KUWAITI SCHOOLS:
BUILDING THE NATION THROUGH MODERNIST AND WELFARE ARCHITECTURE (1952-1989)

By

ZAINAB MURTADHAWI

A thesis submitted in partial fulfilment of the requirements for the degree of Doctor of Philosophy

The University of Sheffield
Faculty of Social Science
School of Architecture

2024

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School architecture is an essential aspect of Kuwait's prosperity towards modernisation and welfare state development, and along with oil income and independence, school architecture has significantly contributed to the nation's knowledge-based growth and quality of life improvement. The educational system shifted dramatically from the 1930s to the 1980s, resulting in a population that was previously largely illiterate becoming educated, culturally aware, and politically knowledgeable, while also developing the resources and abilities needed for a modernist welfare nation. All these activities took place primarily in schools called *Madrasah*.

Following the Industrial Revolution, modernist architecture emerged in the West as a brand-new, high-tech architectural style. This style was introduced to the rest of the world, where it influenced the development of distinct regional architectural legacies. This thesis attempts to contribute to modernist architectural knowledge by investigating the development of school buildings and their historical and cultural contexts in Kuwait's modernisation era from the 1950s to the 1980s. This research employs a historical-interpretive approach to create a cohesive understanding of past architectural contexts by meticulously analysing the complexity of culture, policies, and social impacts. It delves into several interconnected research methodologies, such as archival studies, interviews, and architectural fieldwork.

This is the first thesis to analyse modernist school buildings in Kuwait in the context of the country's modernist and welfare architecture. It emphasises the critical role that school architecture plays in reflecting sociocultural norms through spatial arrangement and space adaptability, demonstrating that school architecture is and can be more than just a school. The analysis indicates that, prior to the discovery of oil, a movement towards modernism had begun, and it was facilitated by the creation of new school buildings. It then discusses how the establishment of Kuwait as a nation, with an emphasis on mass school production afforded by urbanisation, led to the development of a welfare state programme. Subsequently, it explains how school buildings culminated in modernist architecture, which eventually led to modernity and provided a means for Kuwait to achieve modernism. The significance of this is that the architecture of schools is brought into focus not by modernist aesthetics but by the historical contexts in which they are narrated.

Keywords: School Architecture, Modernist School Architecture, Middle East Modernism, Welfare Architecture, The New Schools, Kuwaiti Modern Architecture

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I, the author, confirm that this Thesis is my own work. I am aware of the University's Guidance on the Use of Unfair Means (www.sheffield.ac.uk/ssid/unfair-means). This work has not previously been presented for an award at this, or any other, university.

Zainab Murtadhawi

2024

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إلى أمي . . .

أول من علمني مسك القلم و خط الحرف . . . معلمتي الأولى قبل مدرستي . . . قائدتي إلى التفوق و تخطي العثرات

أمي . . . أضع بين يديك نتاج جهدك العظيم . . . أعلى مراتب الدرجة العلمية . . . فخراً بك و امتناناً لعطائك

ابنتك: زينب

To my mother

Who was the first to show me how to handle a pen and line a letter
My first instructor before my teacher
My role model for excellence and overcoming challenges
Mum, this effort to attain my highest academic degree is dedicated to you, with pride and gratitude
Without your tremendous effort, this accomplishment would not have been achievable

Zainab

February 2024

To those who supported me . . .

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AA	Architectural Association
AGDA	Arabian Gulf for Digital Archives
AHRA	Architectural Humanities Research Association
AIA	American Institute of Architects
APOC	Anglo-Persian Oil Company
Appx.	Appendix
BP	British Petroleum
CAT	Contracting And Trading company
CBD	Central Business District
Ch.	Chapter
CIAM	International Congress of Modern Architecture
CLASP	Consortium of Local Authorities Special Programme
CONESCAL	Centro Regional de Construccions Escolares para-America Latina
CRSK	Centre for Research and Studies on Kuwait
DB	Development Board
DoCoMoMo	International Committee for Documentation and Conservation of Buildings, Sites and Neighbourhoods of the Modern Movement
DP	Development Programme
ETH Zurich	Federal Institute of Technology in Zurich
Fig.	Figure
GDP	Gross Domestic Product
GOC	Gulf Oil Corporation
HVAC	Heating, Ventilation, and Air Conditioning
ICT	Information and Communication Technology
IMO	International Maritime Organisation
IREC	Industrial and Real Estate Company
KD	Kuwaiti Dinar
KEO	Kuwait Engineering Office
KISR	Kuwait Institute for Scientific Research
KNL	Kuwait National Library
KOC	Kuwait Oil Company
MIT	Massachusetts Institute of Technology
MoE	Ministry of Education
MPW	Ministry of Public Works
NCCAL	National Council for Culture, Art, and Literature

NCED	National Centre for Education Development
NHA	National Housing Authority
OPEC	Organisation of the Petroleum Exporting Countries
PACE	Pan Arab Consulting Engineers
PAEET	Public Authority of Applied Education and Training
PAHW	Public Authority for Housing Welfare
PhD	Doctor of Philosophy
QDL	Qatar Digital Library
RIBA	Royal Institute of British Architects
SBC	Sustainable Building Conservation
SCPD	Supreme Council for Planning and Development
SDGs	Sustainable Development Goals
STUP	Societe Technique pour l'Utilisation de la Precontrainte
TNA	The National Archive
UAE	United Arab Emirates
UIA	International Union of Architects
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WAN	World Architecture News award
WHO	World Health Organisation
WWII	Second World War

'Success is a journey, not a destination. The doing is often more important than the outcomes.'

Arthur Ashe

The first and the only African American tennis player
to win the singles titles at Wimbledon,
the United States Open and the Australian Open.

This thesis serves as a fruitful culmination that not only mirrors the scholarly years I have dedicated to it but also exposes the professional ambitions I have developed since my graduation from Kuwait University in 2004 with a bachelor's degree in architecture. My career as an architect has taken me to two of Kuwait's most illustrious establishments: the Kuwait Engineering Office International Consultant (KEOIC), one of the oldest and largest firms in the region, and the Kuwait Institute for Scientific Research (KISR), the country's sole governmental research institution. Later, I returned to school and obtained a master's degree in Sustainable Building Conservation (SBC) from Cardiff University, marking my first academic step in the area of academic research. I then began my doctoral studies in architecture at the University of Sheffield, where I wrote this thesis, which not only represents a fantasy culmination of my previous experiences and education but also opens exciting new avenues for me to explore in the realm of architectural study.

This thesis focuses on architectural modernism in Kuwait, which was spurred by the country's discovery of oil in the second half of the twentieth century. While much recent research on Kuwaiti modernist architecture has focused on large-scale urban projects with little attention paid to individual buildings and their means within today's built-environment, I sought to focus on building-scale architecture that symbolises Kuwait's modernisation and contributes to its welfare state. Because of its pivotal position in history and continued relevance to the modern built environment, school architecture was selected as the focal topic of this thesis.

Given the emergence of the welfare state following modernisation in Kuwait, it is crucial to comprehend the impact on educational architecture and how these changes have influenced culture and society, leading to a more modern way of life. My thesis chronicles Kuwait's distinctive metamorphosis, which has had a tremendous influence on society's knowledge, education, culture, and daily activities. I examined architectural developments in education during the twentieth century to ascertain how a country's modernist approach reflects its ideology and cultural norms. To accomplish this objective, I examined the existing body of literature to situate the design of school architecture within the framework of Kuwait's modernisation efforts. Furthermore, to comprehend the significance of society's influential role in the implementation of modern education, I embarked on an enquiry into the catalysts of socio-political forces in the establishment of modern education prior to the era of oil, as well as the diverse factors that impacted its provision by the welfare state following the discovery of oil. Finally, I conducted a thorough investigation to elucidate how school typologies symbolised cultural interchange among global intellectuals engaged in Kuwait's modernist welfare state. These objectives were achieved by analysing historical archive records, interviews, and architectural fieldwork methods.

The last years of my studies were packed with stops where I was reborn in different ways, becoming more self-assured and knowledgeable as rewards. One of the most challenging times was during the pandemic, with all its psychological and emotional ramifications. Another was when I had to change supervisors, and it took a lot of effort to put together a great team of supervisors of whom I am proud. The third was when I had to start collecting data, which was not easy to process, especially on archival materials.

My search for information was like trying to find ***'a needle in a haystack',*** and the local archives were the most disappointing. The local so-called *'archives'* were nothing more than storage for poorly preserved and inaccessible materials, in contrast to the western archives such as the gta ETH Zurich Archives, the National Archives, and the British Petroleum Archives, where I found details ranging from elaborate blueprints to scratch paper, neatly organised, and simple to retrieve. Of course, I am grateful to the participants in the oral interviews, who were involved in Kuwait's development in the

1960s and the 1970s for bridging the data gap left by inadequate local archives. Through this exploratory archival search, I came to appreciate the depth and breadth with which forgotten records buried in archives tell the story of modernist school architecture in Kuwait. It is my honest desire that the region's buried records be brought to light and recognised for what they value.

The time spent earning a doctorate was both endless and fleeting. Stress, exhaustion, sadness, tears, and emotional anguish all proliferated. Other meaningful experiences included delight, unexpectedness, satisfaction, companionship, enthusiasm, and a sense of success. My deepest gratitude goes to everyone who believed in this study, assisted in conducting it, took part in it, and supported it so that it can be presented as an exhaustive body of information to help us better understand how architecture contributes to our built environment and improves our quality of life.

Zainab Murtadhawi

Sheffield, February 04, 2024

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CHAPTER ONE

RESEARCH CONTEXT

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From the 1930s to the 1960s, the Western world was engrossed in the expressive style of modern architecture. It revealed a cultural and socio-ideological shift aimed at aligning norms and practices with modern industrial life. This style was introduced to Middle Eastern countries mostly through colonialism and imperialism, aiming to highlight the dominance of these nations. In other scenarios, the West presented modernist architecture in the form of modernism and welfare architecture in newly formed nations such as Kuwait. Nevertheless, modern architecture in the Middle East has been shaped by paradoxical concepts, cultural norms, and political movements that have attempted to integrate Western modernist architecture, leading to the emergence of a distinct form of modernism. To understand the significance of modern Western architecture in establishing a new nation and embracing modernity in the Middle East, this study used modernist schools as a paradigm to investigate this phenomenon. The question of why Kuwaiti modernist school buildings was selected for this study can be explored in this chapter. It introduces the context of the study through a brief historical background, research design, methodological approaches, and a summary of chapters. To identify the framework of this thesis, this section briefly explores its aims and objectives, philosophical arguments, methods, insights, and some of its contradictions and limitations.

1.1 INTRODUCTION

In the context of Kuwait's architectural modernism, the rapidly shifting political, economic, and cultural aspects following the discovery of oil and the country's independence are key issues in understanding the country's urban transformation, architectural expression, nation creation, and welfare state formation, all of which have become priorities in architectural studies. While most researchers have concentrated on urban studies and architectural expression, few have focused on housing, healthcare, and education as part of the modern infrastructure and growth of the welfare state in Kuwait. Thus, this study aims to highlight the importance of education reform and the built environment as key factors in the process of modernising Kuwait's society. This research seeks to investigate the cultural ideology and architectural meaning of Kuwait's modernist school buildings throughout the twentieth century because of modernist and welfare state architecture.

Architecture has always played a significant role in defining nations and their cultural, political, and social expressions, and its representation of a nation's identity has been linked to significant moments of change, such as independence and anti-colonialist movements.[1] Colonised nations employed architecture as a means of asserting their identity and existence in opposition to the colonisers, while the colonies utilised architecture to showcase their dominance and control, resulting in architecture being a symbol of the political confrontation between the two. Others utilised architecture to shape their new state identity and highlight their presence to foster their global recognition. Although Kuwait was never subjected to colonisation, the presence of the British Empire in the country, as mandated by the Anglo-Treaty from 1899 to 1961, had a significant influence on Kuwait's modernisation and social welfare infrastructure, even after obtaining independence. Urbanisation and infrastructural development were key components of the 1946 oil boom, which ushered in a new era of social modernisation through wealth redistribution. However, following the country's independence in 1961, Kuwait's architectural representation of its national identity and nation-state became the primary purpose in shaping its urban fabric and architectural expression.

In the context of Kuwaiti architecture of the twentieth century, international architects and designers such as Minoprio, Spencely, and Macfarlane, Colin Buchanan, Shankland Cox, Kenzo Tange, Alison and Peter Smithson, Pier Luigi Nervi, Malene Bjørn, Jørn Utzon, and many more contributed to representational master plans and projects that incorporated welfare state mass-building into the nation-building process. This originated from the Kuwaiti government's desire to acquire the most proficient expertise from the Western world to enhance their modernisation tactics, while Western designers believed in the expressive power of architecture and saw Kuwait as a platform to exhibit their ideologies.[2] They intended to design a utopian metropolis, believing that architecture would play a role in creating a modern society. Designing for new technology, emphasising functionality over ornamentation, simplifying the structure, and using standardised materials were all features of their modernist school architecture. School buildings were also considered part of this modernised architecture, which was implemented through different designers, such as Tripe and Wakeham, Rambald von Steinbüchel-Rheinwall, and Alfred Roth, who promoted their Western standards and meanings of modernity.

[1] *Colonial Modernities Building, Dwelling and Architecture in British India and Ceylon* ed. by Peter Scriver and Vikramaditya Prakash (London and New York: Routledge Taylor and Francis Group, 2007),(p. 170); Mark Crinson, 'Imperial Modernism', in *Architecture and Urbanism in the British Empire*,ed. by G. A. Bremner (Oxford, UK: Oxford University Press, 2016), pp. 198-238 (p. 204).

[2] Crinson, p. 204.

The terms *Modern*, *Modernity*, *Modernisation* and *Modern Society* are linked to many interpretations and historical periods, and they have a crucial meaning concerning the use of disciplines. In this thesis, these terminologies are defined. The term '*modern'* is used to describe a new change, process, or method.[3] The situating of *modern* within a period has been referred to as *Modernity*.[4] In which the broad meaning of modernity is the quality of being modern in '*both frame of mind and attitude to knowledge*'.[5] According to the political thinker Duignan Brian, modernity emerged during the Renaissance period as a cultural movement towards capitalisation influenced by scientific development or rational revolution.[6] Modernity is understood as a change in the context of social conditions.[7] Thus, modernity can be considered a different factor that explains *why* and *when* society changed or became modern. Although *modernity* and *modernisation* are close in meaning, *modernisation* refers to the transition of social change from traditional to modern, precisely after the Industrial Revolution.[8] However, an accurate description of modernisation depends on the perspective from which it is viewed. From an education reformation viewpoint, modernisation describes the shift towards knowledge-based creating '*school culture'*, systemising pedagogy, the emerging national educational system, creating learning spaces, and building places (school buildings).[9] The link between education and the production of the industrial world has become more pronounced and rationalised in the human resource development of modern society. Modern education has been demonstrated to create modern cultural changes in people that rival verifiable cognitive benefits.

In the case of Kuwait, there was no formal schooling system when the twentieth century began. Lessons on reading and writing the Quran were the extent of the education progress. The neighbouring countries of Saudi Arabia, Iraq, Syria, and Egypt were far ahead of Kuwait when it came to educational advancement and were significant backers of the modern educational revolution in Kuwait. Historical records indicate that Kuwait sought assistance from neighbouring nations to compensate for the lack of educational resources and local knowledge by adopting various pedagogical approaches and employing many teachers. The emergence of educational

[3] Oxford Dictionary, "English Dictionary, Thesaurus, & Grammar Help | Oxford Dictionaries", *Oxford Dictionaries | English*, 2018 https://en.oxforddictionaries.com [Accessed 2 December 2018].

[4] Ibid.

[5] Matei Calinescu, 'Modernity, Modernism, Modernization: Variations on Modern Themes', *symplokē* 1. 1 (1993), 1-20.

[6] *Modern Philosophy from 1500 Ce to the Present*, ed. by Brian Duignan, ^eds., 1st edn (New York: Britannica Educational Publishing, 2011),(p. 11).

[7] Calinescu; *Social Change and Modernity*, ed. by Hans Haferkamp and Neil J. Smelser (Berkeley · Los Angeles · Oxford: University of California Press 1992).

[8] Wang Jiafeng, 'Some Reflections on Modernization Theory and Globalization Theory', *Chinese Studies in History,* 43. 1 (2014), 72-98.

[9] Cynthia Pereira de Sousa and others, 'School and Modernity: Knowledge, Institutions and Practices. Introduction', *Paedagogica Historica,* 41. 1-2 (2005), 1-8; Volker H. Schmidt, 'Modernity and Diversity: Reflections on the Controversy between Modernization Theory and Multiple Modernists', *Social Science Information,* 49. 4 (2010), 511-538.

spaces occurred within various educational systems (as shown in **Figure 1.1**). It initially began with Quranic lessons held at mosques, and later evolved into the form of Kuttab schools, facilitated by the merchants of society. By the early twentieth century, a formal education system was established, and traditional courtyard houses were adopted as school buildings. Significant outcomes, however, followed Kuwait's rise to prominence in modern educational facilities in the region after its oil discovery. The most up-to-date architectural spaces, with top-notch construction materials and facilities, were made available for educational purposes. These modernist educational facilities affected the younger generation of society, leading to a shift in cultural norms and the adoption of modern lifestyle norms.

In light of modernist phenomena, it is imperative to understand how educational architecture in Kuwait has been affected by the welfare state and sociocultural transformation. This thesis narrates Kuwait's unique transformation, which has had a profound impact on society's knowledge, education, culture, and daily activities. It focuses on architecture for education in the twentieth century to determine the modernist representation of the nation that shaped its ideology and cultural identity. This places serious doubt on the concepts that link schooling to a country's socioeconomic and political conditions. In particular, they highlight the need to consider how the model of mass schooling model and the nation-state model are related. Educational systems and schools have contributed significantly to cultural and national unity. Supported by modernisation ideology and scientific reasons, this initiative effectively pushed forward the idea of integrating people, or more accurately, citizens, into new nation-states. This is more than partial; consequently, this was the fundamental cause of its existence. Therefore, educational systems are essential for the economic and political growth of modern society.

Thus, this thesis seeks to contribute to the knowledge of modern architecture by investigating how Kuwaiti modernist school architecture represented the country's cultural ideology and welfare state policies throughout the modernisation period. Using the architecture of education as a lens to examine Kuwait's modernisation narrative, this study demonstrates how other forces influenced Kuwait's modernisation long before oil was discovered, how it transformed into a welfare state programme after the establishment of the nation's borders, how it shifted the country's mass production through urban expansion, and finally how it culminated in modernist architecture as an expression of Kuwait's modernisation. These questions add an essential new dimension to school

construction programmes: the long-term impact of the specific types of schools constructed on future educational policies and practices.

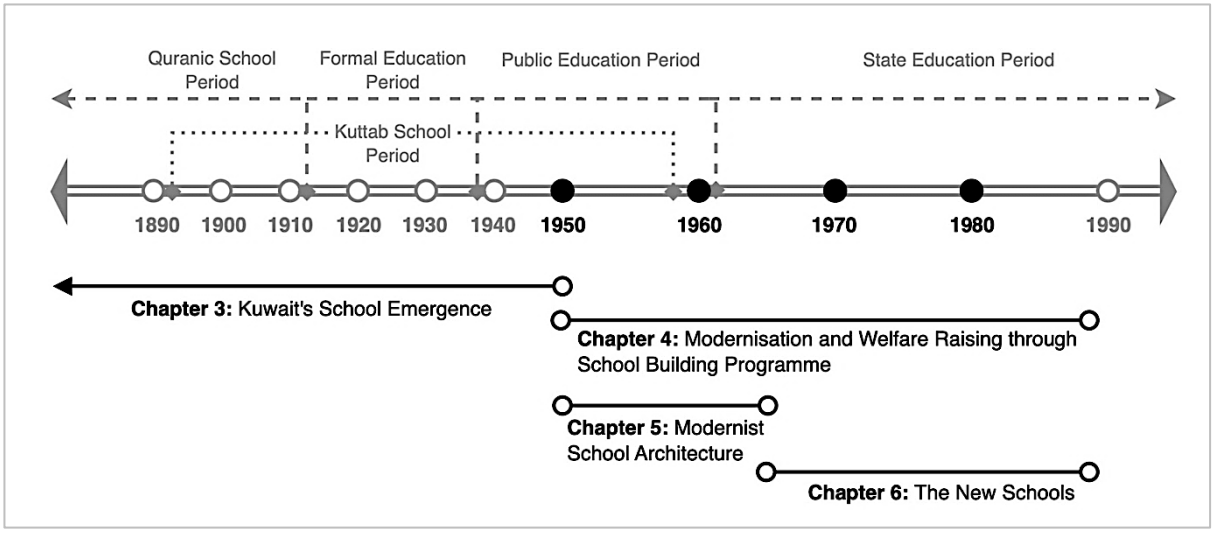


Figure 1.1 Chapter allocation diagram for the thesis in conjunction with a chronology of Kuwait's educational development. The diagram depicts the chronological sequence in which each chapter examines the evolution of school architecture in Kuwait from the early 1900s to 1989. Chapter 3 of the study centres around the pre-modernisation era, while the subsequent chapters delve into the time following modernisation, providing a comprehensive understanding of the political influences and architectural context that shaped its rise.[10]

For this purpose, the study first begins by investigating past literature to position school architecture in the context of Kuwait's modernisation. Second, to understand the importance of society's powerful role in introducing modern education, this study investigates the drivers of socio-political forces in the formation of modern education before the oil era, as well as the various elements that influenced its welfare-state provision after oil discovery (as shown in **Figure 1.1**). Finally, an in-depth analysis was undertaken to explain how the school typologies represented the cultural exchange between international intellectuals involved in Kuwait's modernist welfare state. These objectives were undertaken by examining historical archive records, interviews, and architectural fieldwork methods.

1.2 HISTORICAL BACKGROUND

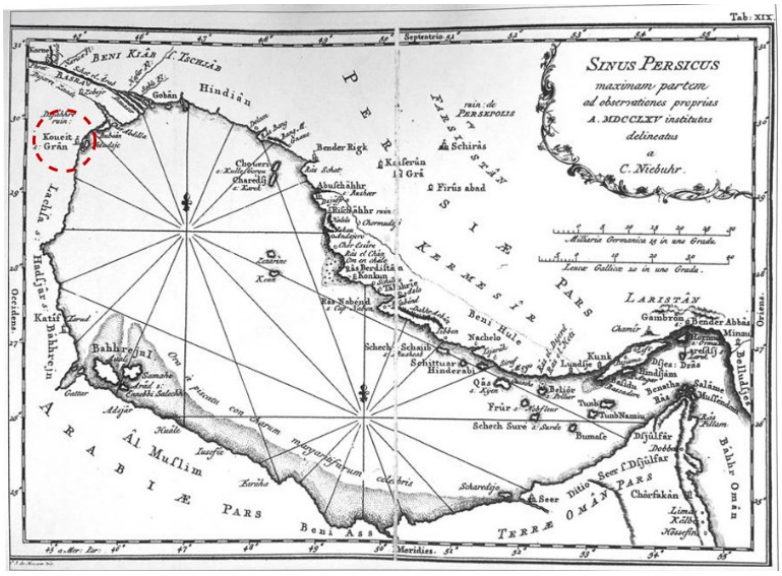
1.2.2 Kuwait: A Brief History

Kuwait, a flat desert land, is located in the north-eastern Arabian Gulf, bordering Saudi Arabia on the southern and western sides and Iraq on the northern and north-western sides. Historians

[10] Author, 2023.

believe that Kuwait's rise can be traced back to the second half of the seventeenth century.[11] According to Ben Slot, in his book *The Origins of Kuwait*, a German traveller named Carsten Niebuhr drew the first map in 1765 that explicitly mentioned Kuwait by name (see **Figure 1.2**).[12] Kuwait was also shown on earlier maps under the names Grane, Qurain, Cathema or Kazima, and Faylaka. Kuwait's legal border (as shown in **Figure 1.3**) with Saudi Arabia and Iraq was not yet determined until 1922 under the Uqair Agreement.[13]

As documented in the East India Company records, the *Bani Utub,* a Najd tribe that was the ancestor of the Al-Sabah and other Kuwaiti families, came and settled in Kuwait in the early seventeenth century.[14] On the other hand, Kuwait's initial act of government and political foundation dates from 1710, when Sheikh Sabah Al-Sabah became the first ruler of Kuwait.[15] The ruling family supplied Kuwait with government, wealth, and security against surrounding tribes.



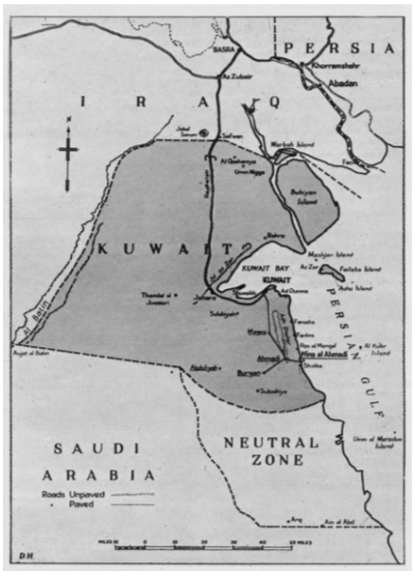


Figure 1.2 Map of Niebuhr for Arabian Peninsula. Left: One of the oldest maps created by the 18th century German traveller Carsten Niebuhr, who was on an expedition to Arabia from the Royal Danish. The map shows Kuwait with the names 'Koweit' and 'Gran'. It was printed in his geographical description of Arabia in 1772.[16]

Figure 1.3 Kuwaiti boarders' map, published in 1951. Right: A map representation illustrates Kuwait's geographical position inside the Arabian Peninsula and its proximity to Iraq and Saudi Arabia. The map was issued in June 1951 by the Illustrated London News.[17]

[11] Ahmad Mustafa Abu-Hakima, *The Modern History of Kuwait 1750-1965* (Montreal, Canada: McGill University, 1980), p. 1; *Kuwait, the Growth of a Historic Identity*, ed. by Ben J. Slot (Kuwait: The Gulf Museum Consultancy Company, 2003),(p. 1).

[12] Ben J. Slot, *The Origins of Kuwait*, 2nd edn (Kuwait: Kuwait : Center for Research and Studies on Kuwait, 1998), p. 146; Slot, p. 10 and 30; H.V.F. Winstone and Zahra Freeth, *Kuwait: Prospect and Reality* (London: Routledge, 1972), p. 62.

[13] The National Archives [TNA], London: FO 371/61423, 'Report Entitled the Neutral Zones', 12th May 1948.

[14] Slot, p. 9; Abu-Hakima, p. 3; Winstone and Freeth, p. 61; Jill Crystal, *Kuwait: The Transformation of an Oil State* (Boulder, San Francisco, Oxford: Westview Press, 1992), p. 3.

[15] Winstone and Freeth, p. 61; Abu-Hakima, p. 5.

[16] Slot, p. 148.

[17] 'The World's Largest Single Oilfield: Kuwait and Its Fabulously Rich Ruler', *Illustrated London News,* 1951, p. 1061.

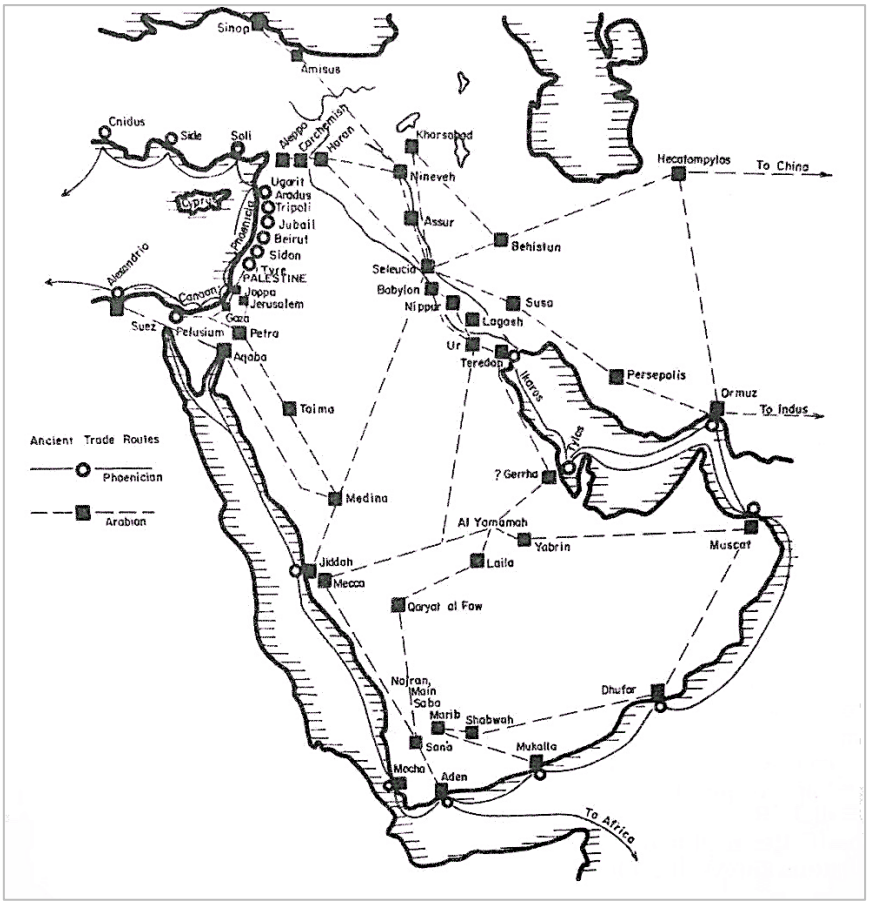


Figure 1.4 An ancient trading route map. The map depicts the historical trade routes connecting India, Baghdad, Aleppo, Smyrna, and the Ottomans throughout the eighteenth century. Kuwait's strategic position along these routes underscores its critical geographical location in the region.[18]

In contrast, the role of the merchants, known as the original ancestry 'Asil' who placed them alongside the reigning Al-Sabah family, was to trade and exchange goods for others.[19] In addition to pearling and fishing, Kuwaiti-built ships had a dhow fleet that carried most of their cargo from India to Northern Arabia. Its geographical position became critical to the growth of trade between India, Baghdad, Aleppo, Smyrna, and the Ottomans in the eighteenth century, which contributed to the growth of Kuwait's population and the improvement of its commercial activities (see **Figure 1.4**).[20] Thus, it was in a prime location for rapidly expanding international trade routes, giving it a significant advantage in terms of both economics and labour.

The Ottoman Empire and other foreign powers amplified the threat in the area.[21] Therefore, the Kuwaitis had to erect walls around their town in order to defend themselves against attacks from other tribes. In the late 1800s, Kuwait's seventh ruler, Sheikh Mubarak Al-Sabah, sought Britain to

[18] Winstone and Freeth, p. 26.
[19] Nicolas Gavrielides, 'Tribal Democracy: The Anatomy of Parliamentary Elections in Kuwait', in *Elections in the Middle East*,ed. by Linda L. Layne (London and New York: Routledge, 1987), (p. 156).
[20] Abu-Hakima, p. 93.
[21] Ben J. Slot, *Mubarak Al-Sabah Founder of Modern Kuwait, 1896-1915* (London: Arabian Publishing, 2005), p. 14; Winstone and Freeth, p. 64.

defend his realm from the Wahhabis and their Ottoman supporters.[22] Under terms similar to those of treaties negotiated with the other Trucial States, Great Britain and Kuwait signed an agreement on 23 January 1899.[23] Kuwait withdrew from the Anglo-Kuwait Agreement in 1961 to declare its independence from Britain.[24] At first sight, Kuwait might fit into the colonial model, but it has never been a colony nor has harboured any anti-colonial sentiments. Under the terms of the arrangement, the British would be shielded from any external danger while their political influence was constrained internally. However, the Kuwaiti-British relationship was firmly established during this era and continued to influence Kuwait's modernism for decades. Despite lacking explicit political power in Kuwait, they persistently aided the government of Kuwait in various aspects, such as oil industry production, welfare state programming, and modernist infrastructure development.

In 1934, the Kuwait Oil Company (KOC) was established with the assistance of the Anglo-Persian Oil Company (APOC) and the Gulf Oil Corporation (GOC).[25] They began drilling for oil and made their first successful discovery in 1938. However, the devastation caused by World War II slowed the exploitation of Kuwait's oil fields. The first oil shipment did not happen until 1946, and it was only after that year that oil revenues began to flow with the economic boom, marking a new era in Kuwait's modernisation.[26]

Meanwhile, the ruling family and merchants together controlled the country's political and economic affairs. Although Kuwait's ruler's family oversaw the country's political affairs, merchants gained economic strength in the pearling trade and labour force.[27] They not only profited monetarily from the ports' activities but also took on the responsibility of providing vital social services such as healthcare and education.[28] However, after the discovery of oil, the ruler's family consolidated its hold over the country's economic and political spheres of influence. This continued until Sheikh Abdullah Al-Salem Al-Sabah's reign (1950—1965) when he paid particular attention to Kuwait's modernity, giving priority to educational development.[29] Initially, he formed a Development Board (DP) with the support of the Public Works Department in 1952 to follow up on the country's spending on Kuwait City plan development. The development plan comprised three

[22] The seventh ruler of Kuwait (1896-1915), known as the Great Mubarak.
[23] Soud M. Al-Sabah, *Mubarak Al-Sabah the Foundation of Kuwait*, 2nd edn (London: I. B.Tauris, 2014), p. 20; Michael S. Casey, *The History of Kuwait* (London, UK: Greenwood Press, 2007), p. 61; Slot, p. 61; Slot, p. 111.
[24] Abu-Hakima, p. 93.
[25] APOC is known today as British Petroleum (BP); GOC is known today as Chevron; Al-Sabah, p. 111; Casey, p. 59.
[26] Casey, p. 59.
[27] Jill Crystal, *Oil and Politics in the Gulf Rulers and Merchants in Kuwait and Qatar* (Cambridge: Cambridge University Press, 1990), p. 4; Anh Nga Longva, *Walls Built on Sand : Migration, Exclusion, and Society in Kuwait* (Boulder: WestviewPress, 1997), p. 24.
[28] Crystal, p. 8.
[29] The 11th ruler of Kuwait, reign period 1950-1965; Al-Sabah, p. 43; Casey, p. 63.

phases: operating a water desalination plant, establishing an electricity station, and establishing a welfare-state.[30]

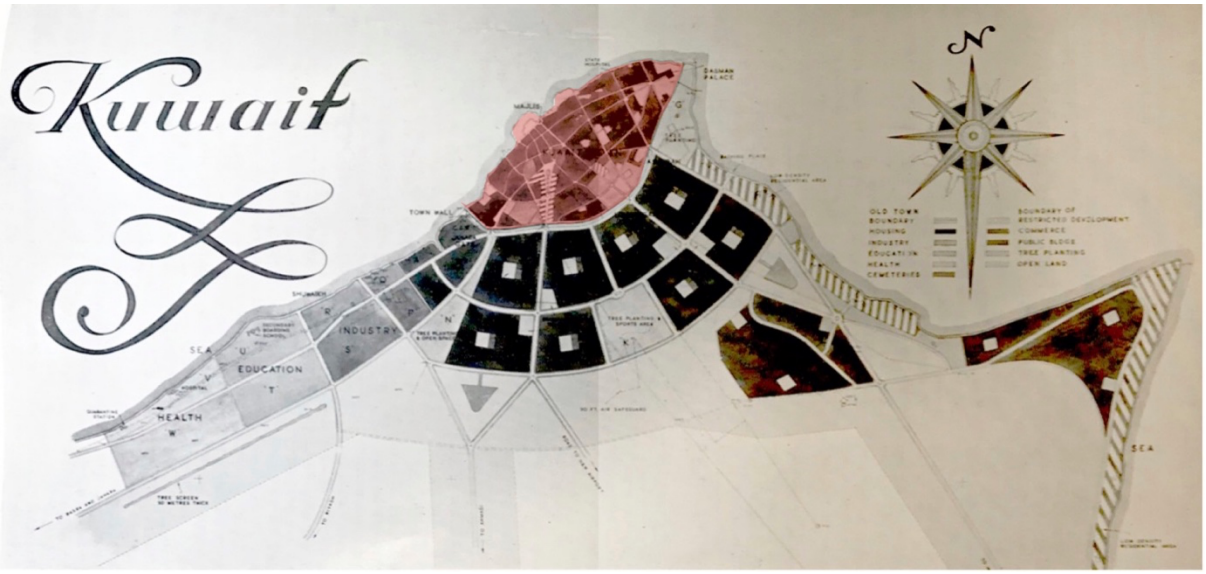


Figure 1.5 Kuwait's First Master Plan, 1952. Antonio Minoprio, Hugh Spencely, and Peter W. Macfarlane created the original Master Plan. The picture depicts the old city (annotated by the author) and is surrounded by concentric rings representing the newer residential areas. [31]

The early stages of development were handled by British experts (Holland Hannen and Cubitts, D.C. William Press, John Howard Construction, Taylor Woodrow, and Richard Costain), who brought in five British companies that made significant progress.[32] Two British firms, Anthony Minoprio, Hugh Spencely, and P. W. Macfarlane, presented the First Master Plan for Kuwait in 1952 (see **Figure 1.5** and **Appendix E**), emphasising the reformation of the old town into a new city and the paving of new roads (see **Figure 1.6, Figure 1.7** and **Figure 1.8**), as well as the expansion of neighbourhoods outside the third wall.[33] Other major projects were conducted during this development phase and included both local and international firms. Due to the high expenses, in addition to the Arab nationalist movement's influence in the region, Sheikh Abdullah sought the help of Arab experts and moved the role of controlling the implementation process to Sheikh Fahad Al-Salem for the next stage of the transformation.[34] Consequently, the region's first and largest secondary school

[30] Jill Crystal, *Oil and Politics in the Gulf: Rulers and Merchants in Kuwait and Qatar* (Cambridge: Cambridge University Press, 1995), p. 78 and 128.
[31] P. W. Macfarlane, 'Planning an Arab Town Kuwait on Persian Gulf', *Journal of the Town Planning Institute,* (1954), 110-113 (p. 112).
[32] Farah Al-Nakib, *Kuwait Transformed a History of Oil and Urban Life* (Stanford, California: Stanford University Press, 2016), p. 106; Crystal, pp. 69-75. The National Archives [TNA], London: FO371/109860, 'Third Report on Financial Control, Development, Progress and Expenditure in Kuwait, 22nd January', 1954.
[33] Al-Nakib, p. 99.
[34] Sheikh Fahad was the ruler's brother, as well as head of the Municipality and Health Department; ibid. p. 106.

was built, serving as a platform for Arab nationalism's democratic activities as well as higher education.[35]

Figure 1.6 An Ariel view of Kuwait's old town, 1950. The photograph was captured in 1951, before the commencement of the development process. The town, which was characterised by traditional courtyard houses and narrow pathways, was mostly dismantled due to the implementation of the First Master Plan. (Annotated by the author)[36]

Figure 1.7 Kuwait around the port at the time of the 1951. The image prominently displays the dilapidated mud buildings of the traditional Kuwaiti town, adorned with small pathways interlacing between them.[37]

[35] Ibid. p. 107.
[36] John Grindrod, 'Model City Planned for Kuwait', *Official Architcture and Planning*. 8 (1953), 374-378 (p. 376).
[37] Karim Jamal, 'Kuwait: A Salutary Tale', *Architects' Journal,* 158. 50 (1973), 1452-1457 (p. 1453).

Figure 1.8 Kuwait around the port as a result of the 1952 plan. This image represents the same area as the previous figure, but it specifically shows the alterations in the infrastructure and physical environment of Kuwait City resulting from the implementation of the First Master Plan. [38]

In 1961, Kuwait joined several international organisations, such as the United Nations Educational, Scientific, and Cultural Organisation (UNESCO) and the World Bank, to fulfil its obligation to protect and provide social services.[39] Thus, Sheikh Abdullah aimed to establish welfare provisions exclusive to Kuwait. The concept of welfare, referred to as *Rafahiya* or *Re'aya,* originated from the equitable distribution of wealth generated by oil production without the implementation of any taxation technique. [40] It encompasses a broad range of values, including the quantity, quality, and distribution of supplies and services; job and wealth security; access to healthcare, education, and culture; ensuring safety and housing; promoting equality and equal opportunities; fostering democratic participation; and overall improvement in quality of life.[41] To achieve this objective, the Kuwaiti government assumed control over the capital market and delivered social services to all citizens. Consequently, the government has had to restructure its framework and sectors to align its services with the objective of acquiring a modern mode of life. Therefore, council institutions were transferred to ministries, and the role of development implementation was handed over to each government sector. By then, a new historical cycle began, when government control of education was connected to the formation of a welfare state.

Education emerged as a foundational pillar of welfarism in Kuwait. An essential requirement for Kuwait's development as a nation was the establishment of a solid educational system, given the government's need for a substantial number of well-educated individuals to ensure effective employment. Sheikh Abdullah wholeheartedly endorsed educational opportunities for the Kuwaitis

[38] Ibid.
[39] Naiem A. Sherbiny, *Arab Financial Institutions and Developing Countries* (Washington, D.C. : 1986), p. 10 and 24.
[40] Wizarat al-Irshad wa-al-Anba, *Kuwait Today: A Welfare State* (n. p.: Quality Publication Limited, 1963), p. 66.
[41] Casey, p. 62 & 70; Crystal, p. 60.

and provided unlimited financial support.[42] In 1951, education accounted for nearly one-third of total government expenditure. [43] These developments occurred simultaneously with the implementation of educational zoning schemes aimed at expediting the establishment of social infrastructure and economic growth. Schools have been designated for each newly developed residential area. [44] Following the attainment of independence in 1961, schooling was made obligatory for all children through legislation, resulting in a significant expansion of the school infrastructure. In this context, the architecture was subjected to the criterion of optimising the functionality of the structure while also maximising the efficiency of the construction process.

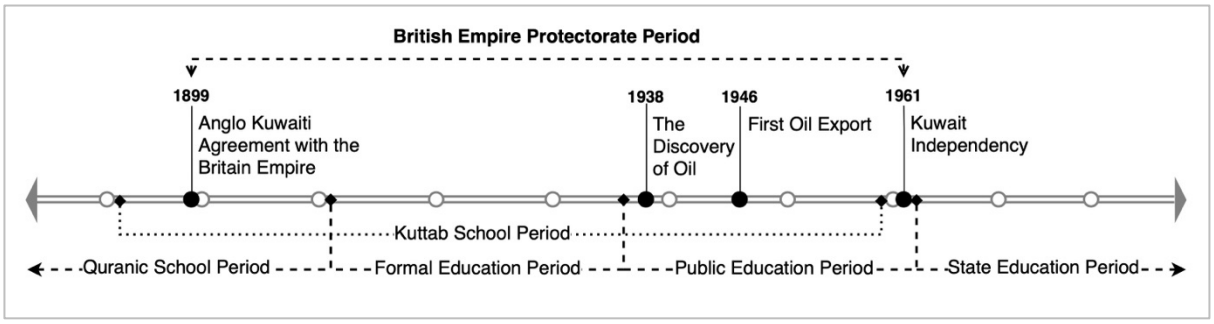


Figure 1.9 A timeline for the development of Kuwait's educational system. This illustrates the several epochs during which the educational system was established and evolved, emphasising the significant events that coincided with the country's political and economic transformations.[45]

Therefore, the key elements that played a vital role in transforming Kuwait into a modernist welfare state were the significant revenue drawn from oil and state independence. The objective of the transitional power was to enhance the modernisation of Kuwaiti society by exerting influence over the physical infrastructure, cultural beliefs, and national sense of identity. These events encompassed the establishment and growth of the educational system in Kuwait from the 1950s to the 1980s (as shown in **Figure 1.9**). It played a significant role in transitioning society from a primarily illiterate state to one that was literate, culturally conscious, and politically knowledgeable. Additionally, it facilitated the acquisition of essential human resource skills required to establish a welfare state. The overall situation had a profound impact on the architecture of the built environment, including school buildings and educational institutions, as it marked the introduction

[42] Georges Britt, 'From Yesterday to Tomorrow, Kuwait Lauches a Vast Welfare Program by Wise Use of Wealth', *The Al-Kulliyah* 1952.
[43] Ibid. p. 8.
[44] Antonio Minoprio, Hugh Spencely and Peter W. Macfarlane, *Plan for the Town of Kuwait* (London: 1951), p. 12; gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162 (1/5), Kuwait-Municipality, 'Detailed Plan and Elevations for the Location of the Secondary School for Girls in Al-Rumaithiyah', 1966.(p.27) Abdulrasoul Al-Mussa, *Altatawur Aleumraniu W Altakhtit Fi Alkuayt 1952-1980* (Kuwait: Kazima Publisher 1981), p. 99.
[45] Author, 2023.

of modernity and the development of welfare architecture in Kuwait. However, its historical architecture was noticeably lacking in these architectural representations.

1.2.2 Modernism Movement in Architecture

The Modernist Movement, which can be broadly defined, originated in the Western world during the nineteenth century as a cultural shift towards capitalism and universal development, fuelled by the rationality of the Industrial Revolution.[46] As a symbol of modernity, the movement emerged to seek a dramatic change in the architectural experience and the values of modern modes of living, expressed in urban development, city planning, housing units, building technology, and new construction materials. According to Duanfang Lu, a lecturer at Design and Planning at the University of Sydney, *'modernism has been a reaction to societal modernization, which is modern in its celebration of newness and the break from tradition, and anti-modern in its critique of modernization's betrayal of its own human promise'.*[47]

Western modernism was not a historical experience separate from modernism in African, Asian, and Middle Eastern countries, which were identified as *Third World* countries.[48] This idea is based on the fiction of modernism as a phenomenon developed in the West and imposed differently on the rest of the world.[49] New modernist design notions were first frequently implemented in the colonies, significantly impacting countries' national policies and cultural expressions. Mark Crinson described these colonies as a *'laboratory of modernity'.*[50] In Third World countries such as West Africa, Iraq, and India, colonialism and imperialism served as powerful symbols of modern industrial capitalism, and their influence lasted well into the post-colonial period.

Following the First World War, new sovereign governments were established in Third World nations as British and French mandates were extended to previously Ottoman-controlled territories.[51] This political shift considerably impacted the city's design and changed the pattern of its urban development. Building designs and city development in Iraq, for example, were manifestations of British colonial influence on the country's nationhood and were notable for their colonial style in

[46] Duignan, p. 11.
[47] *Third World Modernism Architecture, Aevelopment and Identity* ed. by Duanfang Lu (USA and Canada: Routledge, 2011),(p. 4).
[48] Ibid. p. 2.
[49] Crinson, p. 202.
[50] Ibid. p. 204.
[51] Relli Shechter and Haim Yacobi, 'Cities in the Middle East: Politics, Representation and History', *Cities,* 22. 3 (2005), 183-188 (p. 85); William I. Shorrock, 'The Origin of the French Mandate in Syria and Lebanon: The Railroad Question, 1901- 1914', *International Journal of Middle East Studies,* 1. 2 (1970), 133-153 (p. 133).

strategic places.[52] Similarly, the French colonial rule in Lebanon profoundly affected cultural metamorphosis and architectural modifications.[53] At one point, Beirut was wholly rebuilt from the ground up, and a new city centre was established, including new schools, hospitals, and religious institutions that left a French imprint for decades, with Beirut earning the moniker '*the Paris of the Middle East*'.[54] Eventually, a nation-state movement developed in Third World countries in response to the West's decolonisation of the region. Transformational movements and national identities were formed in this era when most countries sought political independence.

After World War II, a historical epoch was marked by the modernist movement through independence, decolonisation, nation-building, and architectural modernism in Third World nations. New modernist development aspects were highlighted, resulting in new forms of modernist practices in different regions. One critical aspect was the political shift. As a means of achieving independence in Third World countries, modernist architecture has become a powerful expression of a nation's new identity and cultural transition.[55] There is a growing consensus that nationalism in architecture is a great representation of how a nation connects with and outlines itself in the global arena, and how it does so to gain worldwide recognition.[56]

Taking several examples from Africa, Asia, and the Middle East, they all demonstrate how profoundly nationalist and modernist architecture played a significant role in defining a nation's historical context.[57] For instance, in India, Chandigarh exemplified modernism as nationalism against the backdrop of the state's split and the loss of its capital to Pakistan. According to Vikram Aditya Prakash, in the chapter *'Epilogue: Third World Modernism, or Just Modernism: Towards a Cosmopolitan Reading of Modernism,'* the Nehruvian regime's decision to use modernism in the design of Chandigarh demonstrated their drive to encase the Indian constitution, but the colonial subjects were publicly rejected at Chandigarh from the historicist view as religious people unprepared to become modern citizens.[58]

[52] Iain Jackson, 'The Architecture of the British Mandate in Iraq Nation Building and State Creation', *The Journal of Architecture,* 21. 3 (2016), 375-417.
[53] Shorrock.
[54] Ibid. p. 152; Phillip O'Brien, 'Beirut: A Changing Urban Environment', *Geography,* 100. 2 (2020), 114-119 (p. 114).
[55] Lu, pp. 9-10.
[56] Ibid. p. 9 and 13.
[57] Scriver and Prakash, pp. 211-215; Peter Wien, *Arab Nationalism the Politics of History and Culture in the Modern Middle East* (London and New York: Routledge, 2017); Marwa El-Ashmouni, 'Interrogating Egyptian Nationalism: Transcultural Architecture at the Ragged Edge of Empire', *International Journal of Architectural Research: ArchNet-IJAR,* 12. 1 (2018).
[58] Lu, pp. 261-264.

Modernism's ascendancy in the nation-state has paved the way for universalism, social progress, and technological advancement. However, the oil boom in Third World nations, particularly in the Middle East, ushered in a new period of global economic transformation that improved the practice of modernist architecture in the region, resulting in diverse conflict types.[59] As a result of oil wealth, nation-states adopted extensive modernisation plans that included shaping capital cities, expanding urban areas, developing infrastructure, setting out a welfare state, and providing public services utilising advanced technologies for international discourse modernism. The practice of modernist architecture was expressed through universalism, globalism, regionalism, urbanism, and other modernist expressions to achieve a high standard of living. Western architects have been called upon to mediate political and ideological concepts to achieve this goal.[60] They deemed Third World countries the ideal place where modernisation's myth could be put into practice. Thus, an ordinary form of modernism was reversed, sometimes integrated and sometimes in conflict with the Western style and a different position from the broader context of colonial exploitation.[61]

Consequently, the characteristics and trajectories of modernist architecture in the Third World vary greatly from those of a First World, even though they share important principles. From the First World perspective, Third World modernist architecture can be classified as regional modernism. If one considers this in the light of the Third World, universal modernism can be viewed as a product of Western modernism. Despite its Western origins, modernism has adopted distinct regional characteristics due to its shifting geographical locus of operation. In this way, modernism's architectural expression was a manifestation of its struggle to overcome the complexities of Third World nations' geographical locations, political power, economic shifts, and social conditions.

In brief, imperialist or colonialist relations did not generate a coherent set of modernist practices.[62] However, it does show that there were various approaches to modernism, none of which were less ideal, partial versions of utopian modernity. But *'modernism was the culture that attempted to respond to these experiences,'* as stated by Mark Crinson.[63]

[59] Łukasz Stanek, *Architecture in Global Socialism Eastern Europe, West Africa, and the Middle East in the Cold War* (Princeton and Oxford: Princeton University Press, 2020), p. 16; Shechter and Yacobi, p. 185.
[60] Stanek, p. 171.
[61] Yasser Elsheshtawy, *The Evolving Arab City Tradition, Modernity Urban Development* (New York, USA: Routledge, 2008), p. 118; *Architecture and the Welfare State* ed. by Mark Swenarton, Tom Avermaete and Dirk Van Den Heuvel (London and New York: Routledge Taylor & Francis Group, 2015),(p. 232); Lu, p. 5.
[62] Crinson, p. 233.
[63] Ibid. p. 202.

In Kuwait, modernisation was primarily introduced with the discovery of oil, which transformed the country from an old town into a new city, offering modern living conditions for all residents. The discovery of oil in 1938 spurred Kuwait's economic growth, whereas its independence from the British Treaty of 1961 sparked its political position in the Arab world. Together, these two factors drove Kuwait into modernity and created a unique welfare system, the period known as *'the golden era'*, *'the boom era',* or *'Asr Alhadatha'.*[64]

It took until after World War II for oil to be exploited, despite its discovery in 1938. Kuwait's first oil shipment left the country in 1946. Oil returns began to bring in sizeable revenue: from $760,000 in 1946, it rose to $169 million by 1953.[65] Meanwhile, Sheikh Abdullah Al-Salem Al-Sabah, a rich ruler nominated in the British News, guided Kuwait through the transition from an old-world sheikhdom to an oil-rich nation amid the turmoil of the Suez Crisis in 1956 and the impending Iraqi invasion in 1961.[66] Kuwait responded to the Arab world's decolonial devotion and nationalist sentiment that peaked in the 1950s and proclaimed independence, ending the Anglo-British Treaty in 1961.[67] Kuwait, on the other hand, never went through a colonial era; rather, the British protectorate's focus at the turn of the twentieth century was on protecting the country from the Ottoman Empire. However, the introduction of modernity in Kuwait corresponded with Britain's presence in the area,[68] and the new oil wealth was a factor in its development. During the 1950s, British policy in Kuwait was to protect Kuwait's status and authority to keep Kuwait's investments in sterling to an extent practicable, which put Kuwait's wealth to good use for its citizens. In addition, Britain wanted to guarantee that its companies would benefit from Kuwait's exports. Following the acceptance of four British advisers, Sheikh Abdallah recruited British commander General William Freke Hasted, an expert civil engineer, to oversee the Development Programme (DP) in Kuwait.

[64] '*Asr Alhadatha'* is an aura of technological modernity era.

[65] Winstone and Freeth, p. 30.

[66] Fawaz A. Gerges, *Making the Arab World Nasser, Qutb, and the Clash That Shaped the Middle East* (Princeton & Oxford: Princeton University Press, 2018), p. 9; Wien, p. 151.

[67] Mariam Joyce, *Kuwait, 1945-1996 an Anglo-American Perspective* (London & New York: Routledge, 2013), pp. 86-87; Slot, p. 49; Al-Sabah.

[68] This was due to the oil concession which was signed in 1934 by Sheikh Ahmad al-Jabir (10th ruler of Kuwait) and continued until 1975 were Kuwait gained full control over the Kuwait Oil Company (KOC). The oil concession was between Kuwait Oil Company (KOC) with the Anglo-Persian Oil Company that is known today as British Petroleum (BP).

Figure 1.10 The timeline for major projects began with Kuwait's modernisation in the 1950s. The chronology depicts initiatives that have been planned and built by foreign and regional firms. The data indicates that throughout the early 1950s, British firms were mostly in charge of the projects. However, in the late 1950s, there was a shift towards regional firms, largely influenced by the Suez Crisis.[69]

Therefore, under the leadership of Sheikh Abdullah and General Hasted's advice, *Asr-Alhadatha* began in Kuwait by reshaping the urban fabric of the old town into a new capital city and expanding lands beyond the old town, depending mainly on external consultants and design execution by foreign practitioners (see **Figure 1.10**).[70] Minoprio, Spencely, and McFarlane, two British companies,

[69] Author, 2023; data generated from: Roberto Fabbri, Sara Saragoca and Richardo Camacho, *Modern Architecture Kuwait 1949-1989* (Switzerland: Niggli, 2016).

[70] Casey, p. 99.

designed the First Master Plan of Kuwait in 1952. The infrastructure of Kuwait was rebuilt, new highways were constructed, a new capital was created, suburbs and communities outside the city were designed, public buildings were built, and prototype housing units were constructed in accordance with Western standards and practices (see **Figure 1.11**).[71]

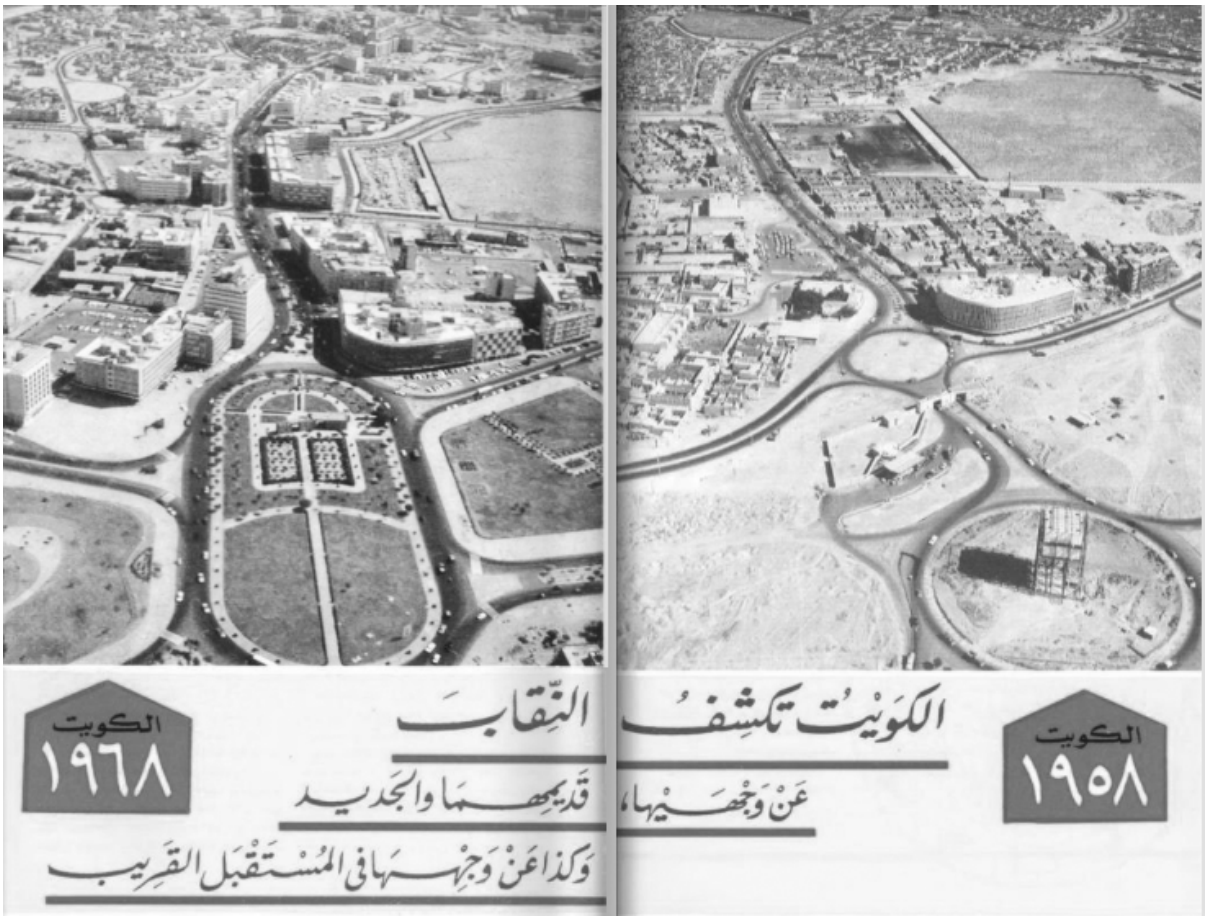


Figure 1.11 Aerial view of Kuwait City between 1958 and 1968. The photographs depict the notable metamorphosis in the constructed environment of Kuwait City, showcasing the introduction of new roadways and modern high-rise structures. The photographs were published in Al-Arabi Magazine in January 1969. [Transcript: Kuwait reveals its old and new faces, as well as its future face].[72]

After Kuwait gained independence, a new period began characterised by the implementation of a reorganised governmental structure with the objective of delivering extensive social services entirely managed by the government, resulting in the development of a distinctive welfare system. From housing and schools to cities, sports, and entertainment, Western European governments laid out ambitious plans for social welfare and wealth distribution in the decades following WWII. These

[71] Asseel Al-Ragam, 'Critical Nostalgia: Kuwait Urban Modernity and Alison and Peter Smithson's Kuwait Urban Study and Mat-Building', *The Journal of Architecture,* 20. 1 (2015), 1-20 (p. 5); Łukasz Stanek, 'Mobilities of Architecture in the Global Cold War: From Socialist Poland to Kuwait and Back', *International Journal of Islamic Architecture,* 4. 2 (2015), 365-398; Sabah Al-Rayes, *Tarikh Alhandasah Fi Alkuwait, Qisah Watan Fi Sirah Dhatia* [Engineering History in Kuwait] (Kuwait: That Al-Salasil, 2017), p. 46.

[72] S. Z., 'Kuwait Reveals Its Old and New Faces, as Well as Its Future Face', *Al-Arabi* 1969, p. 36 and 37.

plans included everything from housing and schools to the welfare state in the West, which aimed to promote cooperative communities controlled by their social organisation policy in order to maintain totalitarianism.[73] Similar services were adopted by Sheikh Abdallah in the 1950s, when he embraced modern socialism and endowed his people with a welfare state that was unseen even in the most sophisticated European nations.[74]

Buildings of all sizes were constructed in response to the nationalist movements. Western practitioners demonstrated their authority by putting their theories into practice and leaving their mark on the place; examples include the Kuwait National Towers by the Swedish architect Malene Bjørn, the Kuwait National Assembly by the Danish architect Jørn Utzon, and the Kuwait National Museum by the French architect Michel Écochard (see **Figure 1.12, Figure 1.13,** and **Figure 1.14**).[75]

Consequently, Kuwait has grown into a metropolis in the last decade. Rapid urbanisation has led to a new transformation in sociocultural phenomena and architectural symbolism. It has steadily raised the interest of researchers and scholars in the discipline, with the goal of better understanding the historical context of the architectural movement in which oil played a significant part in the development of a modernist society.

[73] Swenarton, Avermaete and Heuvel, p. 7.
[74] Simon C. Smith, *Kuwait 1950-1965- Britain, the Al-Sabah , and Oil* (Oxford: Oxford University Press, 1999), p. 137.
[75] Anas Alomaim, 'Nation Building in Kuwait 1961–1991' (unpublished doctoral dissertation, University of California, 2016); Fabbri, Saragoca and Camacho; Majdi Faleh and Caitlin De Brigny Wall, 'The Jorn Utzon Architectural Paradigm and the Emerging World Design Experience', in *Forth International Utzon Synoisium - What would Utzon do now?* , 7-9 March, Sydney Opera House, Australia (University of New South Wales, 2014).

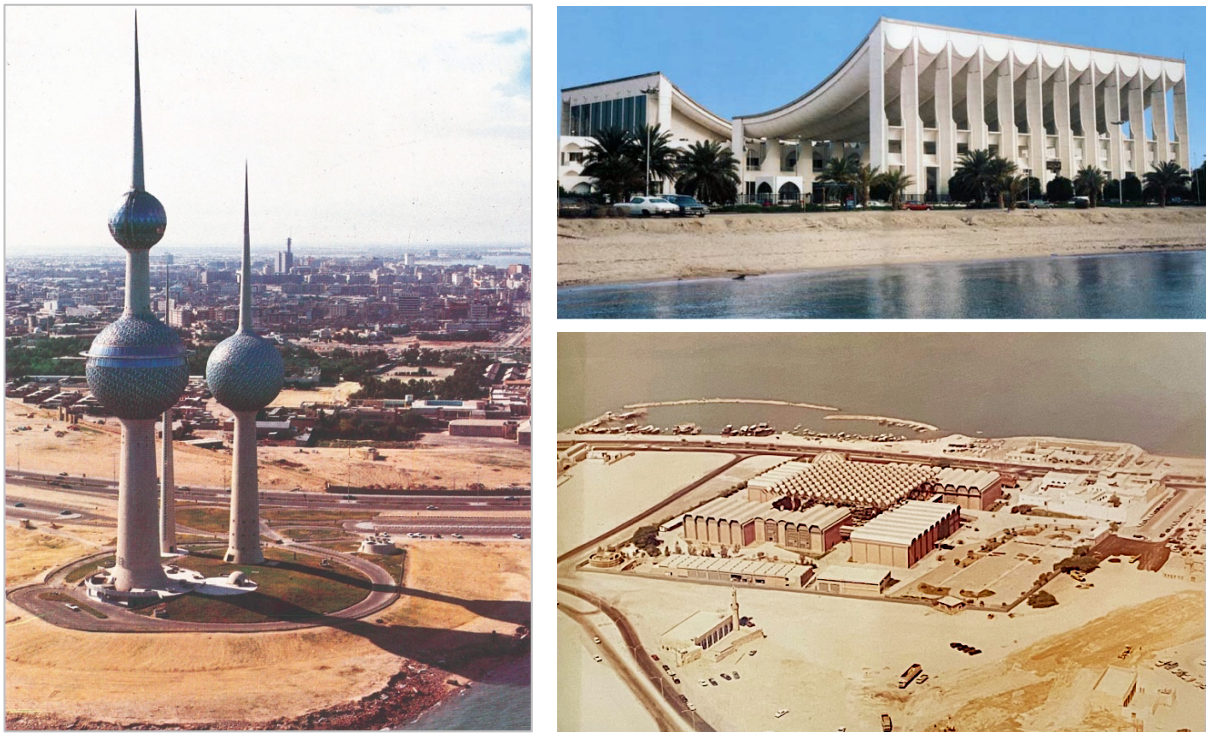


Figure 1.12 Kuwait Towers, designed by Swedish architect Malene Bjørn in 1971. Left: The Kuwait Towers' planning commenced in 1962, but official authorisation was granted in 1971, and the building occurred from 1975 to 1976. Some have made comparisons between the architectural composition and blue-tiled mosques, commending its modern interpretation of conventional Islamic design features such as slender minarets.[76]

Figure 1.13 Kuwait National Assembly by Danish architect Jørn Utzon in 1972. Top-right: The building was specifically designed to symbolise the parliamentary institution following Kuwait's independence. The project was a 1969 competition entry that Utzon won with a focus on Islamic architecture; Max Walt oversaw the structural design; and the building was completed in 1982.[77]

Figure 1.14 Kuwait National Museum, designed by French architect Michel Écochard in 1981. Bottom-right: The concept for the national museum was finalised in the 1960s; however, its construction did not commence until 1981, and it was officially inaugurated in 1986. The architecture of the building was deliberately designed to present the historical aspects of Kuwaiti society, including trading activities and social norms, with the aim of highlighting the nation's ideology.[78]

1.2.3 Educational Architecture

No dedicated space or location was assigned to Quranic schools prior to the oil discovery. Nevertheless, as migrants arrived and endeavoured to impart new abilities such as mathematics and calligraphy, a new educational method known as the Kuttab school emerged.[79] This educational form involves allocating a room within a mosque or a traditional courtyard house for teaching purposes. Around the turn of the twentieth century, Kuwait saw the rise of the Enlightenment Movement, which demanded changes in the country's public education and

[76] Malene Bjørn, 'Kuwait Tower', *Mimar 2: Architecture in Development*, 1981, p. 40.
[77] Hans Munk Hansen, *Kuwait National Assembly 1972-1982* (Los Angeles, California: 2003), p. 23.
[78] *Eakus 'Awal* [First Inverse], ed. by Jaber Al-Hindal. 3 vols. Vol. 2 (Kuwait: Kuwait National Council for Culture, Art, and Literature (NCCAL), 2018),(p. 126).
[79] *Tarikh Altaelim Fi Dawlat Alkuayt* [History of Education in the State of Kuwait], ed. by Abdulaziz Hussein. Vol. 1 (Kuwait: CRSK, 2002),(p. 28).

ultimately led to the founding of the country's first formal school.[80] By then, the traditional courtyard houses used for schooling purposes included courtyards that served as both classrooms (see **Figure 1.15**) and gathering places for people of all ages, thereby establishing the first *'cultural hub'.*[81] Various school activities led to an increasing need for physical space and the development of educational plans for future schools. The growth in these schools was fuelled by educational needs and the emergence of a new revenue stream after the discovery of oil.

Figure 1.15 Kuwait State Schools, c. 1952. The photograph depicts an ongoing handicraft lesson at a boys' state school. Raymond Wilson captured it in the 1950s and made it available in the BP archives.[82]

By utilising the oil wealth, Kuwait developed an advanced schooling programme as one of the most progressive, comprehensive, and functional facilities in the Gulf region. Due to their strong Arab nationalist activism, the British were unable to exert their influence on modern educational policy; however, they managed to oversee the development of educational architecture for decades. In 1954, the largest secondary school in the region was built (see **Figure 1.16**); the first set of Kuwaiti schools, including a Technical College, three intermediate schools, and five kindergartens, were designed and built by a British firm, Tripe and Wakeham (see **Figure 1.17**). Later, international architects were contributing to the development of additional schools, such as the German architect Steinbüchel-Rheinwall, who designed a girl's secondary school in 1962 (see **Figure 1.18**)

[80] Abdullah Al-Nouri, *Qisat Alta'aleem Fi Alkuwait Fi Nisf Qarn* [The Story of Education in Kuwait in Half a Century] (Kuwait: That Alsalasil, n. d.), p. 42; Hussein, p. 104; Abdullah Yousef Al-Ghunaim, *Arshif Almadrasat Alkhayriat Almubarakiat Fi Wathayiq Khalid* [Archive of Donated Al-Mubarakiya School in Al-Khalid's Documents] (Kuwait: Center for Research and Studies on Kuwait, 2018), p. 27; Ebrahim Abdo, *Dawlat Alkuayt Alhaditha* [Modern State of Kuwait] (n. p: Arab Record Foundation, 1962), p. 26.

[81] Ahmad Al-Sharbasi, *Ayam Al-Kuwait* [Kuwait Days] (Kuwait: Dar Al-Arabi Book, 1952), p. 114; Al-Ghunaim, p. 12.

[82] The British Petroleum Archive [BP], University of Warwick: Ref. 107282/141, © BP plc, 'A Handicraft Class in Progress', c. 1952.

and the Swiss architect Roth, who provided a new typology of modernist school design in 1965 (see **Figure 1.19**), which lasted for decades.

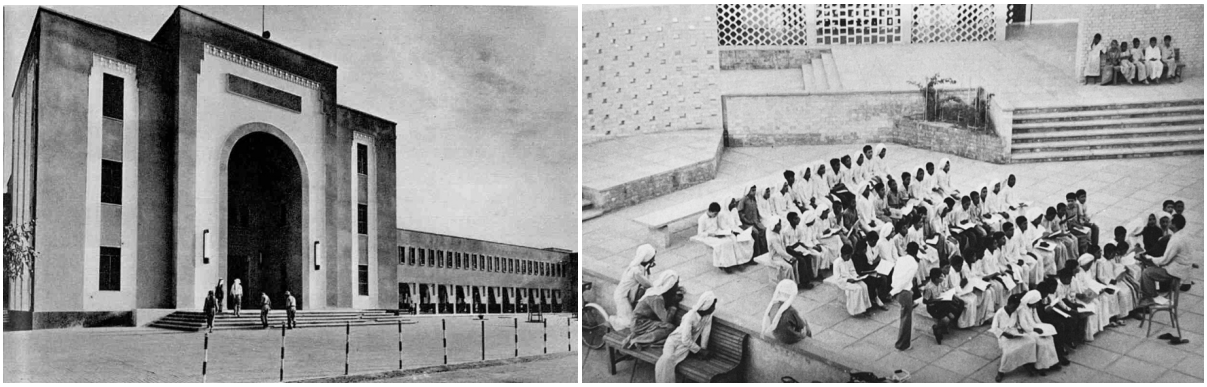


Figure 1.16 Shuwaikh Secondary School, main entrance. Left: The photograph, featured in the London-based journal The Sphere on June 16th, 1956, depicts the most significant educational institution in the area during that era, characterised by its modern architectural design. The Lebanese construction company CAT, run by Emile Bustani, erected the building in the early 1950s.[83]

Figure 1.17 Kuwait's first prototype school, designed by Tripe and Wakeham, c. 1954. Right: Having a lecture in an outdoor courtyard is depicted in the photograph. To construct the top schools in the world, the architecture of the schools was constructed in a modernist style and features numerous facilities by the British firm Tripe and Wakeham.[84]

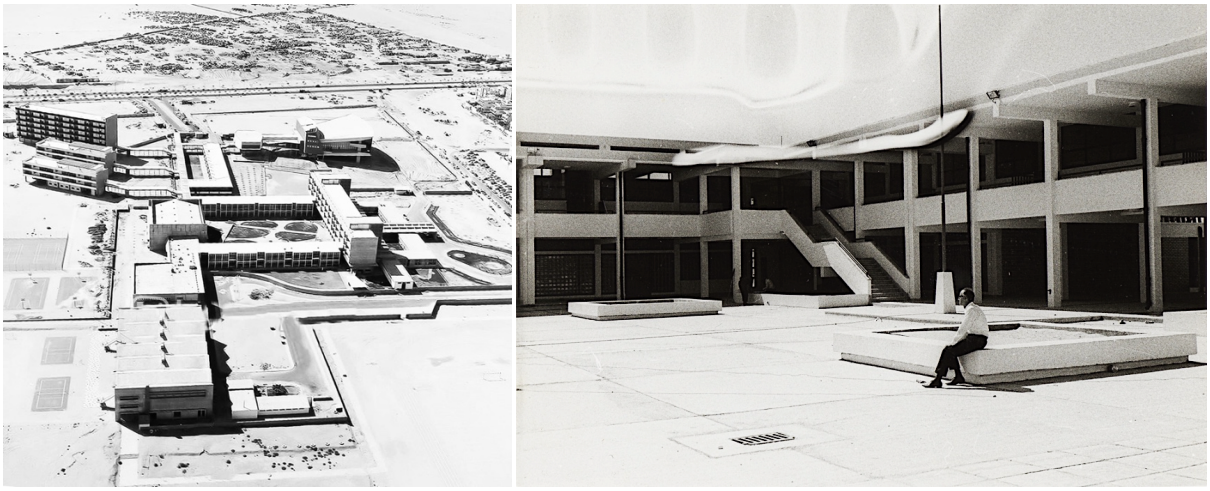


Figure 1.18 An aerial view of Kuwait University in 1966. Left: The architect, Steinbüchel-Rheinwall, used cutting-edge methods and materials in the campus's design. Although the secondary school for girls was built in 1962 and opened in 1964, it was moved to Kuwait University in 1966 for use by the university's higher education programme in the country.[85]

Figure 1.19 Kuwait's new schools by the Swiss architect Alfred Roth, c. 1972. Right: Roth developed and oversaw the construction of the first secondary school for females. The photograph shows Roth posing in the Al-Qairawan School courtyard; it became available in the gta Zurich archives.[86]

[83] John Midgley, 'Kuwait: Wealth from Oil Is Working at Transformation in the Small State on the Persian Gulf', *The Sphere,* (1956), (p. 411).

[84] Fabbri, Saragoca and Camacho, p. 45.

[85] The Afaq Archive, Kuwait University: The Photography Section, 'Khalediya Campus', 10th October 1966.

[86] gta Archive [gta], ETH Zurich University: Ref. 131-0162 (5/5), Alfred Roth, 'Kuwait School's Courtyard', 1972.

All state school designs differed significantly from pre-oil schools, and their designs included classrooms that could be used for a variety of purposes as well as workshop areas. They used new materials, such as reinforced concrete, flat roofs, and uniform finishes, to construct a specific form in the architectural language defined by international style. Western designers had to follow the modernist movement that emphasised functionalism, rationalism, and an ornament-less approach. One of the most frequent critiques that Western designers receive is that they deliver a specific context that differs from their Western practice style, leading to regionalism.[87] They acted solely based on their technical expertise and role within the project, enforcing abstract visions with little consideration for the local context. Therefore, this thesis examines how Western architects interpreted modern educational architecture considering Kuwait's culture and its social, economic, and political contexts.

Schools reflect the communities in which they are spatially and socially integrated. In 1964, a new curriculum for state schools was created with the support of UNESCO, forging connections with experts in educational pedagogy and architectural design.[88] Legislation was passed in 1965, mandating free and compulsory education for all Kuwaiti children, resulting in a rise in the student population that required more schools.[89] At the same time, the population of Kuwait expanded, and new urban areas and suburbs were developed, along with social infrastructure such as educational institutions. At this point, a new set of school types, from kindergartens to high schools, were introduced, including the first higher institutions.

In 1970, 212 state schools grew to 447 by 1980, each with advanced teaching facilities and cutting-edge technology.[90] Kuwait's schooling programme expenditures increased fourfold from 11.4 million dinars in 1961 to 86.7 million dinars by 1975.[91] Not only were school operating expenses paid by the government, but so were books, uniforms, meals, transportation, healthcare, and other facilities for students. Kuwait has made significant progress in social development over the last century. It took the government just a few decades to transform a formerly illiterate society into a literate, culturally, and politically informed society.

[87] Lu, p. 22.
[88] *Tarikh Altaelim Fi Dawlat Alkuayt* [History of Education in the State of Kuwait], ed. by Abdulaziz Hussein. Vol. 3 (Kuwait: CRSK, 2002),(p. 37).
[89] UNESCO-IBE, *World Data on Education* (Paris: 2011), p. 3.
[90] *Tarikh Altaelim Fi Dawlat Alkuayt* [History of Education in the State of Kuwait], ed. by Abdulaziz Hussein. Vol. 4 (Kuwait: CRSK, 2002),(p. 230).
[91] Ibid. p. 44.

From the perspective of spatial organisation, the placement of new schools was a critical component of every suburb's layout, resulting in various stereotypes. As a result, school construction reached unprecedented levels in Kuwait during the modernisation process, raising concerns about how the state education programme and spatial distribution could support this change and accommodate the rise in student population in a short time. On the other hand, the goal of education reform was to turn the population into a better-informed and cultured whole. Consequently, school architecture should be able to tell stories about more than just its physical layouts. This heralded the birth of a new nation that was more educated and ready to improve its standards of living.

The post-war era (modernisation or Industrial Revolution) brought tremendous social and economic shifts in education and architecture worldwide, which had a considerable influence on the design of schools. Post-oil wealth in Kuwait has generated a significant focus on education as a crucial aspect of a child's life, from kindergarten to secondary school. Significant improvements in a wide variety of topics have occurred during the schooling of the post-oil baby generation. As a result of the modernisation process and educational reformation, new cultural spaces were created, which established a functioning learning environment in every neighbourhood in Kuwait. Considering the educational, social, political, and cultural changes that occurred before the oil boom and the subsequent modernist architectural expansion, foreign architects played a major role in designing more than simply a school.

1.2.4 Studies Associated with Kuwait's Modernism and Welfare Architecture

One of the primary references on Kuwait's urban development, which has been regarded in all research and scholarly studies, is Saba George Shiber's book.[92] His book provides a survey of Kuwait's old town and argues for an approach to modernisation that occurred in the post-oil era. This remark has provoked arguments by Farah Al-Nakib, Asseel Al-Ragam, Yasser Mahgoub, Muhannad Albaqshi, and Anas Al-Omaim, including the loss of cultural identity, modern representation, nationalism, regionalism, globalism, capitalism, the creation of public spaces, and

[92] A Palestinian-American architect and urban planner. He studied Bachelor of Civil Engineering and Architecture at the American University in Beirut and Cairo University, master's in architecture and city Planning at the Massachusetts Institute of Technology (MIT), and PhD in City and Regional Planning from Cornell University. He came to Kuwait to work as an assistant chief engineer in charge of the departments of surveying, town-planning and architecture design at the Public Works Department [see more details: Joe Nasr, 'Saba Shiber, 'Mr. Arab Planner'. Parcours Professionnel D'un Urbaniste Au Moyen-Orient', *Géocarrefour,* 80. 3 (2005), 197-206; Saba George Shiber, *The Kuwait Urbanization: Documentation Analysis Critique* (Kuwait: Kuwait Government Press, 1964).

the production of mass buildings while considering social, economic, and political contexts.[93] Roberto Fabbri and his co-authors, including Ben Tosland, Reem Alissa, and Richardo Camacho, presented further arguments for Western architecture in the region. The primary objective is to investigate the limited dissemination of architectural buildings and the work of architects, which has not been previously documented in the literature.[94] (Further discussion is explored in **Chapter 2**)

Other issues that have arisen are related to the preservation of modern architecture. The preservation of Kuwait's modernist buildings is a hotly debated subject, particularly as many of these buildings are in danger of demolition owing to a lack of heritage awareness and ensuing neglect.[95]

Nevertheless, little attention has been paid to modernist welfare-state architecture, particularly in healthcare and educational buildings. Kuwait's state housing has been the subject of various studies aimed at understanding its architectural context and socioeconomic inequality, such as those by Benyameen Ghareeb and Mae Al-Ansari on housing welfare.[96] Hence, this thesis examines the modernist architecture of the social welfare programme, specifically emphasising educational buildings (state schools), which was the second main objective of Kuwait's efforts to promote modernism and cultivate a knowledgeable society. Its significance lies in the extensive historical narrative that emerged as a result of social and political reforms prior to the discovery of oil. This narrative played a crucial role in shaping Kuwait's architectural development and cultural transformation, which were fuelled by the revenue generated from oil. Additionally, this narrative continued to impact the welfare programme implemented after Kuwait gained independence.

[93] Asseel Al-Ragam, 'Towards a Critique of an Architectural Nahda' (unpublished doctoral thesis, University of Pennsylvania, 2008); Muhannad A. Albaqshi, 'The Social Production of Space: Kuwait's Spatial History' (unpublished doctoral thesis, Illinois Institute of Technology, 2010); Alomaim; Al-Nakib; Elsheshtawy.

[94] Fabbri, Saragoca and Camacho; Ben Tosland, 'European Architects at the Confluence of Tradition and Modernity in the Persian Gulf, 1954-1982' (unpublished doctoral thesis, Kent University, 2020); Reem Alissa, 'Building for Oil: Corporate Colonialism, Nationalism and Urban Modernity in Ahmadi, 1946-1992' (unpublished doctoral thesis, University of Califorina, 2012).

[95] Asseel Al-Ragam, 'The Destruction of Modernist Heritage: The Myth of Al-Sawaber', *Journal of Architectural Education,* 67. 2 (2013), 243-252; Asseel Al-Ragam, 'The Politics of Representation: The Kuwait National Museum and Processes of Cultural Production', *International Journal of Heritage Studies,* 20. 6 (2013), 663-674; Kirsty Norman, 'Intangible Challenges in the Management of Tangible Cultural Heritage in Kuwait', *Conservation and Management of Archaeological Sites,* 16. 2 (2014), 131-144.

[96] Benyameen Amanwail Ghareeb, 'The Interplay between 'Tradition,' 'Modernity,' and Uneven Development: The Historical Development of Housing in Kuwait, 1950-2005' (unpublished doctoral thesis, University of Cincinnati, 2020); Mae H. Al-Ansari, 'Women, Public Housing and the Construction of 'Modern/National' Identities in Kuwait' (ibid., 2016).

1.3 RESEARCH DESIGN

The study starts with the historical period considered to be the early twentieth century, when formal education was introduced in Kuwait, with a primary focus on the second half of the century, when oil was discovered, and a new nation-state was established. These factors have resulted in cultural shifts and urban transformations, intending to bring Kuwaiti society to modernity. As this study seeks to acquire insight into the past phenomenon of Kuwait's architectural modernism to understand the complexity of social, economic, and political contexts, an interpretive-historical approach was the appropriate methodology to follow. According to David Wang, interpretive-historical research is '*investigations into socio-physical phenomena within complex contexts, with a view towards explaining those phenomena in narrative form and in a holistic manner'*.[97] The breadth and depth of the historical material of a study are crucial to its outcomes. In this respect, Wang suggests that data be collected to create a coherent narrative to describe an event or phenomenon and that it should address the manner in which historical narratives or more recent historical literature are written.

Therefore, this study follows a *historical-interpretive* approach to convey an understanding of past contexts by methodically examining the complexities, cultures, policies, and ideas that influenced the past. This study examined several interlinked research methods to increase data reliability and provide new insights into the formation of interfirm interactions. It includes archival studies for primary and secondary sources, interviews with specialists in relevant fields, and architectural fieldwork on school buildings. Using archived materials helps to delve into the past and turn a historical study into a present understanding of its phenomena, contributing to the knowledge of the subject matter. The connection between historians and archives is driven by the need to determine the depth of the material in records, obtain the necessary documents, and interpret their information constructively.[98] Therefore, this research encompasses archives from personal and organisational sectors, official governmental sectors, and public libraries to collect adequate evidence for constructing memories. However, archival methods have a few drawbacks, including the potential for missing sufficient evidence and the inability to draw causal connections. Therefore, to give the archival materials more legitimacy, it was necessary to collect oral histories via interviews. According to Donald Ritchie, in his book *Doing Oral History*, *'oral history collects*

[97] David Wang, 'Interpretive-Historical Research', in *Architectural Research Methods* (Canada: John Wiley & Sons, 2002), pp. 135-167 (p. 136).

[98] Sean Cunningham, 'Archive Skills and Tools for Historians', *Making History,* (2008), <https://archives.history.ac.uk/makinghistory/resources/articles/archive_skills_and_tools_for_historians.html>.

memories and personal commentaries of historical significance through recorded interviews'. [99] This study employs school buildings themselves as a source of spatial memory, in addition to historical memories gathered from archival sources and oral history interviews. Architectural fieldwork experience is evoked in and through the memories of school buildings. According to Melinda Milligan, *'buildings serve as collective memory of historic preservationist, and, more broadly, the processes of meaning construction in relation to the built environment'.*[100] Therefore, these methods were utilised in this historical interpretative study to provide insight into modernist school buildings in Kuwait.

In *Ways to Study and Research Urban, Architecture, and Technical Design*, Otakar Macel outlined three stages of historical research: heuristics[101], analysis, and interpretation.[102] He divided the heuristics into *literature*, including previous research on the topic, and *sources*, which comprised primary documentation from the period under consideration. Macel believes that literary studies have no real value unless they are applied in an academic context. He justified that the literature study focuses on materials that others have pre-processed rather than on personal experiences.[103] Controversially, Elizabeth Danto believes that the study of literature connects historical problems that enhance the formulation of the research question, or hypotheses, or *'statement that proposes to explain causal relationships between historical factors, or the causal patterns of historical change'.* [104] For this reason, this study conducts a literature review that aims to gain a better historical understanding of Kuwait's architectural modernisation and situates the research subject in a broader social, political, and economic context (explored in more detail in **Chapter 2**).

There are two categories of Macel's sources: *primary* and *secondary*. According to him, primary sources include the building itself, its architectural drawings, and models; secondary sources include the designer's notes and sketches, as well as other written materials or official documents during the study's subject matter, unless they are used as a subject of the study.[105] The current study intends to collect data as a primary source using the *Archival Research* method, which includes: architectural drawings, notes, manuscripts, papers, records, pictures, letters, correspondent

[99] Donald A. Ritchie, *Doing Oral History a Practical Guide*, 2nd edn (Oxford: Oxford University Press, 2003), p. 19.
[100] Melinda J. Milligan, 'Buildings as History: The Place of Collective Memory in the Study of Historic Preservation', *Symbolic Interaction,* 30. 1 (2007), 105-123 (p. 106).
[101] Refers to the use of sources.
[102] Otakar Macel, 'Historical Research', in *Ways to Study and Research Urban, Architectural and Technical Design* ed. by Taeke M. De Jong, and others (Netherlands: DUP Science, 2002), pp. 61-70 (p. 61).
[103] Ibid.
[104] Elizabeth Ann Danto, *Historical Research* 4, (New York: Oxford University Press, 2008), p. 35.
[105] Macel, p. 62.

commissions, and official documents that date back to the period of subject matter, whether they are original materials or were generated by others at the same time.

However, finding source materials may be challenging because many archives have a methodological approach and are typically not focused on architecture. According to Wang, historians obtain evidence from archives and artefacts.[106] He justified this because the study question corresponded to a certain period or context. This study's selection of archives was mainly based on its essential variables, such as examining personal or organisational archives connected to Kuwait's modernisation or school architecture, official governmental sectors involved in the construction stage, and public libraries with available evidence. The gta Archives at ETH Zurich University in Switzerland, for example, contain significant personal documents of Roth, an academic who contributed to modernist school design in Kuwait. Another example is the British Petroleum (BP) Archive at Warwick University in the United Kingdom, which provides historical records of Kuwait from oil discovery when the BP company was active in Kuwaiti oil operations.

To obtain more evidence from various sources, access to Kuwaiti government data was restricted; nonetheless, limited information from related ministries was obtained with official permission (see **Appendix A**). According to Macel, a researcher's task comprises the appraisal of sources in terms of their usefulness in providing information, whether the source is the main source in terms of content and chronology, or whether it reproduces previously existing material.[107] For the most part, historical records from Kuwait's government relied on the Arabic language, which the author translated into English before being used in this research. The main obstacle to gathering evidence was the lack of a coherent documentation system and the quality and quantity of primary sources. For this reason, in-depth interviews were conducted in this study to obtain first-hand perspectives on how Kuwaiti school architecture evolved through the period of modernisation and the meaning it holds today.

Historical evidence could be gathered through various methods; as highlighted by John Tosh, *'how the past is known and how it is applied to present need are open to widely varying approaches'*[108] and, as Wang put it *'ways of knowing'*.[109] The secondary sources in this research are materials that were

[106] Wang, p. 136.
[107] Macel, p. 62.
[108] John Tosh, *The Pursuit of History: Aims, Methods and New Directions in the Study of Modern History* (England: Pearson Education Limited, 2002), p. 2.
[109] Wang, p. 137.

collected after the study period ended or based on primary source examination; this includes interviews and architectural fieldwork. As a counterargument to Macel's view that the building itself may be regarded as a primary source, I contend that this is not always true. It is possible that the building has been altered from its original condition, which might lead to the perception that it is not authentic; therefore, it should be classified as a secondary source to increase its reliability. Therefore, this study used a qualitative research method and incorporated various data collection techniques. Qualitative enquiries are very similar to historical enquiries in general, in which the research attempts to collect as much evidence as possible concerning a complex social phenomenon and seeks to provide an account of that evidence, evaluate it, and construct a narrative from the evidence that is concise and reliable, as Elizabeth Danto points out.[110]

'Stories are a method of knowing', stated Irving Seidman.[111] One of the most common ways in which people try to make sense of their experiences is to tell stories. In the words of Steinar Kvale and Svend Brinkmann, interviews are *'attempts to understand the world through the subject's points of view, to unfold the meaning of their experiences'.* [112] This helps researchers gain a deeper understanding of a phenomenon by listening to the participants' explanations. In historical research, an interview is like a hall of mirrors, with different people offering interpretations of what has been said.[113] Therefore, data interpretation and the determination of meaning are critical tasks for researchers. Furthermore, Seidman points out that *'when people tell stories, they select details of their experience from their stream of consciousness'.* [114] In other words, participants rely on their memories of the past, which may provide information that was unavailable elsewhere. However, their validity cannot be assumed. The information gleaned from the participants' stories was thus important to Michael Pickering, who focused on comparing and contrasting it with other sources, such as newspapers and other documents.[115] In this study, it was essential to define terms carefully, create ideas and variables, and conceptualise how these variables are related to one another. The purpose of the interviews was to allow participants to retell their own stories about the subject matter. Semi-structured interviews were conducted to investigate the sociocultural context of modernist school architecture. In this format, the emphasis is mainly on the subject matter rather

[110] Danto, p. 35.
[111] Irving Seidman, *Interviewing as Qualitative Research a Guide for Researchers in Education and the Social Sciences* (New York: Teachers College Press, 2006), p. 7.
[112] Steinar Kvale and Svend. Brinkmann, *Interviews: Learning the Craft of Qualitative Research Interviewing* (California: SAGE Publications Ltd., 2009), p. 1.
[113] Seidman, p. 7.
[114] Ibid.
[115] *Research Methods in Cultural Studies* ed. by Michael Pickering (Edinburgh: Edinburgh University Press, 2008),(p. 13).

than the format of the questions, and the interviewer explains the content of the topic throughout the discussion.

In addition to the oral and textual materials, the building itself provides a window into the past. Macel noted that buildings themselves could be regarded as sources for historical research. [116] Therefore, a sample of educational buildings erected during the subject's matter period in the architectural fieldwork was examined in this study. In the book *The Pursuit of History,* Josh stated that *'the first responsibility of the historian is to take the measure of the difference of the past'.* [117] He referred not only to material conditions such as buildings, clothes, and objects but also to values, fears, and hopes from past cultures. According to him, the perception that people in the past acted and thought in the same way as we do was wrong and led to anachronism.[118] In Pickering's book, *Research Methods in Cultural Studies*, he points out that observation is important for cultural understanding because it allows researchers to interact directly with their research subjects and modify their relationships with textual powers.[119] Therefore, it is essential to study the cultural differences between the past and present in the context of the built environment.

This study used the fieldwork method to investigate how students, instructors, and administrators in school buildings interact with the surrounding space and environment. The second purpose was to become involved with the school's architectural context by better understanding the information documented in archival materials. Finally, the goal was to examine the site or place to obtain a sense of significance and produce self-reflection. Therefore, ethnographic fieldwork provides in-depth knowledge of the symbolic meaning embedded in cultural life by observing people's ongoing behaviours and activities in connection with physical and natural environments, as stated by Linda Groat.[120] This method emphasises *participant* observation as the core concept.[121] While the research was in progress, the world was hit by an unexpected pandemic (Covid-19), which caused school lockdowns. Consequently, the ethnographic fieldwork could not proceed as planned because of the absence of participants.

Although the second and third objectives of the approach are still being realised, the enquiry continues to gain knowledge of space through the discipline of architecture. Therefore, the

[116] Macel, p. 62.
[117] Tosh, p. 2.
[118] Ibid.
[119] Pickering, p. 27.
[120] Linda Groat, 'Qualitative Research', in *Architectural Research Methods* (Canada: John Wiley & Sons, 2013), pp. 215-262 (p. 224).
[121] Ibid.

fieldwork method has changed from anthropological study to architectural fieldwork. Anthropology, geography, and archaeology have established and revisited the definition of fieldwork as a methodological approach that contributes to knowledge production and hypothesis examination.[122] According to Jeremie McGowan, *'…fieldwork in architecture, including art and architectural history, is far less defined,'* pointing to many issues and possibilities in architectural research and practice.[123] Despite some controversies about this approach in research methodology, I add my voice to those of the participants of the sixth International Conference of the Architectural Humanities Research Association (AHRA) in 2009 on architecture and fieldwork's theory and practice.

In this study, fieldwork is an approach to learning from a place, researching its meaning, and obtaining self-experience. An edited collection of critical histories, theoretical tactics, and reflective design practices from the AHRA conference was produced by Suzanne Ewing, Jeremie McGowan, Chris Speed, and Victoria Clare Bernie in the book *Architecture and Field/Work*.[124] McGowan pointed out that fieldwork's meaning, usage, techniques, and outputs remain vulnerable to changes and disruptions.[125] Ewing identified fieldwork as a practice rather than a discipline.[126] She clarified this by saying, *'it is practised in different ways by different disciplines towards diverging ends, and may contribute to the consolidating, deepening and extending of disciplinary knowledge'.*[127] Consequently, the authors presented many explanations for the fieldwork method. Victoria Bernie explored that the current state of architecture has its origins in a historical gap between representation and construction and that field or site work may improve our understanding of design purpose and resolution, architectural idea, and constructed building;[128] Catharina Gabrielesson mentioned that *'fieldwork can be understood as a form of reality check, a means of adjusting one's thinking and practice to the exterior world;'*[129] and Ewing stated that fieldwork is a practice of '*thinking on our feet*', referring to experience drawn on and from the field.[130]

Historians believe that the best way to comprehend what written materials truly mean is to leave the archives and enter their source locations, or where the documents were produced. In this

[122] Suzanne Ewing, 'Re-Thinking Site as Field: Field Notes, Observations and Practices', *Report,* 15. 4 (2011), 309-311 (p. 309).
[123] Jérémie Michael McGowan, 'Field/Work Practice', in *Architecture and Field/Work*,ed. by Suzanne Ewing, and others (New York: Routledge Taylor and Francis Group, 2011), pp. 7-21 (p. 8).
[124] Ibid.
[125] Ibid.
[126] Ibid. p. 5.
[127] Ibid.
[128] Victoria Clare Bernie, 'Field/Work Techniques'ibid., pp. 115-117 (p. 115).
[129] Catharina Gabrielsson, 'Inside the Cave, Outside the Discipline'ibid., pp. 35-42 (p. 37).
[130] *Architecture and Field/Work*, ed. by Suzanne Ewing and others (New York: Routledge Taylor and Francis Group, 2011),(p. 5).

research, architectural fieldwork was carried out to obtain a better understanding of modernist school buildings and how our presence can be seen both inside and outside. The ability to read places empirically is because they introduce themselves to new interpretations and examinations to explore the knowledge of space in architectural thinking. Building surveys, site visits, self-observations, documentation, photographs, notes, and sketches were all part of the architectural practices that produced knowledge in this study. Static data from the Ministry of Education was used to conduct a survey of approximately 840 state schools in Kuwait, of which 564 were built before the 1990s. The survey determined the number of schools, their design typology, grade level, student gender, and the district in which each school was located. Thirteen schools were permitted to be visited as part of this fieldwork. The design typology, historical distance, and well-known architects contributed to the selection process.

The findings of historical studies are influenced by how history is interpreted as scientific research. Macel's heuristics, analysis, and interpretation stages are the basis of this historical research. The study investigates how diverse historical evidence was employed as primary and secondary sources, demonstrates how the meaning of historical texts and visual drawings or maps were analysed, and investigates how aspects such as context and typology were interpreted in relation to one another. According to Wang, *'The cultural turn is a significant reaction against this view as the 20th century played out'.* [131] In this study (as shown in **Figure 1.20)**, the historical narrative is given via the analysis of conceptualised and textualised materials based on cultural and spatial turn theories, which provides an in-depth portrait of Kuwait's modernist school architecture development during the twentieth century within the social, economic, and political contexts. As a consequence of these cultural and spatial turns, this historical study focused on real objects and subjective interpretations of the space in which they were situated.

[131] Wang, p. 176.

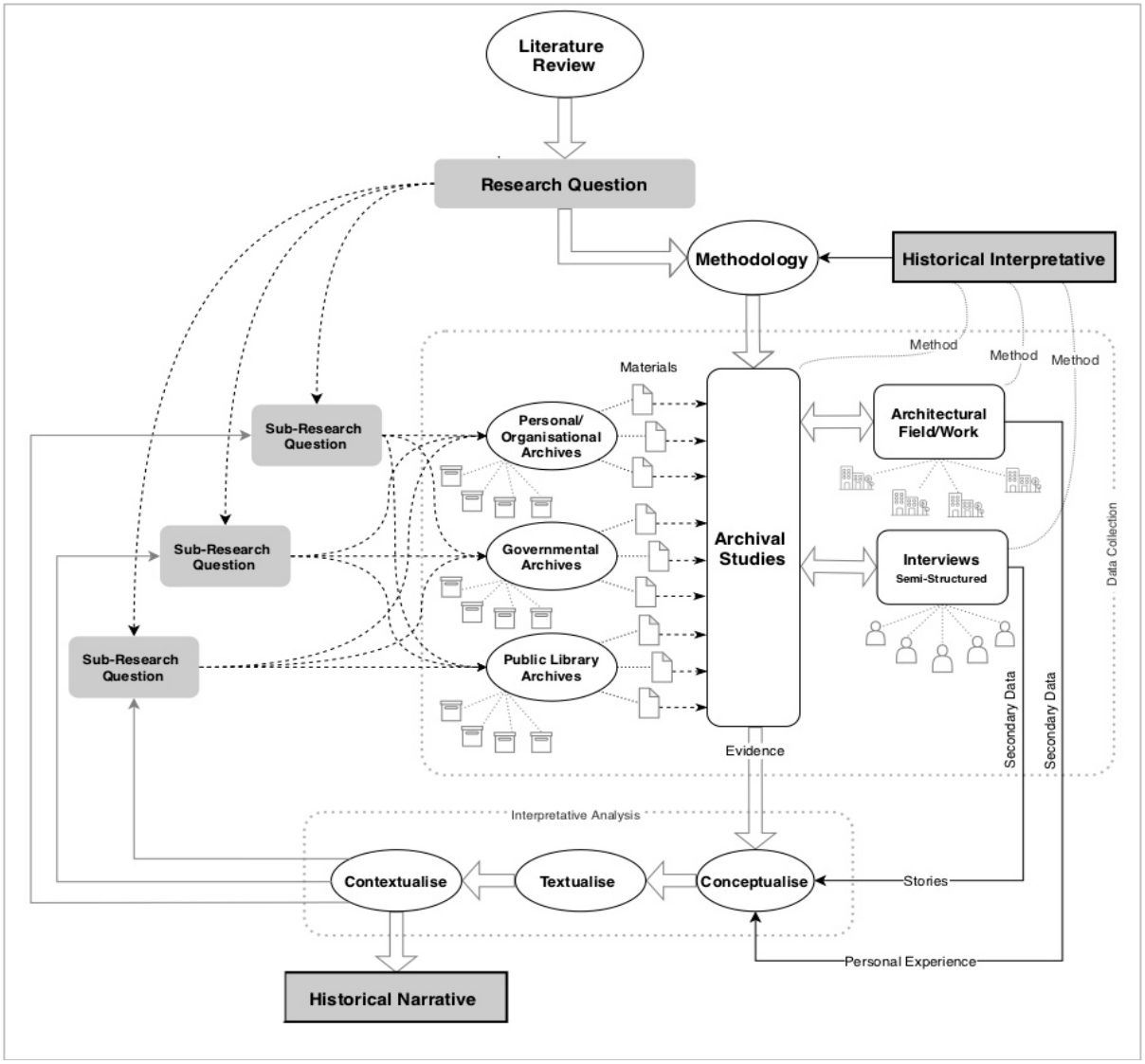


Figure 1.20 Thesis's research design and methods diagram. This diagram delves into the study's research design strategy, the various methodologies employed, and the interrelationships between them to form a coherent framework for data collection and analysis.[132]

1.4 RESEARCH METHODS

1.4.1 Archival Studies

According to Danto, it is important to investigate the sociocultural environment in which historical materials are generated, who produces them, and why.[133] Archival research, using reliable databases and material information, is critical for historical studies. The preservation and diffusion of historical memory and the creation of more profound knowledge of cultural, social, and political forces are made possible by archives that house a culture's distinctive documents, records, and

[132] Author, 2023.
[133] Danto, p. 35.

other publications. The main objective of archival research is to use original materials kept in an archive or other repository to conduct this research. It seeks to bring insight and knowledge to the field of modernisation and interprets the data to reveal a new narrative of Kuwait's modernist school architecture. There were three key areas of investigation: the educational system and pedagogical progress, Kuwait's urban transformation and growth, and the development of educational architecture in the country. There are a wide variety of archival sources, including manuscripts, records (both paper and electronic), and sound and video recordings. However, the archive selection was hampered by several limitations. Even if they can provide some insight into how school buildings were designed, they may not be able to provide all the information that is needed.

The dissemination of archival materials connected to significant architectural projects in Kuwait among distant archives throughout the globe has resulted in more research on Kuwait's modernisation process and its consequences. This investigation included visits to both regional and foreign archives. Regional archives include the government sector, national libraries, and press publishers. It should be noted that several crucial records lost following the Iraqi invasion are missing from Kuwait's government archives. As a result, delving into foreign archives is critical for filling the gaps in the missing material from local sources. The foreign archives that were accessed are relevant to architects and agents who worked in Kuwait throughout the period investigated in this thesis. It would have been challenging to conduct this research without an in-depth assessment of the fragments and analysis of the broader system and its connecting pieces, which included the Kuwait's overall urban modernisation and welfare system.

The materials acquired from the archives include communications between the Kuwaiti government and its foreign designers, as well as drawings, pictures, and studies made by commissioned organisations such as UNESCO. Many previously unpublished items were uncovered during this archive investigation, including communications between architects and foreign consultants and past design concepts for the numerous schools reviewed in this thesis. In addition, several local publications and newspapers revealed the complex web of ties and overlaps that connects overseas consultants with local professionals and the government. For this research, it was important to investigate archives at both individual and organisational archives, as well as those from the governmental sector and public libraries.

It is not only the materials that this study investigates; instead, it looks at archives as a whole and how they were utilised in historical narratives. These archives are more useful if they are part of a larger picture that includes their origins, current context, and power relationships. Therefore, the research may look at evidence from a different angle and not depend on the details given within it. Following in the footsteps of anthropologist Laura Ann Stoler, colonial archives are being investigated as a subject rather than merely a source,[134] allowing for new academic narratives to be read into them that may contradict what is documented in the history, specifically after the '*historical turn'*.[135] She wanted to undermine the bias in colonial studies. According to her, colonial archives include contradictory and rumoured information, shifting conceptions of authority and order, futuristic visions, and affective knowledge that needs to be looked at from the perspective of political rationality.[136] Her goal was to better grasp the frequent changes in archival records between epistemological assurance and the existential doubt shown in the archives that worried and sometimes befuddled colonial rulers. Thus, this study examined the chosen archives as places of knowledge creation rather than knowledge retrieval. The following archives tell the stories themselves.

A. Individual/Organisational Archives:

- gta ETH Zurich Archive in Switzerland: It is an archive that preserves architectural, urban planning, design drawings, and landscape design records from the mid-nineteenth century to the present day since the establishment of the Institute for History and Theory of Architecture (gta) at ETH Zurich in 1967. The archive is housed at ETH Zurich University, where the architect Roth was an academic instructor. This archive served as a key source in this study for the development of modernist educational architecture in Kuwait that took place from the late 1960s to the 1980s, particularly the efforts made by Roth. The obtained materials included blueprint drawings, documents, reports, correspondence letters between Roth and the government of Kuwait and the Kuwait Engineering Office (KEO), photographs, notes, and sketches. (For more information, see **Appendix B**)

- British Petroleum Archive (BP) in the United Kingdom: This is the archive of the Anglo-Persian Oil Company, founded in 1909 and renamed British Petroleum. Since the 1930s,

[134] Ann Laura Stoler, *Along the Archival Grain: Epistemic Anxieties and Colonial Common Sense* (New Jersey: Princeton University Press 2009), p. 20.
[135] Ann Laura Stoler, 'Colonial Archives and the Arts of Governance', *Archival Science,* 2 (2002), 87-109 (p. 88).
[136] Stoler, p. 98.

it has housed records of several significant joint ventures with KOC. In 1934, BP and Gulf Oil formed an equal partnership to establish KOC. It has been claimed that the Gulf had a *special connection* with Kuwait during this period. Consequently, KOC returned to Kuwaiti control in 1975. The archive houses a significant collection of resources related to Kuwait's urban transition and progress. These materials include aerial views, images of old schools, and documents related to the collaboration between the oil company and modern developments in Kuwait- Al-Ahmadi city in particular. (For more information, see **Appendix B**)

- The National Archive (TNA) in the United Kingdom: This archive, which is the official repository of the UK government as well as the governments of England and Wales, has preserved more than 1,000 years of national history. Based on the historical and political ties between the United Kingdom and Kuwait, this collection contains various interesting items dating back to the end of the nineteenth century. This provides insight into the evidence linking the Arabian Gulf to Mesopotamia, revealing strong links with Britain in an endeavour to break away from the Ottoman Empire, as well as information on the British protectorate, which was allocated in 1899 by the British government and Kuwait. For this study, the collection gathered from the TNA archive serves the urban transition and growth of Kuwait modernism. Evidence for following the oil discovery was exposed via these connections regarding British agencies' endeavours in Kuwait's modernisation, such as oil business production, architectural development, and education policies. (For more information, see **Appendix B**)

- UNESCO Archives in France: It provides a wide range of materials, including databases, e-journals, multimedia records, and documents. Educational development and cultural exchange have been central to UNESCO's mission since its establishment over 70 years ago. A key point of UNESCO's is that universal access to free primary education is a requirement for all member states, including Kuwait. The archival sources are utilised in this study to examine the education system and pedagogical developments in Kuwait from the 1960s to the 1980s. Therefore, the materials available in the UNESCO archives enhanced this research to understand the policies behind educational reformation, school building designs, and their development progress. The materials obtained included reports, studies, recommendations, guidelines, assessments, and policies from the 1960s to the 1980s. (For more information, see **Appendix B**)

- Arabian Gulf for Digital Archives (AGDA) in the United Arab Emirates (UAE)*:* The outcome of a partnership between the UK and UAE's national archives. It brings to life more than two centuries of Gulf history and provides historians with unparalleled online access to the original material. It serves to study areas of Kuwaiti urban transformation and growth and the area of educational development and progress. The materials obtained from this archive include documents and reports on educational facilities and correspondence letters between the Kuwaiti government and the British in the region. All materials are from the pre-oil era, including the Shuwaikh School, the role of Emile Bustani in the Arab region, and the adaptation of Kuwait's school programme for the UAE and Bahrain. It is the first time the content has been published in most cases. (For more information, see **Appendix B**)

B. Governmental Sector Archives:

To know more about Kuwait's modernisation and educational development, an investigation combed through its official archival holdings. These government sectors maintain private archives that are inaccessible to the public. A permit for access was obtained. Several important documents were removed from the Kuwaiti government archives following the Iraqi invasion. As a result, it was difficult to access all the necessary data. The materials obtained from Kuwait Municipality include original documents for Kuwait's Master Plans, building regulations and codes, digital maps, and the latest reports on the Fourth Master Plan under study by Parkins and Will (see **Appendix E**). Data on all educational institutions in Kuwait, building guidelines for new schools, and limited school-building blueprints were obtained from the Ministry of Education. The plans and drawings of schools constructed in the 1960s and 1970s were collected from the Ministry of Public Works. Similarly, plans and drawings of educational institutions from the late 1970s through the 1980s and 1990s by the Public Authority for Housing Welfare were used in this research. Images of old schools and student activities were used from the Afaq Archive of Kuwait University.

C. Organisational Libraries:

Aside from archival data, this study drew on secondary sources, such as records of British-Kuwaiti political ties, urban transformation and architectural growth, and

educational development in Kuwait. Journal articles by international planners on their experiences in Kuwait, articles written by Kuwaiti educators, articles from Kuwait's printed press on educational institutions, and scholarships for Kuwaiti educational institutions in the form of books, journal articles, conference papers, and academic publications. These sources were integrated with academic essays by historians such as Abu-Hakima, Zahra Freeth, Saba Goerge Shiber, Abdullah Al-Nouri, Abdulaziz Hussein, and Abdulaziz Al-Rusheed. They were created between the late 1960s and the late 1990s and cover various issues, including education and architecture, history, culture, and education. Some of the library catalogues that include these documents are as follows:

- Central Research for Kuwaiti Studies (CRKS) in Kuwait: This library collects most research and studies on Kuwait's culture, society, history, economy, and politics. Secondary materials, such as government publications, books, and databases, comprise the majority of the CRKS collection and were classified as primary sources in this study. (For more information, see **Appendix B**)
- The Kuwait National Library (KNL) in Kuwait: This newly opened library contains essential works on Kuwait's history. The collection of books, journals, periodicals, maps, movies, and images from which this study benefited was priceless. (For more information, see **Appendix B**)
- The Royal Institute of British Architects (RIBA) Library in the UK: The library has various collections of books, periodicals, photographs, audio-visual materials, and biographical files. For this research, the materials collected were limited to periodicals published in the 1960s and 1980s and were used as primary sources. (For more information, see **Appendix B**)
- The Qatar Digital Library (QDL) in Qatar, in which the Qatar Foundation, Qatar National Library, and British Library have worked together for more than a decade, brings this to recognition. This is the first time that QDL has been made accessible online; it features a vast range of information about the Gulf's history, culture, and legacy. The reports and correspondence letters available provide insight into the region's pre-oil educational progress, particularly the Kuwait-Bahraini collaboration on training pupils at technical schools. (For more information, see **Appendix B**)

1.4.2 Interviews

To gain further perspective and understanding this thesis used interviews with several prominent figures in the fields of education, urban planning, and architecture from the Kuwait government. Semi-structured interviews were conducted with seven important people engaged in the modernisation process or currently holding significant positions in the government sector to better understand the prospects for improving the information created from archive resources. In the semi-structured interview, emphasis was placed on the information being presented and not on the questions asked. The interviewer could specify the subject matter to be discussed throughout the conversation. The interviews lasted approximately 45 minutes each and were conducted through online calls. All interviews were transcribed from audio recordings and typed out. Each interview was first transcribed in Arabic, and the essential aspects were subsequently translated into English for the research. Architects and senior personnel in government sectors were identified via official planning reports, and their positions were presented to government planning bodies. The interviews served to fill the void left by the lack of documentation from a government viewpoint and widened the scope of understanding of the modernisation era for education and architectural development.

A. Interviewees from the 'Period of the Study':

In addition to archival evidence dating back to the study era, historical narratives from the past are also desirable. Through archival records, key or related people were identified during the interviews. A representative sample of those who worked in governmental sectors' school design and construction-related fields, such as the Ministry of Public Works and Kuwait Municipality, was selected for this study. The following individuals were interviewed:

- Sabah Mohammed Al-Rayes: In the 1970s, Al-Rayes worked as an engineer for the Ministry of Public Works before forming the Pan-Arab Engineering Consultancy. His brief stay at the Ministry of Public Works brought him into contact with Saba George Shiber. In Cairo, Egypt, he served as the head of the Union of the Arab Engineers' Education Committee (1967-1984). He was questioned about his time at the Ministry of Public Works in the 1970s and his viewpoint on Kuwait's modernisation process. (For more information, see **Appendix C**)
- Ahmad Al-Jihayem: An architectural engineer who went through many schooling systems during his academic journey in Kuwait. One of the first groups was enrolled in

a government scholarship programme in the United States. In the 1960s, he worked for the Kuwait Municipality until he started his firm in 1978. Interviewees sought him out because of his expertise in Kuwait Municipality in the 1970s. (For more information, see **Appendix C**)

- Jaber Abulhassan: is one of Kuwait's pioneering architects who graduated in 1972 from the University of Oregon, United States. In 1973, the architect Abulhassan joined the Ministry of Public Works and remained there until 1980, when he left to establish his own practice. This study was greatly aided by his experience with a prefabricated system implemented in the 1970s. (For more information, see **Appendix C**)

B. Interviewees from Governmental Sectors:

Four main governmental sectors have an impact on educational architecture in this study: the Ministry of Education, the Supreme Council for Planning and Development (SCPD), the Municipal Council, and the Public Authority for Housing Welfare. To better understand the present conditions of the school building's design and construction, it has been decided to reach out to a key person from each sector. Therefore, the following individuals were interviewed:

- Khaled Mahdi: Presently, he is the director of the Supreme Council for Planning and Development's General Secretariat and the UNDP's Country Plan Action Programme in Kuwait. Mahdi served as a member of the Supreme Council for Education and was on the National Centre for Education Development's (NCED) board of trustees. He was questioned as part of an investigation of the future of school buildings in Kuwait and the country's environmental ambitions. (For more information, see **Appendix C**)

- Hasan Kamal: Since 2013, he has been elected to Kuwait's Municipal Council as a council member and a chairman of that Capital Governorate's Committee, which assesses projects related to the urban, environmental, and health aspects of the municipality. He also serves as a member of the board of directors of the capital governorate. Kamal was interviewed to address the provision of school designs and construction, as well as the possibilities of renovating and reusing existing schools. (For more information, see **Appendix C**)

- Nasser Kharaibut: Deputy Director-General for the Planning and Design Department at the Public Authority for Housing and Welfare since 2001. In addition to being an

architect, he is one of the leaders of the Public Authority for Housing and Welfare in charge of converting Kuwait into a new city. Interviewees sought him because of his expertise in Kuwait's future growth and the establishment of new schools in the twenty-first century. (For more information, see **Appendix C**)

- Salah Yaseen: He is currently a faculty member in the Civil Engineering Department at Kuwait University. He was interviewed about his role in the Ministry of Education as an assistant undersecretary for educational institutions. At the Ministry of Education, Yaseen examined the design and construction processes and challenges faced in school building designs. (For more information, see **Appendix C**)

1.4.3 Architectural Fieldwork

The building itself was another critical source of data for this study. As a means of enhancing knowledge of history, building examinations helps better comprehend the past and how it is represented. These data were collected through architectural fieldwork to critically examine, improve, and extend how they were used to produce interpretations based on data obtained from archival materials. Each building was examined via documentary evidence examinations, site visits, and on-site recordings. Most of the work was captured through photographic documentation, written as self-reflection, or drawn as a sketch. Visiting school buildings aided in thinking about how different designs reflected the past, how they were altered to transmit the present, and the different readings that could be conducted to examine these representations more critically.

A survey was carried out to ascertain the number of schools, their design type, grade level, student gender, and the district in which each school was located (see **Appendix D**). According to a study based on static Ministry of Education statistics, only 564 of Kuwait's 840 state schools were constructed before the 1990s. The design typology, historical distance, and well-known architects contributed to the selection process. Designers such as Tripe and Wakeham, and Roth were included in the shortlist as a result of the selection process. Thirteen schools were permitted to be visited as part of this fieldwork. Consequently, four kindergartens, three primary schools, four intermediate schools, and two secondary schools were visited. The architectural fieldwork school building selection is shown in **Figure 1.21** and **Table 1.1.**

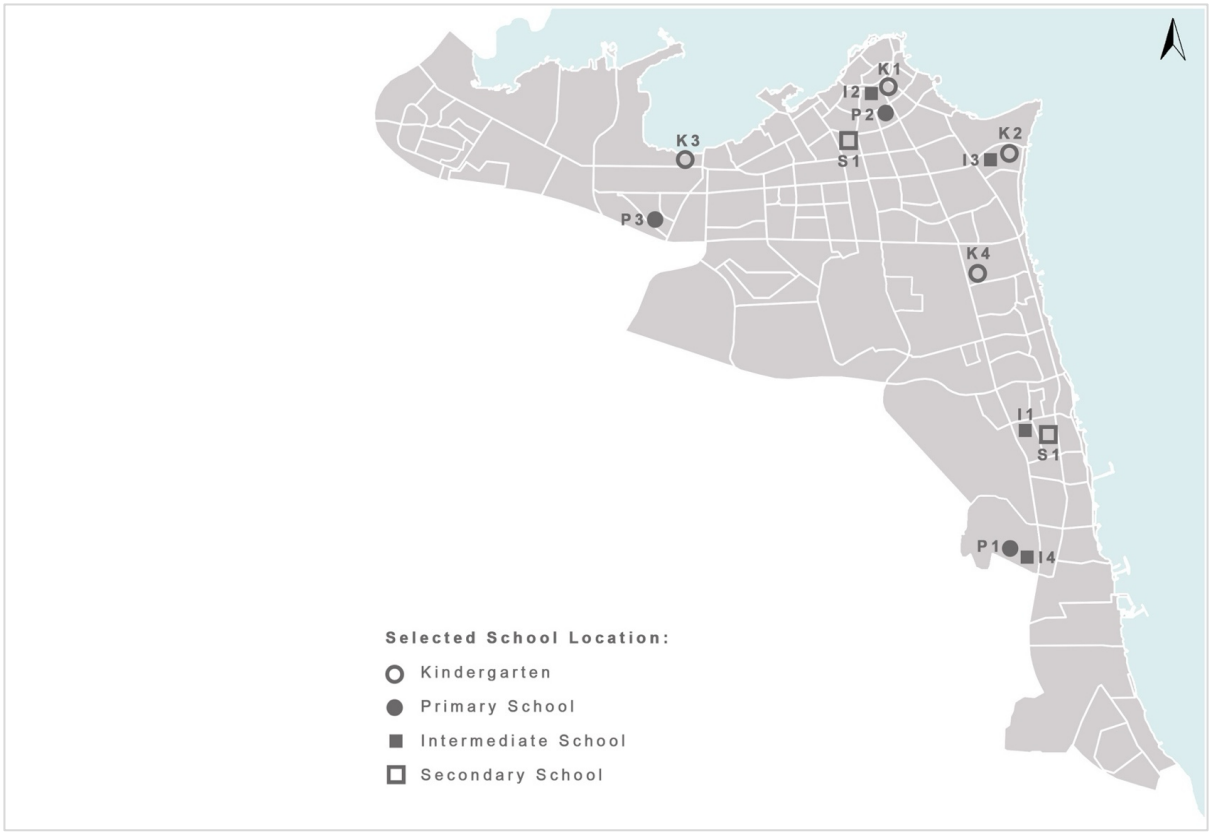


Figure 1.21 The location of selected school buildings in Kuwait. The map illustrates the precise locations of the selected schools for this study, encompassing kindergarten, primary, intermediate, and secondary levels, as indicated by a key on the plan.[137]

School Level	Code	Location	Built Date	Designed by	Archive Source	Note
Kindergarten	K1	Mansouriya	1972	Alfred Roth	gta Archive + MPW Archive	It was originally designed and constructed under the supervision of Alfred Roth
	K2	Rumaithiya	1968	Tripe & Wakeham*	-	
	K3	Sulaibikhat	1971	Tripe & Wakeham*	-	
	K4	Adan	1982	Government	PAHW Archive	
Primary	P1	Ahmedi	1963	Unknown	-	
	P2	Nizha	1974	Alfred Roth*	gta Archive + MPW & PAHW Archives	
	P3	Sulaibiya	1981	Alfred Roth*	gta Archive	
Intermediate	I1	Hadiya	1985	Alfred Roth*	gta Archive + PAHW Archive	
	I2	Abdullah Al-Salem	1974	Alfred Roth*	gta Archive + PAHW Archive	
	I3	Rumaithiya	1970	Alfred Roth	gta Archive + MPW Archive	It was originally designed and constructed under the supervision of Alfred Roth
	I4	Ahmedi	1973	Alfred Roth**	gta Archive	
Secondary	S1	Khalediya	1974	Alfred Roth*	gta Archive + PAHW Archive	
	S2	Riqqa	1979	Alfred Roth*	gta Archive + PAHW Archive	

* The school is a representative example.
**The design was updated by Roth.

Table 1.1 The list of schools visited in Kuwait. The table displays a comprehensive selection of schools included in this study, encompassing all grade levels from kindergarten to secondary. The location, date of construction, and archival references for all schools are given.[138]

[137] Author, 2023.
[138] Author, 2023.

1.5 CONCLUSION

Following crucial historical moments such as independence from the British Treaty, the discovery of oil, and the reformation of the educational system, Kuwait was transformed economically, socially, and culturally into a modern society. These power transitions cause the built environment to undergo rapid changes as it adapts to a new social order, leading to the reshaping of its identity. This study uses an interpretive-historical approach to comprehend the complex contexts of architectural meaning, including social, political, and economic forces. As a researcher, it is essential to have a comprehensive understanding of history to understand cultural phenomena in the context of the built environment. Well-designed historical research is based on a hypothesis or phenomenon that seeks to explain the connections between past and present variables or to draw the sequence patterns of past development. It relies on a logic of interpretation, in which it relies on primary evidence to entail a narrative framework. History focuses on archives and artefacts from the past, whereas qualitative research tends to collect data about the past in current social and cultural contexts.

In this chapter, the research context is explored to give a brief introduction to the research hypothesis, research design, methods, and methodologies, and the contribution they make to the field of modern architectural movement. The purpose of this thesis is to delve into the cultural ideology and architectural significance of modernist school buildings in Kuwait, which emerged during the twentieth century because of the educational plan of the modernist welfare state. The research begins in the early 1900s, when formal education was instituted in Kuwait, and mostly focuses on the second half of the century, when oil was discovered and a new nation-state was formed, with a digression into earlier decades. Because of the complexity of the social, economic, and political circumstances, an interpretative historical approach was the best methodology to follow to gain insight into the past phenomena of architectural modernism in Kuwait.

Therefore, the methods for gathering data, determining their validity and reliability, and placing them in context are laid out in this chapter. The primary and secondary source materials were discussed in detail, and it became clear that a wide range of historical materials were delved into, from a more common archival collection and oral history to more well-known miniature historical physical objects (buildings). The archival materials comprise a wide variety of historical documents, drawings, sketches, notes, manuscripts, and meeting minutes. Because of these in-depth interviews, much of the political and developmental progress was explained and understood. The fieldwork

results were used to provide an in-depth understanding of how and why modernist school buildings represent the cultural ideology of modern Kuwait. As part of the data analysis, sources were evaluated in terms of their ability to provide information, and existing materials were reviewed for facts. The accuracy, timeliness, provenance, authorship, and originality of information are aspects of source evaluation.

This study aims to add to our understanding of modern Kuwaiti architecture, the welfare state programme, and educational architecture by tracking the rise and fall of learning spaces in Kuwaiti schools from the 1950s through the 1980s —a period of economic prosperity. This bolsters the argument that modernism is an ideology with Western roots that has been exported to other parts of the world and adapted in different ways. Through the prism of modernist school architecture, this study offers an empirical perspective on the ways in which economic power and internal and external political tensions serve as powerful emblems of modernisation and how their effects endure long after independence. By focusing on the connection between welfare architecture and school architecture, this research adds to the literature on welfare architecture and opens new lines of enquiry that connect various disciplines and perspectives to modernity in the built environment.

CHAPTER TWO

STUDIES ON KUWAIT'S MODERN ARCHITECTURE: A LITERATURE REVIEW

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Although much has been written about Kuwait's architecture in the modern era, surprisingly little has been mentioned about the architecture of education, which has contributed to infrastructure modernisation and displaced school buildings from the historic fabric in pursuit of modernity. Similarly, the sources of education reform have been dominated by the existing narrative of educational development and pedagogical matters. This section includes research from various disciplines, such as social science, architecture, urban planning, and education policy. Using a literary assessment of Kuwait's urban and architectural transformation, the architecture of modernist schools in different geographical contexts, and school buildings in Kuwait, each section briefly examines their primary content, the insights they bring to this study, and some of their inconsistencies or limitations in identifying the gap that this thesis will fill. This literature includes books, journal articles, academic dissertations, theses, and documentary films.

2.1 OVERVIEW

Kuwait's post-oil modernisation relied heavily on infrastructure development, the creation of a master plan, the expansion of new neighbourhoods, and the construction of modern buildings in the most up-to-date styles and employing the most advanced materials and technology. However, the country has lagged in its attention to architectural matters. To meet the demands of the oil and growing construction industries in the country, the government of Kuwait has placed premiums on training and educating its workforce. Nonetheless, they started valuing technical, mechanical, and electrical abilities with the goal of easing the transition and mainly relied on Western expertise throughout the conceptualisation and design phases.[1] The opportunity to study architecture overseas was made possible by scholarships provided by the government; however, the pool of qualified graduates was limited.[2] This persisted even after the establishment of Kuwait University, where the study of engineering disciplines, such as civil, mechanical, electrical, and petroleum

[1] Łukasz Stanek, 'Mobilities of Architecture in the Global Cold War: From Socialist Poland to Kuwait and Back', *International Journal of Islamic Architecture,* 4. 2 (2015), 365-398; Asseel Al-Ragam, 'Critical Nostalgia: Kuwait Urban Modernity and Alison and Peter Smithson's Kuwait Urban Study and Mat-Building', *The Journal of Architecture,* 20. 1 (2015), 1-20.

[2] *Tarikh Altaelim Fi Dawlat Alkuayt* [History of Education in the State of Kuwait], ed. by Abdulaziz Hussein. Vol. 2, Majlis Alma'aref Fi 25 A'am (Asr Altanweir) (Kuwait: CRSK, 2002),(pp. 46, 71); Jaber Abulhasan, *Kuwait Schools*, an interview conducted by Zainab Murtadhawi (Online Video, 24 May 2022).

began.[3] It seems that the country could have benefited from the aid of architects and planners while undergoing rapid expansion; without them, the country's efforts to modernise, nationalise, and provide social infrastructure (welfarism) were hampered by a misunderstanding of its urban fabric and architectural context.

At Kuwait University, architecture was not formally taught until the 1997 establishment of a department within the Faculty of Engineering and Petroleum; subsequent expansion in 2010 saw the establishment of a College of Architecture, from which forty students graduate each year.[4] Kuwait was a significant importer of architectural services, because its architects had previously received education elsewhere, leading to a more eclectic and varied approach that frequently included highly experimental designs. Therefore, the beginning of the twenty-first century saw a surge of interest in architectural research and studies, with researchers focusing either on pre-oil traditional architecture or, more commonly, on post-oil architecture studies, to decipher the complex context of today's built environment. Some studies have investigated how Kuwait's modernist buildings were expressed and represented in the built environment, while others have examined how Kuwait's urbanisation development and how modernisation has shifted ideologies, altered cultures, and erected entirely new social realms were included in the post-oil architecture narrative. In addition to research on social services and the built environment, there is also a body of work that examines how Kuwait's architectural designs reflect the country's recent history of modernisation and state nationalisation. Nevertheless, there is a lack of extensive research on Kuwaiti school architecture, which creates a great platform for the arguments presented in this thesis.

Therefore, the objective of this chapter is to examine these studies to comprehend the architectural context of Kuwait's post-oil era, with school architecture serving as the focal point of this thesis. It also assesses studies on the link between pedagogical reform, the industrial revolution, and school layout. The chapter also looks at the research on political variables that influenced the formation of school architecture in most Middle Eastern colonial states, such as imperialism, post-colonialism, nationalisation, and welfare provision controls. All these factors inform the primary and secondary research questions that the subsequent chapters will attempt to address.

[3] 'Kuliyat Alhandasat Walbitrul Aihtafalat Bi Murur 40 Eamana Alaa Einshayiha Birieayat Sumui Walii Aleahd ', [The College of Engineering and Petroleum celebrated its 40th anniversary under the patronage of His Highness the Crown Prince], *Kuwait News Agency,* 16 November 2015.

[4] Abdul-llah Abu-Ayyash, 'Urban Public Transport Planning in Kuwait', *Geo Journal,* 12. 3 (1986), 243-254.

2.2 MODERNISATION OF KUWAIT'S ARCHITECTURE AND URBAN TRANSFORMATION

After the discovery of oil in 1938, and following World War II, Kuwait began a period of rapid modern development and expansion of its welfare state. Urbanisation, guided by a variety of Western-inspired designs for the country's master plan, gave rise to a new capital city, which, in turn, inspired the development of adjacent neighbourhoods and the widespread construction of modern government and public buildings. This section analyses the literature on school architecture from the perspectives of urban planning and new cities, the nationalist approach, welfare, cultural transformation, and ideological recreation arguments to better comprehend the architectural context in which this study is situated.

2.2.1 Urban Growth in Kuwait

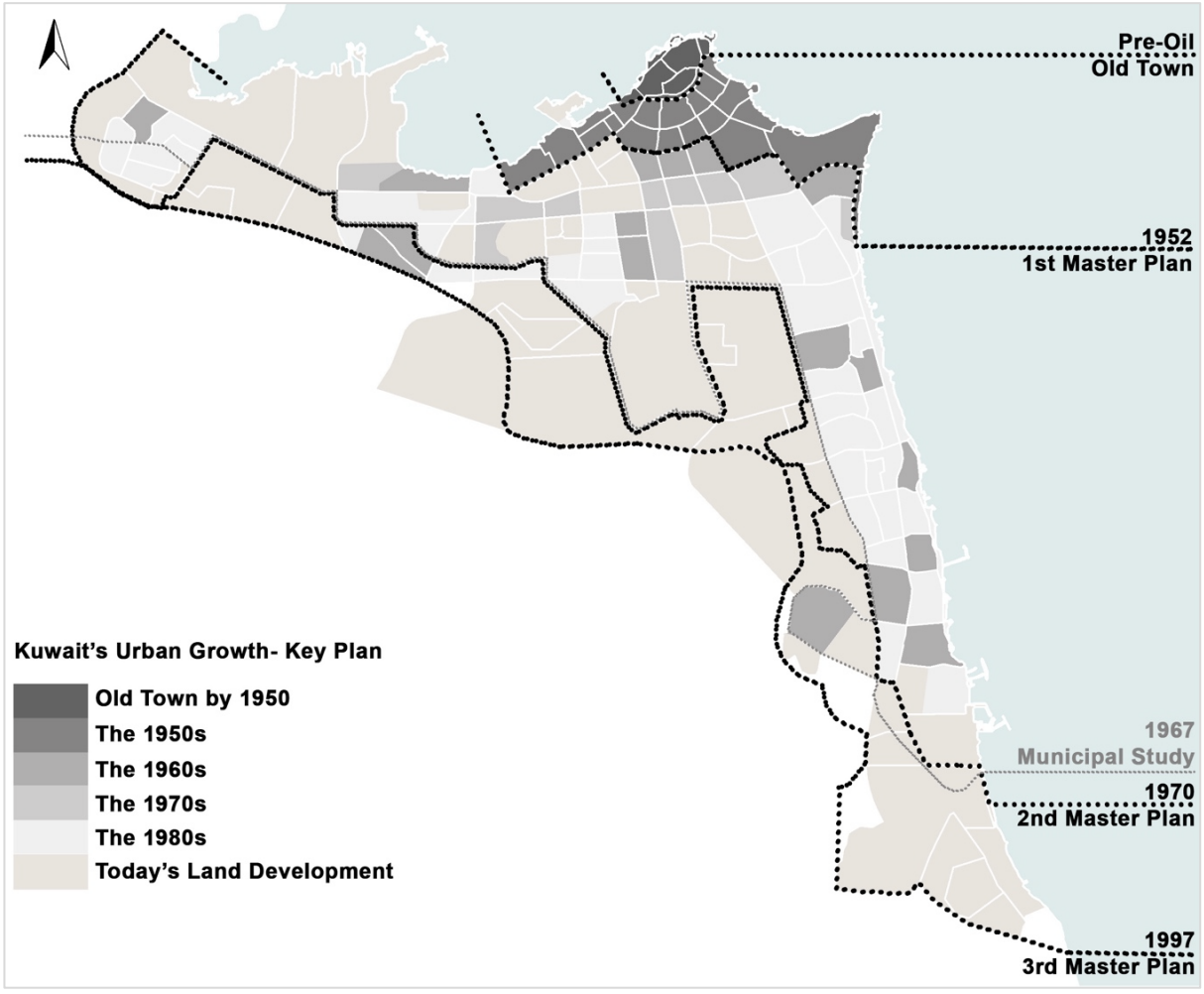

Figure 2.1 Master Plan for Kuwait's expansion from the old town to the present. The map illustrates the growth of Kuwait's urban dimension, which was shaped by a series of master plans spanning from the 1950s to the last plan in 1997.[5]

[5] Author, 2023.

One of the extremely impressive books about Kuwait's growth after oil discovery was written by a Kuwaiti historian, Farah Al-Nakib.[6] Her book, issued in 2016, entitled *Kuwait Transformed a History of Oil and Urban Life*, relied on archival materials and interviews in order to trace the relationship between urban expansion and everyday life activities, as well as social norms and interactions.[7] She emphasises the roots of state oil-driven growth-related societal concerns, such as the rise of intolerance against outsiders, the fluctuating disputes among social groupings, the general people's lethargy, and the lack of public concern. Throughout a chronological examination of Kuwait's pre-oil history into the post-oil state, she analyses the urban growth and the problems linked to the discovery of oil and the distribution of wealth by the ruling family.

Al-Nakib examined how Kuwait City's urban environment in the pre-oil era expanded to meet the everyday demands and activities of the people, giving three morphological studies that comprise a combination of economy, society, and politics. She shows how the pre-oil town's society acquired strong community feelings mainly shaped by their daily interactions and not by creating ideal cultural solidarity. For the post-oil discovery period, Al-Nakib analysed the spatial transformation of Kuwait, the modernisation of city planning and building, and the establishment of a significant welfare system. She finds that the rapid implementation of the First Master Plan indirectly generated two barriers to urban development: an inefficient state planning system and rising land prices. By looking at how successive master plans failed to build a functioning city to replace the demolished pre-oil town, Al-Nakib also believed that after 1950, urban development was targeted mainly at the interests of the state and capitalist elite at the expense of meeting everyday social demands.

Towards the end of her book, she draws inspiration from the concept of *'right to the city'* from the French sociologist Henri Lefebvre to conclude that the restoration of urban areas might provide alternatives for community engagement and participation that transcend actual citizenship constraints.[8] According to David Harvey's 1989 book *The Condition of Postmodernity*, a new postmodern sensibility has evolved in numerous sectors and disciplines, signifying a fundamental shift in political, economic, and cultural activities.[9] He provided a broad societal context for

[6] An assistant professor in the History Department, College of Liberal Arts, the California Polytechnic State University. She earned her PhD and master's degree from the University of London School of Oriental and African Studies, and a B.A. in history and journos from the George Washington University.

[7] Farah Al-Nakib, *Kuwait Transformed a History of Oil and Urban Life* (Stanford, California: Stanford University Press, 2016), p. 6.

[8] She also draws the urban theories of Richard Sennett and David Harvey.

[9] David Harvey, *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change* (Cambridge MA and Oxford UK: Blackwell, 1989), pp. 49, 68, and 111.

understanding postmodern thought. Al-Nakib also believed that the physical characteristics of any city must respond to its social demands; therefore, she did not concentrate much on the spaces in her work, as other historians appraise.

By 2008, Asseel Al-Ragam, a faculty member at the College of Architecture, Kuwait University, had embraced modernity theory to explain the cultural exchange of Kuwait's architectural modernisation between the 1950s and the 1960s in her PhD thesis entitled *Towards a Critique of an Architectural Nahda.*[10] She depicts Kuwait's urban and architectural development in a way that redefines Kuwait's modern identity and values. In her opinion, modern architecture results from societal and cultural evolution, which, in turn, alters our understanding of space and how we interact with it. In her thesis, Al-Ragam described Kuwait's educational architecture as the social production of space that began with the nationalist movement, proceeded into the urban fabric, and culminated in Kuwait's modernist architecture. Although her thesis presents a concise summary of educational architecture as a space production and its reflection on society's everyday life, her analysis briefly emphasises the work of Tripe and Wakeham.

Two studies on the evolution of Kuwait's Master Plans from the 1950s to the 1970s were completed in 1980 and 1988 (see **Figure 2.1**). The first, Abul-Ilah Abu-Ayyash's *Urban Development and Planning Strategies in Kuwait,* examines the first two Master Plans and their reviews generated in 1952, 1967, 1970, and 1977 to describe rapid urban growth and regional development strategies.[11] His analysis identified four factors that affect urban growth: economics, population, urban activities, and urban planning expansion. He noted that the assessment of Kuwait's urban planning must be compared with various plans, considering their theoretical and conceptual bases. He claims that the lack of a theoretical approach resulted in the creation of a Second Master Plan that encompasses areas extending from the city centre to the sixth ring road due to rapid population growth. Even if his analysis of urbanisation offers a comprehensive look at the evolution of master plans, it fails to include the effect of the country's massive production of schools on the expansion of the student population. In regional development, educational institutions were briefly considered in micro-scale planning. The second study, which was conducted in-depth by Muhammad Fawzi Abdo, titled *The Urbanisation of Kuwait Since 1950: Planning, Progress, and Issues* in 1988, investigates the

[10] Asseel Al-Ragam, 'Towards a Critique of an Architectural Nahda' (unpublished doctoral thesis, University of Pennsylvania, 2008).
[11] Abu-Ayyash.

urbanisation process and the various master plans and reviews made over the same period.[12] His research looks at public politics, economics, and demographic analysis to draw guidelines for urban development focused on Kuwait's central business district. In addition to briefly mentioning education and schools, he goes into great depth into the many phases of the master plan process and how they are carried out. Both Abu-Ayyash and Abdo address and document the historical progression of the 1970's Master Plan, which was influential in defining neighbourhood designs and amenities, including schools. These literary forms are integral to this thesis.

2.2.2 Towards a Capital City

Although Kuwait was not colonised, British influence was bolstered by the country's status as a protectorate from 1899 to 1961, during which the British emphasised their role in shaping the country's physical infrastructure through projects such as master planning, city capitalisation, and erecting buildings. Designers and planners in the region were concerned that their country was losing its irreplaceable cultural heritage, amid their efforts to establish a new national identity.

An essential book on Kuwait's history and urban development is *The Kuwait Urbanization: Documentation, Analysis, and Critique* by Saba George Shiber [1923-1968], published in 1964.[13] It has been cited in several studies and publications on Kuwaiti architecture and urban development.[14] He was a Palestinian American architect and urban planner.[15] His involvement in assessing, criticising, and conceptualising intellectual techniques and architectural theories to overcome the problems

[12] Muhammad Fawzi Abdo, 'The Urbanisation of Kuwait since 1950: Planning, Progress and Issues' (unpublished doctoral thesis, Durham University, 1988).

[13] Saba George Shiber, *'The Kuwait Urbanization, Being an Urbanistic Case-Study of a Developing Country'*, (Kuwait: 1964).

[14] Abdo; Yasser Mahgoub, 'Aleumran Fi Alkuayt: Qira'at Fi Awraq Almiemarii Saba George Shiber', *Ammar,* 76 (2003), 40-47; Al-Ragam; Muhannad A. Albaqshi, 'The Social Production of Space: Kuwait's Spatial History' (unpublished doctoral thesis, Illinois Institute of Technology, 2010); Asseel Al-Ragam, 'Representation and Ideology in Postcolonial Urban Development: The Arabian Gulf', *The Journal of Architecture,* 16. 4 (2011), 455-469; Reem Alissa, 'Building for Oil: Corporate Colonialism, Nationalism and Urban Modernity in Ahmadi, 1946-1992' (unpublished doctoral thesis, University of Califorina, 2012); Farah Al-Nakib, 'Kuwait's Modern Spectacle: Oil Wealth and the Making of a New Capital City, 1950-90', *Comparative Studies of South Asia, Africa and the Middle East,* 33. 1 (2013), 7-25; Gwyn Lloyd Jones, 'Kuwait City, Kuwait', in *Architecture and Globalisation in the Persian Gulf Region*,ed. by Murray Fraser and Nasser Golzari (London: Ashgate Publishing Limited, 2013); Roberto Fabbri, Sara Saragoca and Richardo Camacho, *Modern Architecture Kuwait 1949-1989* (Switzerland: Niggli, 2016); Al-Nakib; Asseel Al-Ragam, 'Towards a Critique of a Kuwaiti Nahdha: Al-'Imara Al-HadīTha and the Competing Narratives on Architecture and Urban Modernity', in *Modern Architecture Kuwait, Essays* (Switzerland: Niggli, 2017), pp. 47-65; Aminah Hamad Al-Kanderi, 'Dr. Saba George Shiber; an Early Practice of Critical Regionalism through the Lens of Arabian Modernity', *Enquiry: The ARCC Journal of Architectural Research,* (2018); Benyameen Amanwail Ghareeb, 'The Interplay between 'Tradition,' 'Modernity,' and Uneven Development: The Historical Development of Housing in Kuwait, 1950-2005' (unpublished doctoral thesis, University of Cincinnati, 2020); Ben Tosland, 'European Architects at the Confluence of Tradition and Modernity in the Persian Gulf, 1954-1982' (unpublished doctoral thesis, Kent University, 2020); Łukasz Stanek, *Architecture in Global Socialism Eastern Europe, West Africa, and the Middle East in the Cold War* (Princeton and Oxford: Princeton University Press, 2020).

[15] Shiber studied Bachelor of Civil Engineering and Architecture at the American University in Beirut and Cairo University, Master's in Architecture and City Planning at the Massachusetts Institute of Technology (MIT), and PhD in City and Regional Planning from Cornell University [see: Joe Nasr, 'Saba Shiber, 'Mr. Arab Planner'. Parcours Professionnel D'un Urbaniste Au Moyen-Orient', *Géocarrefour,* 80. 3 (2005), 197-206.]

of modern Arab cities was wide-ranging and influential. Furthermore, Shiber was a public intellectual who shared his regional ideas and criticisms of the urban Arab scene through regional and international journals and conferences, as well as radio and television interviews.

In May 1960, at the invitation of the Kuwaiti government, Shiber came to Kuwait to work as an assistant chief engineer in charge of the departments of surveying, town planning, and architectural design in the Public Works Department.[16] In 1964, Kuwait's Municipal Council and Development Board designated him an expert consultant member of the Technical Committee.[17] During his work, Shiber ran the first monograph of Kuwait's build-up process, where he conducted some of his research, sketches, and notes in this book. Through his survey and analysis, he critiques Kuwait's sudden urban development process over the pre-oil town, highlighting the failure of the modernisation approach (as shown in **Figure 2.2**). His vision of modern Kuwait City was a reaction to the massive destruction of vernacular architecture. He opted to utilise Kuwait's urban past as the driving force behind his proposal to restore the damage rather than any abstract and remote British design scheme. He was anguished that local and regional identity had been lost in Kuwait's progress towards modernity as a nation and city.

In addition to Shiber's philosophy and design theories, his book includes many plans, photographs, aerial views, notes, reports, and sketches that position Kuwait's physical transformation in the context of modern urbanisation in the early twentieth century. In addition to a brief mention of Kuwait University's Shuwaikh Campus, Shiber's work lacks a comprehensive review of the school programme. Nevertheless, it provides significant insight into Kuwait's urban modernisation, neighbourhood planning, and suburban utilities, which this thesis will examine concerning infrastructure schooling.

Correspondingly, Yasser Mahgoub's *Aleumran Fi Alkuayt: Qira'at Fi Awraq Almiemarii Saba George Shiber* [Kuwait Urbanisation: A Reading of Architect Saba George Shiber's Papers], issued in 2003, explains the current urban conditions and how problems appeared in conjunction with Shiber's viewpoint and doubts.[18] According to him, Shiber was concerned about the rapid development at which modernisation was taking place and how it might impact the future of the urban environment. Mahgoub summarises Shiber's concerns regarding the social, economic, and aesthetic impacts of

[16] Ibid.
[17] Ibid.
[18] A former faculty member at the Department of Architecture, Kuwait University; Mahgoub.

Kuwait's First Master Plan. As he explained, the distribution of urban areas supposedly promotes social interactivity, but it has the opposite effect and causes disparities between the new city and neighbourhoods. Aesthetically, the urban spatial distribution throughout the city was assumed to produce an integrated urban environment; however, it was fragmented and resulted in undeveloped lands. According to Mahgoub, automobiles were used as the primary mode of transportation, producing traffic matters, and raising the expenses of infrastructure development.

مدننا العربية في حاجة الى اعادة تخطيطها ...

الكويت تُخطّط عاصمتها على أحدث الأساليب

بقلم : المهندس الدكتور سابا جورج شبر

■ ان تنظيم المدن ، كما يفهم اليوم ، حقل واسع يشمل العلم والفن معا ، كما يشمل العلوم الاجتماعية كذلك. فهو لذلك حقل واسع التشعبات يتطلب كل فرع منه تخصصا فنيا . وفي الاساس ، يهدف تنظيم المدن الى خلق بيئة جميلة تلائم سكان المدينة . فعلى ذلك يحتاج تنفيذه الى معاونة العالم والباحث الاجتماعي والفنان على حد سواء .

اهتمام الانسان بتخطيط المدن قديم

وتاريخ المدن طويل ، اذ يعود الى حوالي خمسة آلاف سنة تقريبا . فمنذ بداية الحضارة ، رافقت المدينة تطور المجتمع البشري . ففي مصر واليونان والهند والصين وحضارات امريكا اللاتينية القديمة لا تزال آثار المدن شاهدة على اهتمام الانسان بتخطيط المدن وبنائها ، وبتعبير آخر ، باقامة الشوارع التي تقسم المدينة الى عدة مناطق مع ترك منطقة وسطية خالية من الأبنية تكون نواة المدينة .

تخطيط الشوارع وحده لا يكفي

وفي عدة دول اليوم ، لم يتعد تخطيط المدن طريقة بسط الشوارع الأولية هذه . ولقد بلغ هذا النوع من التنظيم قمته في تخطيط مدينتي باريس وواشنطن ، كما يظهر بوضوح في كانبرا عاصمة استراليا ونيودلهي عاصمة الهند .

وبمرور السنين ، وبنمو المشاكل الصناعية والاجتماعية في المدن ، اتضح ، شيئا فشيئا ، قصور بسط المدن الى شوارع عن خلق الجمال او توليد التلاؤم والراحة في المدينة ، كما اتضح ان المزج الكيفي بين استعمالات الأرض المختلفة من سكنية وصناعية وتجارية ، قد أدى الى مناسب واضرار برئات سكان المدينة. وفضلا عن ذلك فان استعمالات الأرض المتباينة ولدت احجاما متباينة في حركة المرور نبعد امر معالجتها بنظام موحد من الشوارع.

مشاكل اجتماعية سببها نمو المدن دون سبق تنظيم

ان الضغط الصناعي في المئة سنة الأخيرة ، والنظم غير المنطقية للسير ، ونمو المدن بغير نظام ، سبب مشاكل اجتماعية كبيرة كانت تتطلب الحل والعلاج . فغيام أحياء العشش القذرة المزدحمة بالسكان ، والأحوال الصحية المتأخرة ، وعدم تمكن البلديات من الضغط الناتج عن نمو المدن ، كل ذلك سبب استيفاظ الضمير الاجتماعي في دول عدة . فلم يعد كافيا القيام بانشاء الأبنية الفخمة والساحات الواسعة او شق الطرق الفسيحة دون الاهتمام بمشاكل الحياة اليومية التي يواجهها ساكن المدينة . وعندما ازدادت الحالة في المدن سوءا ، كان لا بد من اتخاذ اجراءات رسمية لتضع موضع التنفيذ اقتراحات المصلحين الاجتماعيين وعلماء الاجتماع والمتخصصين في فن العمارة مما ، ونتيجة لذلك اعتبر تخطيط المدن ، عملية فنية متعددة الجوانب في معظم الدول المتقدمة صناعيا ، وصار التخطيط واجبا من واجبات الحكومة يستوجب اهتماما يعادل اهتمام الحكومة بامور الدفاع والمال وشق الطرق وما اشبه .

في انجلترا مثلا تكوّن وزارة التنظيم البلدي والقروي احدى وزارات الحكومة المركزية وتقع على كاهلها مهمة ادارة تخطيط المدن البريطانية وحماية الريف من مخاطر التصنيع والتجارة بالأراضي بقصد الاستغلال الأمحدود .

معظم البلاد العربية ينقصها الفنيون والمال

وليس من الضروري للدول العربية ان تنتظر حتى تسوء أحوال مدنها الى الدرجة التي بلغتها معظم المدن الغربية قبل اعتمادها التخطيط البلدي كوسيلة من وسائل الحكومة المركزية . فان معظم الدول الآسيوية الافريقية بما فيها الدول العربية لا تزال في المرحلة الأولية للتصنيع ، وتستطيع الآن ان تستفيد من تجارب الغرب في هذا المضمار وذلك بان تجعل من تخطيط المدينة والريف وسيلة تتيح سبل انمائها المنظم .

ومع الأسف فالوضع ليس على ذلك الحال الرنجاة في معظم الدول العربية . ففي لبنان وزارة جديدة هي وزارة البلديات والأرياف وهي ، وان اخذت تتطور وتتوسع اخيرا ، الا انه ينقصها الموظفون الاختصاصيون والمال اللازم لتحقيق الدراسات الكثيرة للقيام بتطوير المدن والأرياف . والوضع نفسه يسود البلديات في بيروت وعمان والكويت وغيرها من بلديات المدن الكبيرة . فالموظفون الفنيون قلائل ولا يستطيعون القيام بالدراسات الواسعة التي تتطلبها مدن تزداد أمور ادارتها تشابكا وتشعبا يوما بعد يوم . وفضلا عن ذلك فان موازنة البلدية لا تكفي بالنسبة لنوع العمل المفروض ان تقوم به لتجعل من المدينة العربية مدينة ذات رونق ، ملائمة ومريحة لسكانها . اما في الجمهورية العربية المتحدة باقليميها فان وزارة الشؤون البلدية والقروية قد

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Figure 2.2 Saba Shiber's article discusses the process of planning Kuwait City. An article entitled 'our Arab cities need to be re-planned: Kuwait is planning its capital according to the latest methods' written by Saba Shiber criticises the process through which Kuwait City has been built, saying it ignores the need for thorough research and regional experience.[19]

Al-Ragam's *Representation and Ideology in Postcolonial Urban Development: The Arabian Gulf*, published in 2011, attempts to show how ideological representations hold up against shifting power structures and how dynamic voices, such as Shiber's, played a significant role in celebrating

[19] Saba Shiber, 'Mudununa Alearabiat Fi Hajat 'lilaa 'lieadat Takhtitiha: Alkuayt Tukhatit Easimataha Ealaa 'Ahdath Al'asalib' [our Arab cities need to be re-planned: Kuwait is planning its capital according to the latest methods], *Al-Arabi*, 1st September 1961, p. 112 and 113.

different cultural forms for their political and social agendas.[20] In her opinion, Shiber's counter-vision was successful to a certain extent. She indicated that many problems were met by Shiber's urban philosophy, which gave historical models greater importance in the communal consciousness, and that his concept of Arab city was an attempt to reclaim a lost sense of identity for the Arab society. Shiber's study approach provided a nascent architectural profession with the essential skills to slow down the disintegration of pre-oil towns; however, his approach to the problem was contradictory, as Al-Ragam stated.

In 1983, another comprehensive book that covered Kuwait City's development from 1950 to the early 1980s was published by Stephen Gardiner, titled *Kuwait: The Making of a City.*[21] Gardiner was an architect who studied at the Architectural Association (AA), worked for Wells Coates, and then spent brief periods with Maxwell Fry, Jane Drew, Richard Blow and Peter Dickinson.[22] From 1951 to 1957, he worked alongside Richard Sheppard, focusing on school projects in the United Kingdom.[23] His book provides excellent insight into Kuwait's modernisation by interviewing numerous prominent international architects and planners who worked in Kuwait during this period.[24] In his interviews, Gardiner spoke with Anthony Minoprio, Alan McCulloch, Leslie Martin, Kenzo Tange, and Jørn Utzon.[25] He offers a brief look at Kuwait's architectural history and a survey of some of the country's most notable buildings from the 1960s and the 1970s. Gardiner argued that Kuwait City could have become a true masterpiece with a better master plan. He felt that the Minoprio and

[20] A faculty member of the College of Architecture, Kuwait University; Al-Ragam.

[21] Stephen Gardiner, *Kuwait: The Making of a City* (Essex: Longman Group, 1983).

[22] An architect, designer and writer who is known for his modernist work of 'Block of Flats' in London. He was a delegate to the CIAM Congress in 1933, which resulted in the Athens Charter, and a co-founder with Maxwell Fry of the Modern Architectural Research Group (MARS), A British modernist architect, writer and painter. He practiced architecture with Walter Gropius, Le Corbusier and Pierre Jeanneret. Buildings by Fry were developed in the 1940s for nations in West Africa, notably Ghana and Nigeria, which were then British colonies. He and his wife, architect Jane Drew, collaborated with Le Corbusier for three years in the 1950s on plans for Chandigarh, Punjab's future capital city. Among Fry's works are critical and descriptive volumes on urban planning and architecture, such as Art in a Machine Age; A British modernist architect and town planner who became a key figure in the London Modernist Movement. She designed social and public housing in England, West Africa, India and Iran. Also, she designed schools and institutions in West Africa with husband, Maxwell Fry; An American writer and journalist who is known today by the name of Richard Bradley; A British author and poet.

[23] A British architect, an owner of Sheppard, Robson & Partners firm. More than eighty schools were designed in 1958. This includes buildings at Loughborough, Leicester, Brunel, City and Durham universities and the Manchester Polytechnic and Imperial Colleges in London and New York. Most notably was Churchill College in Cambridge, which Sheppard designed; Gardiner was also a published author. He has contributed to The Spectator, The Times, Architectural Review, and the RIBA Journal. He also published many works on architecture, including Evolution of the House (1974), a Le Corbusier biography (Fontana Modern Masters,1974), and The House: Its Origins and Evolution (1985).

[24] Sa'dun Al-Jassim, Hamid Shuaib, Leslie Martin, Alan McCulloch, Arthur Chisholm, Ronald Lewcock, Molly Izzard, Abdul-Rahman Al-Houty, Jørn Utzon, Reima Pietila, Raili Pietila, Abdullah Qabazard, Mohammed Qabazard, Violet Dickson, KEO, Anthony Minoprio, PAN ARAB, The Architects Collaborative, Skidmore, Owings and Merrill, VBB, Dissing and Weitling, Colin Buchanan, Shankland Cox, Salem Al-Maizouli, Sabah Abi-Hannah, Brian Clouston, Abdul Raof, Hamed Mashhour, Kenzo Tange, Zelfa Draz, Ulf Hard, Jacques Sartour, Architectural Review, MOI, Letchworth Garden City Museum.

[25] A British architect and town planner, partner of 'Moniprio and Spencely firm' which designed Kuwait's first master plan in 1952; Partner of Colin Buchanan firm which designed Kuwait's second master plan in 1972; An English architect, leading of the International Style. He was appointed as an advisor for Kuwait's Development Board; A Japanese architect who designed Kuwait's international airport in 1979; A Danish architect, who designed Sydney Opera House in Australia. He also designed the National Assembly Building in Kuwait.

Spencley strategies fell short of Kuwait's modernisation potential, resulting in the loss of the country's heritage. Although he disagrees with Kuwait's First Master Plan development, his views diverge from those of Shiber concerning the modernisation of nations. While Shiber encouraged Arab architects and engineers to lead the process of modernisation, Gardiner believed that international architects had the ability to reflect Kuwait's wealth and that their designs would provide natural harmony and continuity with the modern city (see **Figure 2.3**). He explained that the West colonised nearly every country, and the subsequent loss of national identity emerged as one of the most harmful impacts of technological growth in the twentieth century. However, he sees that Kuwait now has enough *'key buildings by key architects in key situations*' that hold and preserve architectural order for this expanded city that he described as a *'unique creation of oil'*.[26] His book presents a chronological narrative of the physical transformation of Kuwait's city, but it does not reveal the many conflicts and issues that accompanied Kuwait's oil-driven modernisation throughout the transition.

Figure 2.3 An aerial view of the developing commercial district in Kuwait City. The photograph depicts the district business area of 1968 Kuwait City, which included the Souq, the Seif Palace overlooking the sea, and the newly constructed government offices.[27]

[26] Gardiner.
[27] The British Petroleum Archive [BP], University of Warwick: Ref. 233261/001,© BP plc, 'Kuwait City', 1968.

In contrast, Al-Nakib indicates that Gardiner's *'unique creation of oil'* statement is misleading.[28] She argues that behind this story are hidden, complicated social, political, and spatial concerns. *Kuwait's Modern Spectacle: Oil Wealth and the Making of a New Capital City, 1950-90*, published thirty years after Gardiner's book, examines different urban development projects launched between the 1950s and the 1980s, which leads to Gardiner's statement and concludes that Kuwait was more than simply a unique oil creation.[29] She justifies her argument by bringing up more social and political circumstances that have led to the modern spectacle. According to her, Kuwait City's formation was established before the discovery of oil due to the port economy development under merchants' control with all their marketplaces, harbours, shipyards, and residential areas on the coastline area. This economic power seems to have prompted the merchants to form a political movement during the development of the new city (see **Figure 2.4**). Therefore, the oil revenue had increased the process of Kuwait City's formation rather than shaping its development, she stated. From a sociological standpoint, Al-Nakib finds that the arrival of oil wealth stimulated the ambition to rapidly modernise both the state and society, with the concept of *'Alnahda'* [the awakening] serving as the main ideological framework behind the development process. As a result, the pre-oil town was demolished to create a new city planned and developed by the state.

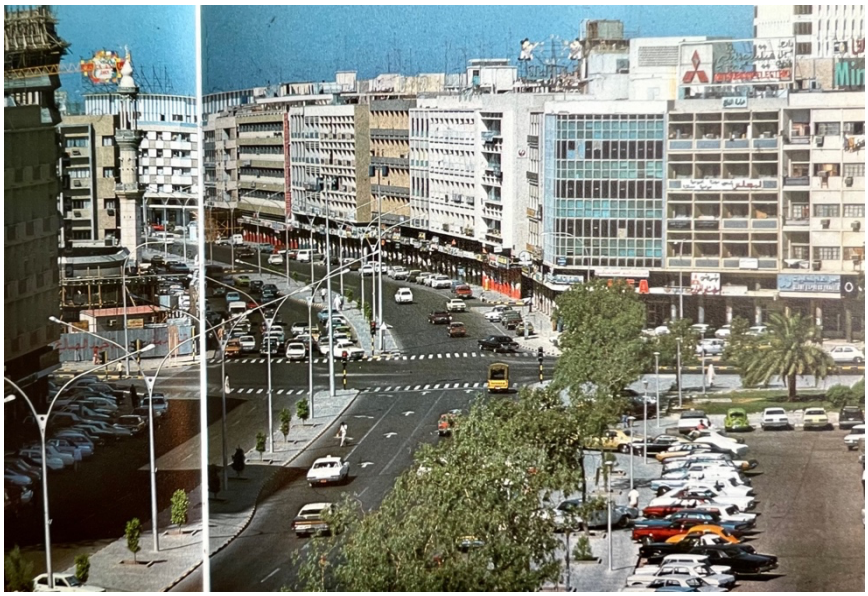


Figure 2.4 Fahad Al-Salem Street in Modern Kuwait City. The shot, taken on Fahad Al-Salem Street in modern Kuwait City, depicts the street's tree-lined office buildings and shops, c.1973.[30]

[28] An assistant professor in the History Department, College of Liberal Arts, the California Polytechnic State University. She earned her PhD and master's degree from the University of London School of Oriental and African Studies, and a B.A. in history and journos from the George Washington University.

[29] Al-Nakib.

[30] Oscar Mitri and Gerard Boulad, *Kuwait*, 1st edn (Editions Deloisse, 1975), p. 13.

On the other hand, Al-Nakib reveals that Kuwait's urban modernisation narrative was not as successful as it appeared. The reality began to surface when the First Master Plan was implemented to turn the pre-oil town into a central business district and allocate the residential suburbs beyond it. She shows that, in comparison with the straightforward development of the suburbs that were built successfully on unbuilt land, the evolution of the pre-oil town into a well-planned new city never met expectation due to numerous obstacles.[31] Architecturally, the state planning strategy attempted to improve the national ideology's practical and symbolic orientation in the city by constructing major projects presenting the capital city's power. Al-Nakib sees that modernisation progress caused the conflict between the *modern* representation of the urban ideal, the government's political strategy, and the dynamic experience of Kuwait City, which marked the spatial contexts of urban development by describing the uncontrolled process that occurred in Kuwait prior to the development of city planning. These tensions, however, led to a modern city that was neither functional nor well-designed, but it has successfully represented an image of modernity, as she concludes.

The debate over whether Kuwait City's development was associated with oil production, or the effect of sociocultural and political elements was mostly determined by the perspective from which this topic was thought. In the late twentieth century, Kuwait's progress in modernisation was extensively publicised in the media, and Kuwait gained a reputation for attributing all its success to the oil boom. Nevertheless, the rise of social science and its incorporation into architectural studies has provided new perspectives for understanding the correlation between architecture and culture. Therefore, the assertion that Kuwait's architectural development was driven only by oil is erroneous. Instead, they were primarily shaped by the socio-cultural and political aspects that were already present in Kuwaiti society before oil discovery and further amplified by the income generated from oil. Therefore, additional in-depth research is necessary to fully comprehend Kuwait's modernisation process and its manner of existence.

2.2.3 The Oil City: Ahmadi

Reem Alissa, assistant professor at the College of Architecture, Kuwait University, examines the role of oil as a driver of political, social, and cultural transformation in Kuwait's modernisation and nationalisation process through both her PhD thesis (2012), titled *Building for Oil: Corporate Colonialism, Nationalism and Urban Modernity in Ahmadi* and a published article (2013), *The Oil Town*

[31] It includes the lack of municipal management over landowners and the absence of spatial coherence for building construction.

of Ahmadi since 1946: From Colonial Town to Nostalgic City.[32] Both publications focused on Kuwait's urban history and suburban communities. Using Ahmadi as a case study of the wistful city of Kuwait Oil Company (KOC) workers in the 1940s, Alissa shifted her scholarly focus to oil architecture, following in the footsteps of Murray Fraser and Carola Hein's respective works, *Architecture and Globalisation in the Persian Gulf Region* and *Oil Spaces*.[33] Ahmadi City was mainly designed by the British firm Wilson Mason and Partners (see **Figure 2.5** and **Figure 2.6)**. She argues that, after the independence of Kuwait in 1961, Ahmadi embraced the colonial modernity adopted by the Kuwait Oil Company (KOC) for workers during the 1950s and, in turn, in the 1960s and the 1970s, took on a significantly different lifestyle and urban modernity. In her publications, she reveals the relationship between oil and space, and emphasises the significance of oil in daily urban experiences. As a result, Alissa concluded that Ahmadi City emerged as an oil company settlement (see **Figure 2.7**), and construction took place across three separate eras: corporate colonialism (1946-56), nationalism (1957-61), and urban modernity (the 1960s-70s). According to her, the corporate colonial period was a result of reproducing a familiar Western context in the middle of a foreign country; and the nationalist period was a response to the Suez Crisis where the corporation utilised nationalist measures to protect its oil exploitation access; at the same time, urban modernity was a continuing process of nationalism that came with the newly promoted Kuwaiti employee.

Figure 2.5 Paving new roads in Ahmadi City, 1954. Left: The picture shows the beginning of road paving in Ahmadi City, a desert region with tent dwellings, where the Kuwait Oil Company was working at the time.[34]

Figure 2.6 An aerial view of Ahmadi City, 1949. Right: This image represents the preliminary stages of the Ahmadi City plan, which was created by the British firm Wilson Mason & Partners. The proposal includes roads, the KOC administration headquarters, a hospital, and housing for employees.[35]

[32] Alissa; Reem Alissa, 'The Oil Town of Ahmadi since 1946: From Colonial Town to Nostalgic City', *Comparative Studies of South Asia, Africa and the Middle East,* 33. 1 (2013), 41-58.

[33] Murray Fraser is a professor of architecture and global culture at the Bartlett School of Architecture, UCL; Carola Hein is a professor of History of Architecture and Urban Planning at Delf University; see: *Architecture and Globalisation in the Persian Gulf Region* ed. by Murray Fraser and Nasser Golzari (England: Ashgate, 2013); *Oil Spaces: Exploring the Global Petroleumscape*, ed. by Carola Hein (New York: Routledge, 2021).

[34] *Kuwait Almadhi* [The Past of Kuwait], ed. by Sulaiman Al-Awadhi (Kuwait: n.p., 1987),(p. 223).

[35] Ibid. p. 178.

Figure 2.7 Houses for KOC employees in Ahmadi City. The shot was captured in 1961 by Clive Jordan, an American engineer who was working in the region at the time. These houses were provided by the Kuwait Oil Company for their foreign personnel, in addition to the other infrastructure facilities.[36]

2.2.5 Architecture in Representation of the Nation-State

Nationalism is associated with the notion of identity and belonging within a political entity, such as a state or nation, in a social or communal context.[37] However, its relation to architecture was in its ability to symbolise the nation's importance and represent its identity in the wake of decolonisation conflicts. In many cases, nationalism emerged in Middle Eastern countries as a response to the process of decolonisation, aiming to unite against external forces.[38] However, over time, the focus has shifted from seeking independence to fostering and strengthening national identity, particularly in the context of internal tensions among various groups. In other cases, nationalism served as a means to symbolise the emergence of new nations through the adoption of modernisation and the attainment of global acknowledgement.[39] Thus, architecture serves as a tangible representation of national identity, providing historical evidence of political strife and cultural diversity among nations. Despite being a British protectorate, Kuwait's nationalist

[36] Brett Jordan [Personal Archive], Flicker: Ref. 5363386630, Clive Jordan, 'Koc Houses in Ahmadi City', 1961.
[37] Nassef Adiong, 'Nationalism: 1920 to Present: Middle East', in *Cultural Sociology of the Middle East, Asia, & Africa: An Encyclopedia*,ed. by Andrea L. Stanton, and others (Thousand Oaks, CA: SAGE Publications, Inc., 2012).
[38] *Third World Modernism Architecture, a Development and Identity* ed. by Duanfang Lu (USA and Canada: Routledge, 2011).
[39] Ibid.

movement emerged because it represented the newly established nation after its independence in 1961 and embraced modernism to gain national recognition.

Anas Alomaim's 2016 thesis, *Nation Building in Kuwait 1961-1991*, emphasises significant architectural projects in Kuwait City, such as the Kuwait National Museum, Kuwait National Assembly, and Kuwait Sports Centre, to investigate their historical development, national identity, impact on the socio-cultural context, and role in Kuwait's nationalism.[40] He conducted a critical examination of architectural postcolonialism and modernisation in Kuwait using archival materials and interviews. Through the selected projects as case studies, Alomaim shows how Kuwait had to fulfil specific criteria imposed by international institutions to be established as an independent nation and how these recommendations encouraged the Kuwaiti government to construct significant buildings that would together create Kuwait's modern nationalism. He asserted that the selected projects had their roots in Europe's early modern period, when they served as governing bodies, educational institutions, and national amphitheatres that fostered patriotic feelings. These buildings recreated Kuwait's new cultural, political, social, and economic norms. Alomaim defined nation-building as *'the active and conscious construction of a national identity that aims at public assimilation and conditioning'.* Even though his studies depicted only museums as educational institutions, his words sparked the current research to investigate how other educational institutions, such as state schools, convey Kuwait's nationalism and modernisation processes.

However, nation-building was not entirely Westernised. At the 16th International DOCOMOMO Conference, held in 2021, Roula El-Khoury's *Nation-Building Narratives from Lebanon and Kuwait* presented significant nation-building and architectural developments in both Kuwait and Lebanon during the 1950s, which were designed by Lebanese architect Sami Abdul Baki.[41] By surveying Abul Baki's work, El-Khoury sought to fill the gaps in the prevailing narratives about cross-border cultural exchange and examine how urban narratives interact with the phenomenon of nation-building. Her article delves into Abdul Baki's ideas on development and modernisation, new technologies, materials, and modern principles. According to her, Abdul Baki received major contracts for designing Kuwait's Municipal Complex (see **Figure 2.8**) and the Ministry of Information and Guidance building via his brother *Fouad*, whom the Kuwaiti government appointed as the Inspector

[40] Anas Alomaim, 'Nation Building in Kuwait 1961–1991' (unpublished doctoral dissertation, University of California, 2016).

[41] A faculty member of the School of Architecture and Design, The Lebanese American University; see: Roula El-Khoury, 'Nation Building Narratives from Lebanon and Kuwait', in *16th International DOCOMOMO Conference*, Japan (DOCOMOMO, 2021), pp. 912-917. ; A Lebanese architect who holds degree in civil engineering from American University of Beirut in 1947, a master's degree in Heidelberg University in Germany 1956.

General of the Public Works Department.[42] Through these projects, El-Khoury stated that Kuwait succeeded in revealing the image of a modern nation. She believed that the Kuwaiti elite's rapid assimilation of modern forms and principles led to a deeper identity problem. Although El-Khoury's article focused on Abdul Baki's work, other modernist practitioners, such as Emile Bustani from Lebanon and Sayed Kareem from Egypt, had a similar effect on Kuwait's educational institutions during the early modernisation era, which this thesis will explore.

It is evident that Kuwait pursued nationalist tactics, following its liberty, to emphasise its national identity. Consequently, numerous projects were built to represent the rise of new nations by embracing modernisation and achieving international recognition. However, this method has not necessarily been adopted by Western designers or based on Western standards. Instead, it was carried out by architects, including regional designers, who were able to adopt an international style during the modernisation process to characterise the nation-state. Thus, the available literature on regional designers and their contributions to nationalism and modernism is scarce.

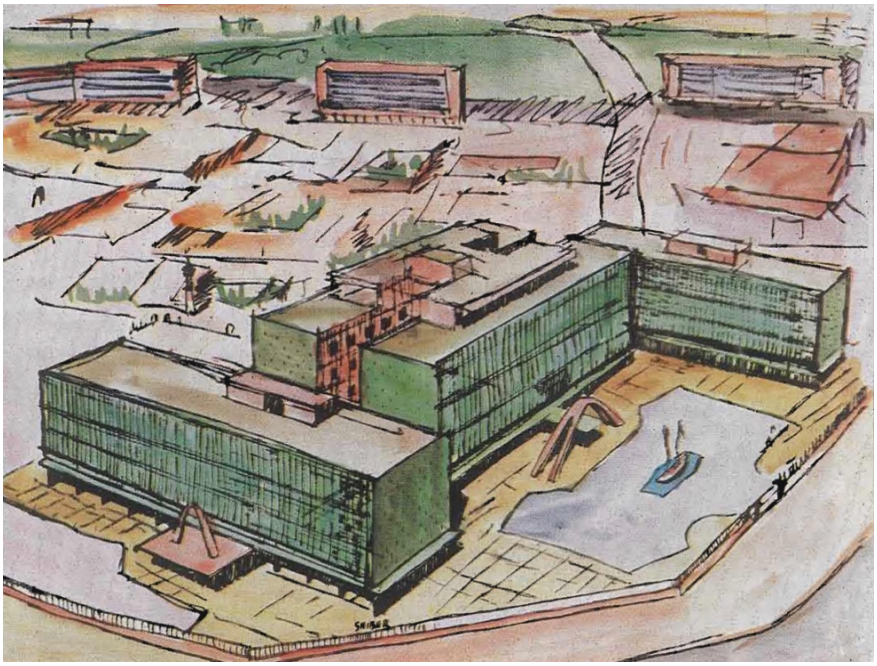


Figure 2.8 Kuwait's Municipal Complex. A sketch drawn by Saba Shiber, published in his book *Kuwait Urbanization, Being an Urbanistic Case-Study of a Developing Country,* 1964.[43]

Muhannad Albaqshi devoted his 2010 thesis, *The Social Production of Space: Kuwait's Spatial History,* to analysing Kuwait's modernisation, focusing on the production of space concerning cultural

[42] The building is still under use of Kuwait Municipality 'Baladiya'; The building today is used for the Kuwait National Council of Culture, Arts and Letters.
[43] Shiber, p. xxxi.

nationalism theory.[44] His morphological methodology provides critical work on Kuwait's overall urban modernisation and built-up architecture. Albaqshi, like Al-Ragam, investigates the narrative history of educational architecture through the lens of space production and nationalism, briefly explores the work of Tripe and Wakeham and dedicates a chapter to Alfred Roth's work. A well-rounded critique of educational architecture from the 1950s through the 1960s is addressed in this thesis. As a result, the current research aims to lengthen the time during which educational architecture was developed and modernised.

2.2.4 Beyond the City: A Welfare State

During the reign of Sheikh Abdullah Al-Salem Al-Sabah, Kuwait witnessed a significant increase in the construction of public housing, hospitals, leisure centres, and educational institutions, beginning in the 1950s. One of the greatest works published in 2015 was *Architecture and the Welfare State*, which, over the course of the thirty years following World War II in Western Europe, investigated the impact of the welfare state on architectural production.[45] Mark Swenarton, Tom Avermaete, and Dirk van den Heuvel examined the role of housing in the development of welfare architecture and stressed that further research is required to understand the significance of welfare state architects and their work. One of the things they discussed was how studying the welfare state might shed light on a hitherto unexplored facet of a capitalist society.

In 2020, Benyameen Ghareeb assessed Kuwaiti housing in the context of tradition and modernity.[46] His work, entitled *The Interplay between 'Tradition', 'Modernity', and Uneven Development: The Historical Development of Housing in Kuwait, 1950-2005* examines the concept of a welfare state, designed by external practitioners, to offer residential areas and housing units for citizens (see **Figure 2.9** and **Figure 2.10**).[47] He utilised archival materials, site observations, interviews, and press and public policy records in his inclusive analysis of the built environment. In his thesis, Ghareeb first exports comprehensive knowledge of the variables that impact housing policy throughout the modernisation decades by examining Kuwait's urbanisation process from a political, social, and economic perspective. The critical theories of Henri Lefebvre, David Harvey, and Edward Soja were commissioned for his assessment.[48] Then, he investigates the work of British planners who worked

[44] A faculty member of the College of Architecture, Kuwait University; see: Albaqshi.
[45] *Architecture and the Welfare State* ed. by Mark Swenarton, Tom Avermaete and Dirk Van Den Heuvel (London and New York: Routledge Taylor & Francis Group, 2015).
[46] A faculty member of the Architecture Department, Kuwait University.
[47] Ghareeb.
[48] A British-born Marxist graduated from Cambridge University in 1961. Also, a faculty member of anthropology and geography at the Graduate Centre of the City University of New York (CUNY). He is a proponent of the 'right to the city' theory; American urban planner holds Ph.D. from Syracuse University. He was a noted postmodern political geographer and urban theorist on the

in Kuwait and adopted the development of their approach through several theories such as *'Garden Cities'* by Ebenezer Howard, *'Neighbourhood Unit'* by Clarence Perry, *'Radburn Suburb'* by Clarence Stein and Henry Wright, and the British New Towns idea. Later, he provided extensive data on the multi-housing regulations implemented since 1950, highlighting the interplay between *tradition* and *modernity* from a design viewpoint. Finally, he discussed social justice by exploring public housing for various groups of people in the country that have been marginalised. His work documents housing growth in Kuwait in detail while highlighting one of the most inequitable consequences of that development: the unequal distribution of wealth across the country's various communities. Despite the fact that it does not particularly deal with school buildings, this thesis is an excellent resource for learning about neighbourhood and utility development and provides helpful information on the underlying theories implemented.

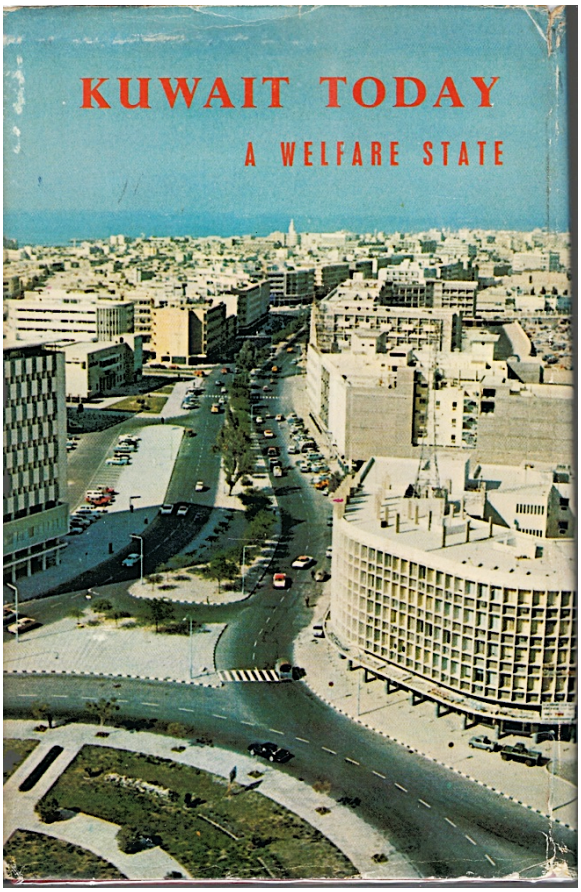


Figure 2.9 Kuwait Today: A Welfare State. Left: This picture shows the cover of a book that the Ministry of Guidance released about modern Kuwait's welfare plan.[49]

Figure 2.10 Article in a magazine on the new suburbs in Kuwait. Right: Houses for KOC employees in Ahmadi City, photographed in 1961 by American engineer Clive Jordan, who was working in the region around that time.[50]

planning faculty at UCLA. Soja concentrates his critical postmodern study on the relationship between space and society, or spatiality.

[49] Wizarat al-Irshad wa-al-Anba, *Kuwait Today: A Welfare State* (n. p.: Quality Publication Limited, 1963), p. Cover.

[50] Alan Cartwright, 'Kuwait Creates a Suburbia; Architects: Pacific Consultants International', *Middle East Construction,* 5. 12 (1980), 47-49 (p. 47).

Kuwait Transformed a History of Oil and Urban Life by Al-Nakib, as mentioned earlier, analysed the modernisation process beyond the town wall, exploring the substantial designs of main residential buildings and suburbs that negatively impacted social and political life.[51] By discussing the functional zones and public spaces outside the post-oil city, Al-Nakib evaluated the growing economic and cultural privatisation over the first four decades after the discovery of oil. She determined that the destruction of the post-oil city was also contributed to by suburbanisation, functional zoning, and public space elimination, where most of the places that shaped, the urban realm were relegated to the suburban area and initially integrated everyday activities.

Figure 2.11 Clinic at Jahra, Kuwait. Left: Medical treatment funded by the government of Jahra district as a social programme, 1958.[52]

Figure 2.12 Kuwait's Hospital, Al-Sabah. Right: This 1976 postcard-sized photograph depicts the maternity unit of Al-Sabah Hospital in Kuwait.[53]

Her book is extended to more grounded academic viewpoints, focusing on daily cultures and socio-spatial linkages and transcending the process into a global context and comparative theoretical aspects, providing a deep understanding of Kuwait's urban growth and social transformation. Although it does not focus on schools as a physical form or education as a social norm, it reflects the different responsibilities, activities, and relationships embodied in schools as institutions and labour migration in the pre-oil town. As Al-Nakib investigates the two pillars of modernisation – urban development and social welfare– she discusses the state's process of planning and building new neighbourhoods, houses, hospitals (see **Figure 2.11**, **Figure 2.12**, and **Figure 2.13**), roads, and schools. She stated, *'the suburbs were important vestiges of Kuwait's advancing urban modernity, showcasing all the features of the country's newfound prosperity and progress: state-of-the-art health clinics, advanced schools, wide roads, lush gardens and trees, luxury housing, and of course rational*

[51] Al-Nakib.
[52] The British Petroleum Archive [BP], University of Warwick: Ref. 107039/006, ©BP plc, 'Kuwait Clinic', 1958.
[53] The Trustees of the British Museum, British Library: Ref. 1607844001, 'Al-Sabah Hospital', 1976.

planning', further adding, *'with its state-of-the-art academic and sporting facilities, the school symbolised Kuwait's rapid progress in modern education'.*[54] Therefore, it is important to explore the role of schools in achieving state welfare.

الكويت تؤمن السكن
لذوى الدخل المحدود من أبنائها
٣٠٠٠ منزل: فى ٤ سنوات
■ لم تكتف حكومة الكويت بان جعلت التعليم فى مختلف مراحله بالمجان .. ولا بان وفرت العلاج والخدمات الصحية والادوية ، لكل شخص تظله سماء الكويت ، بالمجان كذلك .. ولكنها الى جانب هذا وذاك ، جعلت من أهدافها الكبرى توفير الرعاية الاجتماعية وتامين السكن لكل ذى دخل محدود من الكويتيين .
ان التطور الذى تشهده الكويت الحديثة ، يحمل معه بذور التغيير الجذرى للانظمة الاجتماعية والاقتصادية التى كانت سائدة .
صفان متقابلان من المساكن الشعبية الجديدة .. انها معدة للتسليم الى ذوى الدخل المحدود عند الطلب ..

Figure 2.13 A 1961 publication describes the Kuwaiti government's provision of modern residential units. In conjunction with the welfare provision and modernisation advances that occurred in Kuwait during the 1960s, an article titled *Kuwait offers homes for individuals with little income: 3000 dwellings in four years' time* appeared in Al-Arabi Magazine.[55]

2.2.6 Kuwaiti Modernist Architecture and Western Practices

A well-researched and acclaimed book titled *Architecture in Global Socialism Eastern Europe, West Africa, and the Middle East in the Cold War* was published in 2020 by architectural historian Lukasz Stanek.[56] This book brings a different view of global urbanisation and architectural modernisation

[54] Al-Nakib, pp. 123, 165.
[55] 'Alkuayt Tuamin Alsakan Lidhawi Aldakhl Almahdud Min 'Abnayiha', [Kuwait provides housing for its people with limited income], *Al-Arabi*, 1st August 1961, p. 122.
[56] The book was awarded the Alice Davis Hitchcock Medallion by the SAH GB and the RIBA President's Award for History & Theory Research; see: Stanek. ; A Polish architectural historian and a faculty member of Architectural History at the University of

from the perspective of socialist internationalism, questioning long-held viewpoints about modernisation and its evolution in the Global South. This was written based on extensive archival research and in-depth interviews. For the first time, *Stanek's* book highlights the historical significance of not only architects and planners but also contractors, building supervisors, and trade representatives from Eastern European socialists who worked together in creating a *'negotiated future'* of five cities: Accra, Lagos, Baghdad, Abu Dhabi, and Kuwait City. According to him, African and Asian urbanisation and architecture were affected by the Cold War history of Eastern Europe, which helped establish new norms and terms for modernity. He explains that the Cold War coincided with the decolonisation process, resulting in fertile ground for international players and independent nations looking for their own paths to modernity as well as practical assistance in attaining those paths. Rather than discussing competing globalisations, Stanek focuses on the efforts of those who are building a new world.

However, in *Socialism within Globalization: Abu Dhabi and Kuwait's* chapter, Stanek places more emphasis on cultural exchange than on projects aimed at overcoming inadequacies or developing socialist solidarity, as in other chapters. He leads the discussion away from the socialist modernisation route and towards conservative monarchs that were part of the emerging Western-dominated context of the built environment by looking at Abu Dhabi and Kuwait City in the 1980s. He investigated how the Middle East exploited the contrast between socialist international commerce and the expanding global construction industry. According to him, interaction with Western architects and easy access to the Western press in Kuwait aided Polish designers in their journey towards postmodern design, which was reflected in the unusual shopping mall-like *souks*. While these architects were seen as *'weak players',* the chapter shows how their *weaknesses* really helped them to play an important role in shaping local planning ideas, breaking down the traditional line between *global* and *local* architectural development and technological growth. This ongoing negotiation and reconfiguration within local constraints is concluded at the end of the book with an examination of the problems that emerged, the solutions that were found, and the ways in which reality differed from the initial plans in these cities. Furthermore, many previously unreleased pictures, drawings and schematics are featured in Stanek's book, including some that are highly detailed. It is a valuable resource for scholars, as it is a one-of-a-kind academic monograph.

Manchester in UK. He received PhD in Architecture from the Delft University of Technology in 2008, and worked in academia at the ETH Zurich, Harvard University GSD, and the University of Michigan. He also published 'Henri Lefebvre on Space: Architecture, Urban Research, and the Production of Theory' in 2011.

In *European Architects at the Confluence of Tradition and Modernity in the Persian Gulf, 1954-1982* thesis by Ben Tosland in 2020, further knowledge of Western architecture in the Gulf region was examined from both a physical and political perspective.[57] In his thesis, Tosland assessed tradition and modernity within architectural contexts. He emphasises the cultural exchange resulting from architectural modernisation by focusing on a few lesser-known architects' works as a case study, including Max Lock in Iraq, Candilis-Josic-Wood in Abadan-Iran, Alfred Roth and Jørn Utzon in Kuwait, and Doxiadis in Riyadh-Saudi Arabia. His examinations demonstrated a clash between traditional Arab architectural forms, spatial syntaxes, and the conflicting ideas and forms of Western-introduced modernism.

Tosland explored Alfred Roth's practice in Kuwait through various projects, including the Paralysis Institute, a private house, Sabahiya City, and state schools. He pointed out that Roth's main concern while designing in Kuwait was the climate and that he followed orthogonal shapes. Instead of using nationalist or nation-building concepts or aesthetics in his buildings, Tosland indicated that Roth opted for a more global approach and that his style of design was driven by a series of biographical, geographical, and political variables related to Kuwait. Tosland criticised Roth's work because of his ambitious claims about modernity, but he also points out that some of Roth's ideas are grounded in reality and are well researched. Even though his buildings were modest in size, he made a significant contribution to Kuwait's modernisation concerning the broader state-building narratives of the time. Although Tosland provided a thorough assessment of Roth's projects in the region, his research was constrained by the region's physical and political conditions. When investigating educational buildings from a historical perspective, it is essential to consider how their pedagogy, prior design efforts, political influences, and social effects have changed. Kuwait's educational institutions have played a much greater role in shaping Kuwaiti society than physical aspects alone. Therefore, the objective of this study is to look at these issues related to Kuwaiti education and modernity.

Some valuable books on modern Kuwaiti architectural development have been published in the last few years. Two volumes on *Modern Architecture Kuwait 1949-1989* were published by Roberto Fabbri, Ricardo Camacho, and Sara Saragoca, the first of which is a survey book (2016) and the second contains articles on Kuwait's modern architecture (2018).[58] An overview of the 150 buildings,

[57] Tosland.

[58] Fabbri, Saragoca and Camacho; *Modern Architecture Kuwait, Essays, Arguments & Interviews*, ed. by Sara Saragoca, Richardo Camacho and Roberto Fabbri. Vol. 2 (Switzerland: Niggli, 2018).; An Italian architect, researcher, and academic member. He received BA and MA in Architectural Design from University of Florence and PhD degree from University of Bologna in Italy. Fabbri

constructed or planned in Kuwait between 1949 and 1989, can be found in the first volume. Buildings in four chapters of the book, including *Building as Infrastructure, Building as National Identity, Building as Cityscape,* and *Building as Programme,* are organised chronologically to allow an enhanced understanding of the modernisation processes that created the city through time. The authors explored urban and architectural practices from various historical and geographic perspectives around the same time to better understand how design principles, city fabric, and building technology are constantly changing and evolving. According to them, a new story emerged from this chronological survey, which provided new meaning to what the buildings did compared to what they were meant to achieve.

The book, which serves as a reference for the current study, mentions several educational institutions, such as Shuwaikh Secondary School, the early state schools designed by Tripe and Wakeham, Khalediya's Secondary School, Mubarikiya School, and the Standard Schools designed by Alfred Roth with an extended example of his work on Rumaithiya School and Mansouriya Kindergarten. The second volume covers ten essays, six interviews, five arguments, and four transcripts conducted by Kuwaiti scholars and researchers from across the world to provide a more critical understanding of the modernisation of the city and its buildings. Roberto Fabbri wrote an essay titled *Prototyping Spaces for Education: Pedagogy, School Planning, Standardisation, and Prefabrication in Kuwait's Drive to Modernity*. In this article, he offers a concise but comprehensive description of the development of Kuwaiti modernist school buildings. Fabbri's article sparked the current research, which aims to investigate the historical narrative of educational growth and its role in the social, economic, and political dimensions of Kuwaiti daily life throughout its modernisation process.

In the wake of two volumes of *Modern Architecture Kuwait 1949-1989,* published in 2016 and 2018 respectively, a new book entitled *Pan-Arab Modernism 1968-2018* (2021) was issued by Richardo Camacho, Dalal Alsayer, and Sara Saragoca.[59] It is important to highlight that the PACE financed this research with the explicit goal of establishing a place for its company in Kuwait's historic narrative. This book adds to the knowledge of architecture and urban practices exchanged across Middle

currently is a faculty member of College of Arts and Creative Enterprises at Zayed University in UAE.; An architect and Dar Al Athar Al Islamiyah research associate. He earned a GSD from Harvard University and an M. Arch. from the Technical University of Lisbon. He also worked with TAEP and Amiri Diwan to get Kuwait City's Green Belt conserved, An architect and Dar Al Athar Al Islamiyah research associate. She received her BA from Coimbra University School of Arts and master's in architecture from the Technical University in Lisbon, Portugal.

[59] Richardo Camacho, Dalal Alsayer and Sara Saragoca, *Pan-Arab Modernism 1968-2018* (New York, USA: Actar Pblisher, 2021). ; A faculty member of Architecture at Kuwait University. She received MSc in Architecture and Urban Design from Columbia University, MD Studies from Harvard University, and PhD in History and Theory of Architecture from the University of Pennsylvania.

Eastern countries, which are still at the leading edge of architectural theory, postcolonial critique, and visual culture studies. Interviews, archive materials, and case studies of Kuwait's Pan-Arab Modernism movement are used in this book, which bridges the gap in Middle Eastern architectural literature between practice and historical narrative. The book covers three core Pan-Arab arguments: dialogue, narrative, and speculation. Using an oscillating scale, Pan-Arab Dialogues lay out how Pan-Arabism manifests in the built environment, from territorial to architectural scales. While researchers provide essays for Pan-Arab Speculations, in which they focus on a particular issue, time, or interaction that has had a significant impact on the development of Pan-Arab Modernism, Pan-Arab narratives look at various points in Kuwaiti architecture's modern history to investigate the distinct expressions that helped shape modernism and Pan-Arabism locally and regionally. The Pan-Arab architectural culture exchange was investigated in this book through the facilitation of interactions between Arab-regional architects and firms. The writers take a different look at Kuwait's development than prior studies have; they enhance the way in which the modernisation of Pan-Arab is understood from political and socioeconomic to geographical and practitioner-specific. The current study benefited from the references provided.

Modernist architectural and urban patterns, ways of life, and institutions have influenced every aspect of modern society, resulting in remarkable socio-cultural and political shifts. Welfare planning exemplifies Kuwaiti culture and the radical transformation of a pre-oil town into a modern city. During this time of tremendous uncertainty, Modern Architecture became a shared cultural norm, helping to frame and interpret the shifting narrative.

Yet, as Al-Nakib remarked, Kuwaiti modernity has never achieved expectations, and as Al-Ragam put it, it is *'an unfinished project'* due to the numerous obstacles, including the destabilising implications of progressive modernisation values.[60] In her article *Kuwaiti Architectural Modernity: An Unfinished Project,* published in 2019, Al-Ragam focuses on the *'unresolved function of modernity'* that blurs the lines between *'desire to change'* and modernism as a set of aesthetic principles.[61] Her study investigates Kuwait's unfinished modern project, its architectural history, the characters that mobilised and selected its course, and some of the circumstances that disrupted its completion. Using primary sources from Kuwaiti archives and secondary resources on Kuwait's modern development as a core, this paper argues that the unfinished modern project was disrupted because of the destabilising implications of its progressive values, which posed a direct threat to traditional

[60] Al-Nakib.
[61] Asseel Al-Ragam, 'Kuwaiti Architectural Modernity: An Unfinished Project', *The Journal of Architecture,* 24. 3 (2019), 366-384.

social structures. Al-Ragam also advocates a long-term approach to preserving Kuwait's modern historical buildings. She believes that offering critical readings and documentation of modern architecture will pave the way for greater cultural understanding, which will lead to preservation efforts. It also provides an essential background for Kuwait's diverse national identity, which challenges the authenticity of architectural forms.

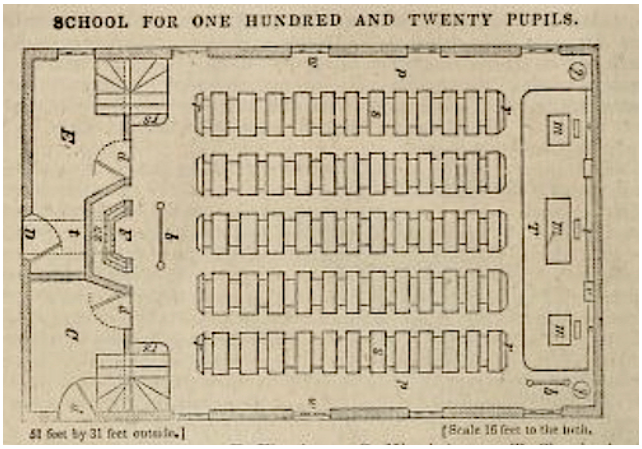
To this end, the modernisation period of Kuwait's architecture has been extensively documented in publications, giving valuable insights to historians and architects alike; albeit informative, they present themselves as surveys of twentieth-century or modern architecture. These sources focus on Kuwait's urban history and various themes that surround the interpretation of buildings in the country throughout the twentieth century, dealing with topics regarding notions of historicism, nostalgia, and identity, often framing buildings or urban situations. The political and social background of the nation's growth was examined, with less emphasis placed on the physical spaces studied by other historians. This demonstrates the necessity of looking beyond the physically built environment to understand the settings that shaped modernist architecture in Kuwait. While other studies explored the concept of cultural exchange, they did not emphasise it. The development of space by Western architects and designers was influenced by the adaptation of the nationalist movement and national context. However, these works focused on the export of British urbanism, rather than interpreting it as a cultural interchange.

2.3 ARCHITECTURE OF MODERNIST SCHOOLS

The architecture of schools may be seen as a manifestation of society's approach to education. Its physical architecture has changed along with the goal of education in society, symbolising more progressive teaching. The early stages of school design corresponded to the educational philosophy, which mandated a linear arrangement of classrooms and laboratories. Changes in the size and orientation of windows and other openings in schools were later made because of environmental concerns, with the aim of creating a more child-friendly and secure environment. However, after World War II, schools standardised their designs to satisfy the nation's high needs as social provisions following the compulsory education call. School architecture changed not only in terms of its architectural complexity but also in terms of the social and political influences of the nation. This section of the chapter comprises school architectural design literature from Western practice and its implications for Middle Eastern school development that occurred in later stages.

2.3.1 School Architecture in the Western History

The educational curriculum has always been considered while designing school architecture to provide a better learning environment. Henry Barnard, the first American Commissioner of Education, published his book *School Architecture* in 1860, which was one of the earliest sources of school building design and spatial layout. He went into detail about the size and arrangement of classroom furniture, natural lighting, and heating and cooling systems (see **Figure 2.14** and **Figure 2.15**).[62] His work, published more than 150 years ago, provided a detailed analysis of the various causes that prompted builders to prioritise student health, which altered the appearance of schools. Typically, the façade was modest and imposing, with only the most basic brick articulation and patterning. Consequently, attempts to incorporate practicality, health, and safety criteria into school designs throughout the post-World War II era led to the establishment of standardised guidelines for modern school architectural expression, resulting in a logical, systematic, and cost-effective design.



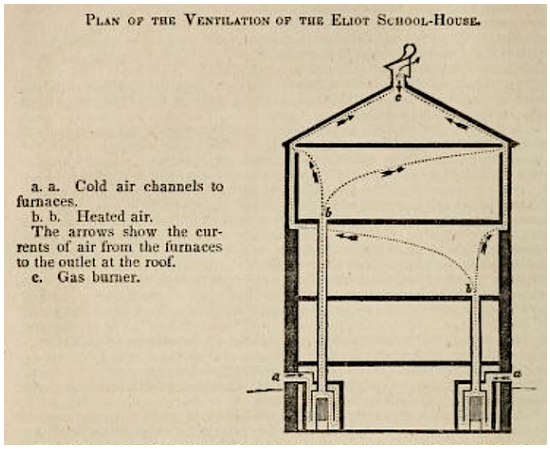


Figure 2.14 One-room school in the United States. Left: A schoolhouse layout for 120 students, a layout designed by Burnard.[63]

Figure 2.15 Boston School mode of ventilation. Right: A section of the schoolhouse showing the air-circulation as a ventilating process.[64]

During WWII, the United States saw tremendous social and economic changes, which influenced the country's school architecture. Education theory was reformed by John Dewey and William James after 1945 and was combined with the Modern Movement that emerged in America from a European style to a much more widespread style.[65] Spatial analyses and social and political viewpoints have

[62] Henry Barnard, *School Architecture; or Contributions to the Improvement of Schoolhouses in the United States*, 6th edn (New York: A. S. Barnes and Burr, 1860).

[63] Ibid. p. 72.

[64] Ibid. p. 150.

[65] Influential American psychologist and educational reformer who worked in the early 1900s. He was a well-known public thinker and a leading advocate for liberal education. Schools and civic society, he believed, were critical issues that required attention and

been applied to the study of school architecture. To better understand the changes in classroom design over the last century in America, Lindsay Baker wrote *A History of School Design and its Indoor Environmental Standards from 1900 to Today* in 2012.[66] Through a comprehensive survey, her book discusses the evolution of lighting, HVAC, and other mechanical systems, and how they functioned within the changing designs of the twentieth century. Baker's work covers much of the ground regarding technology and how it evolved throughout each phase. Like her discussion of building systems, Baker tried to explain the general design modifications of schools, mentioning a few notable figures each time, such as Eliel Saarinen, Alvar Aalto, Richard Neutra, Walter Gropius, Maxwell Fry, and Perkins and Will.[67]

In a similar vein, Thomas R. Hille analysed the work of several architects to determine the influence of various modernist schools in North America and Northern Europe.[68] His book *Modern Schools, A Century of Design for Education,* written and published in 2011, explored schools in the twentieth and early twenty-first centuries.[69] He offers a quick physical review of critical schools in chronological order, creating an architectural statement noteworthy to the most prominent modernist architects. In this research, modern educational theories and practices, relevant design concepts and tactics, and the ensuing effects on actual learning settings were all critical variables analysed. Although the author provided an in-depth study to examine the architectural potential of modern schools in developing meaningful and inspiring learning environments in the last century, his research was limited to the physical environment and did not delve deeply into socio-cultural implications. Nevertheless, his work offers useful perspectives on various modernist school designs and architects, such as Alfred Roth. The current study has greatly benefited from the inclusion of these examples and case studies.

A new historical cycle began when government control of education was connected to the formation of a modern state in Western countries. The creation of a new culture of citizenship in the

rebuilding in order to promote experimental intelligence and diversity. During his tenure as a University of Chicago professor, he established the University of Chicago Laboratory Schools, which allowed him to experiment with new educational methods; a philosopher, historian, and psychologist from the United States, and the first person to teach psychology in the country. James is regarded as one of the most important American philosophers of the late 19th century. In the field of pedagogy, he had a significant impact on educational thought and practise. As a result of his work, radical empiricism became a popular philosophical viewpoint. When it came to philosophy, education, and metaphysics, James covered a lot of ground.

[66] Lindsay Baker, *A History of School Design and Its Indoor Environmental Standards, 1900 to Today* (Washington, US: National Clearinghouse for Educational Facilities, 2012).

[67] As a Chicago-based architectural practise known for their work in school architecture, Perkins & Will epitomised the school typology popularised after World War II.

[68] R. Thomas Hille, *Modern Schools, a Century of Design for Education* (New Jersy, USA: John Wiley & Sons, Inc., 2011).

[69] An American Architect, and a faculty member of Architecture Department at University of Michigan.

educational system represented a shift from traditional attachment to national identity. Mass schooling, which began to take hold in the second part of the nineteenth century, was another stage of this process. The article *World Expansion of Mass Education, 1870–1980*, by John Meyer, Francisco Ramirez, and Yasemin Soysal, demonstrated that many countries have shown that mass schooling emerged and spread in precisely the same way.[70] These place serious doubt on the concepts that link schooling to a country's socio-economic and political conditions. They highlight the need to keep in mind how mass schooling and nation-state models are related. Educational systems and schools have contributed significantly to cultural and national unity. Supported by modernisation ideology and scientific reasoning, this initiative effectively pushed forward the idea of integrating people, or more accurately, citizens, into new nation-states.

In 1987, Andrew Saint's *Towards a Social Architecture: The Role of School Building in Post-War England* traced the social and historical origins of today's school buildings.[71] Much focus has been placed on how aesthetic and intellectual tides in the architectural community are related to pressing social challenges. He delves into the economic and political factors that played a role in shaping the architecture of post-war schools in England. Saint's book, released in 1987, contributes valuable context to this investigation because of the way in which he connects educational institutions to larger social systems and describes the role of school buildings and government housing initiatives in shaping today's society. It is a record of how the modern architectural welfare state developed and a reflection of the cultures that produced its various contributors.

In 2008, an article entitled *Building for Learning in Post-War American Elementary Schools* by Amy F. Ogata was published to investigate how modern American primary schools arose as a cultural and architectural style through a complex interplay of technical concerns, teaching methods, and the wider historical influences of post-war growth.[72] As she makes her case, modernist concerns about building research and technology and the social romanticism expressed in educational socialism were revived in post-war school construction campaigns in America. Her study shows that post-war elementary schools have come to be regarded as a new typology with a friendly design and colourful and open spaces that failed to reflect their educational theory or policy. Her research demonstrated how a diverse group of designers, planners, and local inhabitants believed that architecture could

[70] John W. Meyer, Francisco O. Ramirez and Yasemin Nuhoğlu Soysal, 'World Expansion of Mass Education, 1870-1980', *Sociology of Education,* 65. 2 (1992), 128-149.

[71] Andrew Saint, *Towards a Social Architecture: The Role of School Building in Post-War England* (New Haven and London: Yale University Press, 1987).

[72] Amy F. Ogata, 'Building for Learning in Postwar American Elementary Schools', *Journal of the Society of Architectural Historians,* 67. 4 (2008), 562-591.

influence and enhance the lives of individuals who used school buildings. Therefore, the growth in post-war school construction sparked meaningful national conversations about the role of the environment in children's lives and the country's future. This article examines whether designers and architects of schools in Kuwait accurately represented the nation's goals and educational philosophy, and whether they successfully achieved modernist utopianism.

In Australia 2015, Sinan Healy and Kate Darian-Smith present modern education and schooling of the Australian Nation in the twentieth century in *Educational Spaces and the 'Whole' Child: A Spatial History of School Design, Pedagogy and the Modern Australian Nation.*[73] Their research examined schooling development in the post-war period, when a growing interest was raised in new pedagogical methods, including the role of space and place in learning, and new ideas regarding school and classroom architecture, including specialised facilities. The method followed a survey of Australian schooling in the post-war period to cover the historiography of both the educational system and architectural design to provide a greater understanding of the social, cultural, political, and economic contexts. They demonstrate that schooling after modern development transformed children's training and education to become more individualised and citizens' contributions to become more nationalised. According to them, with modern changes in the political spectrum of the educational system, schooling expansion has led to positive social outcomes and enhanced socioeconomic mobility.

The second half of the twentieth century saw a global trend towards standardising school architecture, which affected the design of schools worldwide. Modernist architects from Europe and North America promoted *New Schools* through the Modern Architecture Movement in international organisations such as the United Nations Educational, Scientific, and Cultural Organisation (UNESCO), the International Union of Architects (UIA), and the Centro Regional de Construcciones Escolares para América Latina, which promoted these changes in architectural models and pedagogical foundations, as well as new regulations and the production processes of school buildings.

On the other hand, Alexandra Alegre brought a colonialist perspective of school architecture influence in her paper. She provides an overview of the school building construction process in

[73] Faculty members of architecture at The University of Melbourne in Australia; see: Sianan Healy and Kate Darian-Smith, 'Educational Spaces and the 'Whole' Child: A Spatial History of School Design, Pedagogy and the Modern Australian Nation', *History Compass,* 13. 6 (2015), 275-287.

Portugal as well as the impact of French and British models on its evolution over the twentieth century to her article, *The Evolution of Secondary School Building Construction in Portugal in the 20th Century: from Traditional to Industrial.*[74] Through an examination of secondary school construction in Portugal, she examined how the connection between architecture and construction has changed over time and benefited greatly from French and British models. She revealed that school construction in England after the Second World War influenced Portugal's design and production processes beginning in the 1960s by creating a new typology design and adopting industrialised and rationalised production systems for buildings and better control over costs and schedules.

At the Educational Architecture - Education, Heritage, and Challenges Conference held in Portugal, Claudia Torres Gilles presented a paper entitled *Influences and Innovations in Modern School Architecture in Chile: Projects Designed by the Construction Society of Educational Institutions, 1937-1987.*[75]In her paper, Gilles provided a comparative architectural analysis of *singular* design types and *prototype* models built between 1937 and 1987 in Chile. She emphasises the importance of Chile's government and other international institutions in bringing together modern schools that she characterises as functional and rationally effective. According to her, new school designs were considered by the UIA, which established the *School Building Commission* in 1951 with UNESCO collaboration, in which both published studies and plans were geared primarily towards developing school facilities in rural regions. Later, in 1961, UNESCO and the Mexican government established a research centre as an independent organisation for Latin America, and their seminars and courses drew together experts from all Latin American nations. Gilles concluded that although prototype modern schools were successful to a certain extent, the *singular* design type sought to provide better health, comfort, and safety conditions. Her article demonstrates how these international organisations imposed political influence by promoting architectural models, educational foundations, the adoption of new rules, and the production processes of school buildings that are essential to consider in the current research.

One of the most significant literary sources is the 2017 publication *Designing Schools: Space, Place, and Pedagogy* by Kate Darian-Smith and Julie Willis.[76] The book contains eighteen articles, all of which concentrate on the creation and use of schools throughout the twentieth century. This book

[74] Alexandra Alegre and Teresa Heitor, 'The Evolution of Secondary School Building Construction in Portugal in the 20 Th Century: From Traditional to Industrial', *Construction History,* 28. 2 (2013), 79-104.

[75] Claudia Torres Gilles, 'Influences and Innovations in Modern School Architecture in Chile: Projects Designed by the Construction Society of Educational Institutions, 1937-1987', in *Educational Architecture - Education, Heritage, Challenges*, Portugal (Atlas of School Architecture, 2019), pp. 11-24.

[76] *Designing Schools: Space, Place and Pedagogy*, ed. by Kate Darian-Smith and Julie Willis (London and New York: Routledge, 2017).

explores how pedagogical assumptions about how children should be taught have changed over time by examining historical advances in school design through the perspective of international case studies that span the Americas, Europe, and Australia, as suggested by the title (with one exception from Africa). It is a great addition to the body of knowledge on school design. The current research highlights the evolution of open-floor plans in school layouts and sheds light on how this model of education reflects Cold War ideals, how traditional classroom practices threaten its efficacy, and how various national contexts contribute to the rise and fall of this approach at various times. It also explores how the development of new technologies and the digital age have affected the layout and use of educational facilities. According to Darian-Smith and Willis, education is mediated or framed by the spaces in which it occurs, and the spaces in which it takes place are influenced by cultural, political, and social concerns about teaching, learning, and children. These themes are *Lessons from History*, *School Buildings*, *School Spaces,* and *School Cultures.*

Literacy sources demonstrate that Western counties' school architecture advanced rapidly because of numerous factors, including the industrial revolution's effect on design and construction techniques, the refinement of educational theories, the spatial turn in the governmental system after World War II, the emergence of social provision, and international movements towards standardisation. Each of these factors has affected the evolution of school architecture worldwide. The modernist architectural movement, however, sheds light on a distinct point of view in third-world nations, where imperialism, colonialism, and de-colonialism had a significant influence on defining countries. Given that architecture is a key instrument used to emphasise power and authority, it has been questioned whether school architecture may play a substantial narrative role.

2.3.2 The Middle East and North Africa's School Architecture

By its nature, modernist school architectural design is a complex strategy that must keep pace with changes in pedagogy, technology, and environmental concerns. However, in the Middle East and North Africa at the turn of the twentieth century, this challenge was compounded by the region's precarious social and political standing. According to Mark Crinson's *Imperial Modernism* chapter in *Architecture and Urbanism in the British Empire* book published in 2016, modernism's introduction to the countries of the colonies was often perceived as the birth of something distinct, yet another arrival in the history of the empire.[77] Thus, there has been a growing understanding over the past

[77] Mark Crinson, 'Imperial Modernism', in *Architecture and Urbanism in the British Empire*,ed. by G. A. Bremner (Oxford, UK: Oxford University Press, 2016), pp. 198-238.

few years that modernist architecture has been distinct from that of either the Cold War Eastern or Western powers. Some Middle Eastern countries, such as Iraq, Syria, and Lebanon, developed alongside colonial architecture, while others, such as the Gulf States (Qatar, Kuwait, Bahrain, the United Arab Emirates, and Saudi Arabia), were formed based on oil extraction and constructed as a means of building new nation-states. However, at this time, modernist architecture rose to prominence in North African countries ruled by colonial power, symbolising both the modernisation process and the anti-colonial and nationalist movements. Therefore, examining school design in these nations' contexts would exhibit significant disparities compared with studying school architecture in other parts of the world. This distinction may be evident in the cultures and ideologies of history and how these buildings were presented.

When literary sources related to school architecture and imperialism, colonialism, or post-colonialism were explored in this area, resources allocated to Middle Eastern nations were limited in preference to North African ones. Africa (Ghana, Nigeria, Kenya, Tanzania, South Africa, and Egypt) and the Middle East (Iraq, Syria, Lebanon, and Gulf Cooperation Countries) are briefly expanded in this section's literary content on school architecture.

In 2006, Rhodri Windsor Liscombe, titled *Modernism in Late Imperial British West Africa: The Work of Maxwell Fry and Jane Drew, 1946-56,* highlighted seventeen school buildings designed by Maxwell Fry and Jane Drew in Ghana and Nigeria from 1946 to 1956.[78] Comparing British colonialism's architectural and literary fabrics, Liscombe revealed an increasing understanding of the colonial subject, a developing reflexive uneasiness among operators or associates of colonial power, and the limits of modernist statements on universal technology and aesthetics. He explains how Fry and Drew's *Tropical Architecture* designs helped expand the number of schools in Africa due to the British colonial strategy of the progressive devolution of legislative authority to Africa. According to him, designers were instrumental in promoting West African migration and modernity by combining the pragmatics of imported building techniques and materials with the environmental and climatic conditions of the site to obtain diversity. This paper provides a useful example of *Tropical Architecture,* the impact of modernist practice, and British higher education reform on the design of a West African educational institution.

[78] Rhodri Windsor Liscombe, 'Modernism in Late Imperial British West Africa: The Work of Maxwell Fry and Jane Drew, 1946-56', *Journal of the Society of Architectural Historians,* 65. 2 (2006), 188-215.

Iain Jackson and Jessica Holland's book, entitled *The Architecture of Edwin Maxwell Fry and Jane Drew Twentieth Century Architecture, Pioneer Modernism and the Tropics* is a critical source for comprehending one of Africa's most prominent architectural teams in the early development of modern architecture, Maxwell Fry and Jane Drew.[79] This book provides a historiographical study based on biographical research, a chosen gazetteer, and a socio-historical analysis of twentieth-century buildings. It presents the critical cultural movements of the twentieth century, including modernism's extension into the late colonial period and post-war modernism's more expressive, formalism-oriented approach to building Fry and Drew's *Tropical Architecture* work. Jackson and Holland make a compelling case for the significance of Fry and Drew's educational institutions in the emergence of tropical modernism. They emphasise that educational institutions were not only symbols of Western colonialism but were also meant to develop socialism, to bring together individuals from diverse social groups and tribes, emerging as leaders of the future. According to the authors, Fry and Drew's work in the 1930s and 1950s, as well as their educational projects in Africa, were the most exciting and rewarding parts of their lives; therefore, they put together the other different parts of Fry and Drew's lives to better understand twentieth-century architectural history, considering it as crucial in the century's significant cultural leaps and turns. Thus, the book provides an in-depth assessment of the numerous aspects of modernist school design throughout colonial times and modernisation development.

In her book *Learning Spaces in Africa*, published in 2018, Ola Uduku, a professor of architecture at Liverpool University, traced the development of school building plans from the nineteenth century to the present day, focusing particularly on British Western Colonies in Southern Africa.[80] She paid special attention to how architectural, social, political, and economic policies in Africa influenced the layout of schools and the continent's primary sites of instruction. She provides a historical background and comparative analysis of the evolution process using examples from schools in Nigeria, Ghana, Kenya, Tanzania, and South Africa. Her efforts pave the way for major changes that will affect how twenty-first century schools use technology and interact with their communities. This is in addition to several previously published articles on school design and pedagogy in Western colonialism.[81]

[79] A faculty member and research director at the Liverpool School of Architecture, UK. He is also an architect who worked mainly on educational and school projects; A researcher at the Centre for Architecture and the Visual Arts, University of Liverpool; see: Iain Jackson and Jessica Holland, *The Architecture of Edwin Maxwell Fry and Jane Drew Twentieth Century Architecture, Pioneer Modernism and the Tropics* (England and USA: Ashgate Publishing limited, 2014).

[80] Ola Uduku, *Learning Spaces in Africa: Critical Histories to 21st Century Challenges and Change* (New York: Routledge, 2018).

[81] Ola Uduku, 'The Nigerian 'Unity Schools' Project: A Unesco-Ida School Building Programme in Africa', in *Designing Schools: Space, Place and Pedagogy*,ed. by Kate Darian-Smith and Julie Willis (London and New York: Routledge, 2017); Ola Uduku, 'An Architecture of Education: African American Women Design the New South', *Women's History Review,* 28. 4 (2019), 707-709.

Mohamed Elshahed and Farida Makar's participation in the *Sharjah Architecture Triennial and Africa Is a Country* was a pivotal moment in Egypt's educational history in the context of the exhibition's first edition, titled *Rights of Future Generations.*[82] They detailed the growth of Egypt's educational facilities after the Nasser regime came to power in a military takeover in 1952, as well as the shifts and maintenance that occurred in the country's educational policy throughout that time. They highlight how major debates between politicians, teachers, and architects throughout Egypt's colonial history gave rise to a variety of school designs that can be seen today in both rural and urban regions. While their brief participation and summary discussions were published on their e-flux architecture blog, they lacked scholarly publications.[83]

Despite the dearth of material on Middle Eastern architectural studies, it was within the framework of these countries' long and varied histories, from the ancient Mesopotamians and Sumerians to the Islamic and Ottoman empires and the Western colonial periods, that scholars primarily examined the architecture of schools in countries such as Iraq, Syria, and Lebanon. School architecture in Iraq during the twenty-first century aligned with Western modernism and British colonisation ideologies (1914-1932). British designers played a key role in revolutionising the design, structure, and significance of schools, adopting a more modern style that highlighted their empirical approach and distinguished them from prior traditional and historical institutions.[84] Consequently, research on modernist architecture draws upon the British authorities investigation of the impact of colonialism and imperialism on architectural development as a whole, rather than solely focusing on school architecture and its relevance.[85] Thus, the colonial state architectures in Syria and Lebanon were extremely convoluted, varied, and unstable. France colonised both countries from 1918 to 1946 (Syria) and from 1920 to 1943 (Lebanon).[86] Throughout the centuries, leading up to the colonial era of the twentieth century, many diverse cultures left their marks on the existing built environment. Recent studies have delved into the friction that can arise between architectural design and political

[82] n.p., Egypt: Mohamed Elshahed, 'New Schools/Future Egyptians', 2019 <https://cairobserver.com/post/189564788879/new-schoolsfuture-egyptians-by-mohamed-elshahed#.Y_DarC-l2LI>.

[83] e-flux, New York: Mohamed Elshahed and Farida Makar, 'New Schools, New Egyptians', 2018 <https://www.e-flux.com/architecture/conditions/287540/new-schools-new-egyptians/>.

[84] Entidhar Altaie, 'Foundations of Educational Buildings in Iraq: Past, Present and Future' (PhD Thesis, Luleå University of Technology, 2013).

[85] Suad Mehdi, 'Modernism in Baghdad', *DC PAPERS, revista de crítica y teoría de la arquitectura*. 1 (2008), 81-89; Hamed Hyab Samir and Yusuf Arayici, 'The Influence of Modern Architecture in Transforming Iraqi City Identity', in *International Postgraduate Conference 2015*, Jun 10-12, Mediacity University of Salford (University of Salford, 2015); Iain Jackson, 'The Architecture of the British Mandate in Iraq: Nation-Building and State Creation', *The Journal of Architecture,* 21. 3 (2016), 375-417; Fawzia Irhayyim Hussein and Ghada Al Slik, 'Ornamentation and Modern Architecture in Iraq', *Journal of Engineering,* 25. 6 (2019), 117-124; Zahraa Dabbach, 'Architectural Identity: An "Arab Renaissance" from a Western Perspective' (PhD Dissertation, The University of Cincinnati, 2022); Zuhair Dahham Naser and Marjan Khan Mohammadi, 'Architectural Identity in the Iraq within 100 Year Ago', *American Journal of Engineering Research (AJER),* 11. 8 (2022), 126-133.

[86] Daniel Neep, *Occupying Syria under the French Mandate: Insurgency, Space and State Formation* (Cambridge, UK: Cambridge University Press, 2012), pp. 20-38; Fawwaz Traboulsi, *A History of Modern Lebanon*, 2nd edn (London: Pluto Press, 2012), p. 88.

authorities that ultimately shapes a society's-built environment and transforms its culture.[87] Similar to the Iraqi situation, the literature falls short of examining the evolution of school layouts in relation to these moves in school architecture, focusing instead on the meaning of modernist and colonialist architectural contexts.

Modernist architecture in Iraq, Syria, and Lebanon is addressed in the literature through the lens of colonialism; however, in the Gulf Cooperation Countries (Kuwait, Qatar, Bahrain, Saudi Arabia, and the United Arab Emirates), the issue of modernism has been approached from a different angle. The discovery of oil and the subsequent explosion of these nations' economies contributed to the advent of modernism in these regions.[88] The urbanisation and built environment of the Gulf Cooperation Countries were developing in response to the political movement towards the creation of new nations to acquire international recognition.[89] Nevertheless, research on modernist development and its effects on the built environment has primarily focused on capitalist, nationalist, and welfare-oriented movements related to urban expansion, the creation of new cities, nation-building, and housing development.[90] Consequently, there is a dearth of rigorous scholarly enquiries into the domain of school architecture.

Additional research on school architecture has been published, exploring a range of subjects including climate change, religion, postcolonial nationalist development programmes, socioeconomic needs, and the costs of education opportunities within the local economy. These studies have also examined UNESCO's role in constructing schools in West Africa.[91] In comparable surveys, the subjects considered in Middle Eastern nations were mostly limited to the physical and technical issues of schools.[92] Historians seem to have seen the Middle East as a rich source of

[87] Robert Saliba, '1840-1940:Genesis of Modern Architecture in Beirut', in *Architecture Re-Introduced: New Projects in Societies in Change.*,ed. by Jamal Abed (Geneva: The Aga Khan Award for Architecture, 2004), pp. 23-34; Eric Verdeil, 'Michel Ecochard in Lebanon and Syria (1956–1968). The Spread of Modernism, the Building of the Independent States and the Rise of Local Professionals of Planning', *Planning Perspectives,* 27. 2 (2012), 249-266; Elie G. Haddad, 'Learning from Beirut: From Modernism to Contemporary Architecture', *The ARCC Journal for Architectural Research,* 5. 1 (2008), 45-52.

[88] Simon C. Smith, *Britains Revival and Fall in the Gulf Kuwait, Bahrain, Qatar, and the Trucial States, 1950-71* (New York, USA: Routledge Curzon, 2004), p. 3; Jill Crystal, *Oil and Politics in the Gulf: Rulers and Merchants in Kuwait and Qatar* (Cambridge: Cambridge University Press, 1995), pp. 6-8.

[89] Todd Reisz, 'Identifying a Local in Gulf Cities', *International Journal of Middle East Studies,* 50. 3 (2018), 559-561; Smith.

[90] Yasser Elsheshtawy, *The Evolving Arab City Tradition, Modernity Urban Development* (New York, USA: Routledge, 2008); Fraser and Golzari; *The Persian Gulf in Modern Times People, Ports, and History* ed. by Lawrence G. Potter (Macmillan: Palgrave, 2014); *Urban Modernity in the Contemporary Gulf*, ed. by Roberto Fabbri and Sultan Sooud Al-Qassemi (New York and London: Routledge, 2022).

[91] Uduku; Kuukuwa Manful, 'The Modern Architecture of State Education: Tropical Modernist Discourse of West African School Design (1945-1965)', in *16th International DOCOMOMO Conference*, Japan (DOCOMOMO, 2021), pp. 994-999; Lacy S. Ferrell, 'Building for Students: School Design and Educational Priorities in Colonial Ghana', *Journal of West African History,* 5. 2 (2019), 1-28; Kim De Raedt, 'Between 'True Believers' and Operational Experts: Unesco Architects and School Building in Post-Colonial Africa', *The Journal of Architecture,* 19. 1 (2014), 19-42.

[92] *Buildings for Education: A Multidisciplinary Overview of the Design of School Buildings*, ed. by Stefano Della Torre and others (Switzerland: Springer, 2020); M. Alwetaishi and A. Balabel, 'Numerical Study of Micro-Climatically Responsive School

traditional architecture, but a poor resource for understanding the modern era because of the region's complicated social, religious, and national heritage.

2.4 ARCHITECTURE OF SCHOOLS IN KUWAIT

Very little attention has been paid to the architectural history of Kuwaiti schools compared to the existing narratives on Kuwaiti education. They have been dominated by discussions about education development and pedagogical issues, even though education has taken a *'spatial turn'* that has led to an examination of school architecture's spatial politics and cultural ideology during the country's modernisation period (see **Figure 2.16**). On the other hand, these sources offer additional context on state and national historical records and economic, political, and cultural effects that assess the general and special characteristics of school architectural design changes throughout history. Furthermore, it helps to gain a better understanding of how school architectural history has been modernised and the most important aspects highlighted in this study.

The most documented period for educational development in Kuwait is the early stage of its reformation [1910-1940], before the economic growth; it highlights the role of specific leaders and reformers, including the ruling family and merchants. Abdullah Alnouri's *Qisat Altaelim fi Alkuayt fi Nisf Qarn* [The Story of Education in Kuwait in Half a Century] presents early informal education to explore the socio-political forces that led to the reformation of Kuwait's education system.[93] In his book, he focused on the role of the community and merchants in establishing the first formal school and other educational charities.

Yusif Bin Eisaa Alqanaei: Almurabiy Wa Almasleh Wa Alshaaeir [Yusuf bin Issa Al-Qana'i: Educator, Reformer, and Poet], another book edited by members of Yusuf bin Issa Al-Qana'i's secondary school and published by the Ministry of Education, explored the unique role of Yusuf Al-Qana'i's in the development of formal education in Kuwait.[94] He published an article explaining the benefits of formal education, began a campaign to gather the funds, with Abdulaziz Hussein and Shaikh Abdullah Al-Jaber Al-Sabah, needed to establish the first formal school, and called for women's education. Along with the merchants' role, unanticipated new links developed between the ruler

Building Design in Saudi Arabia', *Journal of King Saud University - Engineering Sciences,* 31. 3 (2019), 224-233; Mamdooh Alwetaishi and others, 'An Investigation of Shading Devices in a Hot Region: A Case Study in a School Building', *Ain Shams Engineering Journal,* 12. 3 (2021), 3229-3239.

[93] Abdullah Al-Nouri, *Qisat Alta'aleem Fi Alkuwait Fi Nisf Qarn* [The Story of Education in Kuwait in Half A Century] (Kuwait: That Alsalasil, n. d.).

[94] Youssef bin Issa Al-Qena'i High School, *Yusuf Bin Issa Al-Qana'i: Educator, Reformer, and Poet* (Kuwait: Ministry of Education, 1976).

and members of the ruling family via new political and bureaucratic responsibilities, as well as between the ruler and the national populace via social services and benefits that led to modernity.

Figure 2.16 Modern Kuwait's Building article, 1950. The image represents an article titled *Modern Buildings in Kuwait,* that has been published at Al-Bietha Magazine by Bait Al-Kuwayt in Egypt. The article has listed the education council's building and other school buildings as examples of Kuwait's progress towards modernity.[95]

Mona Al-Jaber Al-Sabah published her book *Alshaykh Eabdallah Aljabir Alsabah (1898-1996) Rayid Aalthaqafat Wa Altaelim* [Sheikh Abdullah Al-Jaber Al-Sabah (1898-1996): Pioneer of Culture and Education] in 2014, discussing the significant role of Shaikh Abdullah Al-Jaber Al-Sabah in leading educational and cultural activities during the Enlightenment and Modernisation eras in Kuwait.[96] She indicated that Shaikh Abdullah had built educational facilities, designed a curriculum, recruited Arab tutors for Kuwait, sent Kuwaiti students to study abroad, and assisted Kuwait in all disciplines.

[95] 'Almabani Alhadithat Bialkuayt', [Modern Buildings in Kuwait], *Al-Bie'tha*, 1st of August 1950, p. 230.
[96] Mona Al-Jaber Al-Sabah, *Sheikh Abdullah Al-Jaber Al-Sabah (1898-1996): Pioneer of Culture and Education* (Kuwait: The Emiri Diwan. Historical Documents Center, 2014).

The most important source, published in 2002, is *Tarikh Altaelim fi Dawlat Alkuayt* [History of Education in the State of Kuwait], composed by specialists and researchers in education studies led by Abdulaziz Hussein, a Kuwaiti education reformer, and published by the Centre for Research and Studies on Kuwait (CRSK).[97] These six-volume books document a historical period of more than a century, during which Kuwait gained prominence in Arab and international educational processes. The material covered papers from the Knowledge Council, political decisions and propositions, and other relevant documents. The book series presents the historical period from the establishment of informal education until 1936, through the Enlightenment Age and the foundation of Majlis Almaearif [Knowledge/Education Council], to the independence of Kuwait and the formation of the Ministry of Education in 1961, and the development of educational pedagogy after 1972. The last two volumes include the history of technical education and training, the establishment of Kuwait University, the history of religious education in Kuwait, and the effects of the Iraqi occupation on educational institutions. Although this series provided a harmonious narrative history, the link between educational development and modernity lacked a socioeconomic and political analysis of its impact on Kuwait's modern nation-state. Moreover, it ignores long-term educational reform and its relationship to the physical growth of schools.

A historical documentary film titled *Tarikh Altaelim Fi Alkuayt W Bayt Alqada* [History of Education in Kuwait and the House of Leaders], released by the Ministry of Education and produced by Hamad Al-Badry in 2005, presents an era of educational reform and development in the post-oil period.[98] A look at the politics of educational institutions' growth and how it symbolises a nation-state is found in the film. In addition, more information was revealed about Shuwaikh Secondary School, including its facilities and features. Other sources examine modern education from a perspective different from architectural inputs, yet they offer useful information for the current research. Further subjects included the history of education, the educational system and pedagogy, and socio-political disorders.[99]

[97] *Tarikh Altaelim Fi Dawlat Alkuayt* [History of Education in the State of Kuwait], ed. by Abdulaziz Hussein. Vol. 6 (Kuwait: CRSK, 2002).

[98] Hamad Al-Badri, Alfilm Alwathayiqiu : Tarikh Altaelim Fi Alkuayt W Bayt Alqadah [Documentary Film: History of Education in Kuwait and the House of Leaders],YouTube 2005 <https://www.youtube.com/watch?v=3qz3TQnr4wE>

[99] Documentary-Committee, *Tarikh Thanawiat Alshuwikh (1953-1973)* [Al-Shuwaikh Secondary School's History (1953-1973)] (Kuwait: Ministry of Education, 2005); Gawdat Bahgat, 'Education in the Gulf Monarchies: Retrospect and Prospect', *International Review of Education,* 45. 2 (1999), 127-136; Hussein; Bader Al-Zuwair, *Madrasat Al-Mubarakiya* [The Al-Mubarakiya School] (Kuwait: That Al-Salasel, 2011); Abdullah Yousef Al-Ghunaim, *Arshif Almadrasat Alkhayriat Almubarakiat Fi Wathayiq Khalid* (Kuwait: Center for Research and Studies on Kuwait, 2018); Hamza Alyan, *Alkuayt Fi Alkhamsinat* [Kuwait in the Fifties] (Kuwait That Al Salasil for Printing, 2020); Khairy Abul Jebain, *The Story of My Life in Palestine and Kuwait* (Kuwait: n. p., 2006); *Education for a Knowledge Society in Arabian Gulf Countries*, ed. by Alexander W. Wiseman, Naif H. Alromi and Saleh Alshumrani (UK: Emerald Publishing Limited, 2014); Nadeem A. Burney and others, 'The Efficiency of Public Schools: The Case of Kuwait', *Education Economics,* 21. 4 (2013), 360-379; Jawaher Khaled Al-Bader, 'Visual Ethnography in Three Preschools in Kuwait (Middle East)' (unpublished doctoral thesis, Arizona State University, 2012); Ismail Safwat, *System of Education in Kuwait* (Washington, D.C.: 1993); Qasem Al-Sarraf, 'School Guidance and Counselling in Kuwait: Background,

Talal Al-Rashoud, a faculty member of Modern Arab History at Kuwait University, wrote his Ph.D. thesis entitled *Modern Education and Arab Nationalism in Kuwait, 1911-1961,* in 2017.[100] His thesis aims to understand Kuwait's interaction with modernist ideology in general, and Arab nationalism in particular, with implications for studying the Gulf region. He questions the early cultural practices that transformed Kuwait from an Arab nationalist ideology and their impact on society's political and social development. This thesis highlights that the pre-oil period was the beginning of the modernisation era and founded the nation-state by establishing institutions. It also emphasises the significant role of merchants' power over government institutions in supporting their political activism and capitalising on their positions within the state. As a result, his thesis examines the role of education in creating national identity by defining three general approaches to nationalism. This study contributes to the current thesis by providing an empirical link between early formal education and the modernity period of Kuwait by defining modernisation to the pre-oil time, exploring the economic and political forces on systemising education, and forming the nationalist ideology of the state. However, the impact of modern education on creating an effective socialiser of modern values after 1961 remains essential.

Another publication by Al-Rashoud was issued in 2021, entitled *Schools for the Arab Homeland: Kuwait's Educational Mission in Sharjah.*[101] This article focuses on Kuwait's educational support for reforming Sharjah's educational system and the built environment. Al-Rashoud analysed the connection between Kuwait's aid in the Arab region, particularly Sharjah, which arose from nationalist goals, via archival sources. According to him, Trucial Sharjah was the first Arab state after Kuwait to modernise its educational system by the end of the 1950s; thus, they turned to Kuwait for assistance, based on Kuwaiti and Sharjah ruler Sheikh Saqr bin Sultan Al Qasimi's concept of inter-Arab cooperation. The assessment covers everything from pedagogy and curriculum, teachers, textbooks, school supplies and clothes for students, furniture, and buildings. This article explores how Kuwait's state education system established in 1936 and substantially extended with Egyptian government assistance in the 1940s, played a role in promoting Arab nationalism and Gulf solidarity.

Prospects and Limitations', *International Journal for the Advancement of Counselling* 16 (1993), 195-204; Fatimah Alhashem and Ibrahim Alhouti, 'Endless Education Reform: The Case of Kuwait', in *Annual Review of Comparative and International Education 2020*,ed. by Alexander W. Wiseman (Emerald Publishing Limited, 2021), pp. 345-367; Rania Al-Nakib, 'Human Rights Education for Democratic Citizenship and International Organisations Findings from a Kuwaiti Unesco Aspnet School', *Cambridge Journal of Education,* 42. 1 (2012), 97-112; Rania Al-Nakib, 'Dialogic Universalism and Human Rights Education: A Case Study from Kuwait' (unpublished doctoral thesis, University of London, 2012); Baker; Talal Al-Rashoud, 'Schools for the Arab Homeland: Kuwait's Educational Mission in Sharjah ', in *Building Sharjah* (Basel, Switzerland: BIRKHAUSER, 2021), pp. 217-248; Al-Sabah; Souad M. Al-Sabah, *Abdullah Mubarak Al-Sabah: The Transformation of Kuwait* (London: I.B.Tauris & Co. Ltd, 2015).

[100] A faculty member of Department of History at Kuwait University; see: Talal Al-Rashoud, 'Modern Education and Arab Nationalism in Kuwait, 1911-1961' (unpublished doctoral thesis, University of London, 2017).

[101] Al-Rashoud.

The most important role was that of the Kuwait State Office in Dubai, which was established in 1936 to oversee Kuwait's initiatives in four major areas: education, public health, social and religious services, and the development of natural resources. They constructed, equipped, and——largely staffed seven schools, two hospitals, a clinic, and two mosques in Sharjah. With regard to education reform in Sharjah, this article widens the scope of Kuwait's modernisation effect beyond its state.

In his autobiographical book entitled *Tarikh Alhandasah Fi Alkuwait: Qisat Watan Fi Seira Thatiya* [Engineering History in Kuwait: The Story of a Homeland in Autobiography], issued in 2017, Sabah Al-Rayes recounts his interactions with public figures as well as his engineering journey over a half-century, including personal notes, drawings, and photos. His book provides valuable references for educational institutions in Kuwait. [102]

From an architecture-built perspective, many materials have been released to highlight Kuwait's modern built environment. However, few have gone into greater depth regarding the architecture of education. In the book *Modern Architecture Kuwait 1949-1989*, a brief survey of educational buildings was provided, but it was limited to their physical description.[103] In the second volume, Fabbri's article, *Prototyping Spaces for Education: Pedagogy, School Planning, Standardisation, and Prefabrication in Kuwait's Drive to Modernity,* offers a comprehensive overview of the expansion of educational spaces' throughout the modernisation era.[104] Similarly, a few pages were issued to the *State Building as a Museum, School, Nation* in *Pan-Arab Modernism 1968-2018,* giving a concise political narrative of the state school's production.[105] His essay, which briefly discusses the history of educational production in connection with Kuwait's modernisation, served as inspiration for this thesis. However, his essay only explored the role of Swiss architect Alfred Roth in producing schools as prototype mass buildings to meet the government's need for school programmes after independence, rather than providing a full narrative of pre-oil socioeconomic influences and post-oil attempts to provide the best school layouts.

[102] One of Kuwait's first modernisation-era pioneering professionals. He is a civil engineer who graduated from the Indiana Institute of Technology in 1965. He began his career at the Ministry of Public Works before establishing his office [the Arab Office for Engineering Consultations] in 1968, which contributed to the modernisation progress of Kuwait by designing and supervising more than 1,000 projects in the areas of construction, roads, bridges, education, health, and infrastructure during the late 1960s; see: Sabah Al-Rayes, *Tarikh Alhandasah Fi Alkuwait, Qisah Watan Fi Sirah Dhatia* [Engineering History in Kuwait] (Kuwait: That Al-Salasil, 2017).

[103] Fabbri, Saragoca and Camacho.; It covers Shuwaikh Secondary School, Kuwait's Public Schools, the Girls' Secondary School, Mubarakiya School, the Standard Schools, one Intermediate School for Girls, the Female Students' Housing- College of Education, and one Kindergarten.

[104] Saragoca, Camacho and Fabbri, pp. 208-219.

[105] Camacho, Alsayer and Saragoca, pp. 158-165.

2.5 CONCLUSION

In the book *Modern Philosophy* - which was released in 2011*,* Duignan Brian, a political thinker, pointed out that modernity emerged during the Renaissance period as a cultural movement towards capitalism influenced by scientific development or rational revolution.[106] In the social sciences, modernity is understood as a change in social conditions.[107] Therefore, modernity can be considered a different factor that explains *why* and *when* society changed or became modern. However, an accurate description of modernisation depends on the perspective from which it is viewed. From an educational architecture viewpoint, modernisation describes the shift towards knowledge-based creation in *School Culture*, systemising pedagogy, emerging national educational systems, and producing mass schooling.[108] The uniqueness of architecture's potential to offer us insights into the world around us and our position in it provides a unique opportunity for architectural styles to be expressed in school architecture.

This section evaluates the literature on modernist architecture that is pertinent to this thesis. Considering key ideas on modernist school architecture in the West and a select few in the Middle East, this is by no means a comprehensive summary of the literature on topics related to Kuwait's modern architecture, school architecture development, and pedagogical perspectives. Scholarly doctoral theses have captured Kuwait's enthusiasm for modernisation through the city's urban history and a variety of themes, such as capitalising on the old town or creating a new one based on oil, sparking discussions about the country's cultural shift and ideological reformation within its social and political influences. Other works have focused on building scales, investigating housing production to provide social provisions, and examining the connection between architecture and power to symbolise the nation after independence. This came about because of a cultural exchange between many designers, resulting in a remarkable and sophisticated context into which the built environment presently falls. Nevertheless, none managed to place school design within the context of Kuwait's modernist and welfare architecture.

Therefore, this chapter conducts a literary study of urban revitalisation, cultural transformation and national identity, nationalism and representation, social provision and welfare programmes, and other challenges arising from these topics to assess the concepts and influences behind modernist

[106] *Modern Philosophy from 1500 Ce to the Present*, ed. by Brian Duignan, ^eds., 1st edn (New York: Britannica Educational Publishing, 2011),(p. 11).
[107] Matei Calinescu, 'Modernity, Modernism, Modernization Variations on Modern Themes', *Symplokē,* 1. 1 (1993), 1-20.
[108] Cynthia Pereira de Sousa and others, 'School and Modernity: Knowledge, Institutions and Practices. Introduction', *Paedagogica Historica,* 41. 1-2 (2005), 1-8.

school architecture. Based on the literature mentioned above, the current research examines modernist school architecture in Kuwait from the early educational reformation, prior to Kuwait's economic boom and after its independence, to show the position of architecture as a cluster of modernisation development that persisted after the discovery of oil (the 1930s to the 1980s).

Figure 2.17 Prototype School in Kuwait. This photograph shows Al-Noor Blind School, a progressive institution of learning in 1950s Kuwait. The picture was found at the BP Archive and was also published in the July 1960 issue of Al-Arabi Magazine.[109]

This thesis attempts to address knowledge gaps in the available literature on the topic of modernist school architecture in Kuwait (see **Figure 2.17**). First, it examines the historical context in which the modern educational reformation in Kuwait took place, which counters the assumption that Kuwait's modernisation is a *'unique creation of oil'*. The objective is to find out whether the modernism movement of the country, from an educational angle, was solely driven by oil wealth, as Gardiner raised, or whether other social and political elements contributed to its establishment, as Al-Nakib argues. Therefore, the next chapter of this study focuses on the evolution of modern architecture in Kuwait from the viewpoint of the educational system in the early twentieth century, even though it is difficult to demonstrate modern architecture without referring to premodern times or entering a debate about the social conditions and political conflicts.

[109] The British Petroleum Archive [BP], University of Warwick: Ref. 107086/043, ©BP plc, 'Kuwait School', n.d.

Second, this study seeks to examine the correlation between political actions, such as the British protectorate, Kuwait's modernisation process, welfare programmes, and the design of school layouts in Kuwait during the late twentieth century. Additionally, it analyses the social and cultural effects resulting from these changes. To counter this, Chapter 4 discusses the role of school architecture in establishing a connection among welfare architectural spaces, state policy, and prosperity that supports social services.

Third, the notion that modernism was brought into colonial or semi-colonial countries, such as Kuwait is commonly understood as the influence of Western powers, their principles, and their views. Consequently, analysing the design of schools in Kuwait would provide noteworthy perspectives from other parts of the world, including Western countries. This diversity may be observed in the cultural and ideological perspectives on history, as well as in the architectural designs of these buildings, which were created by multiple foreign and international architects. The cultural exchange over these sophisticated school designs about modernism, international style, and regionalism is discussed in chapters 5 and 6, which provide an in-depth assessment of the design and construction of schools in relation to their foreign designers' and builders' practices. Finally, we critically evaluated modernist school architecture in Kuwait, delving into its symbolism and meaning in the context of modernism and welfare architecture.

To offer a comprehensive analysis of Kuwait's modernist school architecture, it is necessary to examine, evaluate, and appraise its contextualised narrative within the historic-interpretive framework presented in the chapters of this thesis. Chapter Seven discusses the importance of Kuwaiti school buildings, situates Kuwait's modernist architecture within the context of its historical narrative, and concludes with a critique of the arguments in the thesis. In addition to summarising the thesis's contributions to the fields of modernism and welfare architecture, this section discusses the study's limitations and makes recommendations for future studies.

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CHAPTER THREE

EMERGENCE OF SCHOOLS IN KUWAIT: SOCIAL AND POLITICAL INFLUENCES

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The third chapter emphasises the cultural renaissance movement in Kuwait, which led to the establishment of early formal schools (see **Figure 3.1**). It highlights the social and political forces that contributed to the introduction of modern education, with a focus on the British role in Kuwait in the early twentieth century. The primary goal is to explore the various factors that have influenced the creation of learning spaces and how they have been turned into places for education as school buildings. It also presents the tale of oil in Kuwait and its impact on the country's educational evolution from informal to formal and into the new pedagogical nation-state periods. This discussion includes the impact of religion, the clout of merchants, the effect of migration, the rise of the economy and population, the vision of the government ruler, and the role of Britain's Empire in the region. It ends by introducing education as one of the fundamental pillars of modernising Kuwait's society.

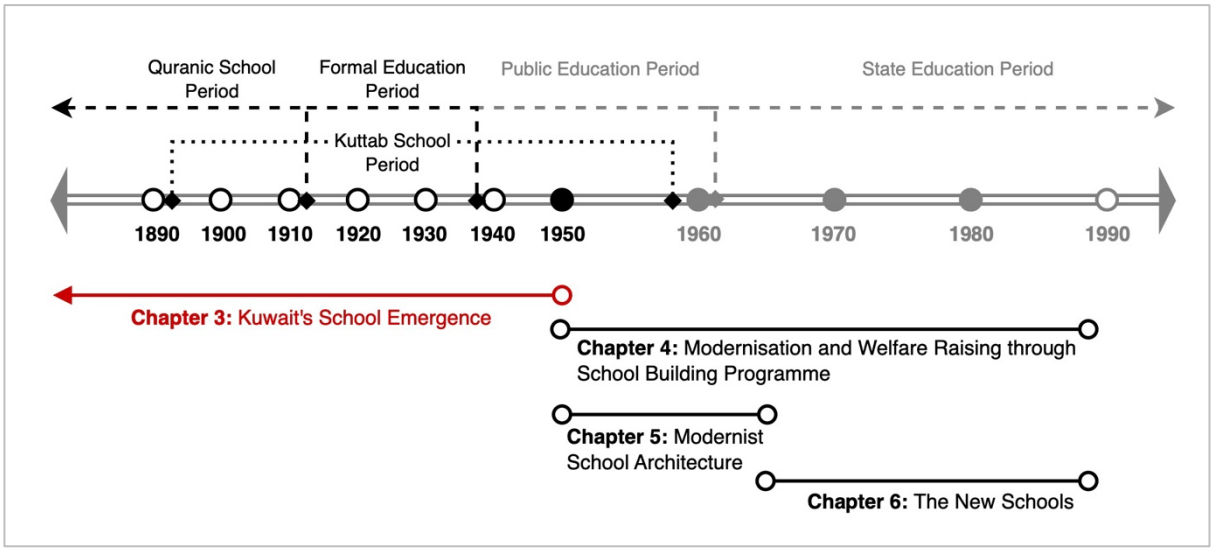


Figure 3.1 The chronological context of Chapter Three of the study. The graph illustrates the framework of this thesis, focusing on the content of this chapter, which emphasises the evolution of the education system before 1950.[1]

3.1 HISTORICAL OVERVIEW

Many historians, travellers, and authors of Middle Eastern history have become fascinated with Kuwait's unique condition. Harry Victor Frederick Winstone, in his book *Kuwait: Prospect and Reality,* gives an overview of Kuwait, writing:

[1] Author, 2023.

> *'In simple translation, Kuwait is the Little Fort. To Europeans who skimmed the surface of Arabia for five hundred years or so it was a sandy littoral, a lip of the Gulf, south of Basra, which gave them no great need to pause in their tracks …Today, it is one of the richest nations on earth, engaged in a massive experiment in social welfare and democracy, maintaining on one level its traditional Arab character –stoic, proud, fatalist– while on the other it balances a modern economy, generated by a gush of oil of almost unimaginable abundance'.*[2]

Zahra Freeth,[3] a British author and daughter of Lieutenant Colonel Harold Dickson, a British colonial officer in the Middle East, wrote:

> *'The new Kuwait is a powerful reality, a modern city ready to be judge on its merits, and the new generation who have made the transition into the twentieth century are impatient of westerners who are interested only in the picturesque life of the past'.*[4]

In this chapter, Kuwait's pre-oil socio-economic and political life is presented to show how many factors led to the formation of a new modern society. A brief historical backdrop is presented in this section to further comprehend the historical context and subsequent shifts.

While the Al-Sabah ruler seized control of Kuwait, merchants provided financial support. Kuwait's merchants were a group of so-called *'Asil'* [original] families that traced their royal ancestry back to Najd and settled in Kuwait with the Al-Sabah family.[5] The economic strength that merchants gained through the pearling trade and the contributions of society's workers led to their eventual ascension to political authority, particularly during World War II and the collapse of the pearling industry.[6] The authoritative input provided to the Al-Sabah ruler was used in decision-making by the social parties and councils. However, the discovery of oil in the 1930s ushered in new forces, reshaping the Kuwaiti political structure. With its oil wealth, the ruler's family gained complete control by achieving

[2] H.V.F. Winstone and Zahra Freeth, *Kuwait: Prospect and Reality* (London: Routledge, 1972), p. 11.

[3] Freeth was the daughter of Lieutenant Colonel Harold Dickson and Violet Dickson (1924–2015). She lived in Kuwait prior to and after the oil boom. She witnessed how Kuwaiti culture and everyday activities transformed after oil. As published author, she has penned novels about the Middle East and Kuwait include Kuwait Was My Home, was published in 1956, A New Look at Kuwait (1972), Kuwait: Prospect and Reality (1972), and The Arab of the Desert by H. R. P Dickson (1983).

[4] Zahra Freeth, *A New Look at Kuwait*, 1st edn (Kuwait: Taylor and Francis, 1972), p. 7.

[5] Nicolas Gavrielides, 'Tribal Democracy: The Anatomy of Parliamentary Elections in Kuwait', in *Elections in the Middle East: Implications of Recent Trends*,ed. by Linda L. Layne (London and Newyork: Routledge, 1987), (p. 156); Jill Crystal, *Oil and Politics in the Gulf Rulers and Merchants in Kuwait and Qatar* (Cambridge: Cambridge University Press, 1990), p. 37.

[6] Crystal, p. 4.

political and economic independence. Nevertheless, merchants were able to recall their political authority by acting as collective parties in the bureaucracy because of their solid corporate consciousness.[7]

Life during Kuwait's pre-oil era was challenging because of the hot environment and scarcity of essential resources such as food and drinking water.[8] This small town, with unplanned urban mud-brick courtyard houses and narrow and non-linear walkways, grew due to population expansion and the influx of labourers to the region. In the mid-eighteenth century, two factors played a significant role in the economic rise: firstly, British interest in the area and their steamships entering the Gulf, with merchants' agencies opening in India; and secondly, a combination of global demand for high-end products and an abundance of pearl fisheries led to pearl industry growth.[9] This economic prosperity encouraged the immigration of many families from Saudi Arabia, Iraq, Bahrain, and Iran to Kuwait. As a result of these migrations, various nomadic tribes with different skill sets merged to revive societal services such as medicine, education, and the judiciary.

Ten thousand people lived in the town in the early 1800s;[10] by the mid-century, that number had doubled, leaving only a few hundred people in the original population.[11] Between 1900 and 1920, Kuwait experienced an enormous population surge. By 1919, there were over 85,000 residents.[12] In the mid-twentieth century, the discovery of oil triggered a second population boom. The oil revenues and new modernisation projects needed additional human labour, and the existing workforce lacked the necessary competence.[13] According to the Annual Statistical Abstract, Kuwait's population exceeded 200,000 people in 1957 (as shown in **Figure 3.2**).[14]

The exploitation of oil resources rushed Kuwait's transition, especially after World War II, leaving little time for gradual development. The change in Kuwait's society was tremendous; the port town became a modern city with mobility access, wide roads, multi-story buildings, and new neighbourhoods extending beyond the third wall. The oil revenue brought a new life to society with healthcare, education, sports, and social services. This happened when Sheikh Abdullah Al-Salem

[7] Ibid. pp. 2, 7.
[8] Anh Nga Longve, *Walls Built on Sand: Migration, Exclusion, and Society in Kuwait* (US: Westview Press, 1997), p. 20; Jill Crystal, *Kuwait: The Transformation of an Oil State* (Boulder, San Francisco, Oxford: Westview Press, 1992), pp. 2, 32.
[9] Ahmad M. Abu-Hakima, *The Modern History of Kuwait 1750-1965* (Montreal, Canada: McGill University, 1980), p. 58; Crystal, p. 31.
[10] Ben J. Slot, *The Origins of Kuwait* (Kuwait: Center for Research and Studies on Kuwait 1998), p. 147.
[11] Crystal, p. 8.
[12] Abdulaziz Al-Rushaid, *Tareikh Al-Kuwait* [History of Kuwait] (n. p: Al-Asriya Publisher, 1926), p. 68; Crystal, p. 33.
[13] Longve, p. 25.
[14] Ibid. p. 27; Freeth, p. 32.

Al-Sabah, the eleventh ruler of Kuwait, assumed power and pursued specific social policies that would support a certain growth model, ushering modernity and prosperity into all aspects of Kuwaiti life. The wealth from oil revenues was used towards building and maintaining infrastructure. His foresight resulted in the establishment of modern Kuwait as an independent and welfare-oriented nation in 1961.[15] Consequently, the economy, government, and social hierarchy were significantly changed in a few decades. Despite this, it has had a lasting impact on subsequent life developments.

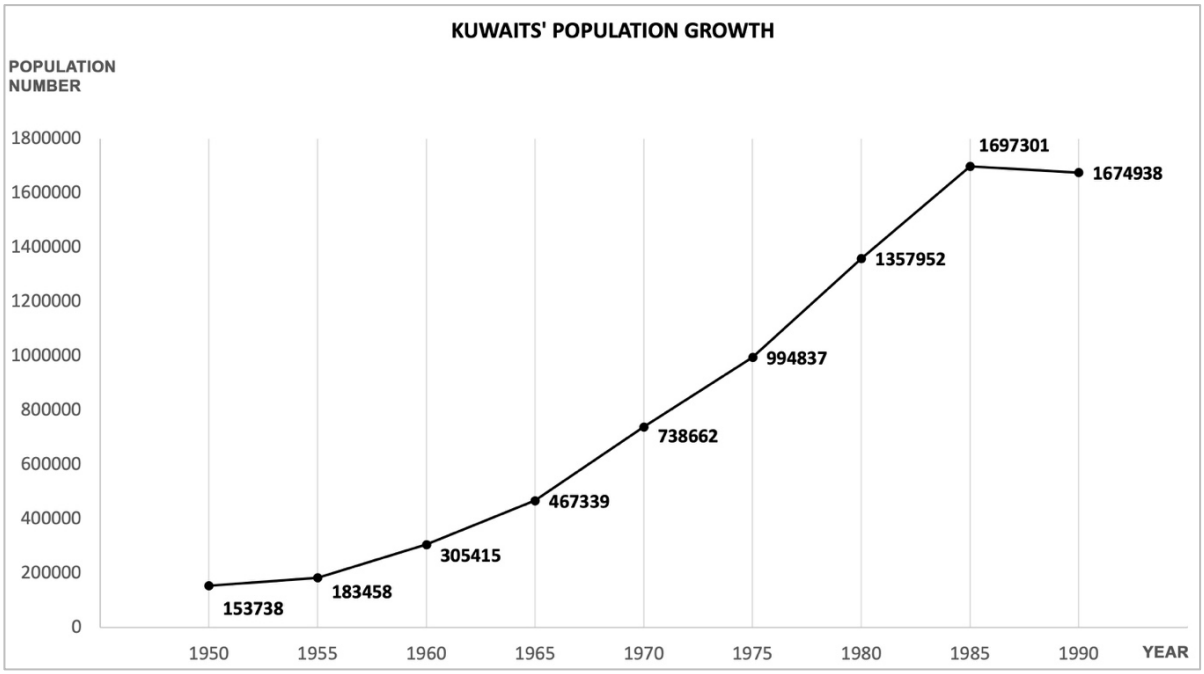


Figure 3.2 Population growth graph for Kuwait from 1950 to 1990. The graph clearly demonstrates that the population of Kuwait has been gradually increasing since the country's oil was discovered, coinciding with its modernisation process. Also, it indicates a minor decrease in the population number by 1985, which is attributed to the world economic crisis.[16]

The ability of Kuwait's rulers to use wisdom and leadership to put Kuwait in a favourable political position to defend and build a prosperous country was crucial. As a result of the merchants' social dominance, the class harmony of society was maintained, and multiple councils were established as a foundation for the early government structure.[17] Despite the population expansion induced by external causes such as migration, the economy flourished, and new skills and functions were

[15] Wizarat al-Irshad wa-al-Anba, *Kuwait Today: A Welfare State* (n. p.: Quality Publication Limited, 1963), p. 13.
[16] UN, *World Population Prospects 2019* (France: United Nations, 2021). ; illustrated by the Author, 2023.
[17] *Kuwait, the Growth of a Historic Identity*, ed. by Ben J. Slot (Kuwait: The Gulf Museum Consultancy Company, 2003),(p. 104).

developed in society. According to Crystal Jill, author, and professor of political science at Auburn University:

> *'Kuwait was well on its way to becoming a nation long before it was a state. Kuwait has been an independent state only since 1961, but it has been a distinct political entity since it was founded early in the eighteenth century'.*[18]

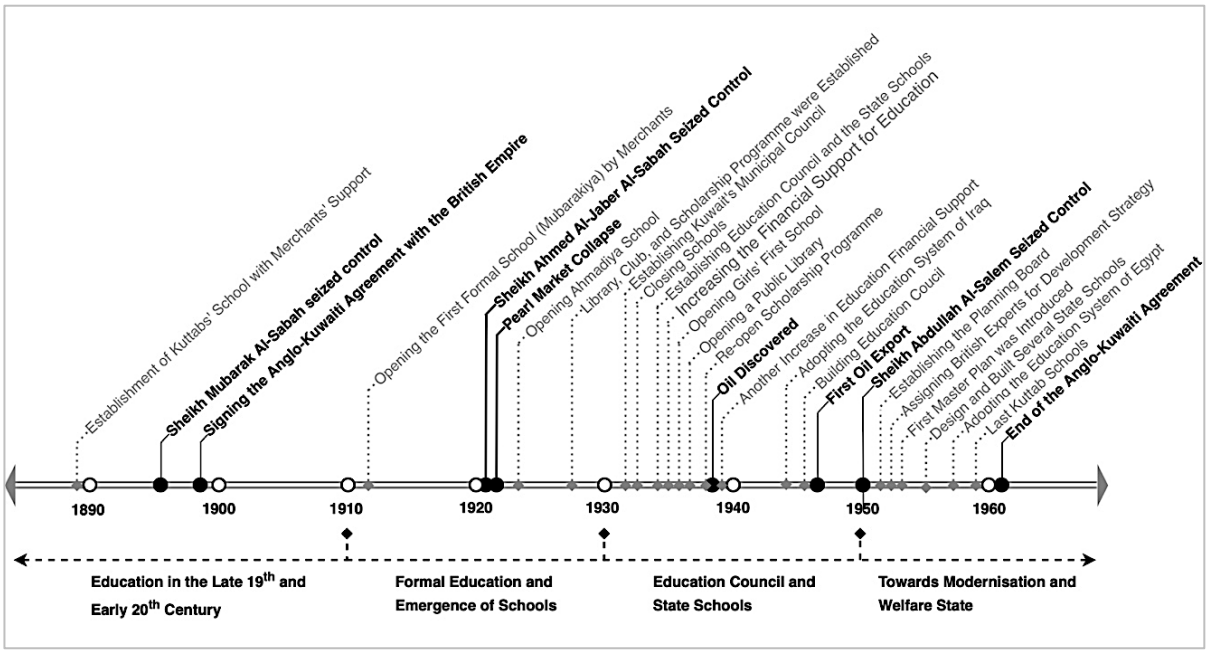


Figure 3.3 A chronological account of educational progress that encompasses pivotal activities. Timelines provide light on the most pivotal moments across the many eras of educational reform, drawing attention to the ways in which social, political, and economic factors played a role.[19]

The tale of an event, such as an oil discovery, cannot be told without considering the incidents that occurred before and immediately around the discovery. Hence, this chapter explores the history of education prior to the discovery of oil to highlight the factors that influenced the formation of modern education in Kuwait throughout the early twentieth century and prior to it becoming an independent state (as shown in **Figure 3.3**).

3.2 EDUCATION IN THE LATE NINETEENTH AND EARLY TWENTIETH CENTURIES

3.2.1 Quranic Schools

Islamic education and lessons have their roots in the Prophet's time; however, it has been documented that institutions of study began to emerge around the Quran and its principles in the

[18] Crystal, p. 7.
[19] Author, 2023.

first and second centuries of the Islamic era (718-818 AD).[20] Education in Islam is an essential part of the development of the Muslim identity. Muslims are not only expected to seek information but also to put that knowledge into practice.[21] Therefore, a significant literary culture emerged in Muslim societies because of the Islamic ethical precepts taught in mosques and *Madrasahs*.

By the late ninth century, almost all mosques served a dual purpose: a place of prayer and a spot where young Muslims could learn religious principles. Similarly, in Kuwait, people received Islamic instruction in mosques. The lessons were given by a religious scholar, known as an *imam* or *mulla*, who read the Quran, led Muslims in their prayers, and preached to them during Friday and Eid prayers.[22] The first known imam was Muhammed Bin Fayrouz, who came to Kuwait from Ihsa in the early eighteenth century.[23] Ibn-Fayrouz was based on the Ibn Bahar Mosque's prayers, lessons, and preaching.[24] In addition to Ibn-Fayrouz, Kuwait witnessed other Imams who came to Kuwait from surrounding countries, such as Abdulrahman Al-Suwaidi and Sayed Abduljallel Al-Tabtabaei who came from Basra in 1836 and settled in Kuwait.[25] This indicates that there was a shortage of teachers in Kuwait at the time, prompting some to migrate from neighbouring countries. Abduljallel's son, Sayed Ahmad, followed his father's approach to preaching and teaching Islamic morals until his death in 1878.[26] According to Abdulaziz Hussein, an education reformer and politician in Kuwait, most imams teach adults and children.[27] In spite of the fact that parents were in charge of introducing Islamic values to their children, learning to pray and read the Quran was obligatory starting at the age of 7 years.[28]

The teaching method was provided orally; there were no textbooks, pens, or papers until the *Kuttab* period of education, when teaching writing was introduced. Children would often sit cross-legged on the ground with their X-shaped wooden stands (as shown in **Figure 3.4** and **Figure 3.5**) for the Quran and surround their *mulla*, listening to him and reciting his talks.[29] Quranic teachings were

[20] Fazlur Rahman, *Islam and Modernity Transformation of an Intellectual Tradition* (Chicago, USA: The University of Chicago Press, 1984), p. 31.
[21] Ibid. p. 14.
[22] Abdullah Al-Nouri, *Qisat Alta'aleem Fi Alkuwait Fi Nisf Qarn* [The Story of Education in Kuwait in Half a Century] (Kuwait: That Alsalasil, n. d.), p. 31.
[23] He died in 1723AD. See ibid. p. 18; MOE, 'Tarikh Altaelim', 2022 <https://moe.edu.kw/about/Pages/History.aspx> [accessed 24th June].
[24] It was built in 1670AD. See MOE.https://moe.edu.kw/about/Pages/History.aspx
[25] Al-Nouri, p. 18; *Tarikh Altaelim Fi Dawlat Alkuayt* [History of Education in the State of Kuwait], ed. by Abdulaziz Hussein. Vol. 1 (Kuwait: CRSK, 2002),(p. 29).
[26] Al-Nouri, p. 18; Hussein, p. 29.
[27] Abdulaziz Hussain is a Kuwaiti politician, author, and education reformer (1920-1996).
[28] The National Archives [TNA], London: R/15/5196, 'Extract from Mr C.A.F. Dundas's Report on His Tour Outlining Educational Activities in Kuwait after Visit', 28th September to 14th October 1939.
[29] Hussein, p. 26 and 28; Freeth, p. 115.

available to all Muslims regardless of age, study admission, or duration of attendance; however, they were limited to male attendance at mosques.

Figure 3.4 Boys' education at the mosque through Kuttab education, n.d. Left: The initial form of education in Kuwait was the Kuttab system, primarily conducted in mosques. Torathona Magazine published the picture.[30]

Figure 3.5 Girls' Kuttab education by Mutawa'a, n.d. Right: the picture presents Kuwaiti girls receiving education by Al-Murawa'a in Kuttab's education theme, early 1900s.[31]

3.2.2 Kuttab Schools

Prior to educational reform in Kuwait in the early twentieth century, Quranic lessons were refined for *Kuttab* education in the late nineteenth century. *Kuttab* served as a temporary classroom in the absence of a permanent classroom. It was placed either in a mosque or in the homes of educators called *muttawa* or *mulla.*[32] Kuttab is a noun derived from the singular form of the word *kitab,* which refers to *writing* as a topic in writers' education.[33] It first taught Islamic principles before writing and arithmetic were included in its curriculum.

In Kuwait, teaching writing and calligraphy was limited to judges such as the Al-Adsani family.[34] Other than them, Abdulrahman and Hamad Al-Boudai, Mohammed Al-Faris, and Mulla Omar were known for their basic knowledge in delivering writing and calligraphy skills between 1873 and 1893.[35] However, Mulla Qassim and his Iranian immigrant brother Mulla Abdein founded Kuwait's first *Kuttab* in the Qaysaria area and taught calligraphy for the first time in 1887.[36] A year later,

[30] 'Katateeb Education by Mulla in the Past, Kuwait', *Torathona*, 3rd November 2020 n.d.

[31] Sarah Al-Mukhaizeem, 'Alkatatiba, Alawlaa Liltaelim Fi Alkuayt Qadiman', 2016 <https://www.kuna.net.kw/ArticleDetails.aspx?id=2513194&language=ar> [accessed 23th August].

[32] Hussein, p. 28; Youssef Al-Qinaie, *Safahat Men Tareikh Al-Kuwait* [Pages from Kuwait's History] (Cairo: Dar Saad Masr, 1946), p. 37; Abdulaziz Al-Rushaid, *Tareikh Al-Kuwait* [The History of Kuwait] (Beirut, Lebanon: Dar Maktabat Al-Hayat, 1978), p. 297.

[33] Hussein, p. 26. Abbasid times seem to have employed two words for the location of boys' education: 'Kuttab' and 'Maktab.' See Bader Al-Zuwair, *Al-Mubarikiya School Entrance* (Kuwait, 2011), p. 21.

[34] Hussein, p. 27.

[35] Ibid.

[36] Ibid. p. 37; Al-Nouri, p. 22.

another *Kuttab* was opened in the Al-Marzouq area by Mulla Rashid Al-Saqoubi, who came from Al-Ihsa.[37] In 1893, Mulla Ali Bin Ammar from Ihsa was asked by Sheikh Jarrah A-Sabah, Sheikh Mubarak's brother, to come to Kuwait and work at the Department for Financial Affairs because of his mathematical abilities.[38] By then, he had begun teaching arithmetic to a group of Kuwaiti youths who needed it for trading purposes. Gradually, the first arithmetic syllabus was developed by him, and it became an important part of the *Kuttab* curriculum in the later years. This exemplifies how the influx of new immigrants from neighbouring nations contributed to the evolution of the curriculum (see **Figure 3.6**).

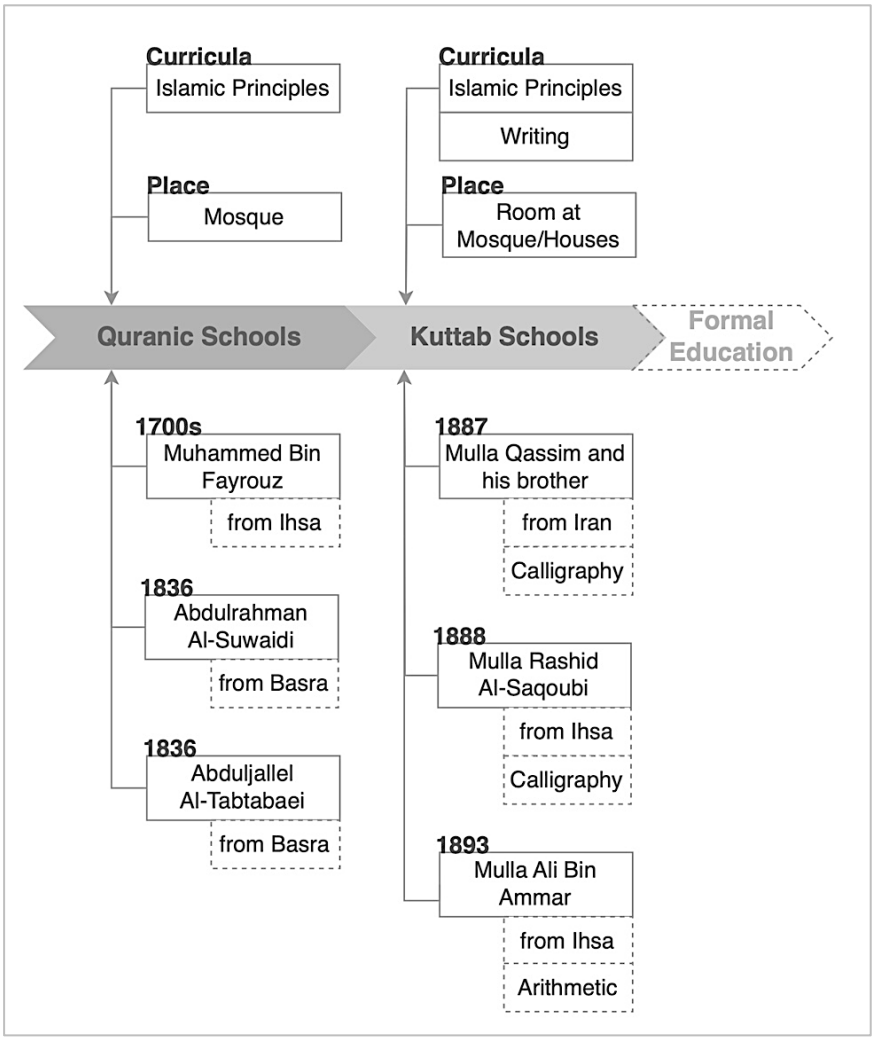


Figure 3.6 Diagram of the Kuttab and Quranic forms, including the influence of instructor migration on the evolution of the education curriculum and space. The visual delves into the distinctions between the Quranic and Kuttab schools of education, where teachers migrated to Kuwait from neighbouring countries, shaped Kuwait's curricula, and helped establish one-room class.[39]

There was no uniform curriculum, and it was up to the *mulla* to develop the lesson principles, methods, and resources. At *Kuttab*, the guardians prepared their children with a rectangular piece

[37] Hussein, p. 38; Al-Nouri, p. 22.
[38] Hussein, p. 39; Al-Nouri, p. 24.
[39] Author, 2023.

of wooden board (40 cm × 20 cm) coated with sticky mud called *khawa,* where the *mulla* wrote the alphabet in black chalk for the children to memorise.[40] The board was washed and re-coated after each lesson. In contrast to prior oral approaches, this is how the teaching method was handled in *Kuttab* education. Children under the age of ten could attend at any time without restrictions. Boys and girls were allowed to attend separate *Kuttab* education sessions, in contrast to Islamic education, which was limited to boys.[41]

Kuttab depended not only on the desire for religious education but was also increasingly being adopted as a new form of income.[42] Each student's guardian reportedly paid *Kuttab* 1.5 rupees every month, even though the amount remitted to the teacher was not fixed at the time.[43] Consequently, *Kuttab* became popular as a place to learn in Kuwait between 1887 and 1910. The British Politic Agent in Kuwait, Major C. J. More, reported on the educational condition in 1927 by highlighting at least 52 Arab schools (27 boys and 25 girls), 11 Persian schools, and another 65 religious' schools, including Jews and Christians.[44] In other records, there were approximately 35 *kuttabs* in 1935, and 320 *kuttabs* by 1952.[45] However, after the introduction of formal education, the *kuttab* population began to decline, and the last *kuttab* closed in 1958.[46]

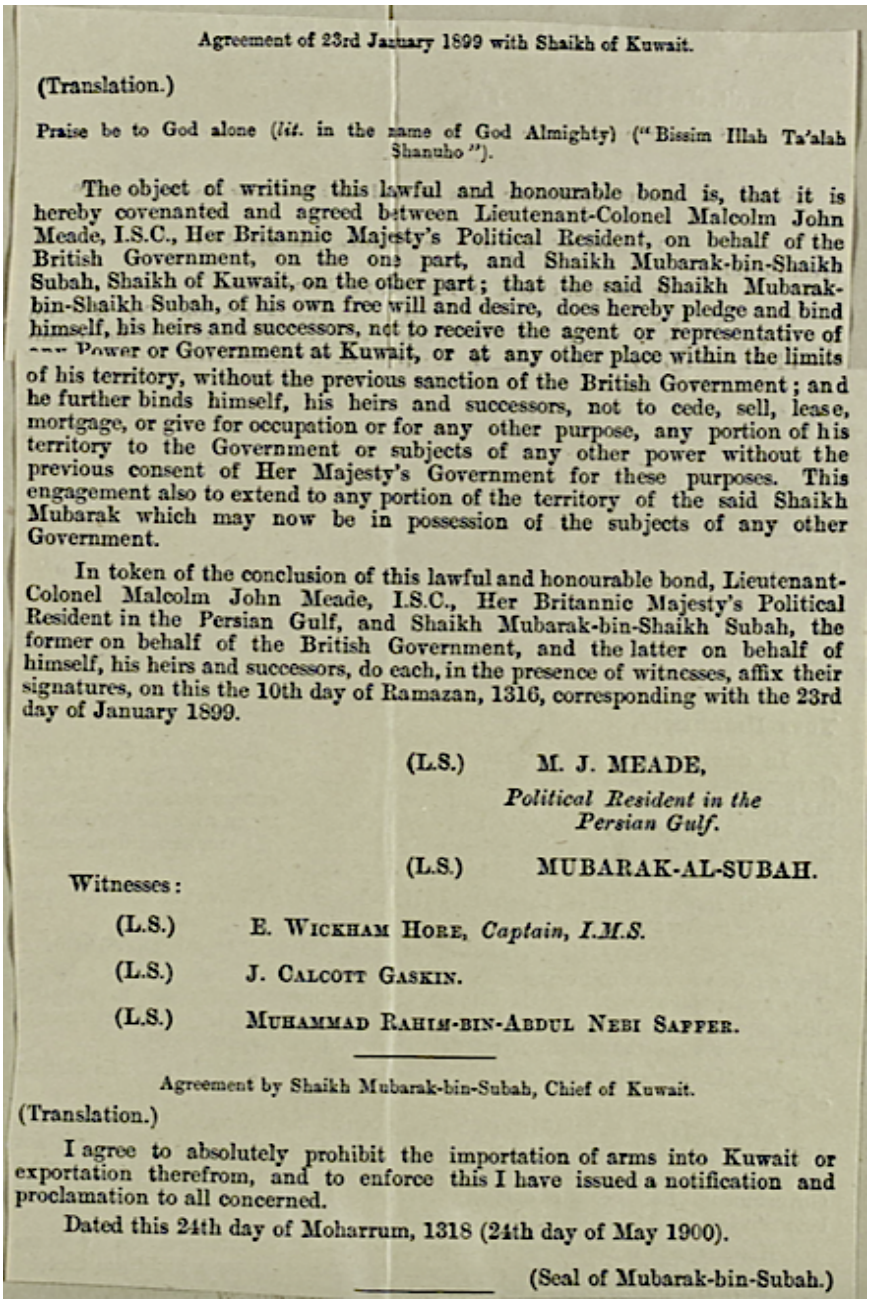
3.3 EMERGENCE OF SCHOOLS (1900s–1920s)

3.3.1 Mubarak The Great

In 1896, Sheikh Mubarak Al-Sabah, the sixth ruler of Kuwait, seized power and initiated a major political and economic transition. He was given credit for founding the modern state of Kuwait as an autonomous entity independent from the Ottoman Empire and acquired the nickname *Mubarak the Great* when the well-known exodus of Kuwaiti pearl merchants occurred under his rule due to the new policy of taxation.[47] Initially, Britain sought protection against the Ottoman Empire and attacks from other nations. By signing a treaty on 23rd January 1899, Britain and Kuwait agreed to an exclusive connection and control over Kuwait's foreign policy in return for British protection of

[40] Al-Nouri, p. 25; Winstone and Freeth, p. 196.
[41] Hussein, p. 42.
[42] Ibid. p. 30.
[43] Adbul-Rahman Al-Awadi, 'Education in Kuwait', *The Vocational Aspect of Secondary and Further Education,* 9. 19 (1957), 101-106 (p. 102).
[44] The National Archives [TNA], London: CO732/33/10, 'Note on the Principality of Kuwait Prepared for Political Resident, Bushire by Major J C More, Political Agent, Kuwait', 1927.
[45] Hussein, p. 65.
[46] Ibid.
[47] Abu-Hakima, p. 109.

the country (see **Figure 3.7**).[48] Sheikh Mubarak had to deal with a complex situation, including Kuwait's internal crisis, the Gulf region, and the European powers' long-term aspirations. Therefore, he became one of the founding fathers of the state of Kuwait by combining politics with the military, warfare, and diplomacy.



Agreement of 23rd January 1899 with Shaikh of Kuwait.

(Translation.)

Praise be to God alone (*lit.* in the name of God Almighty) ("Bissim Illah Ta'alah Shanuho").

The object of writing this lawful and honourable bond is, that it is hereby covenanted and agreed between Lieutenant-Colonel Malcolm John Meade, I.S.C., Her Britannic Majesty's Political Resident, on behalf of the British Government, on the one part, and Shaikh Mubarak-bin-Shaikh Subah, Shaikh of Kuwait, on the other part; that the said Shaikh Mubarak-bin-Shaikh Subah, of his own free will and desire, does hereby pledge and bind himself, his heirs and successors, not to receive the agent or representative of any Power or Government at Kuwait, or at any other place within the limits of his territory, without the previous sanction of the British Government; and he further binds himself, his heirs and successors, not to cede, sell, lease, mortgage, or give for occupation or for any other purpose, any portion of his territory to the Government or subjects of any other power without the previous consent of Her Majesty's Government for these purposes. This engagement also to extend to any portion of the territory of the said Shaikh Mubarak which may now be in possession of the subjects of any other Government.

In token of the conclusion of this lawful and honourable bond, Lieutenant-Colonel Malcolm John Meade, I.S.C., Her Britannic Majesty's Political Resident in the Persian Gulf, and Shaikh Mubarak-bin-Shaikh Subah, the former on behalf of the British Government, and the latter on behalf of himself, his heirs and successors, do each, in the presence of witnesses, affix their signatures, on this the 10th day of Ramazan, 1316, corresponding with the 23rd day of January 1899.

(L.S.) M. J. MEADE,
Political Resident in the Persian Gulf.

(L.S.) MUBARAK-AL-SUBAH.

Witnesses:

(L.S.) E. WICKHAM HORE, *Captain, I.M.S.*

(L.S.) J. CALCOTT GASKIN.

(L.S.) MUHAMMAD RAHIM-BIN-ABDUL NEBI SAPPER.

Agreement by Shaikh Mubarak-bin-Subah, Chief of Kuwait.

(Translation.)

I agree to absolutely prohibit the importation of arms into Kuwait or exportation therefrom, and to enforce this I have issued a notification and proclamation to all concerned.

Dated this 24th day of Moharrum, 1318 (24th day of May 1900).

(Seal of Mubarak-bin-Subah.)

Figure 3.7 Agreement of 23rd January 1899 with the Sheikh of Kuwait. The document, from AGDA collections, is the official version of the treaty agreement assigned between Sheikh Mubarak Al-Sabah, the ruler of Kuwait, and M. J. Meade, the political resident of Britain in the Gulf. [49]

[48] Arabian Gulf Digital Archives [AGDA], UAE: FO 93/137/18, 'Agreement of 23rd January 1899 with Shaikh of Kuwait', 1899 < https://www.agda.ae/en/catalogue/tna/fo/93/137/n/18 > [Accessed 20 January 2023].

[49] Ibid. p. 18.

From the turn of the twentieth century until the beginning of World War I, Kuwait's population quadrupled or even tripled due to the town's growth and its markets; it was considered a golden era for merchants.[50] In this context of safety and stability, Kuwait embarked on its progress towards modernity. In 1911, the first hospital and school were established, and a charitable society opened in 1913.[51] Despite increased social services, a vast majority of these activities were owned and operated by different merchant families.[52] Although the hospital was privately established, Sheikh Mubarak invited a doctor from the Arabian Mission of the Dutch Reformed Church to operate it.[53] Sheikh Mubarak also supported modern education. In 1911, the first formal school, Mubarakiya, was officially formed as a school with his permission.[54] In 1913, a charitable society was founded to send students overseas.[55] Public libraries emerged, aid was provided to the underprivileged, and accessible healthcare was made available to society.

3.3.2 Merchants' Role in Education Development

Given the importance of merchants in pre-oil Gulf politics, their position in the rentier state is an obvious topic of exploration. According to Jill Crystal's book *Oil and Politics in The Gulf Rulers and Merchants in Kuwait and Qatar,* published in 1990, merchants played a crucial role in the political system of rentiers. Her study of how they interacted with Kuwait's and Qatar's rulers is regarded as one of the most important studies on Middle Eastern politics.[56]

The ruler of Kuwait and the merchants supported the state with their wealth and shared authority in Kuwait's political system. The Al-Sabah family relied heavily on the country's merchant class for stability. Although merchants served as government banks, they also controlled the workforce.[57] Many people worked as labourers on merchant ships during the boom in the pearling industry. As a result, they acquired influence over labour and a position as a source of tax income; if a conflict with the government occurred, they would carry out threats.[58] Furthermore, although merchants

[50] Farah Al-Nakib, 'Inside a Gulf Port: The Dynamics of Urban Life in Pre-Oil Kuwait', in *The Persian Gulf in Modern Times People, Ports, and History* ed. by Lawrence G. Potter (Macmillan: Palgrave, 2014), pp. 199-228 (p. 203); Crystal, p. 24.

[51] Abu-Hakima, p. 123; Geoffrey E. Ffrench and Allan G. Hill, *Kuwait Urban and Medical Ecology. A Geomedical Study* (New York, USA: Springer, 1971), p. 26.

[52] Crystal, p. 14; Eran Segal, 'Merchants' Networks in Kuwait: The Story of Yusuf Al-Marzuk', *Middle Eastern Studies,* 45. 5 (2009), 709-719 (p. 710).

[53] Abu-Hakima, p. 124; Winstone and Freeth, p. 74; Crystal, p. 14.

[54] Abu-Hakima, p. 124; Crystal, p. 14. According to Abdullah Al-Ghunaim, Mubarakiya School was opened in 1912 as per Al-Khalid's documents; see Abdullah Yousef Al-Ghunaim, *Arshif Almadrasat Alkhayriat Almubarakiat Fi Wathayiq Khalid* [Archive of Donated Al-Mubarakiya School in Al-Khalid's Documents] (Kuwait: Center for Research and Studies on Kuwait, 2018), p. 27; Ebrahim Abdo, *Dawlat Alkuayt Alhaditha* [Modern State of Kuwait] (n. p: Arab Record Foundation, 1962), p. 26.

[55] Soud M. Al-Sabah, *Mubarak Al-Sabah the Foundation of Kuwait*, 2nd edn (I. B.Tauris 2014).

[56] Crystal.

[57] Ibid. p. 4; Ben J. Slot, *Mubarak Al-Sabah Founder of Modern Kuwait, 1896-1915* (London: Arabian Publishing, 2005), p. 103; Longve, p. 20.

[58] Crystal, p. 4; Longve, p. 24.

benefited economically from these activities, they also assumed an obligation to deliver essential services to society.[59] Under their control, the market was active, religious organisations operated, healthcare became accessible, and informal and formal education systems were formed.

Regarding education, merchants invited religious scholars from neighbouring countries to several Islamic feasts to talk in their *diwaniya* (a social gathering place located at merchants' houses).[60] In 1910, a gathering was held at Youssef Bin Eissa Al-Qinaie's *diwaniya*, commemorating one of the Islamic feasts.[61] Al-Qinaie invited Sayed Yaseen Al-Tabtabaei, great-grandson of Sayed Abduljallel Al-Tabtabaei, to deliver a speech.[62] Al-Tabtabaei emphasised the value of education and the need for formal schools in Kuwaiti society, similar to those found in other Arab countries, such as Saudi Arabia and Iraq.[63] Moved by his speech, Al-Qinaie wrote an article in the newspaper on the importance of education and donated 50 rupees to raise funds for a campaign to construct a new formal school.[64] A call for knowledge was issued and 77,500 Gulf rupees were collected from society's merchants.[65] The Al-Khaled family then stepped up and offered their house in the town's centre as a donation to the school.[66] With the acquisition of 4,000 Gulf rupees' worth of neighbouring houses, the first formal school opened in 1911.[67] Mubarakiya was the name given to the school by Sheikh Mubarak Al-Sabah, who was the ruler at the time. The founding of Mubarakiya School marked the beginning of a new era in Kuwait's educational history, initiated by the society's merchants.[68]

By opening their first formal school, merchants increased their power in society. As a member of the merchant family, Al-Qinaie was selected as the school's first headmaster.[69] Merchants contributed a yearly sum to the school's operating income, in addition to the fees paid by the 254 students enrolled in the first year.[70] They were also responsible for overseeing school development and curricula.

[59] Crystal, p. 8.
[60] Al-Nouri, p. 39; Hussein, p. 80.
[61] Al-Ghunaim, p. 15.
[62] Al-Nouri, p. 39; Hussein, p. 101; Al-Qinaie, p. 40.
[63] Al-Nouri, p. 40; Hussein, p. 101; Al-Qinaie, p. 40.
[64] Al-Nouri, p. 40; Hussein, p. 101; Al-Qinaie, p. 41.
[65] The Gulf rupee was the official currency in Kuwait, Qatar, Bahrain, and Oman during the mid-twentieth century. The Indian Rupee was fixed to the British Pound at a rate of 13-1/3. Al-Nouri, p. 42; Al-Qinaie, p. 42.
[66] Al-Nouri, p. 42; Al-Rushaid, p. 132.
[67] Al-Nouri, p. 42; Hussein, p. 104; Al-Ghunaim, p. 27; Abdo, p. 26.
[68] Merchants volunteered were Ibraheem Al-Mudaf, Mash'aan Al-Khudair Al- Khalid, Shamlan bin Ali bin Sayf, Hilal bin Fajhan Al-Mutairi, and Yousif Al-Ibraheem.
[69] Al-Nouri, p. 47; Hussein, p. 111; Al-Qinaie, p. 42.
[70] Crystal, p. 45; Al-Nouri, p. 43; Hussein, p. 105.

Merchants' contributions did not end with the establishment of Mubarakiya School; they also established a non-profit foundation in 1913 to promote knowledge in Kuwait and the Gulf.[71] Within this charitable institution, the first public library, known as the Ahliya library and subsequently as *Maktabat Al-Ma'aref* [Library of Knowledge], was established.[72] In addition to providing financial assistance, the institution aimed to promote education by hosting talks with great foreign scholars and initiating literacy programmes for illiterate adults. The charity's founder, Farhan Al-Khudair Al-Khalid, died two years later, and the non-profit institution was forced to close.[73] Merchants reopened the public library in 1923 at Ali bin Amir's house in response to Al-Qinaie's call.[74] In 1924, a literary club was established in an area offering a wide range of cultural activities.[75] In that, Abdulaziz Hussein launched Kuwait's first magazine, *Majalat Al-Kuwait,* in 1928.[76] Moreover, merchants established an Educational Council in 1936, through which other schools for girls and boys were built, and foreign teachers were brought in from surrounding countries.[77] This dedication to educational development remained active even in the post-oil period, leading to the formal political demise of merchants.

3.3.3 Mubarakiya: The First Formal School

Mubarakiya School, the first formal school in Kuwait, was successfully established after funding and land were obtained from merchants. Al-Qinaie was honoured for his contribution as a pioneering leader in education by designating him as a supervisor of the school's rehabilitation.[78] He succeeded in combining three traditional courtyard houses to form Mubarakiya School. The school had one central courtyard surrounded by four classrooms on the southern side of the building, closest to the entrance, and two more on the northern side, each separated into two rooms (as shown in **Figure 3.8**, **Figure 3.9** and **Figure 3.10**).[79] Three storage units were erected on the east side with a small area for teachers.[80] The school had a total space of 10,200 square feet (947.6 square metres), measuring 120 feet long by 85 feet wide (36.5 m × 26 metres).[81]

[71] Al-Nouri, p. 57; Hussein, p. 141.
[72] Al-Nouri, p. 59; Ahmad Al-Sharbasi, *Ayam Al-Kuwait* [Kuwait Days] (Kuwait: Dar Al-Arabi Book, 1952), p. 23.
[73] Al-Nouri, p. 59; Hussein, p. 144.
[74] Al-Rushaid, p. 466; Hussein, p. 146.
[75] Al-Rushaid, p. 466; Al-Sharbasi, p. 22; Hussein, p. 148.
[76] Hussein, p. 150.
[77] Crystal, p. 45; Al-Nouri, p. 75.
[78] Al-Nouri, p. 42; Hussein, p. 104; Al-Rushaid, p. 136; Al-Qinaie, p. 42.
[79] Al-Nouri, p. 42; Hussein, p. 105.
[80] Al-Nouri, p. 42; Hussein, p. 105.
[81] Al-Nouri, p. 42; Hussein, p. 105.

As education was closely linked to societal conditions and trading demands, Mubarakiya School's curriculum reflected these requirements. Initially, the curriculum focused on the Arabic language and religion, with the addition of arithmetic and geography in subsequent years.[82] Teachers at Mubarakiya School, in contrast to those at *kuttabs*, were in charge of selecting subjects that were acceptable to the students.[83] Primary school students aged 4 years or 5 years attended school for six hours per day, which is equivalent to today's primary schools.[84] The student population grew steadily until the end of World War I, when schools' financial resources began to decline. In addition, the pearl industry crisis of 1930 led to a two-month school closure, which the government remedied in 1936 by bringing the school under government authority rather than merchant ownership.[85] The ruler agreed to a tax increase of 0.5% on the existing 4.5% for educational development.[86]

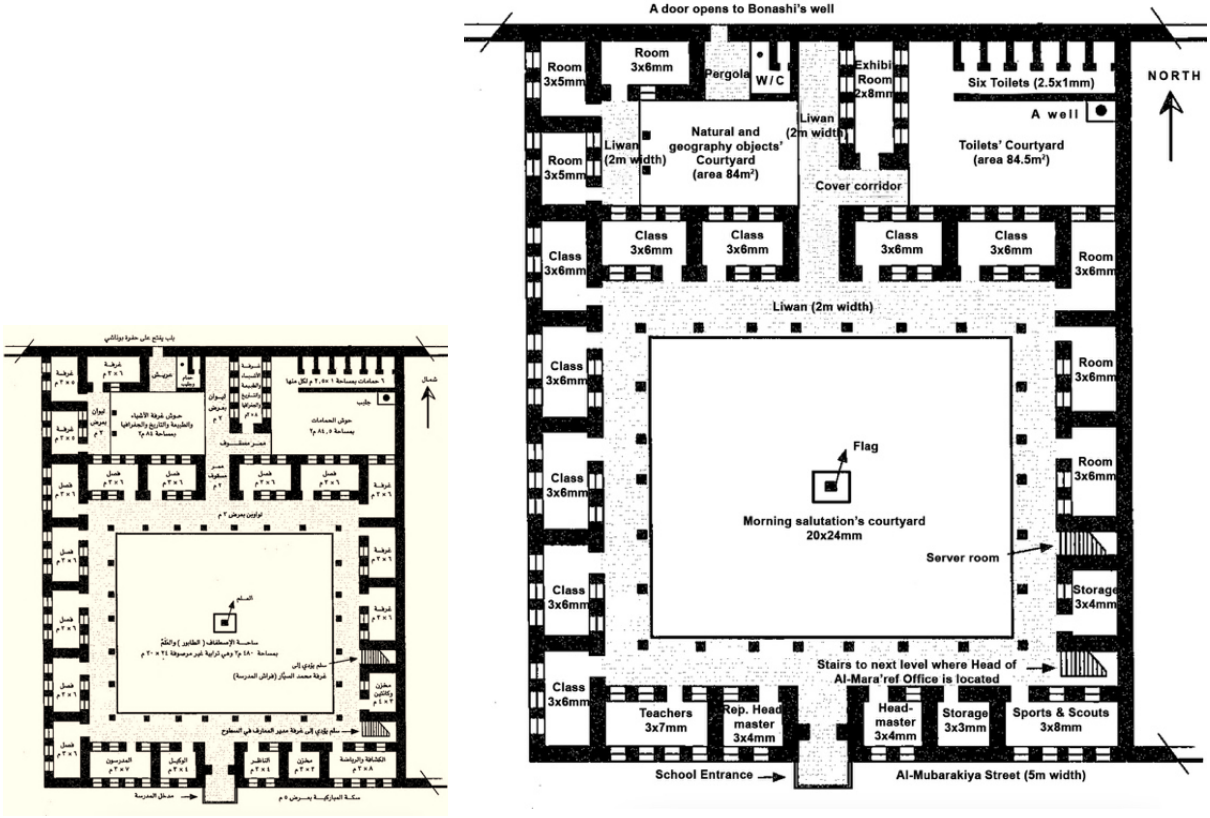


Figure 3.8 Mubarakiya School layout. The plan portrays a traditional courtyard house that was adapted for educational purposes. It was derived from the recollections of those who attended this school. The school features a central courtyard encompassed by classrooms and modest storage spaces. Over time, the backside of the school has undergone development and transformation, as evidenced by documented records. Both the left and right figures show the school layout, with the author's illustrations in English on the right.[87]

[82] Al-Nouri, pp. 53, 68; Hussein, p. 106; Al-Awadi, p. 102.
[83] Al-Nouri, p. 67; Hussein, p. 107.
[84] Al-Mubarakiyah school turned to secondary school when a new pedagogy was introduced in 1955; see Al-Sharbasi, pp. 90, 91; Hussein, p. 107; Al-Ghunaim, p. 25.
[85] Al-Nouri, p. 72; Hussein, p. 115; Al-Rushaid, p. 297.
[86] Al-Nouri, p. 74; Al-Ghunaim, p. 11.
[87] Abdulmehsen Al-Khurafi, *Marbun Min Baladi* [Educators from my country] (Kuwait: n.p., 1998), p. 1328.; edited by the Author, 2023.

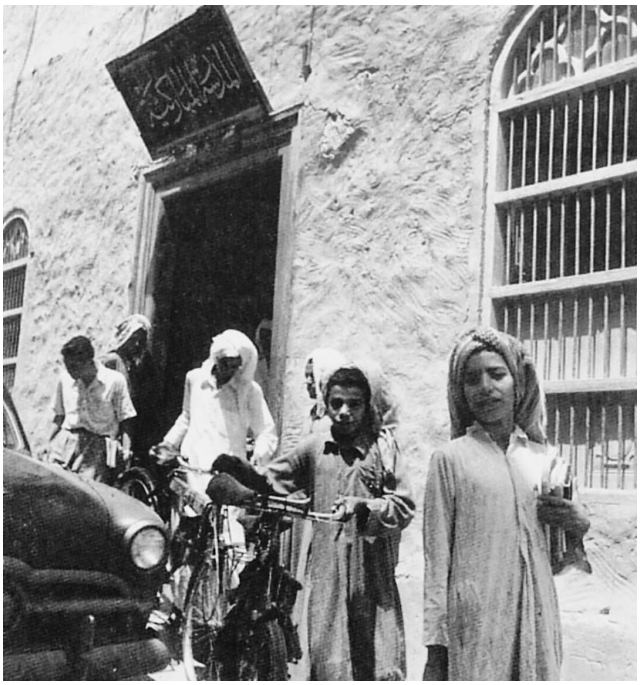


Figure 3.9 Mubarakiya School entrance, 1951. Left: The image depicts elementary-level students leaving from Mubarakiya School, which has been acknowledged as Kuwait's first official educational institution.[88]

Figure 3.10 Mubarakiya School courtyard, c. 1952. Right: Photographer Raymon Wilson is accountable for the image housed in the British Petroleum Archives. It depicts Mubarakiya School children in the courtyard, likely enjoying a break.[89]

Figure 3.11 The courtyard of Mubarakiya School hosts a lecturing event. In 1951, the National Geographic Magazine published this photograph shot by Magnum George Rodger.[90]

[88] Bader Al-Zuwair, *Madrasat Al-Mubarakiya* [The Al-Mubarakiya School] (Kuwait: That Al-Salasel, 2011), p. 108.

[89] The British Petroleum Archives [BP], University of Warwick: Ref.: 107282/146, ©BP plc., Raymon Wilson, 'Classes at State School', c.1952.

[90] Paul E. Case, 'Boom Time in Kuwait', *The National Geographic Magazine*, 1952, p. 798.

The school supported cultural and religious activities in Kuwaiti society and acted as a hub for several festivals for years.[91] In the December 1952 edition of *National Geographic*, Paul E. Case wrote an article titled '*Boom Time in Kuwait*,' in which he detailed his own observations of Kuwait's oil revolution progress. A photograph by Magnum George Rodger of a public lecture at Mubarakiya School was featured in Case's article and depicted Mubarak's son Sheikh Abdullah Al-Sabah as the guest of honour (see **Figure 3.11**).[92] He also detailed how people's lives had improved in every way due to oil, including transitioning from the old desert lifestyle to a new modern one, the construction of new roads and the building of houses and public buildings, the rise of harbour trading and the new *souq*, advancements in medical care and education, increases in income and no taxation, and women taking up roles in society.

3.3.4 Ahmadiya School

Sheikh Ahmad Al-Jaber Al-Sabah, the tenth ruler of Kuwait, began his reign in 1921, and like his predecessors, he was a visionary leader and a valiant warrior who supported his people through some tough times. His reign was dominated by several notable events that featured the Kuwaiti political and economic powers. During his reign, Uqair's Conference was held in 1922 to define Kuwait's borders with Saudi Arabia and Iraq.[93] Owing to this arrangement, Kuwait gained worldwide recognition, leading to the signing of oil exploitation agreements with Britain. Sheikh Ahmad and Kuwaitis hoped that the 1932 Bahrain oil discovery indicated deeper oil resources that could boost their economy.[94] In 1934, he signed an oil concession deal with the Anglo-Persian Oil Company (APOC) and Gulf Oil Corporation (GOC), which helped establish the Kuwait Oil Company (KOC).[95] They immediately began drilling for oil, and four years later, they made their first successful discovery in 1938. However, the destruction caused by World War II hindered Kuwaiti oil production until 1946.[96]

A new era of progress and growth in Kuwait began on 30th June 1946 when Sheikh Ahmad switched on oil taps for the first time (see **Figure 3.12**).[97] Like other Gulf oil concessions, Sheikh Ahmad's

[91] Al-Sharbasi, p. 114; Al-Ghunaim, p. 12.
[92] Case, *The National Geographic Magazine*..
[93] The National Archives [TNA], London: CL/P&S/18/B/395, 'Koweit, 1908-1928 by Mr J G Laithwaite, India Office', 1st October 1928.
[94] Crystal, p. 18.
[95] APOC is known today as the British Petroleum (BP). Also, GOC is known today as Chevron. see: The National Archives [TNA], London: R/15/5/243, 'Kuwait Oil Company Draft Agreement Presented to Ruler of Kuwait by Major Frank Holmes and Mr A. H. T. Holmes', 22nd February 1934; The National Archives [TNA], London: R/15/5/243, 'Arabic Version of Kuwait Oil Company Draft Agreement Registered 27th February ', 1934.
[96] Abu-Hakima, p. 157; Crystal, pp. 19, 22; Winstone and Freeth, p. 169.
[97] Abu-Hakima, p. 157; Crystal, p. 22; Winstone and Freeth, p. 173.

agreement was signed in his name rather than on behalf of KOC. Thus, profits were paid directly to him and could be spent as he deemed appropriate.[98] As a result, Kuwait's ruling family was given control of the country's economy. Nevertheless, Sheikh Ahmed expanded his efforts to improve health and educational services in the country despite merchants' concerns that he would not spend his oil revenue on public welfare.[99] As stated by a British advisor, Sheikh Ahmad's expenses were limited, but public services boomed significantly during his reign.[100] Sheikh Ahmed appeared to seek complete control over policy, economic, and societal aspects. His speech at the opening of the installed silver vale of oil in 1946 was as follows:

> *'. . . every one of my people and my friends will rejoice with me in this happy event, which by the grace of God is for our future welfare. . .I thank God for such an opportunity as this which will help us to continue to carry on various improvements which we desire for the happiness and welfare of my state and people. . . '*[101]

Figure 3.12 Sheikh Ahmad Al-Jaber Al-Sabah turning the silver wheel. Left: The picture released by the oil ministry shows the exact moment that Sheikh Ahmad began the first oil export following WWII, aboard the vessel 'British Fusilier', in 1946.[102]

Figure 3.13 Ahmadiya School as seen from the sea. Right: An image of Ahmadiya School published in the *History of Education,* 2nd volume. It depicts a conventional building with a central courtyard and classrooms encircling it.[103]

Given that Sheikh Ahmad recognised the critical role that education plays in moving the country's economy forward, he approached Al-Qinaei with the request that the education curriculum at

[98] Crystal, p. 18.
[99] Ibid. p. 20.
[100] The National Archives [TNA], London: R/15/1/545, 'Political Agent, Kuwait to Political Resident, Bushire', 20th June 1940.
[101] The National Archives [TNA], London: FO371/52247, 'Inscription for Casket Presented to Shaikh Ahmad Al-Jabir as-Subah, Ruler of Kuwait on Occasion of First Shipment of Oil from Kuwait and Traslation of the Ruler's Speech', 7th July 1946.
[102] MOO, 'Oil Concession Agreement 1934', 1946 <https://www.moo.gov.kw/about_oil.aspx> [accessed 9th June].
[103] *Tarikh Altaelim Fi Dawlat Alkuayt* [History of Education in the State of Kuwait], ed. by Abdulaziz Hussein. Vol. 2 (Kuwait: CRSK, 2002),(p. 94).

Mubarakiya School be expanded to include the study of English literature that assists in trading activities in Kuwait.[104] Al-Qinaie raised Sheikh Ahmad's suggestion to the Mubarakiya School Committee; however, they were rejected.[105] By then, a few students were enrolled in Calverley School, a private Christian school established in 1911 by the doctors of the American Mission of the Dutch Reformed Church, to learn basic English.[106] Because society was concerned about any threats to Islamic culture, Al-Qinaie made a request again at Khalaf Al-Nakib's diwaniya in 1920.[107] When members of the board of Mubarakiya were divided over the curriculum, Abdul-Aziz Al-Rushaid, the headmaster of Mubarakiya at the time, came up with the idea of starting a new school to teach English literature.[108] The merchants agreed to provide 13,000 Gulf rupees, and Ahmadiya School was inaugurated in 1921.[109] Except for the addition of English literature, the curriculum was identical to that of Mubarakiya.

Throughout Sheikh Ahmad's tenure, private fee-paying schools became state schools, and the government assumed control over the entire education system. It also included the opening of 17 new schools, hiring foreign-trained educators, implementing new pedagogical school levels, educating women, and establishing scholarship programmes.

Ahmadiya School was another school for boys that began ten years after Mubarakiya School, and Al-Qinaie was once again its first headmaster.[110] The school was situated in the same building as the long-closed charitable institution in Ali Bin Amir's house (see **Figure 3.13**).[111] It was named after Kuwait's ruler, Sheikh Ahmad Al-Sabah, who contributed land for expansion and a yearly donation of 2,000 Gulf rupees from his wealth.[112] A new building was constructed in front of an existing school to serve as a combined building.[113] The new building was constructed with two corner wings, each with eight rooms, one of which was allocated to the headmaster.[114] The school courtyard, situated between the two wings, was enclosed by a hallway called *liwan* and supported by wooden columns.[115] With growth in the student population, schools were entirely reconstructed in 1948.[116]

[104] Al-Nouri, p. 59; Hussein, p. 116.
[105] Hussein, p. 131.
[106] Crystal, p. 68; Hussein, p. 129; Michael S. Casey., *The History of Kuwait* (London, UK: Greenwood Press, 2007), p. 63.
[107] Al-Nouri, p. 61; Hussein, p. 130; Bader Al-Zuwair, *Almadrasat Al'ahmadia* (Kuwait: Badr Abdullah Hamad Al-Zuwair, 2016), p. 31.
[108] Al-Nouri, p. 61; Hussein, p. 116; Al-Zuwair, p. 32.
[109] Al-Nouri, p. 62; Hussein, p. 116; Al-Zuwair, p. 38.
[110] Hussein, p. 118; Al-Zuwair, p. 42.
[111] Hussein, p. 116; Al-Zuwair, p. 39.
[112] Al-Rushaid, p. 278; Al-Nouri, p. 62.
[113] Hussein, p. 116; Al-Zuwair, p. 43.
[114] Hussein, p. 120; Al-Zuwair, p. 43.
[115] Hussein, p. 120; Al-Zuwair, p. 43.
[116] Hussein, p. 120.

However, the school did not endure and was dismantled due to modernisation in 1957.[117] Unfortunately, few materials are available to learn about the construction of Ahmadiya School.

3.4 MAJLIS AL-MA'AREF AND STATE EDUCATION (1930s–1940s)

3.4.1 The Foundation of Mercantile Political Power

In 1928, Al-Qinaie visited Bahrain and wrote an article on the British-created Manama Municipality.[118] With his writing partner, Abdulaziz Al-Rushaid, they presented their proposal to several other merchants on board.[119] When Al-Qinaei brought up the idea of an emergent municipal council to Sheikh Ahmad in 1930, their suggestion was accepted, and the council was established in 1933.[120] The municipal council was led by Sheikh Abdullah Al-Jaber Al-Sabah, and Al-Qinaie comprised eleven notable merchants.[121] The municipality was tasked with several duties, including market regulation and cleanliness, land registration and ownership, public health and welfare, early work on land development, and street design.[122] The municipal council functioned until the country became independent.

Due to the collapse of the pearl industry in 1921, mercantile structural strength diminished by the time the municipal council was formed. However, the government's primary revenue sources were merchant trading and taxes.[123] It was becoming more difficult for merchants to provide funds for educational institutions; in 1931, they were forced to close their schools.[124] In 1933, Sheikh Ahmad notified British political agent Colonel Harold Dickson that after six years, port income was finally adequate to fund the civil list, which was strong evidence of severe dependence on mercantile

[117] Al-Zuwair, p. 96.

[118] Jill Crystal, *Oil and Politics in the Gulf Rulers and Merchants in Kuwait and Qatar* (Cambridge: Cambridge University Press, 1995), p. 46; Maymuna Al-Sabah, *Alkuayt Fi Zili Alhimayat Albiritania* [Kuwait under British Protection] (Kuwait: Maymouna Khalifa Al-Athbi Al-Sabah, 1988), p. 125.

[119] Crystal, p. 46.

[120] Al-Sharbasi, p. 24; Al-Zuwair, p. 232; Hussein, p. 11.

[121] Sheikh Abdullah Al-Jaber Al-Sabah was a leader in education and culture care and development until 1965. He was appointed as president of Kuwait's first literary club in 1924, and during her tenure as president, he and his colleagues worked to expand Kuwait's intellectual and social horizons, as the club was founded during an era of active socio-culture and the literary and political movement. In 1928, he became the first head of the Courts Council, which he was commissioned to establish. Additionally, in 1933, Sheikh Abdullah took over as head of the Municipal Council, enabling Kuwait's first municipal services such as city planning works, expanding the city streets, taking care of cleanliness, organising, and evaluating workers, and other services. He stepped up his efforts to rehabilitate and improve education; and he enacted compulsory education legislation during this time, and passed the trust for education and culture in the State of Kuwait to the next generation of officials in 1965; see: Al-Sharbasi, p. 20 and 66; Al-Zuwair, p. 223; Mona Al-Jaber Al-Sabah, *Sheikh Abdullah Al-Jaber Al-Sabah (1898-1996): Pioneer of Culture and Education* (Kuwait: The Emiri Diwan. Historical Documents Center, 2014), p. 11; Hussein, p. 148; Najat A. Al-Jasim, *Baladiyat Al-Kuwait Fi Khamsein Aam* [Kuwait Municipal in 50 Years] (Kuwait: Kuwait Municiaplity 1980), p. 37.

[122] Mohammed Abdulaziz, *Hadarat Alkuayt Wa Dual Alkhalij* [The Civilization of Kuwait and the Gulf Countries] (Kuwait: That Al-Salasel, 1975), p. 91.

[123] Hussein, p. 11.

[124] Ibid.

capital.[125] However, merchants met again at Al-Qinaie's diwaniya to address the dilemma of school closures.[126] They came up with the idea of a *Majlis Al-Maaref* [knowledge/educational council] that the government would support; in many ways, government revenue compensated the Municipal Council.[127] Sheikh Abdullah, the head of the Municipal Council, brought this plan to Sheikh Ahmad's attention. It was accepted in October 1936 with an allocation of 0.5% of tax revenue for education.[128] He also led the council, this time with twelve members, to take over the development of new state schools and the administration of existing ones.[129]

When oil was discovered in 1938, merchants realised that oil revenue might deplete them of their important position in controlling state revenue and their influence on society.[130] To have a greater voice in government, they requested that the ruler assemble an elected council, *Majlis Al-Tashriie* [Legislative Council], and Sheikh Ahmad consented to their request.[131] In the same year, Sheikh Ahmad's cousin Sheikh Abdullah Al-Salem Al-Sabah was appointed head of the legislative assembly by 150 of the country's tribespeople; the assembly's fourteen members were all notable merchants.[132]

This council played a significant role and wrote Kuwait's first constitution, which stated that the elected members of parliament represented the country as its legislative body.[133] The council was extremely unhappy that Sheikh Ahmad was not investing any of his newly acquired wealth in state services. As a result, the legislature moved quickly to pass laws that restructured the tax system and established new rules and systems for public benefits such as funded education, erecting hospitals, and other services.[134] This was intended to eliminate the separation of powers and give the council significant control. They urged the ruler to transfer the subsequent oil revenue to satisfy their demands.[135]

[125] Yacoub Al-Hajji, *Kuwait and the Sea: A Brief Social and Economic History* (Kuwait: CRSK, 2006), p. 32.
[126] It was also mentioned that 80 people gathered at Municipal Council's room on discuss school's closures. see: Al-Nouri, p. 74; Hussein, p. 11.
[127] Abdo, p. 26; Al-Nouri, p. 75; Hussein, p. 11.
[128] Al-Nouri, p. 75; Hussein, p. 11.
[129] Al-Nouri, p. 75; Al-Sharbasi, p. 20; Al-Zuwair, p. 215; Hussein, p. 12; Abdulaziz, pp. 32, 91; Al-Sabah, p. 126.
[130] Casey., p. 57; Crystal, p. 5; Hussein, p. 12.
[131] Crystal, p. 48; Abdulaziz, p. 54; Al-Sabah, p. 148.
[132] The fourteen members were: Abdullah Al-Saqer, Yousif Al-Qinaei, Sayed Ali Al-Refaei, Mohammed Thnayan Al-Ghanim, Hamad Al-Marzouq, Mishaan Al-Khaled, Sulaiman Al-Adsani, Abdulateef Al-Ghanim, Yousif Al-Humaidhi, Mishari Al-Bader, Sultan Al-Kulaib, Saleh Al-Rashid, Yousif Al-Dawood, and Khaled Al-Hamad. See: Crystal, pp. 47, 48; Abdulaziz, p. 54; Al-Sabah, p. 150.
[133] Crystal, pp. 47, 48; Abdulaziz, p. 55.
[134] Crystal, pp. 47, 48.
[135] Ibid. p. 48.

Although the ruler was grateful for these improvements, he was dissatisfied with the rules that limited the rising authority of the Al-Sabah family.[136] Therefore, on 17th December 1938, he took action by dissolving the council and failing the parliamentary movement of 1938.[137] The ruling family's economic influence had to surrender to Sheikh Ahmad to move Kuwaiti society ahead; thus, he had to oppose the merchants' move. However, Britain intensively encouraged the ruler in the 1940s to invest money in the civil service.[138] Sheikh Ahmad did not follow this advice, not because World War II curtailed oil revenues but even when the industry was officially launched in 1946.[139] Kuwait's oil revenue was used to create a strong welfare state only after Sheikh Ahmad's death in 1950.

This demonstrates how the state, through the ruling family, exercised authority over the allocation of resources and how merchants rose to prominence as public representatives with the support of the governed to bolster their positions. They considered it beneficial to put oil money into schools. It also sheds light on the larger political context of educational regulations in Kuwait. Thus, these influential entities, together with *muttawa* and *mulla*, influence the educational system and its development.

3.4.2 Majlis Al-Ma'aref: The Education Council

The establishment of Majlis Al-Mararef, the Education Council, in 1936 signalled the start of the government's obligations as well as the process of putting the official educational system into place and establishing legal regulations. A former classroom at Mubarakiya School was designated as council headquarters.[140] Subsequently, a new building was erected for the council on Fahad Al-Salem Street in 1949 (see **Figure 3.14**).[141] The first step was to take control of two schools, Mubarakiya and Ahmadiya. At the council's first meeting, decisions were made to outline its objectives and duties and subsequently write up the Kuwait Education Department Law of 1937.[142] Among the provisions of the legislation were the creation of education plans, the formation of the school curriculum, the appointment of school directors, requests for foreign teaching missions, and

[136] Casey., pp. 57, 58.
[137] Ibid. p. 58; Crystal, p. 49; Abdulaziz, p. 55; Al-Sabah, p. 178.
[138] The National Archives [TNA]: R/15/1/545.
[139] Crystal, p. 51.
[140] Al-Nouri, p. 75; Hussein, p. 24.
[141] Hussein, p. 24.
[142] Al-Sabah, p. 150; Hussein, p. 12.

the setting of rules and regulations.[143] The goals of the Education Council were to improve literacy rates, expand access to education, enhance social values, and produce a more informed population.

They sought help from Arab educational reformers in Palestine to investigate and improve the country's educational situation.[144] Literacy, adult education, and compulsory education were among the many topics addressed by educators' recommendations.[145] They also recommended revising the educational ladder, broadening the scope of the curriculum, creating new exams, incorporating extracurricular activities, and establishing new kindergartens and teacher training programmes.[146] All made use of education as a means of bringing about the desired modernisation of society.

Figure 3.14 Majlis Al-Maaref, the Education Council, 1949. This is a photograph of the first 1949 educational council building. Despite the fact that the photo came from the British Petroleum Archives' collection, little information is available about the building's designer or architectural style.[147]

The educational ladder in Kuwait was not well defined, and it had to be revised several times. In Mubarakiya and Ahmadiya Schools, there was just a basic level, and a secondary level was added to

[143] Al-Nouri, p. 76; Al-Sharbasi, p. 87; Hussein, p. 12.
[144] Al-Sharbasi, p. 85.
[145] Al-Nouri, p. 76.
[146] Hussein, p. 116.
[147] The British Petroluem Archives [BP], University of Warwick: Ref.: 107088/007, © BP plc., 'Kuwait Oil Company Limited, Education Department', 1949.

the educational ladder in 1937. As a result of consulting with experts, the educational ladder was restructured in 1954, with three levels: kindergarten, primary, and secondary school.[148] The result was a dramatic change in the educational trajectory, and the hierarchy of the children's ages was affected. The struggle many students underwent during Kuwait's transition period in the educational ladder system occurred through the story of Ahmad Al-Jihayem, a Kuwaiti architectural engineer, who was interviewed in this research.[149] A reminiscence from his early years in school was recounted by him, as follows:

> *'We did not have schools in our Al-Shuaiba village, so I had to go to Kuttab at the mosque to study the Qur'an. . . later in 1950 or 1951, a small school for boys was erected. I attended kindergarten level (categorised as a second grade), according to the headmaster's perception. A year later, we were reduced to four students, and we had to postpone our studies for one year to have more children to begin the first year of primary school. We entered a new level that was introduced after three years, which is the intermediate level. Following that, we attempted but failed to get admission to the Industrial College. So, I returned to middle school's until I graduated. In 1958, I was enrolled at Shuwaikh High School'.*

In 1939, the Education Council persuaded Sheikh Ahmad to increase the state tax by 1% to fund the development of education.[150] Their request was granted in 1945, resulting in seventeen schools.[151] After World War II, the government began spending large amounts of revenue on social services, especially education, which was made possible by the increased oil output from the state's post-war income. In fifteen years, the school system had absorbed 7,188 boys and 3,550 girls by the end of 1953, and the government's education budget reached 42 million Gulf rupees.[152] In contrast, 620 boys and 140 girls attended school in 1938.[153]

With this financial support, the initial stage was to recruit Arab educators of both genders to develop education in Kuwait. This started with the first educational mission in 1936, which included teachers from Palestine.[154] A second group of female educators from Palestine arrived in 1937.[155] The first

[148] Hussein, p. 116.
[149] Ahmad Al-Jihayem, *Kuwait Schools*, an interview conducted by Zainab Murtadhawi (Online Video, 23rd April 2022).
[150] Al-Nouri, p. 77; Al-Sabah, p. 126.
[151] Crystal, p. 69.
[152] Al-Sharbasi, p. 87.
[153] Hussein, p. 154.
[154] The National Archives [TNA], London: R/15/5/205, 'Kuwait Situation: Shaikh Ahmad; Council and Reforms', 8th July 1938; The National Archives [TNA], London: R/15/5/205, 'Translation of Article on Kuwait in Baghdad Newspaper Al-Kifah, with Copy of Covering Letter Sent from Kuwait', 12th February 1938.
[155] Al-Nouri, p. 77.

educational mission, which included Egyptian educators, began in 1942.[156] In addition, there have been missions to rehabilitate Kuwaiti educators since 1938, when Kuwait started sending groups overseas to train seventeen members.[157] By 1943, attempts had been being made to utilise new members of Kuwait's schools.[158]

Before the foundation of the Education Council, Mubarakiya and Ahmadiya Schools were the only two boys' schools available in Kuwait, with a total of 600 students.[159] The council planned to build advanced schools with laboratories, libraries, playgrounds, gardens, theatres, food courts, gyms, and clinics (see **Figure 3.15)**. The council also prioritised girls' education from its inception, even though socioeconomic conditions were not favourable for girls to attend school at the time.[160] Girls' education had no substantial activity prior to the council, except in *kuttabs* schools. The first girls' school, Wista, opened in 1937.[161] Families were reluctant to send their daughters to girls' schools until the Education Council offered advantages, such as free meals and uniforms, as well as financial rewards for proper performance.[162] Consequently, there were 84 out of 149 schools in 1965, with 32,000 girls and 47,122 boys attending.[163] Given these goals, the Educational Council was serious about using education to bring about social equality.

The council also planned to establish public libraries such as Maktabat Al-Maaref [Public Knowledge Library], which opened in 1937.[164] They launched the first branch of this library in 1953, which has since expanded to open other branches in all residential amenity centres.[165] In addition, libraries were established in every school in Kuwait, and in 1964, more than 500,000 books from various academic and literary subjects were donated to these establishments.[166]

In no respect was the scholarship programme driven by oil discovery or the establishment of the Education Council. To better prepare new graduates for teaching positions in the country, the first study abroad programme was established in 1924.[167] According to Ahmad Al-Sharbasi, seven boys

[156] Hussein, p. 22; Al-Sabah, p. 127.
[157] Crystal, p. 69; Hussein, p. 22; Al-Sabah, p. 126.
[158] Al-Sharbasi, p. 93.
[159] Ibid. p. 85; Hussein, p. 95.
[160] Hussein, p. 162; Hussein, p. 101.
[161] Hussein, p. 121.
[162] Al-Sabah, p. 25.
[163] Ibid. p. 23.
[164] Ibid. p. 29.
[165] Ibid.
[166] Ibid.
[167] Al-Sharbasi, p. 22; Abdulaziz, p. 70; Hussein, p. 96; Hussein, p. 49.

from Mubarakiya and Ahmadiya Schools went to Iraq to study at Adhamiya College in Baghdad.[168] Nevertheless, the scholarship programme was suspended until 1938, when the next group was sent to Iraq, followed by those sent to Egypt, Bahrain, and Lebanon in 1939, and those sent to England and the United States.[169] Although the first scholarship for girls was in 1956 and sent seven students, it was followed by another mission to Beirut in 1959.[170] After two years, Egypt, Lebanon, Iraq, England, Germany, and the United States had 60 female students participating in scholarship programme.[171] Students had the complete freedom to choose their major and country of study.[172] Kuwaiti students in Cairo issued an annual magazine titled *Al-Bietha* [*The Mission*], and the cover of the inaugural edition featured Sheikh Ahmad in recognition of his efforts to foster education (see **Figure 3.16**).[173]

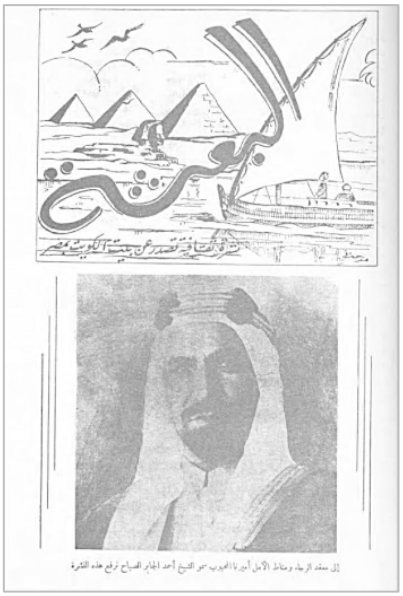


Figure 3.15 State schools for girls in Ahmadi, 1960. Left: The image depicts one of the earliest state schools in Kuwait, characterised by its modernist architectural style. The backyard landscape is adorned with a fountain and a playground designed specifically for children.[174]

Figure 3.16 Al-Bietha magazine cover page published in 1946. Right: In recognition of his assistance with the scholarship and education project that he established during his reign, the cover of the first issue of Al-Bietha magazine featured Sheikh Ahmad Al-Jaber Al-Sabah.[175]

[168] Abdulaziz Al-Rushaid, *Tareikh Al-Kuwait* [History of Kuwait] (n. p: Al-Asriya Publisher, 1926), p. 217; Al-Sharbasi, p. 22; Abdulaziz, p. 70; Hussein, p. 96; Hussein, p. 49.
[169] The National Archives [TNA]: R/15/5/205; Al-Sharbasi, p. 83; Crystal, p. 69; Hussein, p. 51; Abdulaziz, p. 70; Al-Sabah, p. 132.
[170] Hussein, p. 71; Al-Jihayem; Jaber Abulhassan, *Kuwait Schools*, an interview conducted by Zainab Murtadhawi (Online Video, 24th May 2022).
[171] Hussein, p. 75.
[172] Ibid. p. 46.
[173] Al-Sharbasi, pp. 23, 338.
[174] The British Petroleum Archives [BP], University of Warwick Ref.: 107059/020, ©BP plc., 'State School for Girls at Ahmadi', 1960.
[175] 'Albietha [Scholarship]', *Albietha*, 1949.

Moreover, the Education Council's emphasis was not confined to state education for children; it also encompassed the illiterate elderly and the disabled and excellent education to improve employees' abilities to meet the country's requirements for competent workers. In the 1940s, the government established commerce studies to provide employees with the business knowledge and practical skills needed in their jobs.[176] Since 1942, the council has been devoted to teaching children with disabilities.[177] A class for the blind debuted at Mubarakiya School in 1955, and the programme grew to encompass many more children with disabilities.[178] In addition, a religious institution was established in 1945, and its curricula were based on the Egyptian curriculum, which was subsequently expanded.[179] In 1951, they also promoted adult education to reduce illiteracy by creating several centres around the country.[180] According to available information, in 1957, there were only four centres providing adult education for those struggling with illiteracy, serving a total of 430 people. By 1961, the number of centres had expanded to 19, serving approximately 5,000 adults.[181] In the past decades, the government has turned an illiterate society into a literate one.

Sports, along with education, were also an important part of the Education Council's mission. In 1936, they pushed for the inclusion of athletic activities in the school curriculum (see **Figure 3.17**).[182] They built playgrounds, gymnasiums, and swimming pools for boys and girls in all schools.[183] Other activities include the establishment of a scout troupe in 1937.[184] Kuwaiti schools' creative and cultural atmospheres also allow students to explore various activities, including acting, music, painting, and the fine arts.[185] As a result of this initiative, art galleries and theatres were built in all schools.[186] Since 1952, the council has been eager to launch summer clubs to help students improve their skills and interests throughout the summer and engage them in various school activities.[187]

To keep students healthy, the Education Council underwent annual health examinations (see **Figure 3.18**). In 1947, the first school health clinic was opened to provide students with medical treatment.[188] In addition to sending doctors to schools three times a week, the council established

[176] Al-Sharbasi, p. 110; Hussein, pp. 99, 179.
[177] Hussein, pp. 185-194; Abdulaziz, p. 73.
[178] Hussein, p. 185.
[179] Al-Nouri, p. 79; Al-Sharbasi, p. 98; Abdulaziz, p. 78; Hussein, p. 161.
[180] Hussein, p. 195; Abdulaziz, pp. 73, 80.
[181] Hussein, p. 198.
[182] Al-Sharbasi, p. 369; Hussein, p. 96.
[183] UNESCO, *International Yearbook of Education* (Paris: International Bureau of Education, 1959), p. 270; Al-Sharbasi, pp. 371-372.
[184] UNESCO, p. 274; Hussein, pp. 96, 228.
[185] Al-Sharbasi, p. 367; Hussein, p. 99.
[186] Al-Sharbasi, p. 372.
[187] Hussein, p. 251.
[188] Al-Sharbasi, p. 199; Hussein, p. 274.

a pharmacy and clinic in each school to offer healthcare to students, teachers, and staff.[189] When the Education Council detected evidence of malnutrition in children at schools, they decided to provide a cup of lentils to all students every day from 1950.[190] For this purpose, interest in nutrition grew to the point that all schools had nutrition departments starting in 1951.[191] In 1955, a massive central kitchen was built (as shown in **Figure 3.19**), and nutritionists were hired to prepare 10,000–14,000 meals daily (see **Figure 3.20**).[192] Two meals were provided to the students breakfast, which included sandwiches, milk or soup, and fruits, and lunch with rice, meat, and vegetables.[193] The meals were delivered to all Kuwaiti schools through specific automobiles.[194]

Figure 3.17 Sports facilities at school. Left: This is one of the sporting events covered in Ralph Shaw's 1976 book about Kuwait. Sports for both sexes were included in the expanded curriculum of the educational system.[195]

Figure 3.18 Eye treatment at a boy's state school in 1953. Right: The first state school buildings in 1953 are depicted in a photograph across from the British Petroleum Archives collection. In modern Kuwait, access to healthcare has become a fundamental amenity for all students.[196]

[189] UNESCO, p. 273; Hussein, p. 275.
[190] Hussein, p. 287.
[191] Ibid.
[192] The National Archives [TNA], London: FO371/109860, 'Report by Mr N M Reilly on Development of Kuwait to July ', 1954; The National Archives [TNA], London: FO371/98458, 'Report on Education in Kuwait Prepared by Mr Keight, Director, British Council Centre, Basra', 27th October 1952; The National Archives [TNA], London: FO371/114751, 'Telegram from Mr G W Bell, Political Agent, Kuwait to Foreign Office', 8th October 1955; Ibrahim Eid, This Is Kuwait (Part 1) Education,Kuwait c.1960 <https://youtu.be/4rnqVst6C1M>
[193] UNESCO, p. 273.
[194] Eid.
[195] Ralph Shaw, *Kuwait* (London: Macmillan 1976), p. 142.
[196] The British Petroluem Archives [BP], University of Warwick: Ref.: 107282/144, ©BP plc., 'Eye Treatment', 1953.

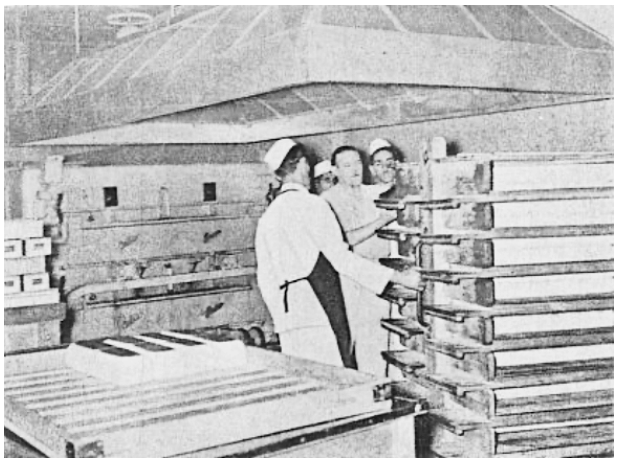


Figure 3.19 The central kitchen building, 1959. Left: The central kitchen building, designed in a modern style, was constructed to provide daily meals for all students in Kuwait.[197]

Figure 3.20 Baking breads for school meals, 1959. Right: One of the steps in making bread for the daily meals is depicted in the image, which takes place in the central kitchen. Utilised are the most cutting-edge, sophisticated machinery at the time.[198]

In addition, transportation facilities and custom outfits were provided free of charge.[199] In 1939, the Education Council allotted automobiles and buses to transport students between their homes and schools.[200] In 1953, this service became accessible to teachers.[201] A documentary film produced by Ibrahim Eid in the early 1960s evidenced the modern education facilities in Kuwait and how transportation was provided for students and educators.[202] In 1960, a budget of 609,889 Kuwaiti dinars was allocated for different vehicles in all Kuwaiti schools.[203] In addition, to unify students' appearances and minimise inequalities, the council agreed in 1952 to enforce a school uniform for all students.[204]

Kuwait's educational activities have not been limited within its borders. In Cairo, Bait Al-Kuwait [Kuwait House] was built in 1945 as a homebase for Kuwaiti students.[205] Kuwait's Educational Council has also served Arab communities in India, Pakistan, and Palestine. The Kuwaiti government established schools in Mumbai in 1952, Karachi in 1953, and Jerusalem in the mid-fifties of the last century schools.[206] Because Kuwait has a longstanding relationship with the Arab Gulf nations, the Education Council sought to construct schools in five cities in the United Arab

[197] 'Almatbakh Almarkazi', [Central Kitchen], *Sijil Al-Kuwait Alyaoum [Kuwait Record Today]*, 1956, p. 92.
[198] Ibid. p. 94.
[199] The National Archives [TNA], London: R/15/5/196, 'Report on Government Education in Kuwait Prepared by Mr C. R. L. Adrian-Vallance with Supplementary Comments and Statement of Accounts', October 1940; Al-Sharbasi, p. 83; Hussein, p. 46.
[200] Hussein, p. 271.
[201] Ibid. p. 272.
[202] Eid.; Hussein, p. 272.
[203] Hussein, p. 273.
[204] Al-Sharbasi, p. 93; Hussein, p. 277.
[205] Al-Sharbasi, p. 85; Abdulaziz, p. 71; Hussein, p. 85.
[206] UNESCO, p; Al-Sharbasi, p. 83; Abdulaziz, p. 78; Hussein, pp. 294, 295.

Emirates: Dubai, Sharjah, Ajman, Umm Al-Quwain, and Ras Al-Khaymah.[207] Between 1953 and 1958, Kuwait's Educational Council oversaw the construction and administration of schools.[208]

In conclusion, the Educational Council's responsibilities were not confined to the above-mentioned issues but included ongoing educational growth over the years. Before gaining independence in 1961, Kuwait was accepted by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) as an associate member in 1958.[209] Education and culture are two areas where Kuwait has sought aid from international organisations, sending specialists to analyse and research the country's educational facilities over decades.

3.4.3 The Position of the British in Kuwait

As mentioned earlier, the Kuwaiti-Anglo Treaty Agreement signed in 1899 by the British and Kuwait ushered in an era of exceptional development in ties between the two countries.[210] This arrangement allowed Britain to exert its economic and political influence in the area. Despite the British having no power over the country's decisions, they made the most of their formerly strong positions. British political agent Stuart Knox was sent to Kuwait a few years after signing the agreement to persuade the ruler to support British interests in the region.[211] However, Kuwait's rulers were reluctant to accept the appointment of a senior British adviser because they were eager defenders of the internal affairs of their state.[212] Tensions began to increase when the British arrived and were not greeted. Several of these issues emerged in 1938, when Britain withdrew its backing for the Majlis movement.[213] Despite their lack of political involvement at the time, the British were able to manage the economy via oil discovery and production before making a profit for these firms and the country.

With the growth of solid national sentiment and a rising desire on the part of Kuwait to expand education, the British political resident agent, Colonel Trenchard Fowle, felt compelled to intervene in learning programmes and guide them, as this would risk British interests.[214] Captain Gerald de-Gaury, who served in Kuwait from 1936 to 1939, met with Sheikh Ahmad to discuss several concerns

[207] Hussein, p. 291.
[208] Ibid.
[209] Ibid. p. 315.
[210] The National Archives [TNA], London: R/15/5/393, 'Appendix Containing Precis of Treaties and Engagements between Ruler of Kuwait and British Government', 1899-1921; Arabian Gulf Digital Archives [AGDA]: FO 93/137/18.
[211] Winstone and Freeth, p. 78; Crystal, p. 25.
[212] Winstone and Freeth, p. 79.
[213] Crystal, pp. 18, 25.
[214] The National Archives [TNA], London: R/15/5/205, 'Note on Current Situation by Sir Trenchard Fowle', 25th April 1939.

regarding the education plans in 1936.[215] In his report, de Guary raised issues such as the importance of education, financial constraints, the scarcity of qualified educators, the capacity of schools, and potential training facilities.[216] Kuwait's education policy was devised by a British agent to meet the country's educational needs while also ensuring that the rapidly expanding oil industry could find skilled local workers to work alongside it.[217] According to his report, fifty *kuttabs* in Kuwait focused on teaching the Qur'an, as well as two schools that taught English; he explored the idea with the ruler of sending a Kuwaiti delegation to British technical institutions to verify that members would have the necessary training skills.[218] In addition, he said that Kuwait should train certain employees and that English educators from Syria and Palestine should be brought in.[219] He concluded that there was a misunderstanding of the benefits and costs of state education. Enabling education to flow freely across a nation as a backward country that has not received sufficient education in recent years is incorrect.[220]

As a result, British advisor Adrian Vallance was urged by de-Guary to visit Kuwait and provide his recommendations for educational improvement in 1939, which Sheikh Ahmad agreed to, as well as the Education Council.[221] Due to World War II and the failure of Vallance's suggestions in Kuwait, a second report was issued in 1940.[222] According to Vallance's two assessments, Kuwaiti schools and buildings were in a good state of repair but needed to develop their facilities, provide better healthcare, and update their uniforms.[223] In addition, he noted the number of educators, students, and classrooms, as well as the curriculum and educator salaries.[224]

In 1942, another British advisor, F. J. Wakelin, visited Kuwait to evaluate its educational status.[225] He met with Sheikh Abdullah Al-Jaber and the KOC training team, as well as all the leaders in the education system.[226] Wakelin also managed to visit other schools, including Mubarakiya, Ahmadiya,

[215] Qatar Digital Library [QDL], Qatar: IOR/L/PS/12/3856, 'Koweit (Neutral Zone) Oil Concession: Negotiations with Petroleum Concessions, Ltd.', 4th November 1935 to 30th December 1944 <https://www.qdl.qa/archive/81055/vdc_100000000648.0x0001a8> [Accessed 20th July 2022].
[216] Ibid.
[217] Ibid.
[218] Ibid.
[219] Ibid.
[220] Ibid.
[221] Qatar Digital Library [QNL], Qatar: IOR/R/15/1/545, 'Kuwait Education', British Library: India Office Records and Private Papers', 23rd April 1936 to13th November 1940 <https://www.qdl.qa/archive/81055/vdc_100000000193.0x000206> [Accessed 20th July 2022].
[222] Ibid.
[223] Ibid.
[224] Ibid.
[225] The National Archives [TNA], London: R/15/1/546, 'Major T. Hickinbotham, Political Agent, Kuwait to Political Resident, Bahrain, Enclosing Report by F. J. Wakelin, Educational Advisor to Kuwait and Bahrain', 18th November 1942.
[226] Ibid.

Sharqya, Qabalya, and village schools (*kuttabs*).[227] This trip provided him with the opportunity to network with parents and teachers. In his 1945 assessment, Wakelin noted that educational needs had not yet been addressed, despite the addition of classrooms, an increase in students, and the admission of Egyptian teachers.[228] He emphasised the need for a British advisor to oversee Kuwait's educational and administrative advancement.[229] Although this does not imply that the British agents, Vallance or Wakelin, were involved in Kuwait's plans for its educational system, it does not rule out the possibility that they had an impact.

All political agents based on sheikhdom until 1951, served as the primary point of contact between the British government and Kuwait rulers. Instead, Herbet Tomas Kemp, KOC's London-based representative of the ruling family, consulted the rulers the most heavily.[230] However, as the state bureaucracy developed, Kemp's responsibilities and position grew in importance. Between 1948 and 1951, he became a British political agent.[231] He successfully persuaded the ruler to accept junior advisors in all government departments, including finance, city planning, customs, and airport administration, during the 1950s modernisation movement in Kuwait.[232] These advisors, in turn, channelled development funds to British enterprises, which he referred to as '*the five big British construction firms'*.[233]

To this end, this study investigates how the social and political context of Kuwait, prior to the discovery of oil, influenced the country's subsequent growth. It has been demonstrated that the *mutawaa* or *mulla*, the merchants, and the state government were the three primary regulators of education modernisation. It also shows how the ruling elite of Kuwait fought against British operatives' attempts to influence schools' curricula. This is partly a reflection of the altering power structure of society, as well as its financial impacts. Moreover, it also addressed how, in many ways, educational provision in the middle of the twentieth century paralleled educational reform unfolding abroad and was clearly tied to the financial windfall of the oil sector. As a result, schools played a crucial role in modelling objectives beyond academic achievement, including healthier lifestyles, more creative pursuits, and stronger social standards.

[227] Ibid.
[228] The National Archives [TNA], London: R/15/1/546, 'Report on Education on Kuwait by Mr F. J. Wakelin and Submitted to the Ruler of Kuwait', 4th December 1943.
[229] Ibid.
[230] The National Archives [TNA], London: FO371/82163, 'Kuwait Administration Report', 1951.
[231] Winstone and Freeth, p. 78.
[232] Simon C. Smith, *Kuwait 1950-1965- Britain, the Al-Sabah , and Oil* (Oxford: Oxford University Press, 1999), p. 16.
[233] The National Archives [TNA], London: FO371/104330, 'Translation of Letter from the Ruler of Kuwait to Political Resident, Bahrain', 13th August 1953.

3.5 INTRODUCING MODERNITY THROUGH OIL (1950s)

3.5.1 Sheikh Abdullah Al-Salem Al-Sabah's Vision

The grandson of Sheikh Mubarak 'the Great,' Sheikh Abdullah Al-Salem Al-Sabah, effectively brought his nation into an independence and modernisation era. He was the first emir of the 'State of Kuwait' and was widely regarded as the driving force behind the country's modernisation and as a pioneer in developing the welfare and wealth extraction state in the Arabian Peninsula in the 1950s. During his rule, Kuwait experienced extraordinary development and growth of its infrastructure and government institutions, combined with the formation of governmental welfare, health, and education services supplied to all residences.

Based on the previously unaddressed idea that Kuwait's oil revenue belonged to all its residents, Sheikh Abdullah directed Kuwait's development plans and dispersed this wealth through a broad national development and social services programme.[234] The welfare programme included education up to a higher level; medical care in sophisticated facilities; food, housing, utilities, and transportation expenses; and several other privileges, all for free and without paying taxes, granted to the Kuwaiti people.[235] In contrast to the previous ruler's policy, Kuwait's oil revenue was fully utilised when the nation was in turmoil and changing rapidly.[236] This progressed through the establishment of a legal and constitutional framework essential for Kuwait's ultimate independence in 1961.

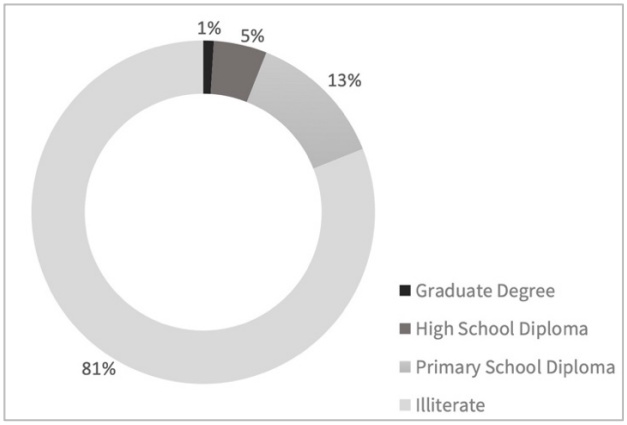
When Sheikh Abdullah took control, he wanted to implement administrative improvements in the government infrastructure that would be appreciated by merchants, society, the Al-Sabah family, and the British. In 1952, he began the process of centralising decision-making in a cooperative organisation with governmental reforms.[237] This organisation, made up of department heads and advisors, operated until 1961, when the Planning Council overtook it.[238] With the assistance of several members of the ruling family and merchants in 1954, Sheikh Abdullah founded the Higher Executive Committee, which was responsible for reorganising government duties and promoting reforms.[239] After two years of its establishment, the committee—consisting of ten members of the

[234] Casey., p. 60; Crystal, p. 23; Abdulaziz, p. 89.
[235] The National Archives [TNA], London: R/15/5/378, 'Military Report and Route Book: The Arabian States of the Persian Gulf, General Staff India, Simla, Kuwait Section', 1939.
[236] Crystal, p. 23.
[237] The National Archives [TNA], London: FO371/109860, 'Economic and Financial Affairs in Kuwait', 1954.
[238] Ibid.; Abdulaziz, p. 89; Al-Sabah, p. 424.
[239] The National Archives [TNA], London: FO371/109810, 'Reports on the Kuwait Administration: Activities of Subversive Elements in Kuwait; Work of the Higher Executive Committee', 1954.

royal family—was succeeded by the Supreme Council, which assumed control of most governmental matters.[240] However, Sheikh Abdullah was obliged to implement a third reform order in 1959, when he had to reorganise Kuwait's department directors to prevent political conflict.[241] Consequently, he shifted the focus of the Supreme Council from organising Kuwait's departments to steering the nation towards independence and drafting its legislation.[242] The Supreme Council was abolished after independence and replaced by the Cabinet of Ministers, which served as the final directive for governmental change.[243] The last part of Sheikh Abdullah's solution to governmental affairs was achieved through these numerous implementation orders to restructure the Kuwaiti government, thus overcoming the obstacles that had plagued rapid modernisation.

When he died in 1965, the Kuwaiti government established a system of public care, education, and housing, as well as subsidised utilities and guaranteed work for all residents. Statistics provided by the International Bank for Reconstruction and Development on the 1963 mission show that only 1% of public servants had graduate degrees, 5% had high school diplomas, and 13% had primary school diplomas.[244] Overall, 16,700 Kuwaitis (46% of the workforce) and 19,600 foreign workers were absorbed by the public service (54% of the total labour force) (see **Figure 3.21**).[245] For Kuwaiti workers, the oil industry ranked second only to the government sector as the primary source of employment.[246] In 1962, 1,350 out of 7,000 workers were Kuwaitis who worked in the oil sector (see **Figure 3.22**).[247] A land acquisition strategy in the 1950s, which shifted millions of dollars from the state to private property, also spread a major amount of oil income inside the economy.[248] These policies established modern welfare, a rentier state in the Gulf on which Kuwaitis depended and have welcomed with gratitude. In Case's article, entitled '*Boom Time in Kuwait: an obscure of Persian Gulf Sheikhdom, enriched by oil, uses its wealth to improve the lot of all its people'* (as shown in **Figure 3.23**), the twenty pieces centre on the unexpected revolution in Kuwait and its people, presenting a quick picture of old and new life from everyday elements, such as Bedouin and merchant life, oil exploration activities, health and education, security and marketplaces.[249]

[240] The National Archives [TNA], London: FO371/120550, 'Internal Political Situation in Kuwait', 1956; Al-Sabah, p. 428.
[241] Al-Sabah, p. 425.
[242] Ibid. p. 428.
[243] Ibid. p. 430.
[244] BRDC, *The Economic Development of Kuwait* (Baltimore: The Johns Hopkins Press, 1965), p. 4.
[245] Ibid.
[246] Ibid.
[247] Ibid.
[248] Ibid.
[249] Case, *The National Geographic Magazine*.



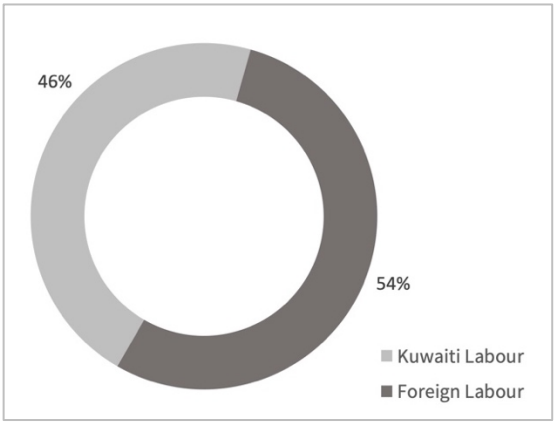


Figure 3.21 The education level of Kuwaiti public servants in 1963. [Left][250]
Figure 3.22 The proportion of Kuwaitis to foreign workers in 1963. [Right][251]

Boom Time in Kuwait

An Obscure Persian Gulf Sheikdom, Enriched by Oil, Uses Its Wealth to Improve the Lot of All Its People

By Paul Edward Case

IN a sun-scorched corner of the Arabian desert I have been watching a revolution in progress.

It is a peaceful revolution. The only combat involved is that of man versus his ancient adversaries: time, distance, climate.

Man is winning, and his prize is oil—millions of barrels of oil from one of the richest pools in the world.

The scene is Kuwait, a British-protected Sheikdom on the northwest rim of the Persian Gulf. Slightly smaller than New Jersey, it comprises about 6,000 square miles and has Iran, Iraq, Saudi Arabia, and a Neutral Territory as neighbors (map, page 787).

From approximately 135 wells the Kuwait Oil Company, Ltd., is producing about 800,000 barrels of oil daily. Gulf Oil Corporation and Anglo-Iranian Oil Company jointly own the operating concern.

Kuwait's total proved reserves—oil still in the ground—are 16,000,000,000 barrels, or roughly half the total reserves of the United States.

Kuwait Suddenly Becomes Rich

Most dramatic effect of this bonanza is the sudden fattening of Kuwait's income at the rate of an estimated $150,000,000 a year—the Sheikdom's 50-percent share of Kuwait Oil Company profits.

By dynastic law this windfall goes into the hands of the absolute ruler, His Highness Abdullah as Salim as Subah, who thus becomes one of the world's richest men (pages 791 and 800). If he chose to spend it on yachts, palaces, or racing stables, or just keep it under his bed, no one could say him nay.

But His Highness has elected to use his vast wealth for the good of all his people. Through an ambitious program of public works the ruler has started the construction of a model community in an ancient and neglected region of the world.

In all my years as a resident of the Near East, I have never witnessed a greater transformation.

Until a few years ago the obscure Sheikdom's 170,000 inhabitants quietly occupied themselves with the time-honored pursuits of pearling, fishing, seafaring, and shipbuilding. The capital, also called Kuwait, was known chiefly as a junction of caravan routes and as home port of deep-water sailing dhows.

Fortunate geographical position and easy customs regulations give Kuwait a brisk traffic in many kinds of goods flowing between Europe, Asia, and Africa. Now, after centuries as a placid trading center, Kuwait has become a mushrooming boom town, just as has happened frequently in America's petroleum-rich Southwest.

On the streets, Arabs in flowing robes slip along silently beside Americans and Europeans in business suits or work-stained khaki. Accents of Texas and Oklahoma, London and Zürich mingle with guttural Arabic. Camels and donkeys, once lords of the road, step warily lest they tangle with American cars, trucks, and earth-moving machines. In the harbor the ancient dhows rock in the wash of passing tankers.

Flow Increased after Iran Shutdown

The curtain rose on the Kuwait drama in 1936 when a well was drilled near Al Bahara, north of the port across Kuwait Bay. It was a dry hole, a failure. Within two years operations were begun in the Burgan area, to the south, and the result was a steady succession of producers.

Activities were suspended in 1942, because of the war, and resumed in the latter part of 1945. After Iran shut down its Abadan production in 1951, thereby denying the United Kingdom one of its chief oil sources, Kuwait's output was increased from a little more than 450,000 barrels a day to its present 800,000.*

In the Neutral Territory south of Kuwait American companies have completed several test wells. Results have not been announced. If this field should prove a producer, it would mean even more riches for Sheik Abdullah Salim. He and Saudi Arabia's King Abdul Aziz al Saud jointly own the Neutral Territory.

All is hustle and bustle now within and beyond the crumbling old wall that surrounds three sides of Kuwait. Shiny new sedans glide through the widened gates. Trucks and trailers thunder in and out. Kuwait dashes to work in the tempo of Times Square. There is little time for the old greeting at the gate, and hardly any for the former ever-ready cup of spiced coffee.

The Kuwait Oil Company has 7,165 men on its payroll. About 750 English and Ameri-

* See "Journey Into Troubled Iran," by George W. Long, National Geographic Magazine, October, 1951.

Figure 3.23 The 1952 National Geographic Magazine article *Boom Time in Kuwait* was written by Paul Case. Topics covered in the article include commerce, education, health care, and everyday life in Kuwait, all of which have seen significant social transformations because of the country's modernisation effort.[252]

[250] BRDC, p. 4.; illustrated by the Author, 2023.
[251] Ibid.; illustrated by the Author, 2023.
[252] Case, *The National Geographic Magazine*. p. 783.

3.5.2 Towards Modernisation and the Welfare State

Sheikh Abdullah founded Kuwait's economic development plan three months after taking control. In 1951, the project was plagued by several issues, prompting the government to redesign it two years later.[253] The local population lacked the necessary skills and administrative capacity to carry out the government's plan efficiently, and Sheikh Abdullah asked Colonel Kemp, his representative at KOC, to utilise British expertise to operate in Kuwait.[254] Since 1952, British experts have served on numerous government councils, including the Finance Council, the Public Works Council, and the Health Council. It included two main experts, Colonel Crichton as the controller of finance and Roper as the controller of customs; in addition to Alexander Gibb, who supervised Shatt Al-Arab affairs, William Halcrow on port activities, E. Parry and Harrison, Barnes, and Hubbard on health management, General Hasted as the controller of development, J. D. Addison as the chief engineer of the electricity department, and Ewbank and Partners on water distillation.[255]

Finance advisor Colonel G. C. L. Crichton nominated General William Freke Hasted, an expert engineer, as the development board controller in Kuwait's public works department (see **Figure 3.24**).[256] As early as March of 1953, General Hasted was active in preparing for the entrance of the five contracting firms tasked with transforming Kuwait from its old town into a new metropolis.[257] With the help of prominent Kuwaiti merchants, it became necessary to collaborate with the five companies, such as Holland Hannen and Cubitts with Khalid Al-Hamad, D.C. William Press with Yusuf Al-Ghanim, John Howard Construction with Khalifa Al-Ghunim and Saeib Hamid, Taylor Woodrow with the National Contracting Company owned by Abdullah Ali Reza and Abdulaziz Al-Salih, and Richard Costain with Muhammad Mulla Salih, who were all involved in joint ventures.[258] They all worked under contracts with Sheikh Abdullah, where they were required to perform projects at a cost of 15%, which put Kuwait's finances at risk.[259]

[253] The National Archives [TNA], London: FO371/104326, 'Kuwait Development Project; Problems of Contractors. ', 1953.
[254] The National Archives [TNA]: FO371/109860.
[255] The National Archives [TNA], London: FO371/109810, 'Memorandum and Letter Submitted to Ruler of Kuwait', 9th July 1954; Al-Sabah, p. 426; The National Archives [TNA], London: FO 371/91334, 'Telegram from Mr. H. G. Jakins, Political Agent, Kuwait to Foreign Office ', 17th April 1951.
[256] The National Archives [TNA], London: FO 371/109863, 'Development Projects and Contracts in Kuwait Appointment of British Advisers and Technicians', 1954.
[257] The National Archives [TNA], London: FO371/104328, 'Kuwait Development Project; Problems of Contractor', 1953.
[258] The National Archives [TNA]: FO371/109860.
[259] The National Archives [TNA], London: FO371/104330, 'Kuwait Development Project; Problems of Contractors', 1953.

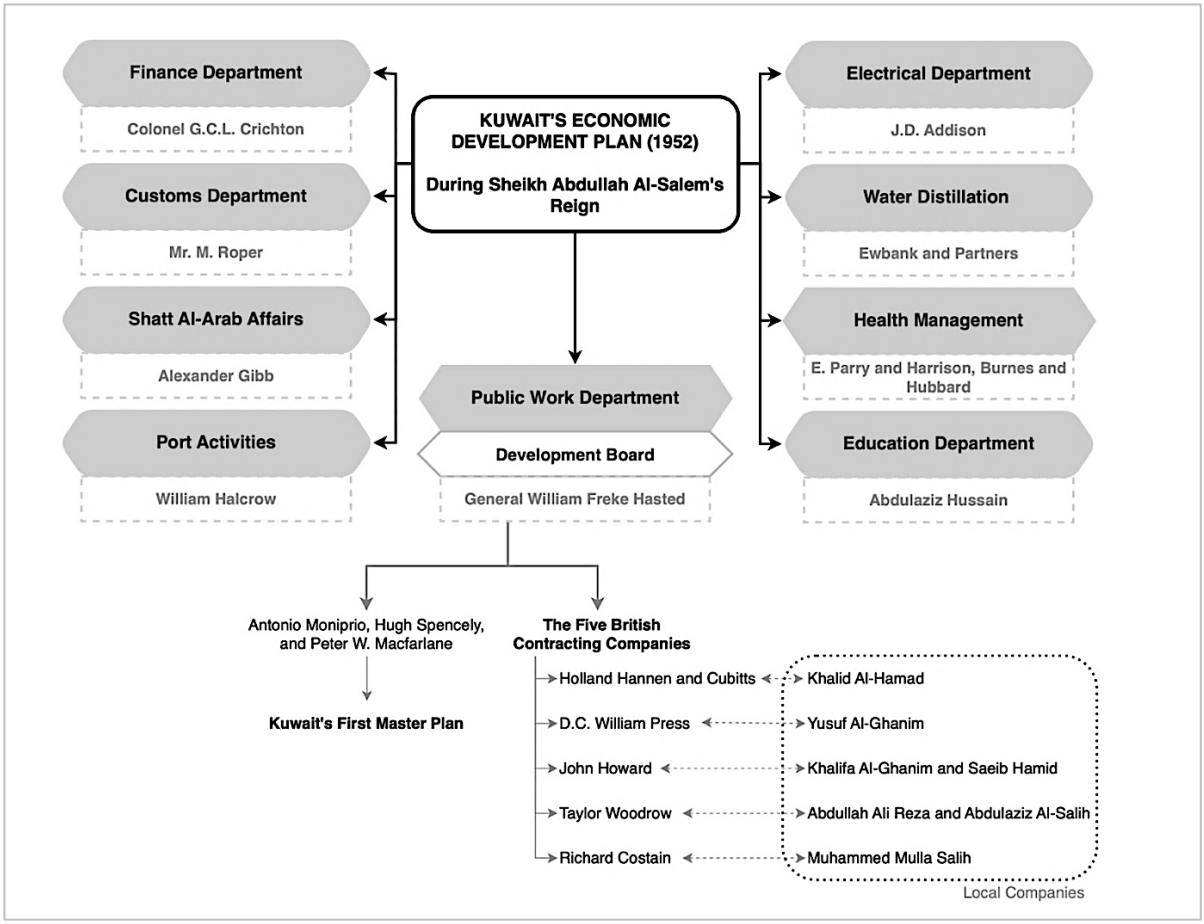


Figure 3.24 Kuwait's economic development plan for 1952. The diagram shows how the British consultants progressed through the various government agencies, as well as their roles in the overarching master plan and the initial phase of planning and construction.[260]

During this period, the relationship between merchants and the government was changing. The merchants' financial dependency on the government began with the economic development plan, in which the government's programme of sharing oil revenue benefited them in particular.[261] Merchants stood to gain a lot from government land acquisition programmes that went hand in hand with the state's development plan.[262] To avoid mercantile rigidity, the government created elected executive bodies, believing they would be responsible for overseeing future governmental changes.

When establishing its economic development plan, Kuwait underwent an evolutionary process that included three distinct phases. The first and second phases dealt with the country's preparation for transformation, whereas the third phase dealt with the declaration and implementation of the

[260] Author, 2023.
[261] The National Archives [TNA], London: IOR R/15/5/100, 'Kuwait Najd Boundary: Attack on Jahra by Ikhwan; Bahrain Agency Mission to Ibn Sa'ud, 1920; Ikhwan Raids; Kuwait Mission to Ibn Sa'ud, 1921; Death of Shaikh Salim, 1921; Boundary Settlement', 1st November 1920 to 24th February 1923.
[262] Al-Jasim, p. 199.

nation and welfare state. In this early phase, from 1952 to 1954, British consultants played a key role in overseeing the execution of the development programme in Kuwait, which resulted in excessive expenditures to which Sheikh Abdullah objected. Therefore, he sought the help of Arab professionals throughout this development stage.[263]

However, these tactics were required to develop and reform the citizens well-being early. Sheikh Abdullah concentrated on fixing Kuwait's water crisis by selecting Ewbank and Partners Limited as consultants for a desalination project and water distribution.[264] To build a new power plant, he had to nationalise Kuwait's private electric power, which had been in the country since 1938.[265] Later, Sheikh Abdullah was responsible for Kuwait's development planning, which included a presentation by architects and city planners from the British companies Antonio Minoprio, Hugh Spencely, and Peter W. Macfarlane, as proposed by General Hasted, for Kuwait's new capital city.[266] The First Master Plan, shown in **Figure 3.25**, was offered in April 1951, in which the town within the walls was entirely redesigned by constructing new roadways, enlarging and upgrading existing ones, clearing the land, and undertaking massive reconstruction.[267] This plan was revised by designating 23 districts outside the walls in February 1952, which were meant to concentrate on a specific type of zoning, such as residential, industrial, and port districts, as well as the sites of major projects, such as hospitals and educational institutions.[268]

An essential aspect of Sheikh Abdullah's legacy was the development of Kuwait's educational system. Education services increased in the early months of Sheikh Abdullah's reign in 1950, mainly because of his endless support for members of the Educational Council, all of whom thought education was critical for the development of Kuwait's future workforce resources. As a result of this widespread conviction, the Kuwaiti government's spending on education has been among the highest in the country's budget since the late 1940s. In 1949, the country's education budget was around 5 million rupees, and by 1959, it had grown to more than 132 million Gulf rupees, making it the world's largest per-population education expenditure. [269] In a special issue on Kuwait's modernisation, an Egyptian magazine called *Al-Tahreer* published an article about education in Kuwait with the headline '*The happiest students in the world! … The largest budget for education in*

[263] The National Archives [TNA], London: FO371/104380, 'Kuwait Water Supplies: Shett-El-Arab Water Scheme; Efforts to Persuade the Ruler of Kuwait to Appoint Engineers: Appointment of British Consulting Engineers to Survey the Project', 1953.
[264] The National Archives [TNA]: FO371/109860; Al-Sabah, pp. 233, 509; Ffrench and Hill, p. 10.
[265] Ffrench and Hill, p. 10.
[266] The National Archives [TNA]: FO371/109860.
[267] Ibid.
[268] Ibid.
[269] Hussein, p. 44.

consideration to their population!'[270] Budgeted expenses went towards the operation of the school district and the development of new buildings and facilities.

Several educational institutions were constructed between 1952 and 1954 that adhered to Western standards, as defined by the Education Council.[271] Three intermediate schools, five nurseries, and one secondary school were included in the project plan, in addition to one Technical College (see **Figure 3.26, Figure 3.27, Figure 3.28** and **Figure 3.29**) and a central kitchen serving 14,000 meals daily in 1954.[272] The term *'Messrs' Schools'* was coined for these school designs because of their short completion time and high cost, as it was the government's ambition to have *'the best schools in the world'*.[273]

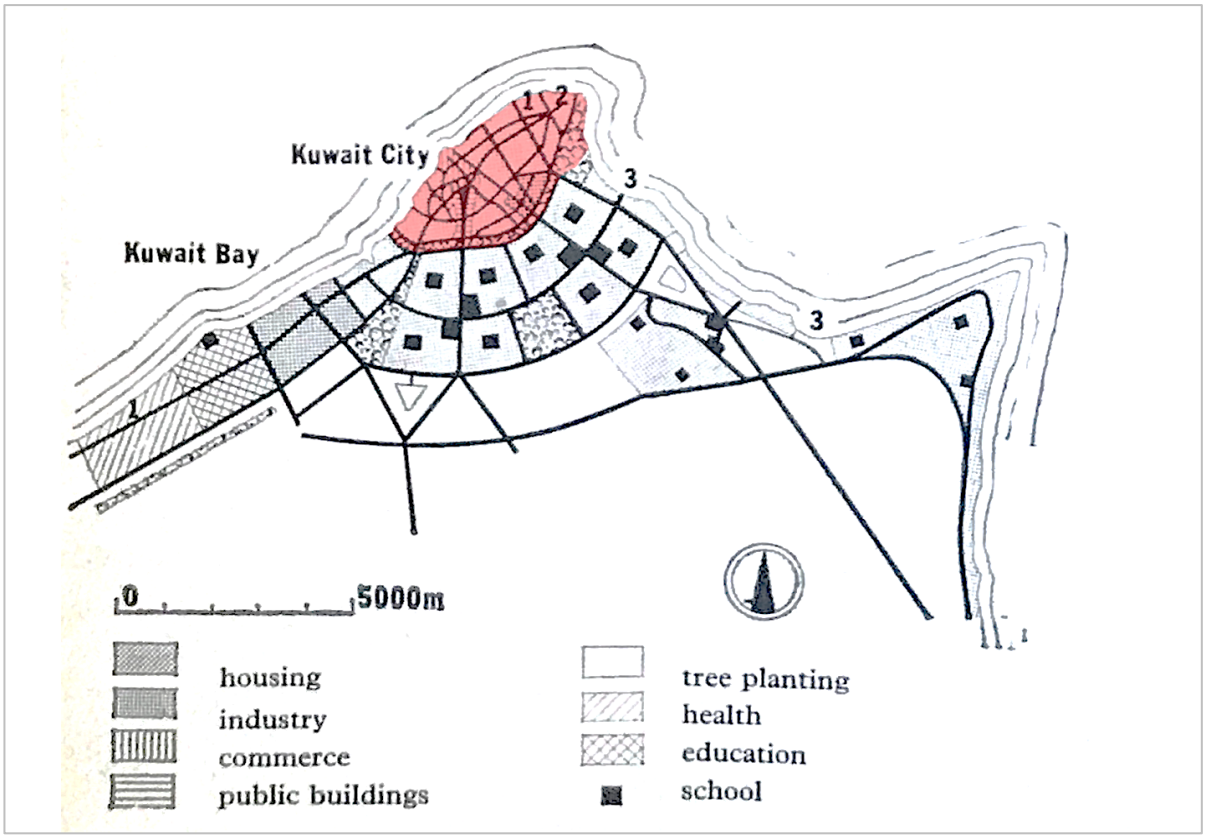
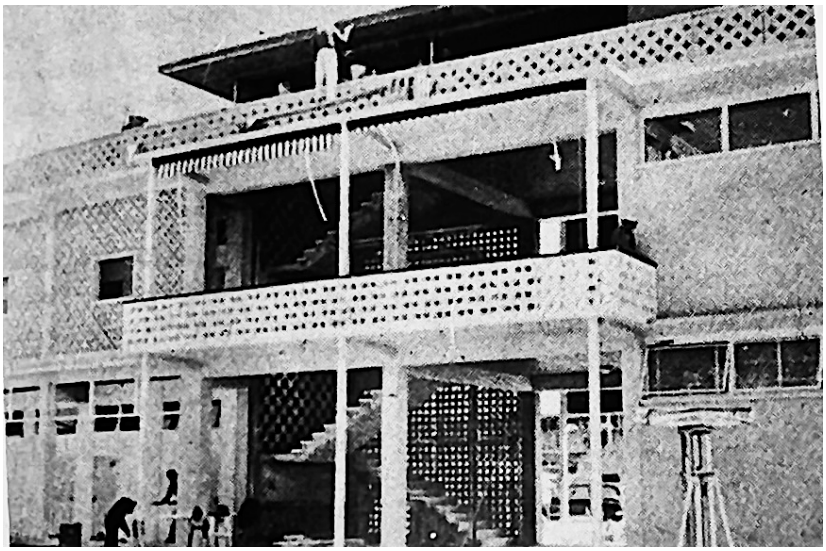


Figure 3.25 Plan for Kuwait City in 1951. Minoprio, Spencely, and Macfarlane's proposed extended urban zones are shown on the map alongside Kuwait City. Aside from the landscaping theme, the image also shows the distribution of commercial, industrial, public, healthcare, and educational services.[274]

[270] Abdulaziz Sadeq, 'Asead Talabatan Fi Alealami!' [The Happiest Students in the World!], *Al-Tahreer*, 6th January 1959..
[271] The National Archives [TNA]: FO371/109860.; Note: Wakeham and Hasted are brothers in law, and they served in Army together.
[272] Ibid.
[273] 'Education', *Architectural Design,* (1957), 93-94; The National Archives [TNA], London: FO371/109947, 'Formation of Trade Unions in Persian Gulf: Strikes in Kuwait', 1954.
[274] Karim Jamal, 'Kuwait: A Aalutary Tale', *Architects' Journal,* 158. 50 (1973), 1452-1457 (p. 1452).

Figure 3.26 Outdoor class at Kuwait's State School, c. 1956. Left: This photograph, sourced from the British Petroleum Archive, shows a group of children engaged in outdoor play at a modern kindergarten in Kuwait that was created by the British firm Tripe and Wakeham.[275]

Figure 3.27 Shamiya Nuesery School, n.d. Right: This image depicts the Shamiya nursery, a modern space decorated in shades of blue, red, and white, created by the architectural firm Tripe and Wakeham. This picture first appeared in 1957 in the Architectural Design magazine.[276]



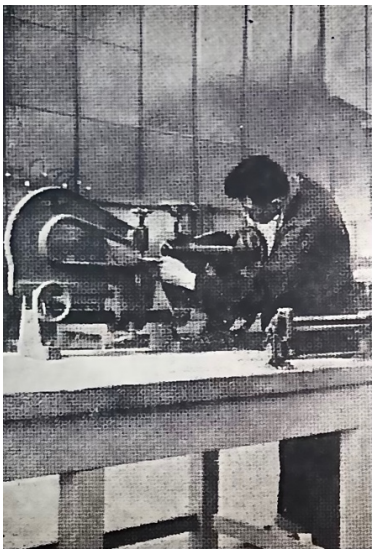


Figure 3.28 Kuwait's Technical College building. Left: The photograph depicts the entrance of the Technical College, which exemplifies the most modernist design and techniques employed in the construction of the buildings. It was published in 1959 in Aljomhoriya magazine with the title Architecture Art of Kuwait.[277]

Figure 3.29 Industrial College workshop. Right: This is an image from 1954 that was published in Aljomhoriya magazine. It shows a student learning at the automated technical workshop at the industrial college.[278]

[275] The British Petroleum Archives [BP], University of Warwick: Ref.: 107059/001, ©BP plc., 'New School, Kuwait Town', 1954.
[276] 'Educational Buildings in Kuwait; Architects: Tripe and Wakeham', *Architectural Design*. March (1957), 94-95 (p. 95).
[277] 'Fan Aleimara Fi Alkuwayt', [Architecture Art in Kuwait], *Aljomhoriya*, 29th March 1959, p. 12.
[278] 'Koleya Senaeya', [Industrial College], *Aljomhoriya*, 29th March 1959, p. 25.

In the second stage of Kuwait's development plan, Sheikh Abdullah moved to Arab experts to avoid incurring further costs after being turned down by British firms. At this point, 1954–1961, members of the ruling family served as department heads in order to oversee the execution of Kuwait's development plans under their authority.[279] The Development Board introduced a five-year plan in 1955, intended to continue the previous development plan that had begun in 1952; it was seen as a major shift in Kuwait's social and economic progress.[280] One of the top priorities was to increase the number of eligible contractors for large-scale development projects in Kuwait, so a tenders committee was formed and charged with reviewing contractors' bids based on open competition, ensuring that projects were completed at the lowest possible cost while maintaining quality.[281]

In 1951, its first secondary school complex was constructed as one of the largest schools in the world.[282] This was in response to a request from the Educational Council to construct one of the world's most prominent secondary schools for boys. They set aside 2.5 square metres of land (see **Figure 3.30** and **Figure 3.31**) and contributed four million pounds of sterling for the project's development.[283] The school hosts all the community's celebrations and sporting events each year, as well as the cultural seasons in which authors from all Arab nations meet.[284]

Figure 3.30 An ariel view at Shuwaikh Secondary School in 1956. Left: There are massive buildings under construction in the photograph, which depicts a desert landscape where the largest secondary school was situated. The British Petroleum Archives collection contains this shot.[285]

Figure 3.31 Entrance of Kuwait's Secondary School at Shuwaikh, 1954. Right: This image, which is in the British Petroleum Archives, serves as the main entrance of the secondary school. It showcases the building's modern architecture style and the adaptation of the Islamic arches.[286]

[279] Crystal, pp. 66,73.
[280] The National Archives [TNA], London: FO371/114588, 'Internal Political Situation in Kuwait', 1955.
[281] The National Archives [TNA], London: FO1016/514, 'Development Plan for Kuwait', 1956.
[282] The National Archives [TNA]: FO371/109860; Documentary-Committee, *Tarikh Thanawiat Alshuwikh (1953-1973)* [Al-Shuwaikh Secondary School's History (1953-1973)] (Kuwait: Ministry of Education, 2005), p. 56; Al-Jasim, p. 205.
[283] The National Archives [TNA]: FO371/109860; Documentary-Committee, p. 55.
[284] Documentary-Committee, p. 162.
[285] The British Petroleum Archives [BP], University of Warwick: Ref.: 108068/018, ©BP plc., 'Secondary School, Shuwaikh', 1956.
[286] The British Petroleum Archives [BP], University of Warwick: Ref.: 107064/009, ©BP plc., 'Kuwait Secondary School Shuwaikh', 1954.

Sheikh Abdullah's contribution to the ratification of Kuwait's constitution was highlighted in the final stage of these developments, which safeguarded Kuwaitis' rights to benefit from the services provided by the government. It started in 1959, when Sheikh Abdullah ordered the creation of a Consultative Council of eleven members from merchants to help the Supreme Council make reform decisions.[287] They have developed legislation governing the country's legal system, nationality, and immigration policies. When Sheikh Abdullah had these laws, he could make decrees governing his departmental institutions' duties and safeguard the rights of all residents.

Sheikh Abdullah faced a tremendous challenge in the last phases of constructing a welfare state, and this challenge was to gain complete state independence, not as a British protectorate. As a first step, he led Kuwait to join international organisations, such as the International Maritime Organisation (IMO) in 1959, the World Health Organisation (WHO) in 1960, and UNESCO in 1960 as a member state.[288] In 1961, Sheikh Abdullah sought independence. After exchanging notes with Sir William Luce, a British resident politician, Sheikh Abdullah completed the termination of the 1899 pact and secured Kuwait's independence on 19th June 1961.[289]

After independence, Sheikh Abdullah wasted no time tackling the second obstacle to reforming the country's internal political system. Ultimately, he wanted to draft Kuwait's constitution to suit the country's new position as an independent Arab nation and the world. On 26th August 1961, he issued a proclamation requesting the formation of a constituent assembly of twenty members to create the Kuwaiti constitution. [290] By emphasising justice, liberty, and equality, the constitution emphasises the government's duty to defend Kuwaiti citizens' human rights, such as social insurance, public education, and healthcare.[291] Kuwait's social services sector became one of the most extensive in the region, and education was no longer simply a privilege but a right guaranteed by the constitution.[292] Kuwait's transformation was considered to have been accomplished at this point, allowing the local populace to profit from oil revenue and reducing the government's enormous load of obligations to its residents, which had accumulated over the years.

[287] Al-Sabah, p. 444.
[288] Ibid. pp. 455, 478.
[289] The National Archives [TNA], London: FO371/156836, 'Political Relations: Uk', 1961.
[290] Al-Sabah, pp. 425, 444.
[291] The National Archives [TNA]: FO371/109810.
[292] Ibid.

3.6 CONCLUSION

This chapter focused on Kuwait's pre-oil decades to highlight the variables that played a role in the establishment of a modern education system. As explored in the chronological framework, the establishment of education in Kuwait was initiated as a result of the country's adherence to Islamic religious beliefs and the teachings of the Quran. It expanded on a vast network of merchant contacts to promote political and social endeavours. Furthermore, the ability of Kuwait's rulers to utilise knowledge and leadership to position Kuwait favourably in the political arena has had a significant impact on the advancement of education and the overall progress of the nation. Merchants' social power was also effectively utilised to establish various councils, including the Education Council, which played a crucial role in fostering intellectual progress and educational development during that time. By analysing primary documents and conducting interviews, the chapter reveals that Kuwait's development in education was not solely attributed to its substantial oil revenue but rather to its pre-existing modern status, which was established even before the discovery of oil.

This chapter delineated the pre-oil era into distinct stages to highlight the essential variables that shaped the progress of education and the establishment of schools in Kuwait. Early education was based on the community's religious requirements; however, *kuttab* Education, became more economically driven as it evolved. Two factors influenced the evolution of *kuttab* education: first, the relationships that local merchants had with neighbouring countries and their efforts to invite religious scholars; and second, migration and the emergence of new skills that led to training and education.

The second stage of Kuwait's educational growth began with the intellectual movement known as the Enlightenment, which established Kuwait's first formal school through merchant charitable activities. Growth in these schools was fuelled by educational needs and the emergence of a new revenue stream. Kuwait's ruler also had a significant impact on the country's political and economic affairs, indirectly affecting educational development. Merchants played a major role in the second stage. Their economic power eventually expanded to include political authority when they established the Education Council.

In the third stage, although oil was discovered, Kuwait's education programme and its facilities developed tremendously, even though oil funds were inadequate. A unified educational system was developed as a curriculum that included various topics, and educational facilities were expanded.

Scholarships were offered, and schools for both boys and girls were opened. A wide range of services were available to the students, including school supplies, books, meals, transportation, and medical care. Although the ruler's support for increasing oil revenue for educational purposes was crucial, the Education Council also played a major role in arranging services and improving education. These findings demonstrate the positive impact of the economy on improving school facilities while also highlighting how merchants assumed positions of authority by spearheading these services.

Kuwait's ruler, Sheikh Abdullah Al-Salem, receives credit in the last stage, which established a welfare state system in exchange for people sharing oil wealth. There has been growth in cultural and scientific activities as well as educational institutions outside the welfare structure, and Kuwait has become a pioneer in this region. Britain also played a prominent role in the welfare state after failing to interfere with the control of education policy.

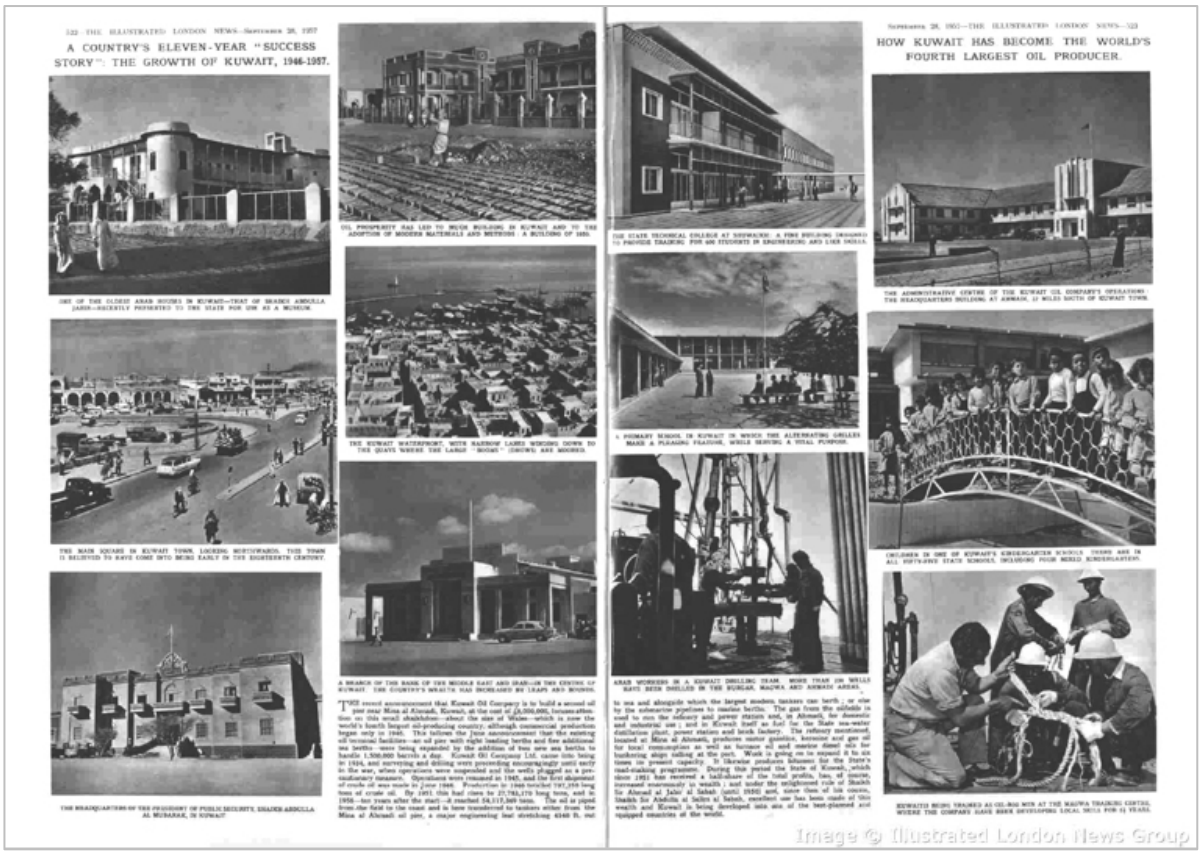


Figure 3.32 An article published in The Illustrated London News, 1957. The article headed *A Country's Eleven-Year 'Success Story': The Growth of Kuwait, 1946-1957* delves into the expansive building boom that ensued following the oil discovery in Kuwait and was published on September 25. The photographs mostly focused on educational institutions and their associated buildings and facilities.[293]

[293] 'A Country's Eleven-Year "Success Story": The Growth of Kuwait, 1946-1957', *The Illustrated London News,* 1957, p. 522.

Ultimately, the outcomes of this chapter reveal significant changes in development and the educational system throughout the early 1900s that were primarily influenced by the British Protection Treaty. These changes began slowly but progressed quickly, and Kuwait was able to lead the way. The key features emphasised in this section were related to the major shifts in Kuwait's socioeconomic, political, and cultural contexts, which relied on the merchant class as well as wise rulers who encouraged education and preserved Kuwait's status before oil became the driving force behind the state's economic advancement and success. This section contributes to the literature by examining the primary characteristics that underlie modernisation. It focused on understanding the factors that drive modernisation, not just considering oil revenue and economic growth but also other social and political developments that have shaped the modernisation process.

Ending with *'A country's eleven-year "success story": the growth of Kuwait, 1946–1957'* an article which was published in *The Illustrated London News* on 25th September 1957, new roads, hospitals, schools, public buildings, and people's daily lives were only some of the many changes that this article quickly covered as it investigated Kuwait's growth following the discovery of oil. Educational institutions and programmes in Kuwait were emphasised as well (as shown in **Figure 3.32)**.[294]

[294] Ibid.

CHAPTER FOUR

MODERNISATION AND WELFARE RAISING THROUGH SCHOOL BUILDING PROGRAMME

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As a result of the Second World War, welfarism became a dominant phenomenon in many Western European countries to provide people with a modern and capitalist society that relies on public services and support, such as housing, education, health, leisure, sports, and social security. This has implications not merely for governance structures but also for the architectural built environment. The *'welfare'* concept has spread across the world as a means of establishing new states and providing a comfortable standard of living for their citizens, as in the case of Kuwait, which built a specific social welfare system by redefining the role of its government to start its new nation-state in 1961. Consequently, the built environment specified in 'public buildings' expanded greatly, with the idea that the state would finance and manage essential services, such as healthcare, education, and even the military. This chapter examines the Kuwaiti welfare system in detail with a specific focus on the government's role in establishing education as a social service. It also discusses policy formulations and governance structures aimed at providing ideal services for modern society after the oil era (see **Figure 4.1**). The findings of this study present the correlation between government welfare programmes, urban development, and architectural design, with a specific emphasis on the construction of educational facilities.

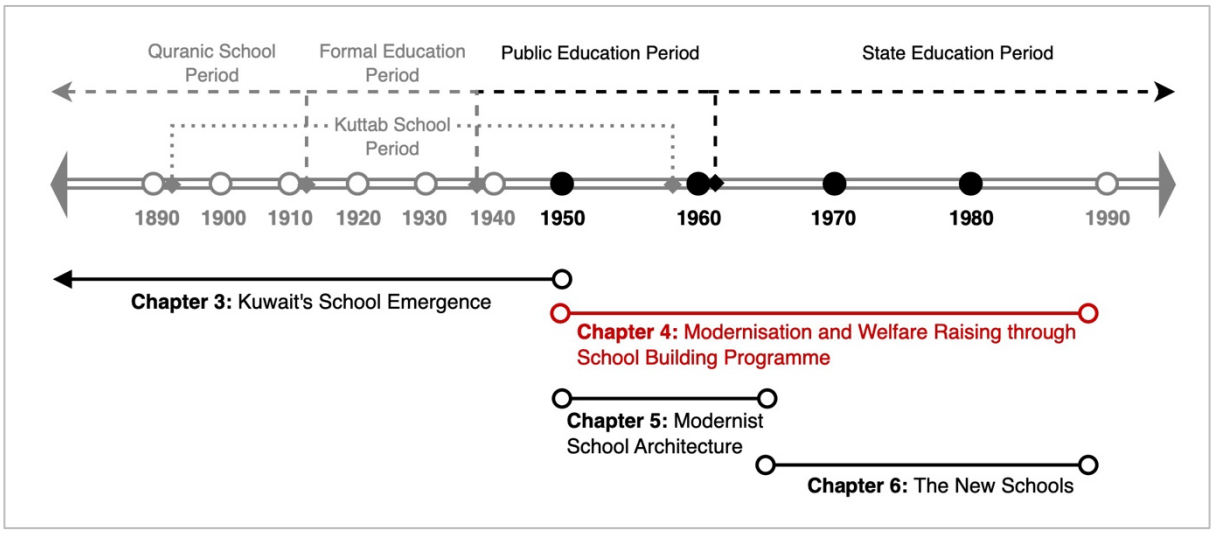


Figure 4.1 The chronological context of Chapter Four of the study.[1]

[1] Author, 2023.

4.1 OVERVIEW

The concept of welfare states remains the cornerstone of modern society. Its rapid expansion throughout the 1960s and 1970s in most nations has made it a popular subject of study in political economy and sociology, for the reason that it symbolises the ever-present connection between market activity and social support.[2] The consequences of these economic changes and privileges provided by the welfare state were also reflected in the alterations to the built environment in cities and urban expansion in the post-war era. Despite its importance, the welfare state's architecture has received less attention in research and academic fields, limiting our ability to comprehend the complex context of post-war architecture. A standout publication from 2015 is *Architecture and the Welfare State,* edited by Mark Swenarton, Tom Avermaete, and Dirk van den Heuvel, which examines the role of housing welfare architecture in post-war Western European welfare state creation during a 30-year period (1945–1975).[3] The editors pointed out that there is still much to learn about the history and importance of welfare state architects and architecture, which is essential for expanding discussions on its value and preservation. Consequently, learning about the welfare state is one way to gain insight into the hitherto unexamined aspects of a capitalist society.

The welfare state is a unique social and economic system and form of government that first appeared in Western countries towards the end of the nineteenth century and became firmly entrenched in the twentieth century.[4] Constant debates centre on the classification and definition of welfare states. Here, the term *welfare state* is defined in a broader sense than its associated laws, programmes, or practices. In 1961, English historian Asa Briggs argued that the welfare state developed out of the social democracy that sprouted in the wake of World War II.[5] According to him, the welfare state refers to a government programme that ensures a minimum essential quality of life for the population.[6] In the 1980s, sociologists, such as Goran Therborn, an academic member of Cambridge University, recognised that welfare represents a paradigm shift in the role that the government controls in society.[7] While Gosta Esping-Andersen focused on the welfare state and its role in capitalist economies, in 1990, he pointed out that there is more than one distinct welfare state that can be differentiated according to the integration of society, the priorities of its

[2] Gosta Esping-Andersen, *The Three Worlds of Welfare Capitalism* (Cambridge, UK: Polity Press, 1990), p. 55.
[3] *Architecture and the Welfare State* ed. by Mark Swenarton, Tom Avermaete and Dirk Van Den Heuvel (London and New York: Routledge Taylor & Francis Group, 2015).
[4] David Garland, *The Welfare State: A Very Short Introduction* (UK: Oxford University Press, 2016), p. 14.
[5] Asa Briggs, 'The Welfare State in Historical Perspective', *European Journal of Sociology,* 2. 2 (1961), 221-258; Esping-Andersen, p. 19.
[6] Briggs; Esping-Andersen, p. 19.
[7] Göran Therborn, 'Welfare States and Capitalist Markets', *Acta Sociologica* 30. 3/4 (1987), 237-254; Esping-Andersen, p. 20.

government, and the legacy of the government's institutionalisation.[8] Despite the fact that the meaning of *welfare states* is still a highly contentious topic, it is clear that they describe a certain subset of democratic industrial capitalist nations that share some common features, such as the role of government institutions, stability of economic growth, and improvements in people's quality of life.

By 1960, all industrialised nations had established the pillars of the welfare state, and all governments had come to accept their responsibilities for directing the economy.[9] Between the 1960s and the 1970s, the welfare state quickly gained prominence as one of the modern era's critical sociological linkages. Afterwards, governments had to fundamentally provide opportunities in the form of labour, care, and support supplies to improve citizens' skills, knowledge, habits, and vision. Consequently, it was necessary for a country's infrastructure and built environment to reflect the prevailing paradigms of the welfare state, as it symbolises the dynamic relationship between market activity and social services, which saw a widespread movement to urban centres, altering lifestyles across the board.[10] Governments have struggled to meet the rising demand for public services as a result of rapid population expansions, which stretched facilities and infrastructure.[11] Therefore, part of the considerable rehabilitation undertaken by war-torn European countries in the years following 1945 was the establishment of a fully functional, modern, and welfare architecture.[12]

Housing, transportation, sewage treatment, water distribution, healthcare, and education were all necessities that had to be met by welfare state programmes for any nation, driving the adoption of a new architectural language and design approach. According to the editors of *'Architecture and the Welfare State,'* one of the primary ways in which the welfare state aimed to realise its goals of economic transformation and social welfare was through the design of the built environment.[13] An explanation of the European housing welfare state has been provided in their book. The narrative begins with the government's management plan for labourers who were given housing units for them and their families.[14] These units were typically located on the outskirts of towns or prompted the construction of new cities, while also ensuring basic necessities, such as healthcare and education.[15] In this way, evidence shows that the requirements of the welfare state impelled the

[8] Esping-Andersen, p. 21 and 32.
[9] Garland, p. 26.
[10] Niels Albertsen and Bulent Diken, 'Welfare and the City', *Nordic Journal of Architectural Research,* 17. 2 (2004), 7-22; Garland, p. 29.
[11] Albertsen and Diken, p. 29; Garland.
[12] Garland, p. 29 and 45.
[13] Swenarton, Avermaete and Heuvel, p. 1.
[14] Ibid. p. 10 and 13.
[15] Ibid. p. 14.

creation of a physically built environment, which was reflected in the planning and design of neighbourhoods, cities, infrastructure, the construction of power plants and water desalinisation facilities, and the design and construction of residential units, healthcare centres, educational institutions, cultural centres, and sports arenas.

From a historical perspective that considers the unique contributions of architects and designers, the structures built after World War II are often seen as icons of the era's modernisation, industrialisation, colonialism, nationalism, and capitalism. Mark Swenarton and co-editors have made the case that post-war architecture ignores its function within the welfare state. One justification was the lack of correlation between urban planning and welfare state provisions.[16] Another point relates to the manner in which planners, designers, and architects typically work.[17] They saw architects as heroes of the modern age, those who shaped the built environment with their innovative designs and visions for dwellings, educational institutions, medical facilities, and even whole cities for the welfare state.[18] Therefore, the complex link between the welfare state and the built environment, including the role of urban expansions, neighbourhoods, and buildings within social programmes, must be explored to fully understand the implementation rhetoric of welfare state architecture.

In the real world, welfare states are as diverse as the countries that provide them. Kuwait is a lavish welfare state with a unique historical narrative. Social democracy in Kuwait, as explored in **Chapter 3**, was attempted on several occasions before oil discovery but was not successful until the economic shift that followed the discovery of oil in 1938. In the pre-oil era, rulers and merchants shared the responsibility of maintaining the political hierarchy and securing citizens' access to the most fundamental necessities. However, a new political structure began to form because of the paradigm shift in Kuwait's economy brought on by oil revenue after World War II, transferring the role of responsibility to the government and guaranteeing a higher standard of living for all citizens. With Sheikh Abdullah Al-Salem Al-Sabah's accession to power in 1950, a welfare state programme was established in Kuwait to ensure that the country's economic growth was based on the principle of the tax-free distribution of oil wealth to all residents. The welfare state was designed to provide more than just the basic minimum quality of life; it aimed to offer utopian services that would stand out among the greatest in the area. After Kuwait attained independence in 1961, the government's

[16] Ibid. p. 2.
[17] Ibid. p. 14.
[18] Ibid. pp. 4, 14 and 18.

welfare-state structure took effect. They set economic policies, formed government institutions, and pursued market-capitalist goals by achieving fair levels of efficiency in social insurance and public services. This aspect of the welfare state was most prominent in the post-oil period, when the government took it upon itself to guarantee full employment, and provide housing, healthcare, and education, seeing it as a basic human right and as the accounting basis for social expenditure.[19] Kuwaiti citizens' social welfare and economic growth rely heavily on the architecture of the built environment. The government implemented a rapid modernisation plan to turn Kuwait's town from its traditional scheme into a thriving metropolis and expand urbanisation, culminating in a profound cultural and social revolution in the welfare state over a few decades.

This chapter examines the emergence of the welfare state in Kuwait between 1961 and the 1980s, both as a phenomenon and as a modern mode of state development. It aims to provide increased knowledge of Kuwait's social provisions, legislative or political contexts, economic alliances, and the built environment that shaped its welfare architecture, with a particular emphasis on public education and the institutions that played a role in transforming modernist society. The built environment is divided into two sections: urban planning and neighbourhood design (as is discussed in this chapter) and school architecture (which is explored in **Chapters 5 and 6**).

4.2 KUWAIT'S WELFARE SYSTEM

4.2.1 Oil Discovery and the Economic Revolution (the 1930s–1940s)

The various welfare states today result from unique historical circumstances and massive socioeconomic shifts in the nations' cultures. Kuwait's welfare system is one of those rare tales whose roots predate the twentieth century. Its citizens have historically relied on desert grazing, pearling, and maritime commerce, with merchants playing a key role in regulating the labour, market, and commodities, as well as public services, such as health and education, to satisfy society's fundamental necessities, while the ruling family ensured internal and external stability.[20] The political goal was to strike and maintain a delicate equilibrium between the influence of the ruling family and that of the merchant class. According to Kuwaiti sociologists Sulayman Khalaf and Hassan Hammoud, the effort to balance the interests of the ruling family and the merchant class

[19] *Kuwait Today: A Welfare State*, (n. p.: Quality Publication Limited, 1963), p. 61.

[20] Jill Crystal, *Oil and Politics in the Gulf Rulers and Merchants in Kuwait and Qatar* (Cambridge: Cambridge University Press, 1990), pp. 4, 32 and 103; Anh Nga Longve, *Walls Built on Sand: Migration, Exclusion, and Society in Kuwait* (US: Westview Press, 1997), p. 20 and 24.

was aided by a specific economic categorisation and propelled by the coexistence of tribal biases and religious Islamic theology.[21]

This scenario was revolutionised politically, sociologically and, most of all, economically, by the discovery of oil in 1938, or more precisely, in 1946, with the first post-war oil exports. Oil revenue moved authority from the merchant elites to the ruling family, who became the exclusive economic beneficiaries of the oil boom.[22] Sheikh Ahmad Al-Sabah, the tenth ruler of Kuwait, signed the oil deal under his name rather than on behalf of Kuwait's Oil Company, so that he could receive earnings personally and use them as he saw proper (detailed in **Chapter 3**).[23] With this move, the ruling family gained control of the country's capital markets. By contrast, merchants were able to solidify their political influence by forming and managing governmental institutions in the country owing to the strength of their corporate consciousness in society.[24] These authoritarian conflicts have transformed the country's political structure, allowing the expansion of public services funded by oil revenue (see **Figure 4.2**). Thus, the enormous oil wealth in the 1940s sparked new sets of economic and political forms and a new political culture, culminating in the introduction of an early social welfare system in Kuwait.

By 1950, Sheikh Abdullah Al-Salem Al-Sabah took power, ushered in modernism, and dispersed wealth through a comprehensive national development and social service programme, ensuring that all citizens benefited from the country's oil wealth, in contrast to his predecessor, Sheikh Ahmad.[25] He launched Kuwait's welfare system based on the equitable distribution of the country's oil wealth, a scheme that had not been fully applied before. As a consequence of this vision, Kuwait was founded in 1961 as an independent and prosperous nation.

[21] Sulayman Khalaf and Hassan Hammoud, 'The Emergence of the Oil Welfare State: The Case of Kuwait', *Dialectical Anthropology,* 12. 3 (1987), 343-357 (p. 349).
[22] Crystal, p. 20.
[23] Ibid.
[24] Ibid. p. 2; Jill Crystal, *Kuwait: The Transformation of an Oil State* (Boulder, San Francisco, Oxford: Westview Press, 1992), p. 7.
[25] Crystal, p. 23; Michael S. Casey., *The History of Kuwait* (London, UK: Greenwood Press, 2007), p. 60.

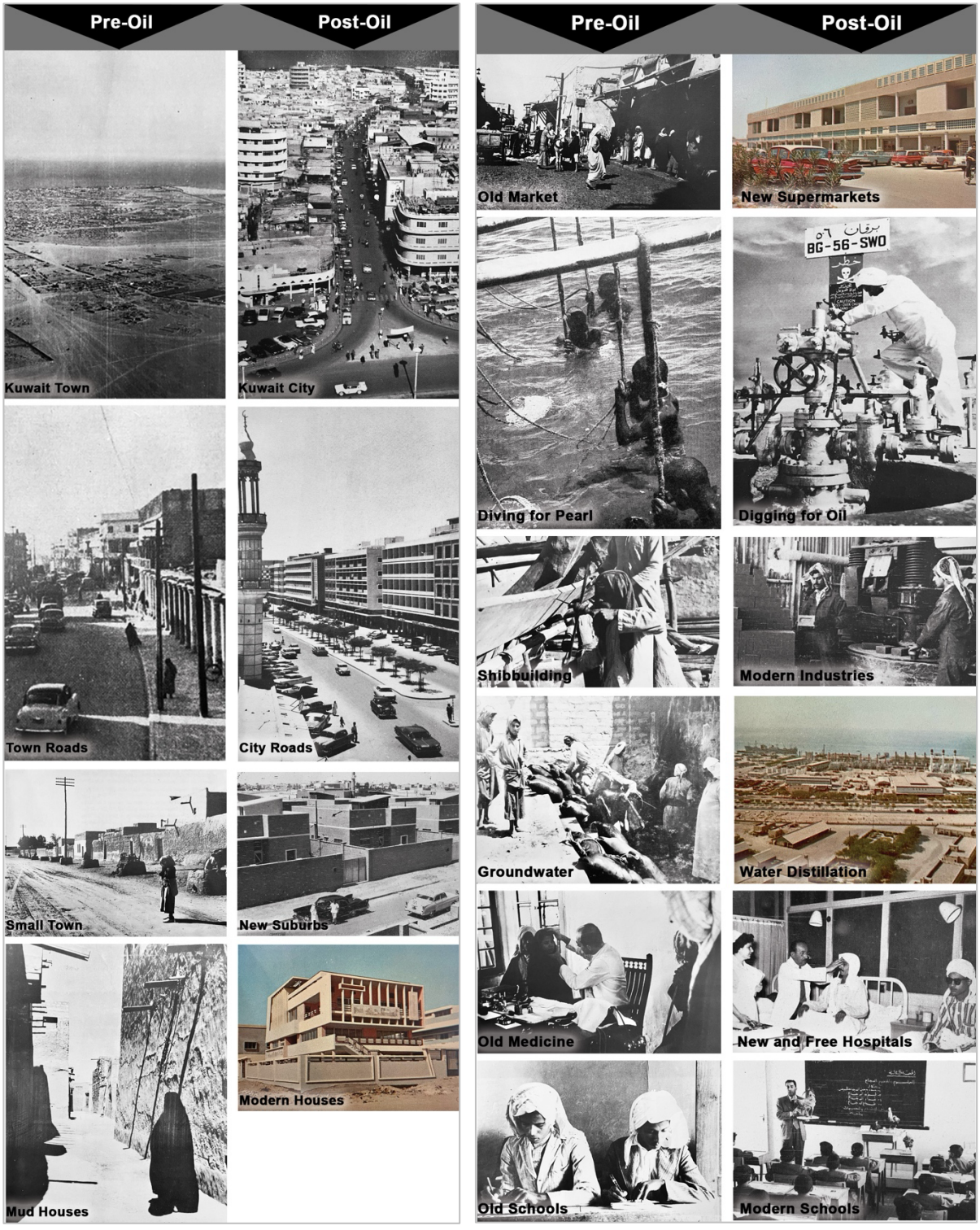


Figure 4.2 Kuwaitis' lives before and after modernisation development. These pictures show the constructed environment, roads and walkways, homes and markets, various types of labour, water sources, healthcare facilities, and educational institutions in Kuwait both before and after the country's oil was discovered.[26]

[26]Kuwait Today: A Welfare State; *Kuwait Almadhi* [The Past of Kuwait], ed. by Sulaiman Al-Awadhi (Kuwait: n.p., 1987),(pp. 22, 30, 42, 83, 97, 148, 153, 155, 191, and 200). Images put together by the Author, 2023.

The migration and management strategy of the Kuwait Oil Company's (KOC) workforce is another relevant pattern of rising welfare. Due to a severe shortage of local labour in oil extraction and exports beginning in 1946, KOC was forced to import manpower from other countries.[27] Owing to the terms of the contract with the British Petroleum Company, the Kuwait government, represented by KOC, was obligated to help provide employees and their families with basic necessities.[28] Therefore, a new town was constructed in the desert, called Ahmadi, located approximately 22 miles outside Kuwait City and supplied with public facilities, including hospitals, schools, worship buildings, and marketplaces, as well as 1,450 housing units for employees (see **Figure 4.3**).[29] The town of Ahmadi was planned by British architect James Mollison Wilson in 1947.[30] The families and dependent workers at KOC, estimated to number over 10,000, had homes because of the construction efforts of KOC, as stated by E. A. V. de Candole in his 1954 speech titled *Developments in Kuwait* presented to the Royal Central Asian Society.[31] In reality, this welfare has been provided by a company that has prioritised improving the quality of life of its workforce. Like other examples highlighted by Mark Swenarton and his co-editors in their book *Architecture and the Welfare State,* Ahmadi town is evidence that the necessities of the welfare provision compelled the building of a physically built environment as well (see **Figure 4.4** and **Figure 4.5**).

It is widely believed that the build-up of oil revenues and the inclination of governing elites to modernise their traditional societies are the reasons for this rapidly expanding phenomenon. They provide a more coherent account of the increase in prosperity in emerging economies through the imitative spread of ideas from more developed states. In addition to the economic revolution period that occurred between the 1930s and the 1940s, three other distinct periods in Kuwaiti welfare state development are explored in this chapter: the 1950s, when oil prices were stable and the first government social programmes were established; the 1960s, when independence was obtained and a constitution was introduced; and the 1970s and the 1980s, when oil revenues spiked and a large number of public buildings and other infrastructure projects were constructed. The rapid development of Kuwait's welfare state can be observed in these four distinct phases, each corresponding to a decade of significant historical and economic shifts.

[27] Longve, p. 25.
[28] The British Petroleum Archives [BP], 68422/002, KOC, 'Kuwait Building Programme', 1947.
[29] The British Petroleum Archives [BP], 68422/004, KOC, 'Summary of Work Completed or in Hand ', 1948; The National Archives [TNA], London: FO371/98467, 'Report from International Department on Trades Union Congress in London to Mr F. C. Mason, Foreign Office', 1st December 1952.
[30] The founder of Wilson Mason & Partners. Farah Al-Nakib, *Kuwait Transformed a History of Oil and Urban Life* (Stanford, California: Stanford University Press, 2016), p. 137.
[31] He served as head of external affairs department of Kuwait Oil Company (1952-1954).

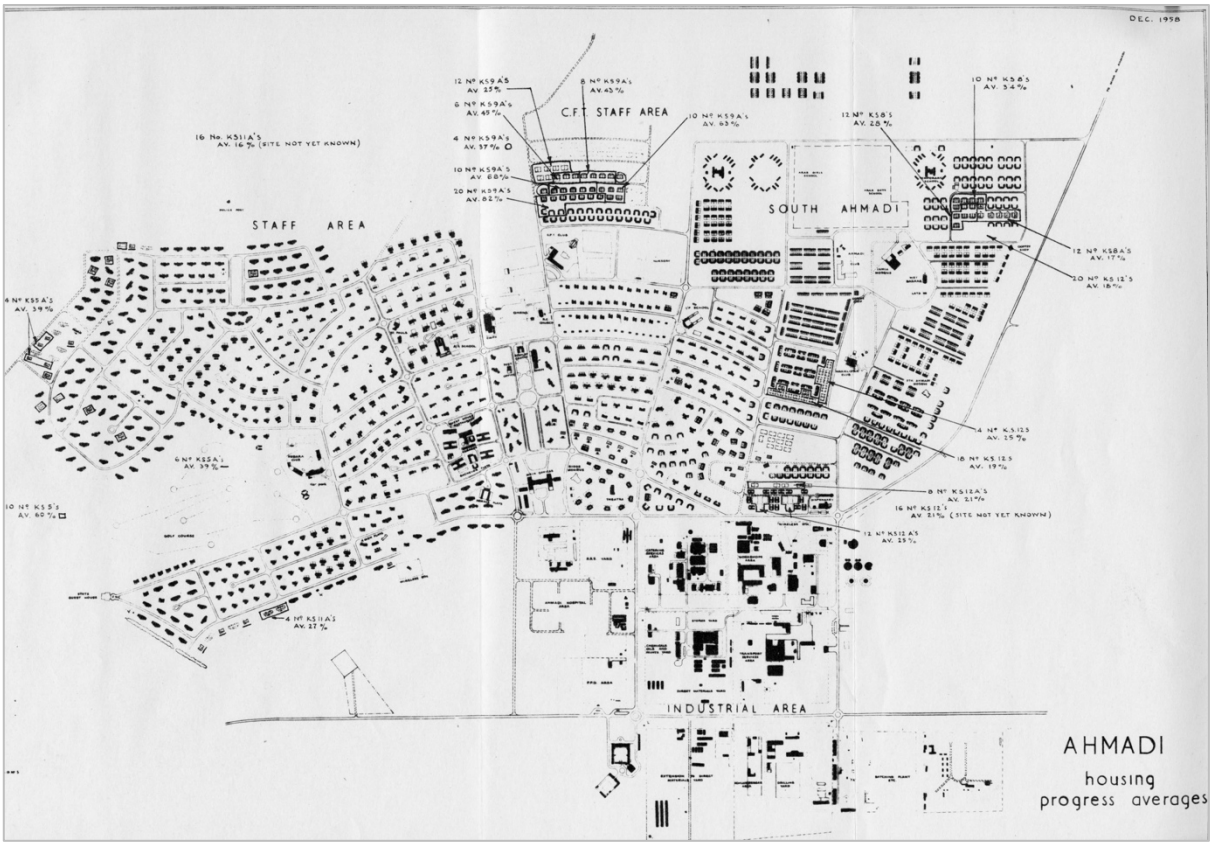


Figure 4.3 Ahmadi town housing progress plan, 1950. Al-Ahmadi town, planned in 1947 by British architect James Mollison Wilson, will provide all the services that a working-class community needs, including housing, healthcare, schools, and more. The British Petroleum Archive is home to this particular map.[32]

Figure 4.4 Aerial view of Ahmadi Town, 1950. Left: At its heart, the picture depicts the cinema Al-Ahmadi, a symbol of the modern Ahmadi town that sprung up on top of a desert and features all the modern conveniences and leisure activities. [33]

Figure 4.5 Aerial view of Ahmadi centre amenity, n.d. Right: Here is another shot of Al-Ahmadi town from a closer angle. Pictured here are the town's workers residences encircling the central market.[34]

[32] The British Petroleum Archive [BP], University of Warwick: Ref. 106943/001 ©BP plc., 'Ahmadi Housing Progress Average', 1950.
[33] The British Petroleum Archive [BP], University of Warwick: Ref. 108089/006, ©BP plc., 'Aerial View of Al-Ahmadi Town', 1959.
[34] The British Petroleum Archive [BP], University of Warwick: Ref. 142973/25, ©BP plc., 'Aerial View of Mina Al Ahmadi Showing Administrative and Housing Areas', n. d.

4.2.2 The Creation of a Welfare System (the 1950s)

In 1951, Sheikh Abdullah Al-Salem successfully negotiated with the British to elevate the terms of Kuwait's contract with KOC to 50% of all oil export revenue.[35] As a result, KOC established the infrastructure necessary to expand production of oil while improving efficiency, making Kuwait one of the Middle East's top oil exporters where output increased from 125.7 million to 619.1 million barrels between 1950 and 1960, and kept rising annually.[36]

At the same time, British efforts were made to send financial expert Colonel G. C. L. Crichton and customs expert H. L. Roper, who was chosen by British Political Agent H. G. Jakins, to Kuwait.[37] Crichton's first action was to present a report on the management of Kuwait's finances to the ruler. He justified that the current system of financial management was ill-equipped to handle the country's enormous financial shares, and advised giving full authority over the country's expenditures to the finance department.[38] He also claimed that the planning and implementation of the country's development projects required the expertise of an engineer, recommending the hiring of General William Freke Hasted, former president of Loughborough Engineering College and former British servant in India.[39] Thus, the Ruler provided preliminary consent in 1952 to form a Development Board under the direction of General Hasted and Colonel Crichton to manage the country's development finances.[40] Other members of the Development Board included Kuwaiti directors from the Council of Education, Finance, Health, Municipality, Public Works, and Awqaf (Muslim Endowments).[41]

Three main responsibilities were given to the Development Board: capitalising Kuwait Town, laying the foundation for the country's infrastructure, and preparing for the growth of neighbourhoods with new public services beyond the town's third wall.[42] With an eye on getting construction underway within four months, General Hasted provided Sheikh Abdullah with a preliminary report on Kuwaiti development in February 1952.[43] First, envisioned as a decade-long development effort,

[35] The National Archives [TNA], London: FO 371/91334, 'Telegram from Foreign Office to Washington ', 12th April 1951; The National Archives [TNA], London: FO 371/98323, 'Kuwait Admission Report', 1951.
[36] Crystal, p. 39.
[37] The National Archives [TNA]: FO 371/98323.
[38] The National Archives [TNA], London: FO 371/104340, 'Letter from Political Agent in Kuwait to Sir Rupert Hay, the Political Resident in Bahrain ', 24 Febuary 1953.
[39] Simon C. Smith, *Kuwait 1950-1965- Britain, the Al-Sabah , and Oil* (Oxford: Oxford University Press, 1999), p. 27.
[40] Ibid.; The National Archives [TNA], London: FO 371/91283, 'Draft Letter from Mr R. F. Sarell to Sir Rupert Hay, the Political Resident in Bahrain', 16th October 1951.
[41] The National Archives [TNA], London: FO 371/109860, 'Report by Mr N. M. Reilly on Development of Kuwait ', July 1954.
[42] The National Archives [TNA], London: FO 371/114745, 'Report from Mr C. A. P. Southwell at Kuwait Oil Company to Mr L. A. C. Fry, the Foreign Office, with Enclousers', 21st February 1955.
[43] The National Archives [TNA]: FO 371/104340.

the timeline for the plan was shortened to include only the years 1952–1959.[44] The development plan's goal was to construct 10,000 residences (see **Figure 4.6** and **Figure 4.7**) and 650 miles of roads, a new international airport, governmental buildings, healthcare facilities, educational facilities (see **Figure 4.8**), a desalination plant, electric power (see **Figure 4.9**), sewage, sanitary services, fire services, gas, hotels, a ruler's palace, port reconstruction, and a contractor's camp.[45]

Figure 4.6 Construction of residential units. Left: The construction of these housing units was part of a larger effort to improve living conditions for lower-income families in Kuwait.[46]

Figure 4.7 The new housing model in Kuwait, 1958. Right: The government of Kuwait adopted a new housing style for its citizens, away from the traditional courtyard house. Instead, the houses were rearranged in a way that put the living quarters in the middle and had open space around them, as shown in the picture.[47]

Figure 4.8 Jahra School, 1958. Left: This is one of the state schools that the government runs as part of its welfare programme, with the goals of improving the development plan and making sure everyone has access to education.[48]

Figure 4.9 State's power station, 1958. Right: This photograph, retrieved from the British Petroleum Archive, depicts Farmer and Dark's design for the first power station in Kuwait. One of the first and most important stages in providing people with welfare was this endeavour.[49]

[44] The National Archives [TNA]: FO 371/114745.
[45] The National Archives [TNA], London: FO371/104327, 'Brief for British Prime Minister with Two Annexes ', May 1953.
[46] Kuwait Today: A Welfare State, p. 35.
[47] The British Petroleum Archives [BP], University of Warwick: Ref. 107064/013, ©BP plc., 'Kuwait Modern House', 1958.
[48] The British Petroleum Archives [BP], University of Warwick: Ref. 107064/007,©BP plc., 'Jahra School', 1958.
[49] The British Petroleum Archives [BP], University of Warwick: Ref. 107048/017, ©BP plc., 'Power Station', 1958.

After assessing the situation, General Hasted appointed the British firms of Antonio Minoprio, Hugh Spencely, and Peter W. Macfarlane to design Kuwait's First Master Plan, and five contracting firms to carry out the development strategy.[50] Moreover, five prominent British contractors were hired to carry out the programme's most important development projects for a fee equal to the cost plus 15%.[51] The initial estimate for the five-year programme was £91.5 million, but by 1954, the total expenditure had risen to £170 million.[52] With unsatisfactory financial costs, Sheikh Abdullah was compelled to take decisive action and reorganise the status of British companies in Kuwait and General Hasted in 1953.[53] The position of General Hasted was filled by Sheikh Fahad Al-Salem, the Ruler's brother, and the five companies were required to complete their tasks without further projects being awarded.[54] He also limited the influence of the finance department by shifting the focus of his executive authority over development programmes to provide technical advice and information.[55] This new disarticulation within the financial paradigm provided the country with a limited configuration of power, allowing it to consolidate its management as a dominant economic and political power.

When Sheikh Abdullah made the decision early in his reign to share the country's newfound wealth with his people and develop the country's social infrastructure, he decided to become part of 1954 Decree No. 1, in which he attempted to construct a welfare law:

> *'We, Abdullah Al-Salim Al-Sabah -Ruler of Kuwait- as one of our fondest desires and highest intentions is to establish the foundation of justice, to instil confidence, to make the reforms prevent and to put into operation a system which would guarantee the welfare of our beloved people on equal footing'.*[56]

Sheikh Abdullah was keen on maintaining the ruling family's position of power and privilege by distributing part of the nation's wealth. Several authors in the 1950s inspired Sheikh Abdullah's insistent vision of a welfare state. Georges Britt, a New York newspaperman who visited Kuwait in 1952, wrote about the country's progress towards a welfare state in an article titled *From yesterday*

[50] The National Archives [TNA]: FO 371/109860.
[51] The National Archives [TNA]: FO371/104327; The National Archives [TNA], London: FO 371/104327, 'Reports on Development Contracts and British Contractors, Unsigned', 1953; The National Archives [TNA], London: FO 371/104327, 'Confidential Letter to London with Attached Items of Local News', 12th April 1953.
[52] The National Archives [TNA], London: FO 371/104341, 'Report on Finance and Expenditure in Kuwait', 14th November 1953.
[53] Ibid.; The National Archives [TNA], London: FO371/104340, 'Letter from Political Agent in Kuwait to Sir Rupert Hay, the Poltical Resident in Bahrain', 24 Febuary 1953.
[54] The National Archives [TNA], London: FO 371/98352, 'Letter from Mr C. M. Pirie Gordon, the Political Agent in Kuwait, to Political Resident in Bahrain', 4th December 1952; The National Archives [TNA], London: FO 371/104329, 'Draft Message from British Prime Minister to the Ruler of Kuwait ', n. d.
[55] The National Archives [TNA]: FO 371/104329.
[56] The National Archives [TNA], London: FO371/109810, 'Proclamation by Ruler of Kuwait', 19th July 1954.

to tomorrow, Kuwait launches a vast welfare program by wise use of wealth.[57] Britt pointed out that Sheikh Abdullah wanted to share oil wealth with his people, so that they could have access to modern amenities, such as fresh water, elementary schools, technical programmes, hospitals, clinics, sewage treatment and waste disposal, improved housing, paved streets, and reliable electricity.[58] Eric Parry, Chief Medical Officer in Kuwait, was one of the many people Britt had met, and he used the phrase, *'we are handicapped by the world's shortage of materials. But I must say this for Kuwait: it is willing to do anything at all, absolutely anything, for the welfare of its people, and nothing that I have asked has ever been refused on the plea that it would cost too much'* to describe the government of Kuwait's willingness to spend freely on health care as well as all other public services.[59] According to Condole's interview with Sheikh Abdullah in 1953, the ruler put in much effort and saw great success in his welfare programme to increase access to clean water, quality education, and adequate medical treatment for all.[60]

The ruler's vision acquired economic capacity and resolved to modernise the state and society, which led to the establishment of a welfare state by laying the foundation for a social system that provided Kuwaitis with supplementary benefits, such as social allowances, land, and loans.[61] For the welfare state to achieve its goal of societal modernisation, it had to create a wide variety of welfare organisations to provide the population with various forms of social assistance. Nonetheless, Sheikh Abdullah's goals extended far beyond simple physical alterations; he sought to establish a constitution and gain independence for the country. A new era of prosperity and development began with the declaration of independence in 1961.

4.2.3 Kuwait as a New Nation (the 1960s)

In the early 1950s, an Arab nationalist movement emerged in the region, leading to anticolonialism. The Suez Crisis of 1956 saw Kuwait at a pivotal juncture in its relations with other Arab governments and the internal political movement that arose in support of the nationalist movement.[62] The equitable distribution of oil profits helped Sheikh Abdullah prevail over merchant elites and the public. During this period, fundamental amenities, such as roads and buildings, were constructed.

[57] Georges Britt, 'From Yesterday to Tomorrow, Kuwait Lauches a Vast Welfare Program by Wise Use of Wealth', *The Al-Kulliyah* 1952, pp. 6-9..
[58] Ibid. p. 7.
[59] Ibid. p. 9.
[60] E. A. V. de Candole, 'Developments in Kuwait', *Journal of The Royal Central Asian Society,* 42. 1 (1955), 21-29 (p. 22).
[61] Kuwait Today: A Welfare State, p. 76.
[62] Crystal, p. 85; Simon C. Smith, *Britains Revival and Fall in the Gulf Kuwait, Bahrain, Qatar, and the Trucial States, 1950-71* (New York, USA: Routledge Curzon, 2004), pp. 66-67.

As a result, the ruler was well on his way to establishing a new administrative state by greatly expanding the scope of the state's workforce, regulatory authority, and influence over the population. He was confident that Kuwait was ready to become an independent nation. The Treaty of 1899 and formal British authority over Kuwait were officially terminated in June 1961, when an agreement was signed between the two countries.[63]

The formidable Arab Nationalist Movement and other political developments ushered in rapid social and economic development in Kuwait. Kuwait's constitution was ratified in 1962 and served as the initial state for formal institutions that defined the state's relationship with its people.[64] It established democracy in Kuwait and reaffirmed Kuwait's position as a hierarchical emirate of the Al-Sabah family.[65] It also clearly outlined the rights of its residents, including the right to be presumed innocent, freedom of belief and expression, and equality before the law.[66] Social rights were enshrined in the constitution, making it the responsibility of the state to offer the full range of benefits available today. Guaranteed employment, medical care, access to public health services, and free and open public education are examples of social rights.[67]

Consequently, there was a need to restructure government institutions to adequately oversee the distribution of wealth, which was carried out via public works projects, to provide a basis for a more progressive and equal welfare state. Significant changes were made to the government structure (see **Figure 4.10**), and ministerial management with the establishment of an elected National Assembly in 1963.[68] The Valuation Committee was formed in response to mounting demands for urban sprawl through land acquisition in 1961, the Supreme Council was founded in 1963, and the Planning Board was moved from the Ministry of Public Works to Kuwait Municipality in 1963.[69] The government brought technical professionals from Britain, Egypt, Palestine, and Syria to operate these divisions. Furthermore, planners and architects were used in a wide range of public and private planning and architectural projects, each of which contributed significantly to the early layout of the city, such as the significant input of Saba G. Shiber.

[63] Arabian Gulf Digital Archives [AGDA], UAE: FO 93/137/10, 'Terminating the Agreement of 23rd January 1899 between the United Kingdom and the Ruler of Kuwait', 1961 <https://www.agda.ae/en/catalogue/tna/fo/93/137/n/18 > [Accessed 20th January 2023].

[64] Kuwait Today: A Welfare State, p. 52; Crystal, p. 68; Smith, p. 25; Casey., p. 67; Crystal, pp. 26, 96.

[65] Crystal, p. 11; Elizabeth Monroe, 'The Shaikhdom of Kuwait', *Royal Institute of International Affairs,* 30. 3 (1954), 271-284 (p. 271); Ebrahim Abdo, *Dawlat Alkuayt Alhaditha* [Modern State of Kuwait] (n. p: Arab Record Foundation, 1962), p. 201; Kuwait Today: A Welfare State, p. 55.

[66] Kuwait Today: A Welfare State, p. 27 and 55.

[67] Ibid. p. 55.

[68] Ibid. p. 7; Crystal, p. 4 and 95.

[69] Smith, p. 98 and 125; Kuwait Today: A Welfare State, p. 87; Najat A. Al-Jasim, *Baladiyat Al-Kuwait Fi Khamsein Aam* [Kuwait Municipal in 50 Years] (Kuwait: Kuwait Municiaplity 1980), p. 26.

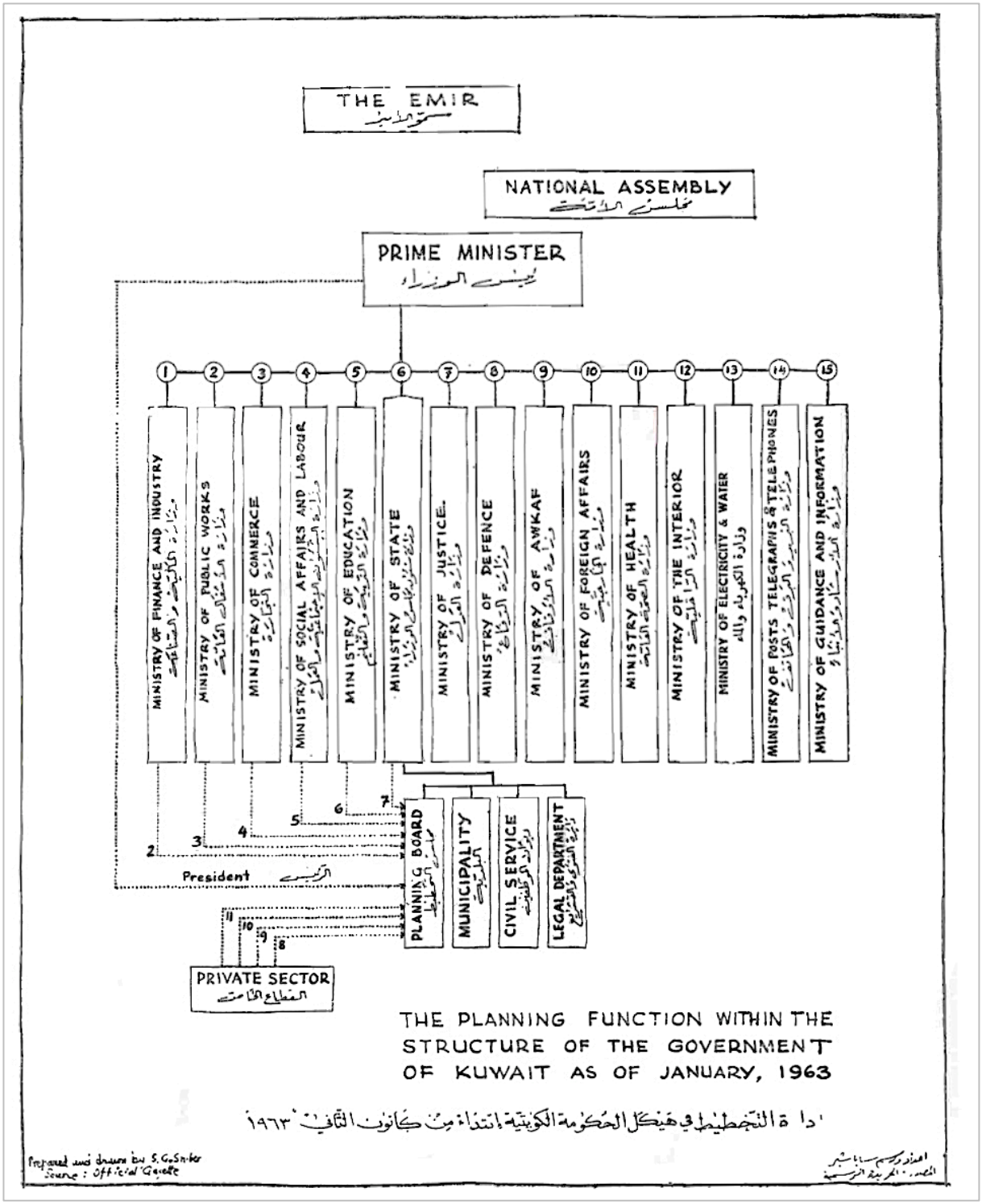


Figure 4.10 Kuwait's new governmental structure, 1963. To ensure that every sector is ready to fulfil its role in establishing a welfare system and putting the development strategy into action, the new government structure that emerged following the country's independence is depicted in the graph.[70]

Their work caused a great deal of chaos due to issues with land acquisition, an overheated land market, a flurry of land transactions, public projects, the construction of new residential areas, and

[70] Saba George Shiber, *The Kuwait Urbanization: Documentation Analysis Critique* (Kuwait: Kuwait Government Press, 1964), p. 282.

supervisory and management challenges.[71] Therefore, the government of Kuwait invited Saba George Shiber, an expert in urban planning and architecture, to help with the situation. According to his analysis in his book *The Kuwait Urbanization: Documentation Analysis Critique,* useless land, significant setbacks, underdeveloped places between buildings, numerous roundabouts, traffic problems, a shortage of parking areas, and a wide variety of uncoordinated architectural expressions were all symptoms of this chaos in Kuwait City.[72] By then, Shiber suggested that Kuwait City's Central Business District (CBD) should get a new reasonable and all-encompassing plan.[73] In addition, Saba included the redevelopment of eight residential blocks, which had amenities, commercial centres, mosques, schools, and playgrounds.[74]

His comments led to the implementation of a moratorium on further work on the initial master plan, and the government issued the 1967 Municipal Development Plan in response to these issues.[75] In 1951, the updated strategy was an assembly plan that expanded the master plan to include new commercial and industrial areas.[76] Unfortunately, their strategy did not account for the need for demographic and extensive traffic studies or the difficulties associated with developing the city centre. In response, the government sought additional United Nations (UN) guidance and formed a committee to advise on the administration and regulation of rapid growth, which ultimately recommended hiring an international consultant to establish a hub for all-encompassing planning and development in Kuwait.[77] The British planning firm Colin Buchanan and Partners was hired in 1968 to create the Second Master Plan, and in 1971, they provided a plan with national, metropolitan, and neighbourhood distribution.[78]

On the contrary, international organisations such as the UN, the United Nations Educational, Scientific, and Cultural Organisation (UNESCO), and the World Health Organisation (WHO) aided Kuwait in developing social welfare programmes modelled after Europe's more progressive practices in the 1960s. Following Kuwait's request for assistance from the United Nations and the International Bank for Reconstruction and Development (the predecessor of the World Bank), a team of eleven specialists travelled to Kuwait to provide guidance on how to manage and regulate

[71] Saba George Shiber, 'Thawrat Alkuayt Aleumraniati: Hadm Almintaqat Altijariat Bi'awsat Almadinat Wa'iieadat Binayiha' [Kuwait's urban revolution: demolishing and rebuilding the downtown commercial district], *Al-Arabi*, 1st May 1963, pp. 365, 366, 374, 406; Shiber.
[72] Shiber, p. 115.
[73] Ibid. p. 157.
[74] Ibid. p. 219.
[75] Abdulrasoul Al-Mussa, *Altatawur Aleumraniu W Altakhtit Fi Alkuayt 1952-1980* (Kuwait: Kazima Publisher 1981), pp. 93, 94 and 99.
[76] Ibid. p. 100.
[77] Ibid. p. 107.
[78] Ibid. p. 108.

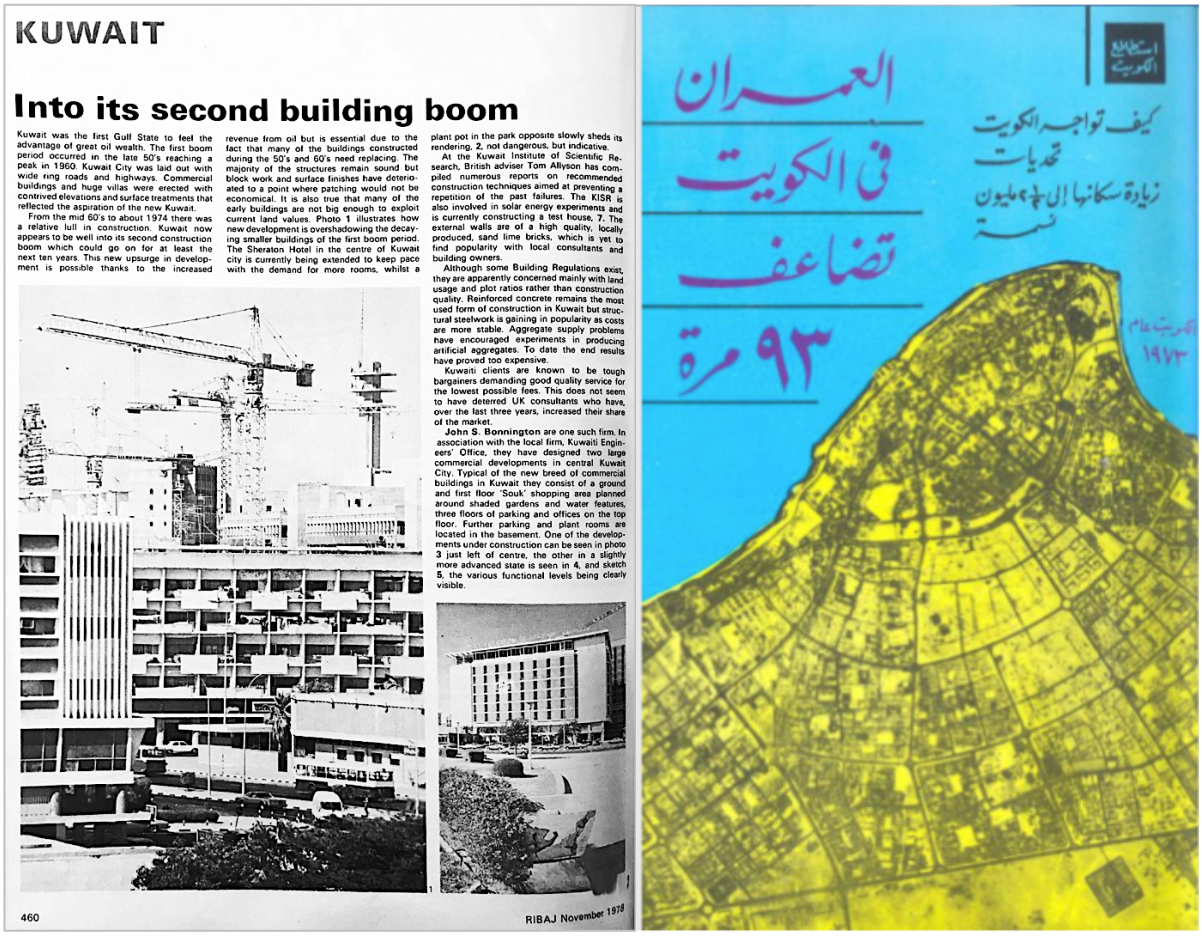
the country's rapid expansion in several sectors.[79] The World Bank organised an economic mission to Kuwait in 1962 and then again in 1963; a report was written and released that year.[80] The report noted that Kuwait had reached a level of prosperity, and increasing the nation's gross domestic product (GDP) was no longer a top priority.[81] Instead, the country should focus on other priorities, such as providing a good standard of living for its citizens.[82] In general, the government's public investment programme followed sensible and productive lines, focusing on vital infrastructure, including ports, highways, and public utilities.[83] The report suggested concentrating more attention on the distribution and provision of housing and water, reducing expenditure on land acquisitions and their ads, and increasing the quality of education and public health services.[84] It demonstrates that Kuwait's orientation towards the posture of realising optimal outcomes and propelling the renaissance to utopian ideals during the 1960s political movement was a massive success in Kuwait's development history.

4.2.4 Kuwait's Development Implementation (the 1970s–1980s)

By the early 1970s, countries dependent on oil exports, such as Kuwait, were reaping the advantages of their wealth outcomes, as evidenced by the country's growing excess capital and excellent standard of living. In March 1972, Kuwaiti oil production peaked at 3.86 million barrels per day.[85] This resulted in the 1970s being a time of major public works and infrastructure construction as well as an expansion of social welfare benefits. The government made more than four times as many expenditures on social welfare initiatives between 1972 and 1981.[86] An article titled *Kuwait: Area of Expansion and Opportunity* appeared in the *Building Journal* in 1971, predicting that the country's oil revenues will be spent on building projects to the tune of 500 million pounds sterling.[87] Similarly, Ken Dalley and Francis E. Tibbalds published an article titled *Into its second building boom* published in the 1978 issue of *RIBA's Journal*, which referred to Kuwait's second wave of massive building construction based on great oil revenue (see **Figure 4.11**).[88] One hotel, a research centre, and several commercial and healthcare projects were among the many developments they presented that had taken place in Kuwait, most of which were constructed as part of the Second Master Plan.

[79] BRDC, *The Economic Development of Kuwait* (Baltimore: The Johns Hopkins Press, 1965).
[80] Ibid. p. vii.
[81] Ibid. p. 3.
[82] Ibid.
[83] Ibid. p. 7.
[84] Ibid. pp. 7, 10 and 16.
[85] Crystal, p. 43.
[86] Ibid. p. 59.
[87] 'Kuwait: Area of Expansion and Opportunity', *Building*. February (1971), 79-83.
[88] Ken Dalley and Francis Eric Tibbalds, 'The Gulf: Report from Kuwait, Bahrain, Qatar, Oman, and the United Arab Emirates States; and, Planning in the Gulf', *RIBA Journal,* 85. 11 (1978), 459-480.

Urbanization in Kuwait has increased 93 times according to the title that Saleem Zabal wrote in *Al-Arabi Magazine* issued in 1975, expressing the rapid development of the built environment in Kuwait (see **Figure 4.12**).[89]



KUWAIT

Into its second building boom

Kuwait was the first Gulf State to feel the advantage of great oil wealth. The first boom period occurred in the late 50's reaching a peak in 1960. Kuwait City was laid out with wide ring roads and highways. Commercial buildings and huge villas were erected with contrived elevations and surface treatments that reflected the aspiration of the new Kuwait.

From the mid 60's to about 1974 there was a relative lull in construction. Kuwait now appears to be well into its second construction boom which could go on for at least the next ten years. This new upsurge in development is possible thanks to the increased revenue from oil but is essential due to the fact that many of the buildings constructed during the 50's and 60's need replacing. The majority of the structures remain sound but block work and surface finishes have deteriorated to a point where patching would not be economical. It is also true that many of the early buildings are not big enough to exploit current land values. Photo 1 illustrates how new development is overshadowing the decaying smaller buildings of the first boom period. The Sheraton Hotel in the centre of Kuwait city is currently being extended to keep pace with the demand for more rooms, whilst a plant pot in the park opposite slowly sheds its rendering. 2, not dangerous, but indicative.

At the Kuwait Institute of Scientific Research, British adviser Tom Allyson has compiled numerous reports on recommended construction techniques aimed at prevensing a repetition of the past failures. The KISR is also involved in solar energy experiments and is currently constructing a test house. 7. The external walls are of a high quality, locally produced, sand lime bricks, which is yet to find popularity with local consultants and building owners.

Although some Building Regulations exist, they are apparently concerned mainly with land usage and plot ratios rather than construction quality. Reinforced concrete remains the most used form of construction in Kuwait but structural steelwork is gaining in popularity as costs are more stable. Aggregate supply problems have encouraged experiments in producing artificial aggregates. To date the end results have proved too expensive.

Kuwaiti clients are known to be tough bargainers demanding good quality service for the lowest possible fees. This does not seem to have deterred UK consultants who have, over the last three years, increased their share of the market.

John S. Bonnington are one such firm. In association with the local firm, Kuwaiti Engineers' Office, they have designed two large commercial developments in central Kuwait City. Typical of the new breed of commercial buildings in Kuwait they consist of a ground and first floor 'Souk' shopping area planned around shaded gardens and water features, three floors of parking and offices on the top floor. Further parking and plant rooms are located in the basement. One of the developments under construction can be seen in photo 3 just left of centre, the other in a slightly more advanced state is seen in 4, and sketch 5, the various functional levels being clearly visible.

460

RIBAJ November 1978

Figure 4.11 Kuwait into its second building boom. Left: In 1978, RIBA's journal published an article that shed light on the case of Kuwait by describing the massive development that occurred in the 1970s due to the country's large oil revenue and its welfare supply strategy.[90]

Figure 4.12 A cover page of Al-Arabi magazine was released with Kuwait's urbanisation growth news in 1975. Right: The illustration above displays an item headlined 'Urbanisation in Kuwait has increased 93 times,' which highlights the country's fast and unexpected growth in the 1970s.[91]

When Buchanan was commissioned to design the Second Master Plan for Kuwait in 1971, he included the country's first comprehensive demographic study.[92] The population of Kuwait reached two million in 1985, according to official estimates.[93] New cities, oil refineries, agricultural areas,

[89] Saleem Zabal, 'Aleimran Fi Alkuayt Tudaeif 93 Maratan' [Urbanization in Kuwait has increased 93 times], *Al-Arabi*, 1st November 1975.
[90] Dalley and Tibbalds, p. 460.
[91] Zabal, *Al-Arabi*. 93.
[92] Kuwait-Municipality, *Al-Tatawur Wa Al-Umran Fi Al-Kuwait [Planning and Urban Development in Kuwait]* [Planning and Urban Development in Kuwait], (Kuwait: 1980), p. 38; Colin Buchanan, *Studies for a National Physical Plan for the State of Kuwait and Masterplan for the Urban Areas* (1970); Al-Mussa, p. 100.
[93] Buchanan, p. 6; Kuwait-Municipality, p. 40; Al-Mussa, pp. 109-112.

and military bases were included in the plan. Both ten-year and long-term plans have been drafted, with the latter's intended expiration date set at 1997.[94] An integral part of this strategy was the formulation of a national natural plan for growth of the Kuwait City's metropolitan area south of the Saudi border and north of the Jahra district and Iraqi frontier. Planning policies for the expansion of Kuwait City and its surrounding metropolitan areas, as well as the neighbourhoods that would benefit from such expansion and would be subject to stricter regulations of land use and public utility infrastructure, were mapped in detail.[95] This was an all-encompassing plan for the construction of residences, hospitals, sports arenas, schools, and government offices. International architectural contests have been conducted to develop key areas and other major building initiatives. Important public works projects, such as the enlargement of the Seif Palace, rehabilitation of the old Souk area, construction of a new Ministries Complex, and design of in-town housing, have been assigned to four international architects.[96] Successful projects during this time included the Central Business District in Kuwait City; housing projects in Fintas, Riqa, and Wafra; banks, such as the Kuwait Central Bank, Gulf Bank, Commercial Bank, and Al-Ahli Bank; hotels, such as Sheraton and Hilton; the National Museum; Water Towers; Kuwait Towers; the International Air Terminal; Kuwait National Assembly; sports clubs; Al-Sabah Hospital; prototype state schools; cinemas, and many more.[97]

By contrast, the economic crisis and political strife in the region in the 1980s slowed some development plans and halted additional projects. The shift in the global oil market resulted from a confluence of these circumstances. Jill Crystal claims that the price spike in 1979, the Iranian revolution in the same year, and the Iran–Iraq war in 1980 were all contributing factors.[98] Consequently, the Kuwaiti government presented the country's first budget deficit in 1981, and debt quadrupled the following year.[99] By 1986, oil prices had dropped to less than 10 dollars per barrel, and by early that year, the Organisation of the Petroleum Exporting Countries (OPEC) price mechanism had disintegrated entirely, disrupting oil exports from Kuwait.[100] The government consequently began enforcing rationing and general, careful, and realistic accounting of public expenditures, such as reducing the scope of enhanced welfare provisions.[101] Therefore, the research presented a span of evolution until the late 1980s.

[94] Buchanan, p. 6; Kuwait-Municipality, p. 40; Al-Mussa, pp. 109-112.
[95] Buchanan, p; Kuwait-Municipality, p. 46; Al-Mussa, p. 132.
[96] Hamid Shuaib, 'Urban Development of Kuwait', *Alam Albena,* 98 (1989), 4-5.
[97] Roberto Fabbri, Sara Saragoca and Richardo Camacho, *Modern Architecture Kuwait 1949-1989* (Switzerland: Niggli, 2016).
[98] Crystal, p. 53.
[99] Ibid.
[100] Ibid.
[101] Khalaf and Hammoud, p. 352.

In conclusion, it is clear that oil revenues were the driving force behind practically every part of Kuwait's modernisation process and welfare development. This phenomenon, which some have labelled 'oil-based production' or 'oil welfarism,' ultimately transformed the country's social fabric at a breakneck pace.[102] According to Khalaf and Hammoud, Kuwait's oil state arose as a 'welfare state' rather than a 'welfare society,' highlighting the fact that a system with societal duties was not adopted in favour of the current oil welfare system.[103] Kuwait's unique structure is the result of a confluence of factors, including the country's reliance on oil income, extraordinary wealth and success, a small indigenous population, and dependence on an expatriate workforce. This analytical differentiation is vital as it enables the localisation of centres of influence and the identification of networks of economic control in connection with the evolution of the modernist built environment. Consequently, modern Kuwait's social welfare conditions diverge significantly from those of advanced capitalist nations, or even third-world countries. In addition, the welfare state's general growth and functions in Kuwait's economy are distinct from those repeatedly observed in mature capitalist societies because of economic, social, cultural, and historical specificities.

4.3 SCHOOLING WELFARISM: A STATE-SCHOOL PROGRAMME

4.3.1 Education: A Prior Welfare Service

One of the earlier welfarism pillars in Kuwait was education, which can be traced back to the time before the establishment of the state welfare programme or even oil discovery. Several social, political, and economic factors have accelerated its development (as mentioned in **Chapter 3**). In 1945, Kuwait joined the League of Arab States, in which the government recruited educators from Arab nations, particularly Palestine and Egypt, to bolster an accredited educational programme and fill key administrative positions in educational institutions.[104] The most pressing need to develop Kuwait as a nation was a rigorous educational system, as the government required many educated workers to operate effectively. Thus, there was a vision that graduates from these schools would secure jobs in teaching. Students were prepared for the workforce owing to a severe shortage of teachers and the numerous industries that had formed to meet the changing requirements of Kuwait's development progress and economy, particularly with the creation of KOC.[105]

[102] Ibid. p. 351; Crystal, p. 44.
[103] Khalaf and Hammoud, p. 355.
[104] BRDC, p. 20; Abdo, p. 27.
[105] *Tarikh Altaelim Fi Dawlat Alkuayt [History of Education in the State of Kuwait]*, ed. by Abdulaziz Hussein. Vol. 2, Majlis Alma'aref Fi 25 A'am (Asr Altanweir) [Council of Knowledge in 25 Years (Enlightenment Era)] (Kuwait: CRSK, 2002),(p. 183).

The development of an education programme was also advised by the British Agent in Kuwait, Captain Gerald de-Gaury, to address the country's needs and ensure that the burgeoning oil industry would find qualified locals to work alongside them.[106] During this time, the Oil Company began training its staff to acquire the necessary abilities and discussed sending a Kuwaiti mission to Britain's technical institution.[107] To satisfy manpower needs, the Education Council agreed to provide technical education in 1947, causing the need for a new educational institution in Kuwait.[108] Consequently, educational reforms have become more aligned with the needs of the nation and the progress of its economy. Despite the rapid influence of political development, pedagogical changes, and economic factors on educational services, the school-built environment continued to expand. By the end of the 1940s, the Education Council had developed approximately 23 educational institutions in Kuwait, of which 18 were dedicated to boys and 5 to girls.[109]

In 1950, the country's resources were redirected to education reforms, or *'investing in brains,'* as the article by Britt put it.[110] The ruler of Kuwait, Sheikh Abdullah, strongly supported educational opportunities for his people, maintaining that *'never mind about a school budget; spend all you can, enlarge as fast as you can, provided you put the money to effective use'.*[111] Consequently, in 1951, education accounted for more than one-third of government spendings.[112] The following year, the Development Board was established to centralise decision-making in a cooperative organisation in line with Sheikh Abdullah's intention to improve the government's administrative infrastructure.[113] This was the year in which the Education Council was reorganised into the Department of Education.[114]

The Department of Education was a pioneer in making its demands known to the Development Board and was prepared with a well-defined plan for the educational building programme. By then, General Hasted and Colonel Crichton oversaw Kuwait's modernisation as directors of the Development Board, in which they proposed five big British contracting companies.[115] John Howard

[106] Qatar Digital Library [QRL], Qatar: IOR/L/PS/12/3856, 'Koweit (Neutral Zone) Oil Concession: Negotiations with Petroleum Concessions, Ltd.', 4th November 1935-30 to December 1944. <https://www.qdl.qa/archive/81055/vdc_100000000648.0x0001a8> [Accessed 20th July 2022].
[107] Ibid.
[108] UNESCO, *International Yearbook of Education* (Paris: 1960), p. 43; Hussein, p. 171.
[109] Hussein, p. 355.
[110] Britt, *The Al-Kulliyah* 9.
[111] Ibid. p. 8.
[112] Ibid.
[113] Smith, p. 27; The National Archives [TNA]: FO 371/91283.
[114] UNESCO, p. 13, 248.
[115] The National Archives [TNA], London: FO371/104330, 'Translation of Letter from the Ruler of Kuwait to Political Resident, Bahrain', 13th August 1953.

and Taylor Woodrow, two of the five companies, were responsible for the coordination and construction of educational institutions under the guidance of British architectural firms Tripe and Wakeham in the 1950s.[116]

During the same period, other Arab architects like Sayed Karim from Egypt and Emile Bustani from Lebanon were involved in the educational building development as a response to the regional political and social shift brought on by the rise of Arab nationalism.[117] These developments coincided with the creation of the First Master Plan of Kuwait, which advocated for zoning area schemes to hasten the development of social infrastructure and the economy. Among these zoning districts was the Shuwaikh district, designated for educational services, in addition to the other schools appointed to each of the new residential areas (see **Figure 4.13**).[118]

Figure 4.13 Kuwait's first master plan by Minoprio, Spencley and Macfarlane, 1952. The map shows the location of schools in Shuwaikh and other residential areas with red hatching. Colour coding is as follows white for city boundary, orange for residential, yellow for industry, red for schools, brown for hospitals, purple for public spaces, green for landscape.[119]

[116] Arabian Gulf Digital Archives [AGDA], UAE: FO 371/109936, 'Education in Kuwait: Difficulty of Staffing Schools and Appointment of British Council Representative', 1954 <https://agda.ae/en/catalogue/tna/fo/371/109936> [Accessed 20th January 2023]; Arabian Gulf Digital Archive [AGDA], UAE: FO 371/109856, 'British Trade Mission to Kuwait', 1954.

[117] The National Archives [TNA]: FO 371/109860; Documentary-Committee, *Tarikh Thanawiat Alshuwikh (1953-1973)* [Al-Shuwaikh Secondary School's History (1953-1973)] (Kuwait: Ministry of Education, 2005), p. 56; Al-Jasim, p. 205.

[118] Antonio Minoprio, Hugh Spencely and Peter W. Macfarlane, *Plan for the Town of Kuwait* (London: 1951), p. 12; Kuwait-Municipality, p. 27; Al-Mussa, p. 99.

[119] Kuwait Municipality Archives, Kuwait: 'Mokhatat Alkuwayt Alhaykali 1952', 1952.

4.3.2 Messrs' Schools: The First Master Plan Programme (1952)

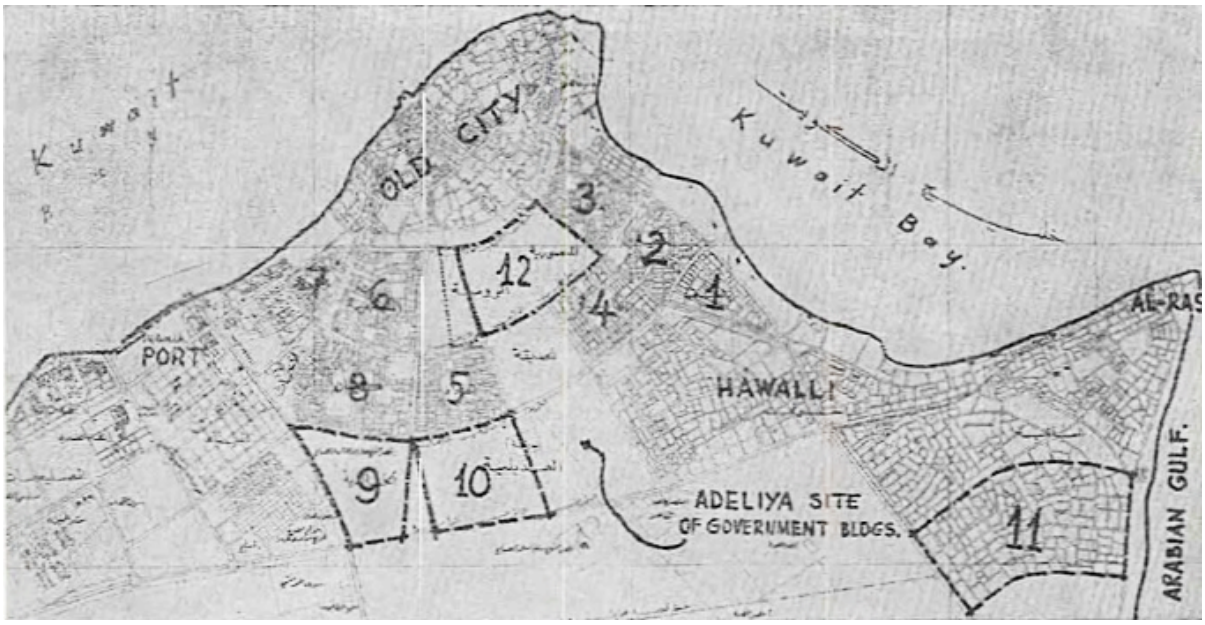


Figure 4.14 The first eight proposed neighbourhoods. Shiber published this rough draft in his book as part of his examination of the distribution and growth of neighbourhoods following the First Master Plan's implementation. It was not until 1964 that neighbourhoods nine through twelve were incorporated.[120]

As early as 1952, Minoprio, Spencley and Macfarlane worked on a master plan for the growth of Kuwait to bring the traditional Kuwaiti town up-to-date with the high standards of a modernised city and expand the urban area beyond the third wall.[121] The capitalist city, modern road system, commercial and industrial zoning, educational and health zoning, residential areas with public utility areas, public spaces, landscape along main roads, and other key locations were all the primary goals of their proposal.[122] Urban planning in Kuwait took an unprecedented turn when neighbourhoods and suburbs expanded beyond the third wall, creating a new mood in welfare architecture. They drew proposals for eight different neighbourhoods (this was modified to twelve by the revised plan in 1967, as shown in **Figure 4.14**) and essential infrastructure, separated from the old town by a greenbelt.[123] Greater than in the previous town, the new neighbourhoods were designed to house 48,000 people on flat and sandy grounds. As described by P. W. MacFarlane, each neighbourhood unit provided services to a cluster of 160 homes centred around a nursery school.[124] At the time, it was thought that housing should be built close to schools since they served as the hub of a larger community. The plan called for a system of radial roadways to extend beyond the third wall as well as a ring road running in a pattern parallel to the green belt. Several zones were

[120] Shiber, p. 236.
[121] Minoprio, Spencely and Macfarlane, pp. 2.
[122] Ibid. p. 2 and 3.
[123] Kuwait-Municipality, p. 34; Al-Mussa, p. 89.
[124] P. W. Macfarlane, 'Planning an Arab Town: Kuwait on the Persian Gulf', *Town Planning Institute Journal*. April (1954), 110-112 (p. 113).

introduced, each suited to a particular type of development in Kuwait, to divert traffic away from neighbourhoods and public utilities. With this proposal, the town's infrastructure and roadways were greatly improved, necessitating an increase in public services and utilities such as water supply, sewage, collection and disposal of refuse, street cleansing, electricity, and telephone networks (for more details, refer to **Appendix E**).[125]

Minoprio, Spencley, and Macfarlane designated one zone in Shuwaikh District for educational institutions, where a Technical College and Shuwaikh Secondary School were planned to be constructed; it was also meant for higher educational purposes.[126] This was a different approach than neighbourhood planning, in which the layout was designed for a large campus separated and distanced from housing. Minoprio, Spencley, and Macfarlane observed that existing schools inside the third wall were not suitable localities for children's pedestrian access and that there was a lack of places to create playgrounds, which they had recommended in the master plan.[127] Therefore, they proposed building amenity centres in each neighbourhood (as shown in **Figure 4.15, Figure 4.16** and **4.17**), so that:

> *'Each will have its mosque, public hall, shops, site for service industry, and primary schools for boys and girls with ample room for play and games, as well as six nursery schools. Every four neighbourhoods will be served by two secondary schools'* as Macfarlane notes.[128]

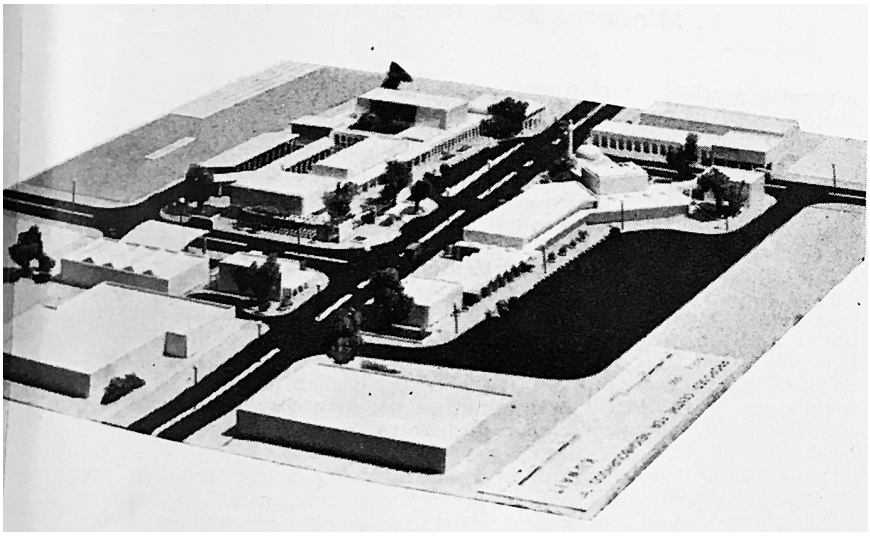


Figure 4.15 A model of the centre for the neighbourhood amenities. This 1957 image from the Architectural Design Journal depicts the distribution of utilities in a community in Kuwait, showing places like mosques, marketplaces, and police stations.[129]

[125] Minoprio, Spencely and Macfarlane, pp. 25.
[126] The National Archives [TNA]: FO 371/109860; Documentary-Committee, p. 57.
[127] Minoprio, Spencely and Macfarlane, pp. 12 and 18.
[128] Macfarlane, p. 113.
[129] Raglan Squire, 'Plans for Towns in the Middle East', *Architectural Design,* (1957), 73-78 (p. 75).

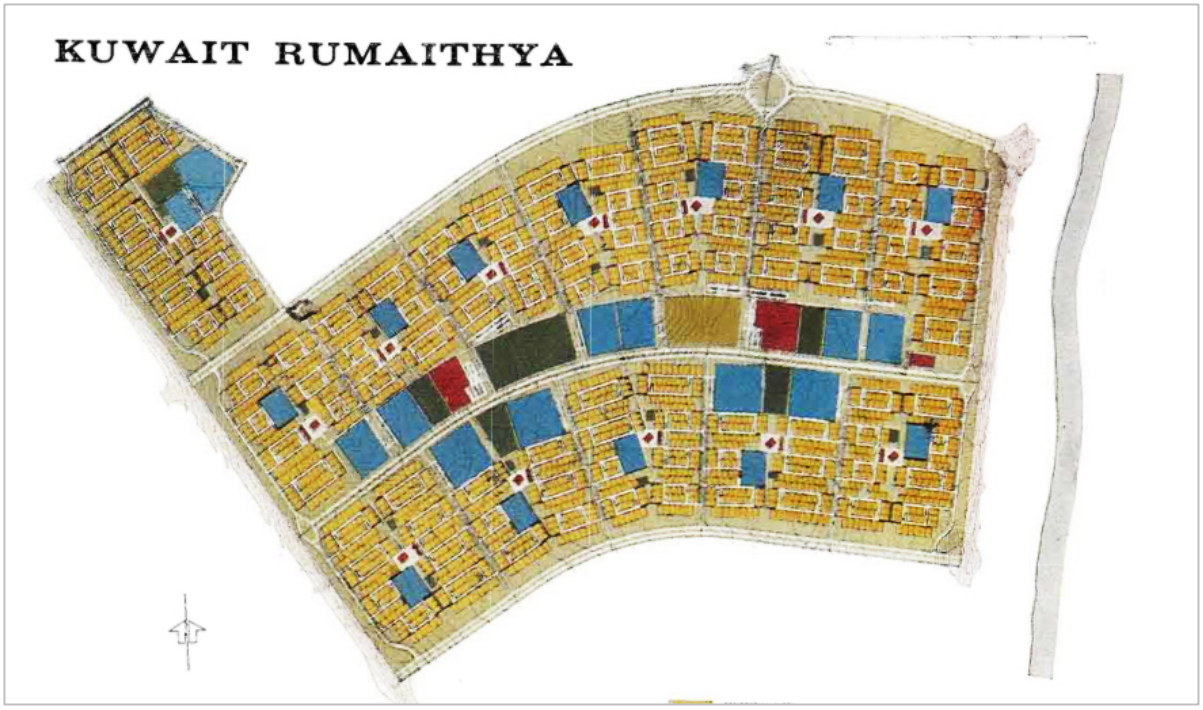


Figure 4.16 Rumaithiya layout design with amenity distributions. The utility distribution in the 1957-established Rumaithiya district is depicted in the figure; the blue portion represents the amount of space allocated for schools.[130]

Figure 4.17 Aerial view of Rumaithiya district with the locations of school buildings. This map displays all the school buildings situated in the Rumaithiya district. It illustrates the concept of placing the kindergartens within the units and positioning the main schools in the central part of the residential district.[131]

[130] Shiber, p. lxix.
[131] Google Map, Rumaithiya, 2022; annotated by the Author.

A major focus of the plan was to place homes close to schools so that children could walk while avoiding traffic. Tripe and Wakeham, an architectural firm, created a new set of Western standard typological designs for each grade level in the country's first modernist schools (see **Figure 4.18** and **Figure 4.19**), as well as in the country's Technical College and central kitchen, under the direction of the Development Board and the Education Department's building programme.[132] Their designs were much more modern and functional, diverging greatly from the traditional Kuwaiti school style. Technical College was established in 1954 using cutting-edge building techniques and materials (more details are provided in **Chapter 5**).[133] One secondary school, three intermediate schools, and five nurseries were built within this timeframe.[134] These schools have increased across the neighbourhoods, presenting an exceedingly functionalist and utilitarian aesthetic of welfare architecture. Among all of Shiber's criticisms of his report, he considered schools the greatest accomplishment of Kuwait's development strategy. He stated that *'the school buildings of Kuwait are, undoubtedly, the most up to date in the Arab World and a source of deserved pride for the Arabs'.*[135]

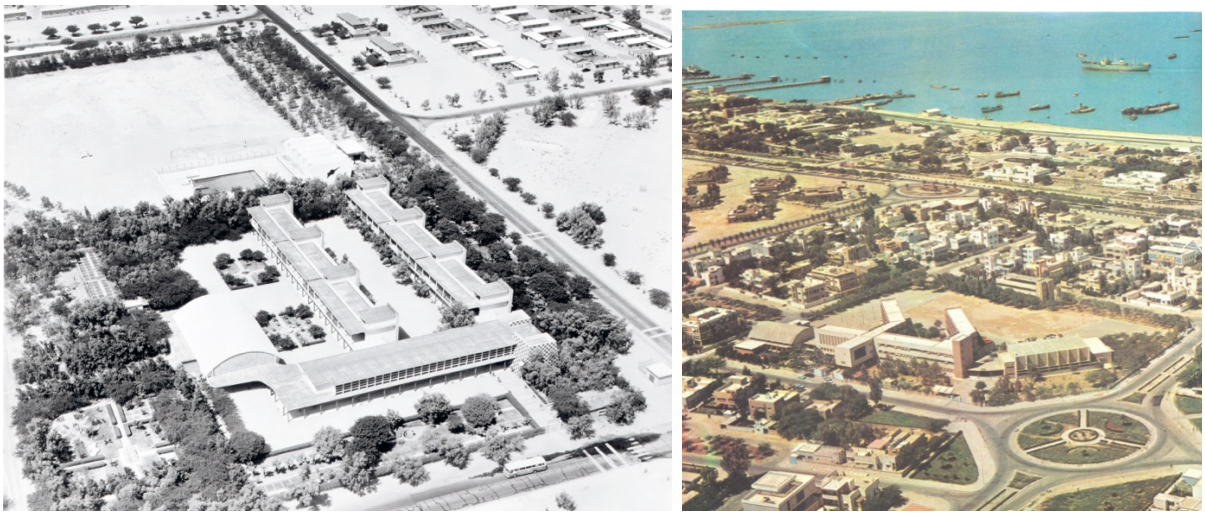


Figure 4.18 Ahmadi girls' school, n. d. Left: One of the first prototype schools created by Tripe and Wakeham, Al-Ahmadi School, is shown in this overhead view. The finger concept of class distribution was the basis for this architectural theme, which included gardens and open courtyards in between.[136]

Figure 4.19 A secondary school in Kuwait. Right: The photo showcases the large land utilised for this design, which is in the heart of the neighbourhood and is one of Tripe and Wakahem's prototype school buildings for Kuwait (probably a secondary level).[137]

[132] The National Archives [TNA]: FO 371/109860.
[133] 'Article on Educational Buildings in Kuwait; Architects- Tripe & Wakeham', *Architectural Design,* (1957), 94-95.
[134] The National Archives [TNA]: FO 371/109860; UNESCO, p. 248.
[135] Shiber, p. 89.
[136] The British Petroleum Archive [BP], University of Warwick: Ref. 233259/016, ©BP plc., 'Ahmadi Girls' School', n.d.
[137] Saleem Zabal, 'Alkuwayt Alhadetha' [Modern Kuwait], *Al-Arabi*, 1st January 1972, p. 145.

Over the past ten years, the government has extended its support for education in various ways, including the provision of free meals, school uniforms, textbooks, medical care, extracurricular activities, transportation, and scholarship programmes, represented in the modern language of the architectural built environment. The vision of investing in the educational system and building programmes was clearly evident. In Britt's conversation with a member of the educational community, he predicts the following:

> *'The oil will be exhausted someday… but if we educate the people and use this opportunity to increase their capacities, they can take care of themselves, whatever happens, and have the satisfaction of passing on their capacities to other generations'.*[138]

Edward Benthall, a member of the Trade Mission in the Middle East, noted *'what else the money might possibly have been spent if not on schools'.*[139] As pointed out by Britt, the intention was for Kuwait to become the educational centre of all Arab Gulf, which implies a broader vision taken by Kuwait's Education Department.[140] This demonstrates the government's vision of educational reform at the time when it worked tirelessly to ensure that Kuwait would have *'the best schools in the world'* or *Messrs' Schools,* as one author described in a 1957 article for *Architectural Design* Journal about the schools in Kuwait.[141]

By that time, Shuwaikh Secondary School, one of the largest educational buildings in the region, had been completed by Emil Bustani's contracting company (known as C.A.T.) on a desert plot of ground measuring 2.5 million square metres in the Shuwaikh district (as shown in **Figure 4.20**), complete with dormitories for students and educators, athletic fields, a mosque, and more.[142] As for what de Candole thought of this school, he said:

> *'This great college is a magnificently conceived project on the most up-to-date and lavish lines, classroom blocks and laboratories, gymnasium, mosque, library and assembly hall, clinic, boarding houses, very pleasant bungalows for the teachers, swimming pool and playing fields. Its ultimate future has still to be decided, but it is well fitted to become the University of the Persian Gulf, attracting students from other lands. It already welcomes*

[138] Britt, *The Al-Kulliyah* 9..
[139] Arabian Gulf Digital Archive [AGDA]: FO 371/109856.
[140] Britt, *The Al-Kulliyah* 34..
[141] Article on Educational Buildings in Kuwait; Architects- Tripe & Wakeham, p. 93.
[142] The National Archives [TNA]: FO 371/109860; Documentary-Committee, p. 55.

students from as far afield as Morocco and Algiers as well as Persian Gulf Sheikhdoms'.[143]

Figure 4.20 An ariel view at Shuwaikh Secondary School, 1956. The picture from the British Petroleum Archives shows the huge plot of land that was set aside for the region's biggest secondary school. The photograph shows the major structures and several accommodation buildings under construction, with the mosque in the front.[144]

The following statistics imply Kuwait's educational system and the building programme's progress and expansion during the past quarter-century. In 1936, there were only 600 students enrolled, 26 educators, and two schools; however, by 1960, the number of students had quadrupled to 40,302, with 2,255 teachers and 128 schools.[145] Budgetary support for school administration increased from 63,000 rupees in 1936 to 267,604,154 rupees in 1960, and more than 132 million rupees were spent on building construction in 1959.[146]

UNESCO released a report in 1960, stating that this level of spending in Kuwait was the highest of any Arab state and that it was comparable to the levels maintained by several Western European countries.[147] The World Bank reported that Kuwait's expenditure on public services, such as

[143] de Candole, p. 23.
[144] The British Petroleum Archives [BP], University of Warwick: Ref. 113269/025, ©BP plc., 'Shuwaikh School', 1956.
[145] UNESCO, p. 249; UNESCO, *International Yearbook of Education* (Paris: 1961), p. 217; Abdo, p. 28; Hussein, p. 152 and 154.
[146] UNESCO, p. 21 and 248; Hussein, p. 44.
[147] UNESCO, p. 249.

education and health, was possibly the highest in the world.[148] These increases indicate the profound societal changes brought about by Kuwait's improved education system long before the formal welfare state was established in 1961.

4.3.3 Modern Education and UNESCO's Collaboration

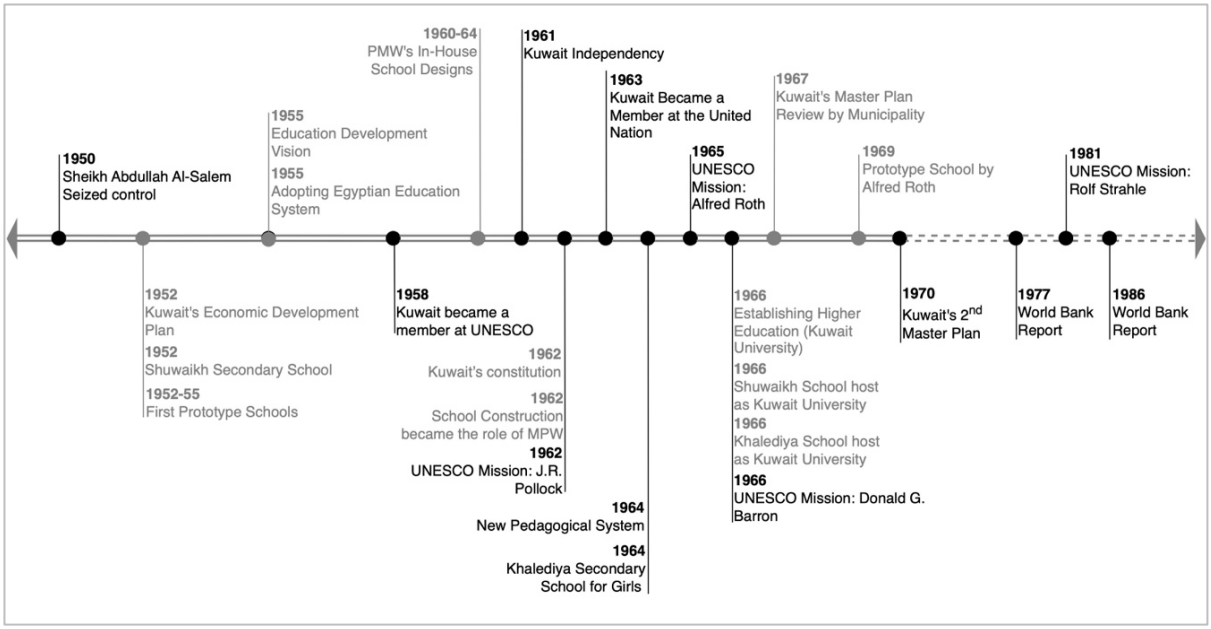


Figure 4.21 Development of the education system chronology and significant events. The graph illustrates the political developments in Kuwait's history and their influence on the advancement of the educational system between 1950 and 1989.[149]

However, the 1960s were pivotal years for Arab educational planning (see **Figure 4.21**), even though Kuwait's planning was already well established before that time (in 1955). This was due to a rising population, a revitalised desire for learning, and an increased awareness of the role of an educated workforce in a nation's economic and social progress. The 1960s' planning initiative was a direct outcome of a UNESCO survey that highlighted the discrepancy between educational progress and financial demands, sparking many conferences and meetings aimed at defining educational guidelines for Kuwait as well as the Arab world.[150] These reforms, however, corresponded with Kuwait's post-independence welfare state vision, in which the government set its constitutions. Thus, the country's institutions were reorganised, and the Planning Council was established to oversee its long-term social and economic development and bring it up to par with other developed

[148] BRDC, p. 27.
[149] Author, 2023.
[150] UNESCO, p. 7.

nations. From 1962 to the present day, a five-year plan has been a staple of Kuwait's development planning history, covering every sector, including the education programme.[151]

Kuwait's constitution was drafted in 1962, incorporating two articles on educational rights (Articles 13 and 40). Article 13 states that *'education is a fundamental requisite for the progress of society, assured and promoted by the State'.*[152] Article 40 stipulates that *'education is a right for Kuwaitis, guaranteed by the state in accordance with law and within the limits of public policy and morals, education in its preliminary stages is compulsory and free in accordance with the law; the law lays down the necessary plan to eliminate illiteracy; and the state devotes particular care to the physical, moral, and mental development of the youth'.*[153] By elevating the Education Department to the status of Ministry of Education in the same year, the development plan continued according to the visions considered in 1955, reflecting the country's socioeconomic and cultural demands.[154] Their primary goals were to end youth and adult illiteracy, advance social justice, and encourage people to express themselves freely and creatively.[155] Although no official legislation was published until 1976, progress was made with several of these initiatives from 1955 to the mid-1970s.[156]

Rapid changes have arisen as a result of initiatives to follow up with international organisations, such as the World Bank and UNESCO, boosting education quality.[157] The mission organised by UNESCO in Kuwait between the years 1960 and 1980 produced twelve documented reports detailing their efforts to improve education in the country and those they had been able to achieve. Most improvements were made to the educational policy and facilities, such as adopting a new pedagogical system in 1964 that shifted from the Egyptian 3-4-5 approach to the more progressive 4-4-4 system (see **Figure 4.22**), the law mandating schooling from ages 6 through 14 with the option of continuing education afterwards, the employment growth in the training and education sector with the improvement of administrative oversight, the establishment of higher education with the existing Shuwaikh Secondary School building considered as the university campus and suggested as the model for the new Kuwait University, the proliferation of school buildings outfitted with modern facilities, as well as the expansion of financial resources.[158] However, these unstated goals of education have been mirrored in the evolution of the school curriculum and, by extension, the

[151] Kuwait Today: A Welfare State, p. 87.
[152] 'Education', [Kuwait 1962]..
[153] Ibid.
[154] Kuwait Today: A Welfare State, p. 103.
[155] BRDC, p. 147-159.
[156] Taher Razik, *An Appraisal of the Educational Structure* (Paris: 1981), p. 1.
[157] UNESCO, p. 218; BRDC, p. 16.
[158] UNESCO, p. 248-251; UNESCO, p. 216-219; Mohammed N. Raafat, *Kuwait Educational Guidance and Examination System* (Paris: 1966).

design of schools. Although the responsibility for school construction was transferred to the Ministry of Public Works in 1962, there was involvement from the Planning Board and the Ministry of Education through the School Building Programme Committee to ensure their curricular needs and class numbers were met.

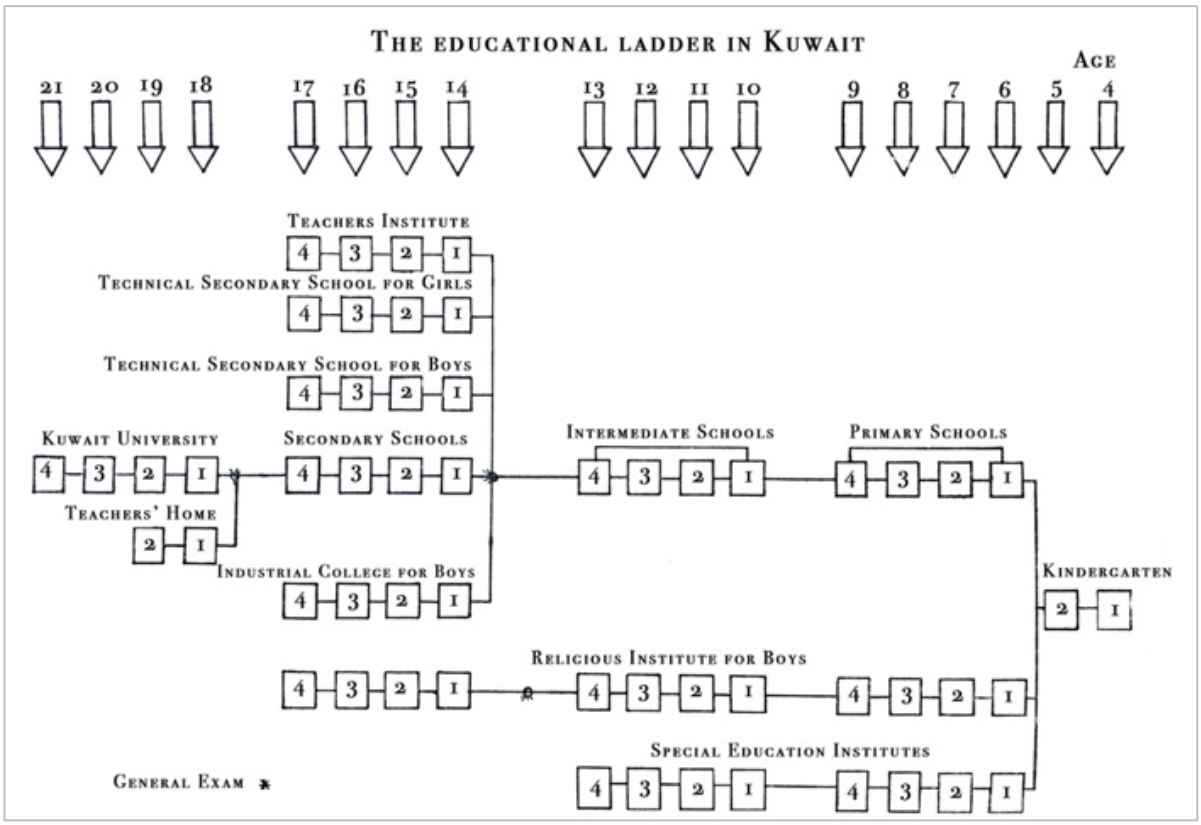


Figure 4.22 The Kuwaiti school ladder came out in 1969. The figure depicts the hierarchical structure of education, showcasing the many levels of education, the duration of each level, and the corresponding age of students, ranging from kindergarten to university. [159]

By then, the number of students from around the world was increasing due to the establishment of education as a fundamental human right. According to UNESCO, the number of children who attended primary education in developing nations increased by three times, to 200 million, between 1950 and 1970; there were over 42 million secondary school children and over 6 million college students in 1970 a six-fold increase since 1950.[160]

In Kuwait, as depicted by the statistical data provided in **Figure 4.23**, the population of students enrolled in primary and intermediate schools increased dramatically during the 1960s; the number of primary school students more than doubled, and the number of students enrolled in

[159] MoI, *'Yearbook'*, (Kuwait: Ministry of Information, 1987), p. 172.translated by the Author, 2023.
[160] David Morawetz, *Twenty-Five Years of Economic Development 1950 to 1975* (Washington D.C.: 1977), p. 52.

intermediate schools rose four-fold to exceed more than 43,000 by the end of the decade. With a projected increase in the number of students, the school building programme was planned for 51 new schools at a total Kuwaiti dinar cost of 24.6 million over the following five years (1961–1965).[161] However, the 1961 UNESCO mission concluded that the urgency of building schools at the rate considered at the time was not particularly well proven.[162]

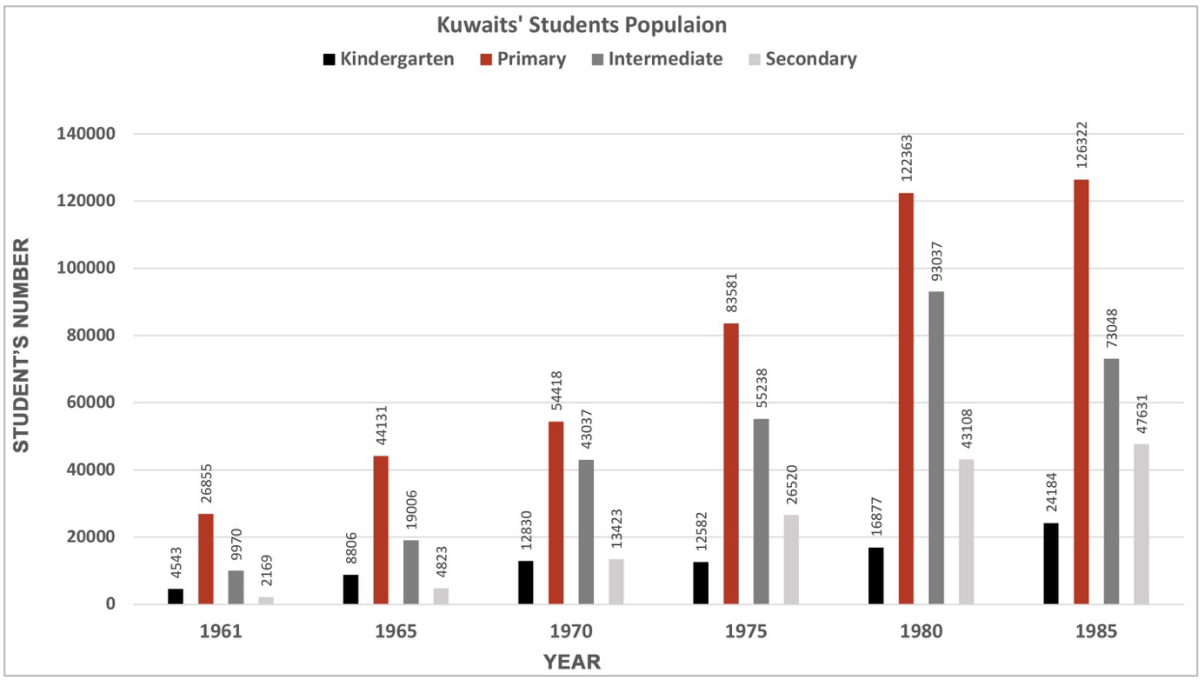


Figure 4.23 Total number of students in Kuwait at each grade level from 1961 to 1985. The graph illustrates a steady rise in the number of students after the country gained independence in 1961. The primary school level experienced the biggest increase, followed by the intermediate level.[163]

Therefore, the Ministry of Public Works made some internal attempts to meet these requirements. Their design team proposed a new model for schools, known today as *Fox's design,* after its creators, who adopted the principal designs of the Tripe and Wakeham approach (see **Figure 4.24** and **Figure 4.25**).[164] The three-wing, three-story school building with a basic grid column and exposed façade was extensively distributed between 1961 and 1965.[165] An interview with pioneering architectural engineer Sabah Al-Rayes, who worked at the Ministry of Public Works in the 1970s, revealed that

[161] BRDC, p. 162.
[162] UNESCO, p. 217.
[163] *Tarikh Altaelim Fi Dawlat Alkuayt* [History of Education in the State of Kuwait], ed. by Abdulaziz Hussein. Vol. 3, Alistiqlal Wa Qiyam Wizarat Altarbiya (Kuwait: CRSK, 2002). ; illustrated by the Author, 2023.
[164] Kuwait Today: A Welfare State, p. 103. According to an interview conducted with Engineer Abdul-Aziz Sultan, the owner of KEO International Consultant, Fox was a German engineer who worked at MPW in the 1960s, see: Richardo Camacho, 'Interview with Abdulaziz Sultan', in *Modern Architecture Kuwait 1949-1989*,ed. by Roberto Fabbri, Sara Saragoca Soares and Ricardo Camacho (Zurich: Niggli, 2017), pp. 162-163.
[165] Alfre Roth, 'Schulbau in Heissen Klimazonen ', *Bauen + Wohnen,* 21 (1967), (p. 397).

these schools, in his opinion, were dull and unwelcoming to children.[166] He said, the term *jail* was coined later as a result of this. On the contrary, two specialists who visited Kuwait in 1965 and 1966 as part of a UNESCO mission harshly criticised not just *Fox's model* but also the designs of Tripe and Wakeham. The *mission members* visits to several schools in Kuwait were intended to assess the quality of the educational and physical built environment, and they concluded that the design was inadequate for the needs of Kuwait's education programme. Despite the government's efforts to meet international criteria for the schools, the dedicated design plan underlying the construction of school facilities yielded unsatisfactory outcomes in pedagogical, economical, aesthetical, and architectural terms.

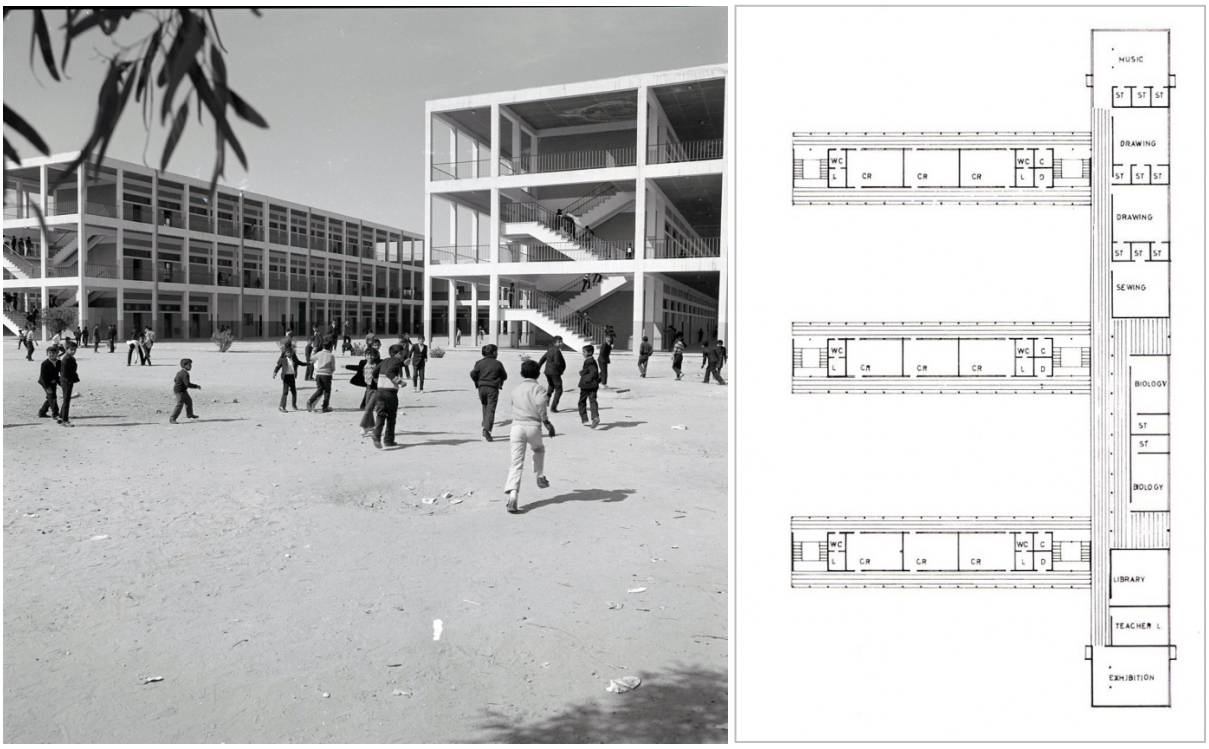


Figure 4.24 Khalediya primary and intermediate school for boys, n. d. Left: The Ministry of Works in Kuwait is responsible for designing and implementing this school typology, which is also called the E-shape or Finger style. The picture was found in the collection of the British Petroleum Archives.[167]

Figure 4.25 Sample school layout designed by MPW, Fox's Model. Right: The plan illustrates the distribution of classes within Fox's model, which is an E-shape layout with corridors on both sides. As part of his assessment of educational institutions in Kuwait, Roth released this blueprint.[168]

In October 1965, Alfred Roth, an academic and director of the research committee for school construction of the International Union of Architects (UIA), visited Kuwait as part of a UNESCO

[166] Sabah Al-Rayes, *Kuwait Schools*, an interview conducted by Zainab Murtadhawi (Online Video, 18th April 2022).
[167] The British Petroleum Archives [BP], University of Warwick: Ref. 233261/019, ©BP plc., 'Boy School', n.d.
[168] Roth, p. 397.

mission to analyse the problems in the country's schools. He visited six schools in Kuwait (three nurseries, one intermediate school, and two secondary schools for both girls and boys) and concluded that their designs were inefficient and poorly suited to the local environment.[169] This criticism was directed at the Fox models, which he referred to as the *open arcade* design and included many glass windows, disorganised classroom layouts, and the absence of any sun protection mechanisms.[170]

Another mission in November 1966 was conducted by Donald G. Barron, an affiliated member of the Town Planning Institute in the United Kingdom, who reported on the needs of Kuwaiti students and the condition of the country's educational schools. In his report, Barron provides a glimpse into the government sector of Kuwait's long-term ambition to establish one hundred new schools over the following five years (1965–1970). He had three main concerns regarding the school's condition: inefficient use of space, wasteful building construction practices, and an unwelcoming atmosphere.[171] Through site visits, he found that kindergartens were too large and had too many wasted spaces, neither of which contributed to a *homey* environment for the children who attended them.[172] Similar problems were also observed in primary and intermediate schools, which may be attributable to the *half-way house* nature of their designs that is, they were more advanced than intermediate schools but not as advanced as secondary schools.[173] Aesthetically, schools were all displaying what *Barron* called the *'ugly and extravagant'* as a brutalist style of school design.[174] They were characterised by the utilisation of large and costly concrete structures, although Kuwaitis took great pride in their school buildings and their children were attending school happily.

As a result, he recommended the formation of a research and development team comprising a resident UNESCO educationalist, an architect, a UNESCO specialist in school design, and members of the Ministry of Education and Ministry of Public Works officials.[175] The team's responsibilities included establishing criteria and guidelines for the future design of schools, and providing advice and support during the construction process.[176] To reduce costs and provide a better built environment, Barron suggested constructing four model schools, one for each grade, to serve as

[169] Ibid.; gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (3/3), Alfred Roth, 'The School Buildings of Kuwait', 1965.
[170] Roth, p. 397; gta Archives / ETH Zurich [gta]: 131-0162/0165 (3/3).
[171] Donald G. Barron, *Kuwait: The Design of Schools and Related Problems* (Paris: 1967), p. 7 and 8.
[172] Ibid. p. 3.
[173] Ibid. p. 4.
[174] Ibid.
[175] Ibid. p. 10.
[176] Ibid. pp. 11-14.

prototypes for the rest of the construction programme, taking a wide range of factors into consideration, including student schedules, functions of available spaces, and technical concerns unique to buildings, such as air-conditioning, prefabrication methods, materials used, and climate.[177] The government agreed with Roth and Barron's comments and began working with the Ministry of Education and the Ministry of Public Works in the second half of the 1960s. By that time, Ahmed Al-Duaij, the Planning Board's head, had tasked Roth with creating a series of prototype schools for various grade levels, which resulted in a series of effectively prototype schools that were subsequently mass-produced for not only the five-year school building programme (1970–1975), but which continued for decades.[178] This school provision was realised with the introduction of the Second Master Plan in 1968 by Buchanan and partners –a process by which appropriate locations were designated for all educational facilities, with an emphasis on Sabahiya City as the new neighbourhood.[179]

4.3.4 School Mass Production: The Second Master Plan (1970)

In 1965, Kuwait Municipality assembled a tripartite committee to evaluate the first Kuwaiti master plan of 1951. The committee members were Omar Azzam, City Planning Consultant at the United Nations Regional Office in Beirut; Mahmoud Riad, an Egyptian engineer; and Jacob Thijsse, a faculty member at the Institute of Social Studies in the Netherlands. [180] All team members were recommended by the United Nations. Using Shiber's report as the starting point, the committee delivered an in-depth analysis of the situation and made recommendations for developing a new state master plan for the council's executive director in November 1965. The proposals incorporated economic and social factors, one of the most crucial being that the master plan be created considering the population increase in the State of Kuwait. The report included suggestions for an updated architectural style, rehabilitation of Kuwait City, construction of new homes, extension of roads and other infrastructure, improvement of the waterfront, construction of Kuwait International Airport and ports, modification of terms of reference and appropriation rights, consideration of oil concession areas, and timing of the implementation of the second master plan.[181]

[177] Ibid.
[178] gta Archives / ETH Zurich [gta], Zurich, Switzerland: 131-0162 (2/5), Ahmad Al-Duaij, 'Kuwait's Planning Board Invitation Letter to Architect Alfred Roth', 8th November 1966.
[179] Buchanan, p.Technical Report No. 29
[180] Al-Mussa, p. 99.
[181] Omar Azzam, Colin Buchanan and Jacob Thijsse, *Policies to Be Adopted for a Master Plan of Greater Kuwait* (Kuwait: 1965).

In response, Buchanan drafted the state's second master plan, which was revised in 1977, 1983, and 1990, to become the first complete national master plan for the state.[182] A long-term development strategy, state vision, urban expansion, and Kuwait City were the primary focus areas of this plan.[183] Traffic analyses and housing development studies have also been conducted. Kuwait's population was projected to grow from an estimated 625,000 in 1969 to two million in early 1985, and the master plan was drafted accordingly.[184] It was determined that the long-term development strategy would be carried out in four phases, each lasting between five and seven and a half years. Thus, the first two phases comprised the short-term plan. During the 1970s' oil boom, many of the Second Master Plan's recommendations and criteria were implemented. This included the development of Jahra village in the west and the construction of additional residential areas between the city's fourth, fifth, and sixth ring roads along the coastal corridor in the southeast (see **Figure 4.26**).[185] Here, the scope of the study necessitates looking at the master plan's aspirations for public services and utilities, namely the expansion of educational facilities (refer to **Appendix E**).

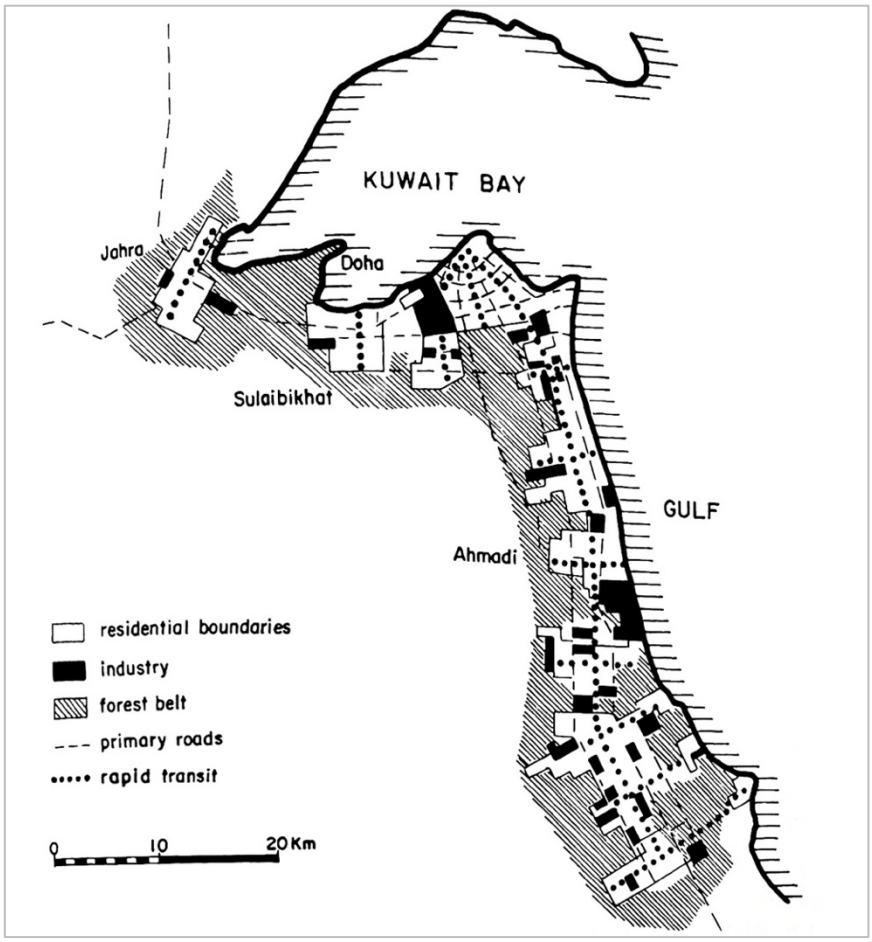


Figure 4.26 Kuwait's Second Master Plan by Colin Buchanan in 1970. The map depicts the planned growth of urbanisation in Kuwait, namely along the coastal area. This extension encompasses residential districts, industrial plots, landscapes, and main highways.[186]

[182] Al-Mussa, p. 108; Kuwait-Municipality, p. 38.
[183] Buchanan, p; Al-Mussa, p. 109; Kuwait-Municipality, p. 38.
[184] Buchanan, p; Kuwait-Municipality, p. 40.
[185] Buchanan, p; Kuwait-Municipality, p. 50.
[186] H.V.F. Winstone and Zahra Freeth, *Kuwait: Prospect and Reality* (London: Routledge, 1972), p. 225.

The Second Master Plan probed further into technical studies on delivering public services as it detailed an assessment of urban expansion based on population increases, revealing a new form of welfare. To gain an understanding of the existing conditions and the need to estimate future demands, they devoted Technical Report No. 29 to the entire spectrum of educational institutions (state schools, private schools, specialist institutes, adult education, Technical College, and the University).[187] The provision was based on two factors: the increased demand of the student population and the requirement for new criteria for siting procedures.[188] Their projection of a population of two million by 1985 included approximately one-quarter of a million students of school age (with five of eight students coming from other countries), which was nearly twenty times the number of students enrolled in 1970.[189] With a focus on various educational institutions, grade levels, and ages, the report addressed vital areas of school programme development, from eligibility and rights to government administration, spending school sites, and building designs. The five-year plan (1967/68–1971/72) estimated that approximately 30,000 boys and 50,000 girls in Kuwait were eligible for free education, including the prompt construction of new educational facilities.[190] According to their findings, in the last five-year plan, the school programme cost 50 million Kuwaiti dinars, or almost 20% of the budget of the Ministry of Public Works.[191] Based on these projections, it was determined that budgeting for future state-school buildings could regulate both short- and long-term plans (see **Table 4.1**).

In response to the UNESCO findings by Barron and Roth, the size of school sites has been analysed and disclosed by the Second Master Plan to reduce their size, taking into consideration all the facilities necessary for each grade level (see **Table 4.2**). New school designs presented by Roth, reflecting a traditional Arab courtyard design principle reflecting the local climate condition, were considered to replace the earlier kindergarten and other grade layouts (see **Figure 4.27**).[192] However, after constructing two prototype schools (a secondary school for females in Rumaithiya in 1969 and a kindergarten in Mansouriya in 1972), it became evident that the school construction cost was nearly twice as much as initially expected by the master plan committee.[193] This prompted Roth to experiment with a variety of prefabricated techniques in new school designs to keep costs down —a move that ultimately paid off. By then, each of the proposed new neighbourhoods in

[187] Buchanan, p. 3.
[188] Ibid. p. 4.
[189] Ibid. p. 18.
[190] Ibid. p. 6.
[191] Ibid.
[192] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162 (1/5), Alfred Roth, 'Schools in Kuwait', 1973.
[193] Buchanan, p. 8.

Kuwait had a fully equipped and up-to-date primary school, intermediate school, and secondary school, all of which were gender-segregated, in addition to several kindergartens with mixed genders (more details on the architectural designs are provided in **Chapter 5**).

School Level	Gender	Age	No. of Students	Cost (KD)	Note
Kindergarten	Mix	4-5	250	100,000	
Primary	Boys	6-9	650	190,000	No dormitory
	Girls	6-9	650	225,000	With dormitory
Intermediate	Boys	10-13	650	190,000	
	Girls	10-13	650	225,000	
Secondary	Boys	14-17	650	300,000	
	Girls	14-17	650	335,000	With housing 48 teachers

Table 4.1 The cost of each type of school building. The budget allocated for the construction of the school building for each grade level was determined by the Ministry of Public Works in 1970. [194]

School Level	Previous Site Size (Hectares)	Site Size by 2nd MP (Hectares)	Sports Facilities
Kindergarten	1.5	1	-
Primary	3	2	2 Basket Ball Courts 2 Volley Ball Courts 1 Playing Field-small (football, etc)
Intermediate	4	2.5	2 Basket Ball Courts 2 Volley Ball Courts 1 Playing Field-standard (football, etc) 1 Handball Court (not always)
Secondary	5	4	4 Basket Ball Courts 3 Volley Ball Courts 1 Hand Ball Court 1 Playing Field-standard (football, etc) 1 or 2 Tennis Courts Squash Courts (not always) 1 Gymnasium

Table 4.2 Different school building sizes and facilities. The schedule delineates each category of school institution, together with the designated land area and dimensions of schools as specified by the second master plan in 1970. It also illustrates the distinct athletic amenities offered to each school type.[195]

[194] Colin Buchanan, *Studies for a National Physical Plan for the State of Kuwait and Masterplan for the Urban Areas* (n. p.: 1970).; compacted by the Author, 2023.

[195] Ibid.; compacted by the Author, 2023.

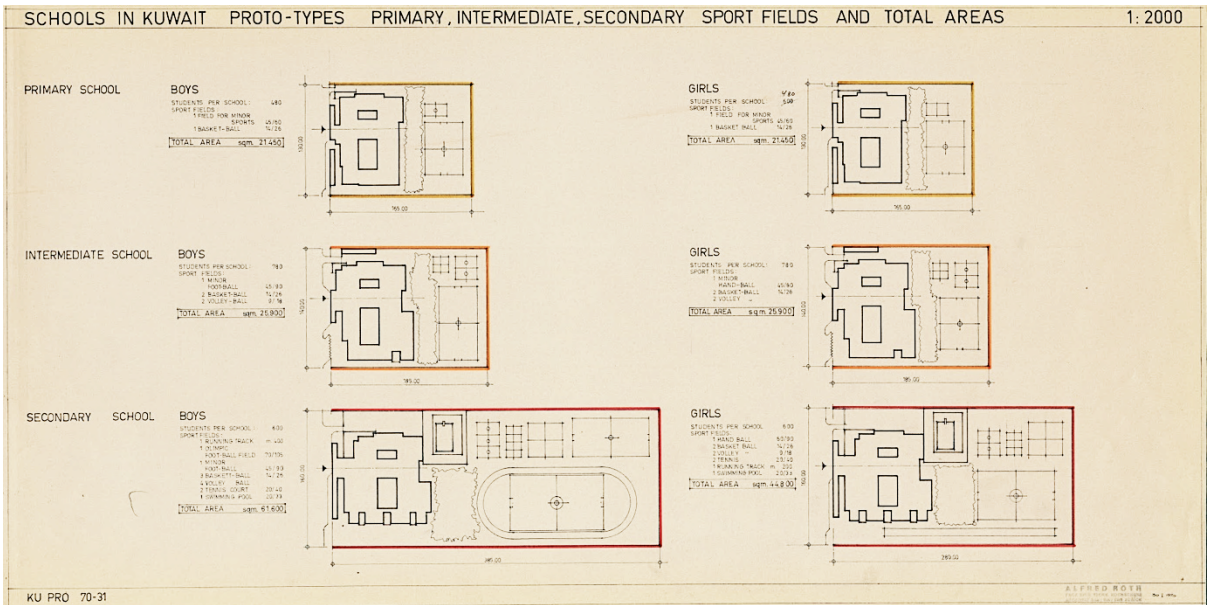


Figure 4.27 Roth's prototype school designs in Kuwait. The graphic showcases various school designs catering to primary, intermediate, and secondary grade levels for both genders. Roth's concept suggests incorporating the traditional Arab courtyard theme; the sketch dates back to around 1970.[196]

Unlike the process of the First Master Plan by Minoprio, Spencley, and Macfarlane, the architect and planner of the Second Master Plan collaborated to produce not only better school designs and finances, but also to work on the scale of urban distribution of schools in neighbourhoods and units. School placement guidelines were uniform throughout neighbourhoods of four or five units.[197] Three hundred families, or 2,220 people, constituted the base units of measurement (see **Table 4.3**).[198] These guidelines, however, were not sufficient for different neighbourhood sizes and populations, especially because the Second Master Plan's development was based on a demographic analysis. According to the team's findings, location principles were profoundly affected by the population serviced by schools at different levels.[199] As a result, the distribution of school quantities and types was determined by student population and neighbourhood characteristics. Moreover, per the First Master Plan, schools have been situated on adjacent sites in the centre of each residential area, with convenient access to local services and amenities (except for secondary schools that were often located near the junctions of the main streets), resulting in no means of communication or synergistic relationships. Therefore, the attempted solution was to implement a school complex theme to enable the joint use of certain facilities in each neighbourhood.[200] Sabahiya City was a new district plan in which the first set of Roth's prototype

[196] gta Archives / ETH Zurich [gta], Zurich, Switzerland: Ref. 131-0157, 0164, 0165,0166, Alfred Roth, 'Schools in Kuwait', 1970.
[197] Buchanan, p. 10.
[198] Ibid.
[199] Ibid.
[200] Ibid. p. 11.

school designs was constructed (see **Figure 4.28** and **Figure 4.29**). The community's fifteen kindergartens and primary, intermediate, and secondary schools were strategically placed according to their grades and accessibility from home.[201] Roth maintained that these distributions were determined by factors such as the population of the Sabahiya neighbourhood, its distance to the centre's amenities, the school's grade level, and students' gender.

Per 1 Units	1 Kindergarten
Per 3 Units	1 Primary - Boys 1 Primary - Girls 1 Intermediate
Per 10 Units	1 Secondary -Boys 1 Secondary -Girls

Table 4.3 The concept for distributing school locations. The schedule outlines the allocation of different types of schools throughout the neighbourhood units. For instance, every three units should have one separate primary school for boys and girls, along with one intermediate school.[202]

Figure 4.28 Sabahiya City plan by Alfred Roth. The design plan that was retrieved from the gta archives demonstrates Roth's idea for allocating schools according to the distance to student homes.[203]

[201] gta Archives / ETH Zurich [gta], Zurich, Switzerland: Ref. 131-0162/0165 (3/3), Alfred Roth, 'Al-Sabahiya City, Kuwait', n.d.
[202] Author, 2023.
[203] gta Archives / ETH Zurich [gta]: Ref. 131-0162/0165 (3/3).

Figure 4.29 The current location of school buildings in Sabahiya city. The plan depicts the existing arrangement of Sabahiya City, with secondary school buildings positioned in the central part of the area and kindergartens located within each individual unit, thereby enhancing safety and accessibility for the children.[204]

Due to the committee's persistent efforts, the state's immediate welfare programme for educational demands was satisfied with modern school architecture and facilities in every neighbourhood and suburb. However, in the haste to produce and construct large numbers, the design was modified to accommodate a quick development process, leaving many flaws and gaps in its implementation methods, resulting in inadequate mass production for schools. In 1981, Rolf Strahle spent three months in Kuwait assessing the conditions of the country's educational facilities.[205] He visited 19 schools, most of which were built in the 1970s. He found that the schools' architectural flaws stemmed from overly large and unusable floor plans, improper orientation, inadequate insulation, unsafe stairwells, lack of maintenance, low-quality furniture, the abundance of wasted space devoted to car parking, and an absence of community service.[206] Overall, Strahle

[204] Google Map, Sabahiya City, 2022; annotated by the Author.
[205] Rolf Strahle, *Planning of School Buildings* (Paris: 1981), p. 1 and 19.
[206] Ibid. p. 19 and 20.

was impressed with the quality of construction of the structure, especially those made possible by the use of prefabricated components.[207] With sufficient funding, the new design typology of prefabricated components enabled easy replication and rapid development; however, little attention has been paid to the context in which schools were built.

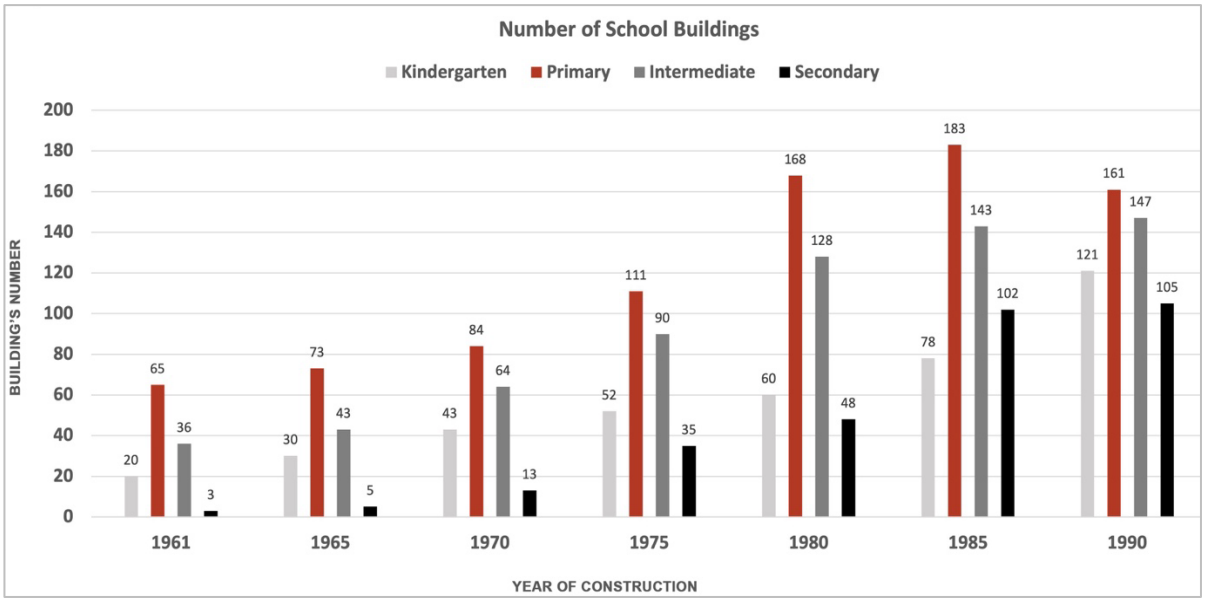


Figure 4.30 The number of state school buildings in Kuwait from 1961 to 1990. The figure illustrates the upward trend in school building development following the country's independence and the initiation of a welfare system, driven by the nation's growing desire for more educational facilities. The data clearly indicates that primary school buildings were most affected by the number of students shown in Figure 4.24, followed by intermediate school buildings. It is also worth noting that the number of schools decreased after 1985 due to the impact of the world economic crisis, and Kuwait implemented a cost-cutting scheme.[208]

By the time the Second Master Plan was implemented, schools were found all over the region with the ubiquitous functionalist and utilitarian style of a welfare state. Mass production of the new school typological design, which relied on prefabricated construction, began smoothly in the 1970s. A comprehensive, better-designed, and inexpensive product that is simple to manage according to the welfare vision of the country was the result of careful study and development based on the state's population and consultation with experts in the field during the planning phase. Even though the oil industry experienced a boom in the 1970s and the outcomes of various processes and design implementations were disappointing, educational programme construction remained the most effective in Kuwait. **Figure 4.30** displays the total number of new school buildings constructed for

[207] Ibid. p. 19.
[208] Source, illustrated by the Author, 2023.

each grade level since the inception of Kuwait's welfare initiative in 1961 until 1990 (also see **Figure 4.31** and **Figure 4.32**). Building new primary and secondary schools has been a top priority in the government's development plan because the education law obliges all children and adolescents aged 6–14 years to attend school. The increase reached its apex in 1985, before the economic crisis and suspension of the budget policy, highlighting the significance of oil revenue and government policies in shaping the country's architectural welfare.

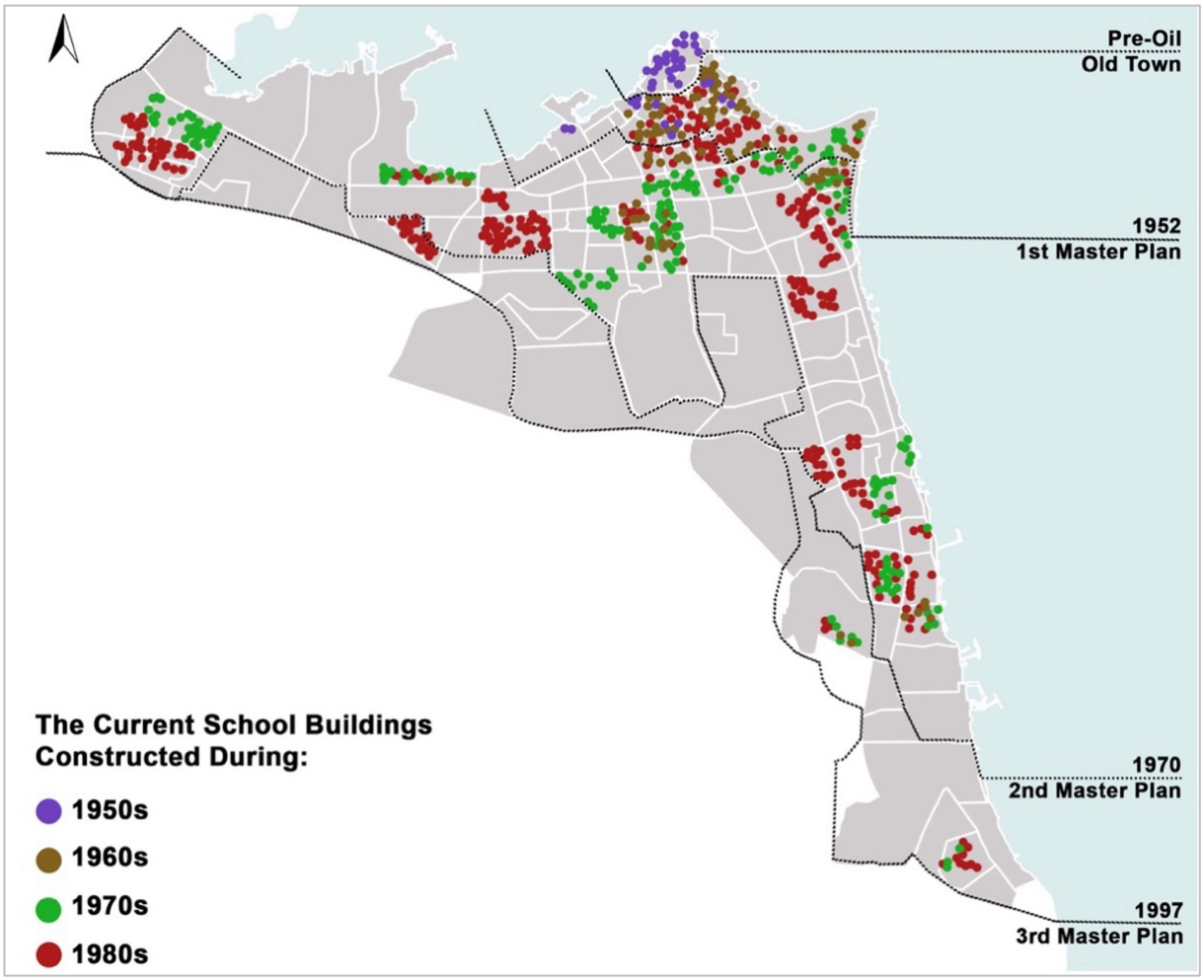


Figure 4.31 School building expansion in Kuwait, 1950-1989. The map examines the quantity of school construction in Kuwait, focusing on the planned development spanning from the 1950s to the 1980s.[209]

[209] Author, 2023.

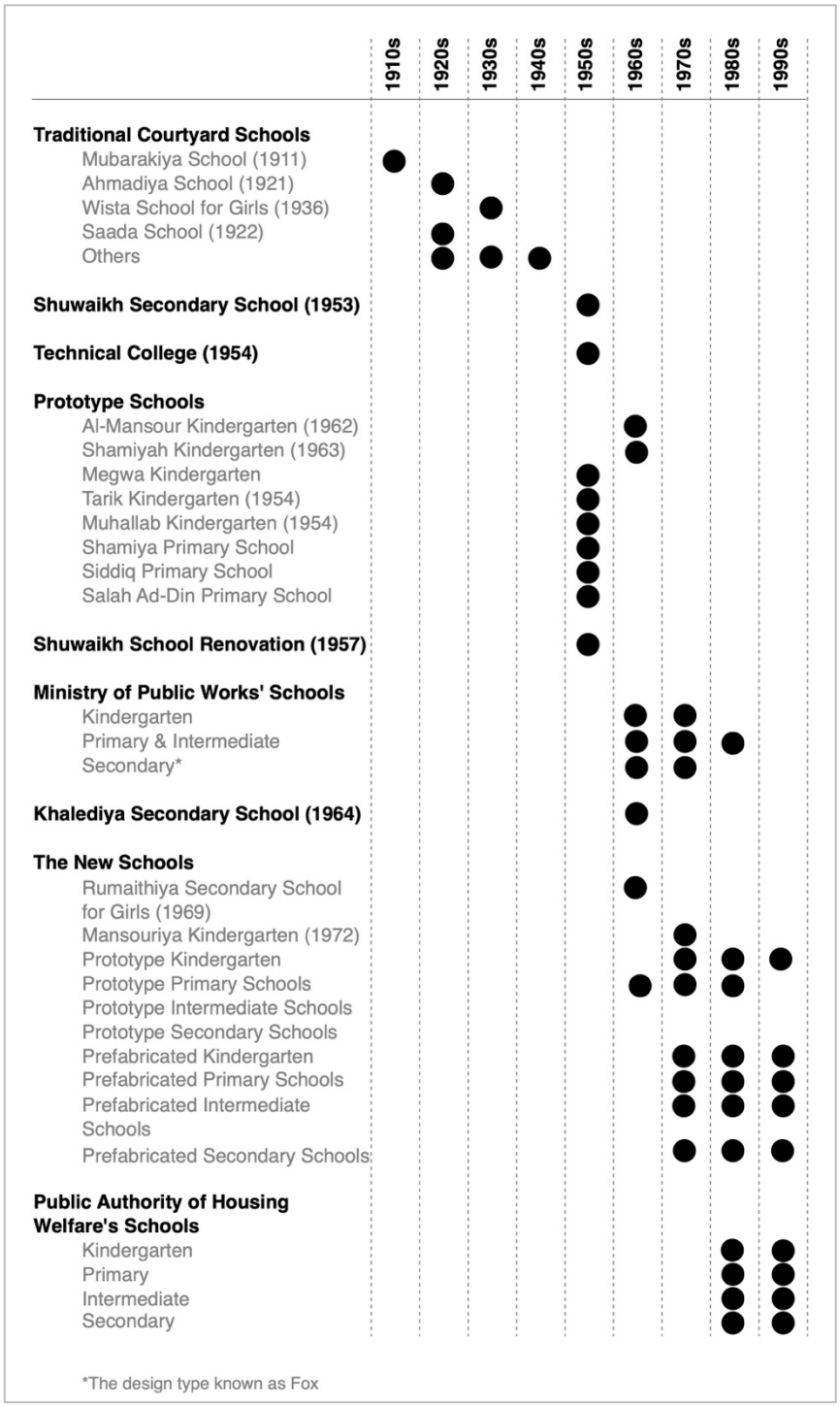


Figure 4.22 The various forms of school buildings that were built in the 20th century in Kuwait. The timetable displays a comprehensive range of school buildings erected in Kuwait, encompassing traditional school buildings of the early times (the 1910s-1940s), large complexes that were built in the 1950s, and prototype designs that were constructed afterwards.[210]

4.4 CONCLUSION

Welfarism, a global trend that gained prominence in the late twentieth century and has since been adopted by many nations, aims to create a modern and capitalist society by offering public services and support in areas such as housing, education, health, leisure, sports, and social security. This

[210] Author, 2023.

approach has significant implications for both governance structures and the architectural built environment. Thus, this chapter thoroughly examined the Kuwaiti welfare system, with a specific focus on the government's role in establishing education as a social service and its impact on creating a modern built environment (1950s–1980s). The results highlight how Kuwait implemented a unique welfare system, making it the first in the area, and featured new school buildings that symbolise the country's progressive attitude and commitment to education, knowledge, and cultural evolution.

Kuwait's welfare state was formally established upon the country's independence in 1961, and its practical development by the government began with the acquisition of oil revenue; the societal structure was underway before the discovery of oil. Through a historical narrative, this section explored how the concept of welfare, which influenced public social services, arose from power struggles between merchants (who controlled the market) and the ruling family. It highlighted the paradigm shift in economic authority following the discovery of oil, in which the ruling family consolidated both economic and political powers in the country and formed a new government structure ensuring a higher quality of life for the public, while merchants aimed to secure influential positions within this framework. A new governance structure was established by implementing legislation and establishing a constitution under the leadership of Sheikh Abdullah Al-Salem Al-Sabah, who assumed authority in 1951. His tenure was notable for establishing an unconventional welfare system in Kuwait aimed at distributing wealth among citizens and guaranteeing that the country's economic progress adhered to the idea of tax exemptions for all. Consequently, by the time Kuwait achieved independence in 1961, it was prepared to implement its welfare system. Through this analysis, the chapter reveals that factors that influenced the formation of Kuwait's welfare system were primarily driven by economic prosperity resulting from the influx of oil-related revenue, the ruler's visionary and ambitious approach to modernisation, and structured governance and constitutional legislation.

The repercussions of these changes and entitlements provided by the welfare system relied heavily on and were evident in the development of Kuwait's infrastructure, capitalising on its old town, and expanding its urban areas. Welfare architecture was formed because of the government's endeavours to fulfil the rising need for public services due to population growth, which stretched facilities, such as housing, transportation, sewage treatment, water distribution, healthcare, and education. This chapter analyses the complex interplay between the welfare state and architecture.

It highlighted the importance Kuwait's educational institutions place on developing welfare infrastructure, from the country's master plan to neighbourhood designs and the mass production of public buildings, as a means of efficient human resource management and cultivating a knowledgeable, progressive society.

School institutions' welfare architectural language and design approaches mainly consisted of adapting fully functional and modern designs created by foreign designers who incorporated Western principles and followed international standards at first. Despite the inadequate school designs by those specialists, the Kuwaiti government contributed all the necessary resources to construct educational institutions, thereby establishing one of the superior schools in the area. Ultimately, the school architecture discussed in this chapter exemplifies a highly functionalist and utilitarian style, a characteristic of welfare architecture, which plays a significant role in shaping Kuwait's urban fabric.

Regrettably, this study reveals that the integration of welfare's intended comfort into Kuwait's urban architecture has not been consistently achieved from the perspective of the educational built environment. A significant amount of knowledge regarding the history and significance of welfare state architects and architecture remains to be acquired. This research is crucial for understanding the relationship between urban planning and the provision of welfare state services. Ultimately, there is more to the story of school design than simply considering it a place for education.

CHAPTER FIVE

TOWARDS A WELFARE STATE:

MODERNIST SCHOOL ARCHITECTURE

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School buildings that house the function of education have not only served as places of learning but have also shaped nations' cultures, social norms, and the future. The built environment reflects this profound change. School buildings have undergone slow and drastic changes in architectural layout, spatial organisation, exterior expression, material utilisation, and construction processes, with most of these changes standardised in the latter half of the twentieth century. During the same period, Kuwait's schools, known as *Madrasah,* were critical in the country's modernisation, and their designs have glowed across the area since the 1950s and have lasted as the country's second main welfare pillar following independence in 1961.[1] This chapter delves into the post-oil and pre-independency eras of modernist school architecture (as shown in **Figure 5.1**). It is the first in a series that explores the modernist architecture of schools and addresses the question of how architects from Western countries have contributed to shaping the knowledge-based physical environment and influenced its cultural metamorphosis, symbolising Kuwait's modernisation towards becoming a welfare state.

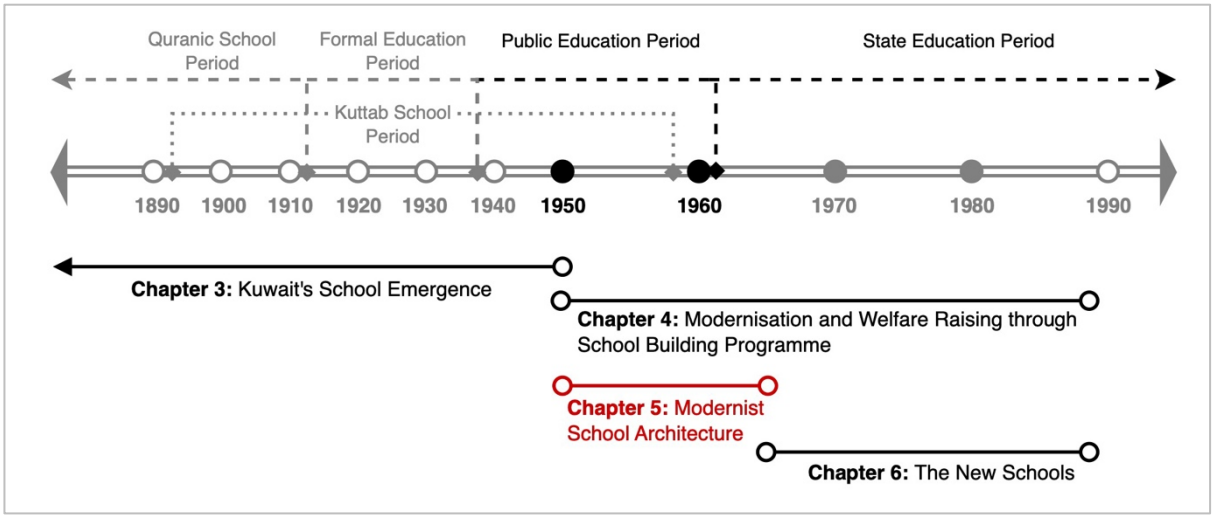


Figure 5.1 The chronological context of Chapter Five of this study.[2]

[1] The 'Madrasah,' as a noun derived from the Arabic verb root *da.ra.sa*, which means 'to learn,' refers to a learning space or a school-building or a group of educators in the Arabic-speaking world.

[2] Author, 2023.

5.1 OVERVIEW

Schools have recently emerged as distinct architectural forms, coinciding with the rise of modern educational pedagogy in the twentieth century. Education reformation had a significant influence on forming the nation-state and controlling the socio-political aspects of society, as did the architecture of schools, representing the transformational moments that occurred in every nation. Its physical context is viewed as more than a place to impart knowledge. It was also the first public space where children socialised, a second home where their future was held, a path their family accessed every day, and a community landmark that all residents recognised. Over several decades, various architects (or other builders and designers) have used different design approaches to school buildings and have revealed a wide range of influences on the architecture of schools. Most of these aspects concern how pedagogical theories and curricula evolved over time, how national cultures changed in response to economic and political conditions, and how readily building materials and technological applications were available.

A great deal of thought went into the educational philosophies that informed the methods used to deliver teaching, and those same principles inspired the design of schools. As is evident from historical sources, early education practice was mostly founded on religious beliefs with the intention of instilling those values.[3] Consequently, it was crucial to develop non-formal schools, such as monastic schools that met in the parish churches in the West, and Islamic schools that convened in mosques in the Middle East.[4] It was not until the fourteenth century that the first public education system was established in Europe, the Netherlands in particular, and it spread widely in the eighteenth century, alongside the growth of modern democracies, namely during the Enlightenment and Industrial Revolution.[5] It came with government control over education and the goal of producing a more engaged labour force, creating the need for a dedicated physical space for educational purposes, as seen in the school building.[6] The education reform movement aimed to produce a new generation ready and eager to embrace the modern and industrialised way of life. The link between education and the production of the industrial world became more pronounced and rationalised in the human resource development of modern society, mainly in the twentieth

[3] Frederick Eby, *The Development of Modern Education*, 2nd edn (New York, USA: Prentice Hall 1955), pp. 3, 44; Fazlur Rahman, *Islam and Modernity Transformation of an Intellectual Tradition* (Chicago, USA: The University of Chicago Press, 1984), p. 2; John L Rury, *Education and Social Change Contours in the History of American Schooling*, 6th edn (New York and London: Routledge, 2020), p. 30; *Social Change and Modernity*, ed. by Hans Haferkamp and Neil J. Smelser (Berkeley, Los Angeles, Oxford: University of California Press, 1992),(p. 4).

[4] Eby, pp. 5, 19, 89; *Education Buildings, Listing Selection Guide* (United Kingdom: Historic England, 2011), p. 2; Rahman, pp. 35, 66.

[5] Eby, pp. 21, 153, 304; Education Buildings, Listing Selection Guide p. 2; R. Thomas Hille, *Modern Schools, a Century of Design for Education* (New Jersy, USA: John Wiley & Sons, Inc., 2011), p. 13.

[6] Hille, p. 13; Haferkamp and Smelser, p. 47.

century.[7] The profound changes in society and economy of the modern era have directly impacted educational pedagogy, which defines the physical layout of schools and multiplies their quantity.

The first physical manifestations of public schools, the one-room variety known as a *schoolhouse* in America and a *schoolroom* in England, took shape in response to industrial and economic demands.[8] Following the rote memorisation philosophy of teaching, the interior layout corresponded to a single classroom setup with rows of fixed long desks for the students (between 50 and 100 students) and a single desk dedicated to the teacher in front.[9] As the modern curriculum evolved, increasingly different types of classrooms and extracurricular spaces, such as playgrounds and laboratories, became necessary, and this demand was reflected in the layout design of schools. The notion of age grouping, which divides students into nursery, primary, and secondary levels, has led to the rise of multi-school complexes, the layouts of which may not change significantly, saving for differences in student number, body size, and curriculum offerings.[10] It is common for schools to consist of a single- or two-story building with uniform classrooms on each floor arranged symmetrically around a central hallway.[11] By the turn of the twentieth century, a more standardised method of design emerged to gauge the scope and scale of large school buildings, especially with the rise of international organisations such as the United Nations Educational, Scientific, and Cultural Organisation (UNESCO), the World Bank, and the International Union of Architects (UIA), which collaborated in assessing the standards of both the quantity and quality of educational facilities. Over the centuries, school layout development has shown how pedagogy and design were intertwined; as curricula grew, so did the size and variety of school typologies.

It is important for architects that the school's facilities and education curriculum are designed to provide a better learning environment. As the concept of raising healthy children gained popularity in the nineteenth century, architects began to increase the number and size of windows in school design layouts that enhanced cross-ventilation.[12] In 1867, Henry Barnard, the first American commissioner of education, extensively discussed classroom furniture size and layout, natural

[7] Haferkamp and Smelser, p. 17.
[8] Eby, pp. 136, 441, 543; Hille, p. 13; Lindsay Baker, *A History of School Design and Its Indoor Environmental Standards, 1900 to Today* (Washington, US: National Clearinghouse for Educational Facilities, 2012), p. 4; Rury, p. 16.
[9] Hille, p. 13; Baker, p. 4.
[10] Eby, pp. 367, 388, 561, 564.
[11] Hille, p. 13; Baker, p. 4.
[12] Hille, p. 13; *Designing Schools: Space, Place and Pedagogy*, ed. by Kate Darian-Smith and Julie Willis (London and New York: Routledge, 2017),(p. 2).

lighting, and heating and cooling systems in his book *School Architecture*.[13] His work, which was released more than 150 years ago, provides an in-depth look at the many elements that influenced designers to prioritise the well-being of students in the built environment, which altered the physical appearance of schools. As is common, the façade is unadorned and stately, including only the most fundamental brick patterning and articulation.[14] Julie Willis, a historian and professor at Melbourne University, pointed out that the exterior styles of schools often mirrored the styles of other buildings, such as similarly-sized public buildings, and extended from the gothic revival to classicism, Romanesque, Edwardian baroque, and various revivalist styles, such as neo-Georgian, until at least the early twentieth century.[15] Consequently, designers' efforts to incorporate comfort, health, and safety criteria into school designs ultimately led to the establishment of standard guidelines for modern school architectural expressions, resulting in rational, systematic, and cost-effective architecture.

With the modernist architectural movement in the twentieth century and the work of modernist architects, major architectural improvements were driven by shifting perspectives on the role of schools in society. Frank Lloyd Wright's structural innovation in residential architecture, as evidenced by R. Thomas Hille, reflected broader socioeconomic developments, ushering in a new pattern of modern living and establishing a new type for all other buildings, including schools.[16] The school buildings became more open and interconnected, fostering a more transparent and spatially complex environment both within and outside the classroom, eventually giving rise to the *open-air* school type.[17] It coincided with the widespread adoption of Le Corbusier's concept of social housing, which featured innovative materials, the installation of large windows, the utilisation of open floor plans, and the provision of plentiful natural light and ventilation.[18] Among the oldest examples of this type of design are the Open-Air School in Amsterdam (1928), the Suresnes School in France (1935), and the Eriksdal School in Stockholm (1938) (see **Figure 5.2**, **Figure 5.3** and **Figure 5.4**).[19] Since then, more architects have made an effort to create what they thought of as a healthier learning environment by enhancing the mechanisms used in school design, and this has led to a more rational and functional approach to school building layout and appearance. As a result, the

[13] Henry Barnard, *School Architecture; or Contributions to the Improvement of Schoolhouses in the United States*, 6th edn (New York: A. S. Barnes and Burr, 1860); Eby, pp. 551, 579; Rury, p. 92.
[14] Hille, p. 13; Baker, p. 11.
[15] Darian-Smith and Willis, p. 3.
[16] Hille, p. 17.
[17] Ibid.
[18] Darian-Smith and Willis, p. 2.
[19] Hille, pp. 37, 47 and 61.

atmosphere was friendlier to children, using scaled-down furnishings, natural materials, and a relaxed approach to the space's layout.

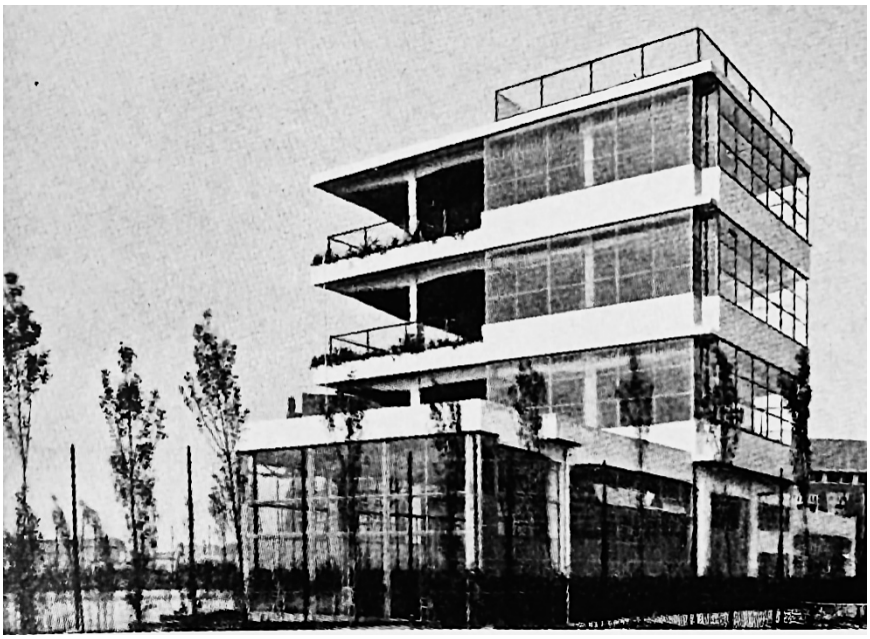


Figure 5.2 Open-Air School in Amsterdam, 1927. Jan Duiker designed the three-story school to feature outdoor spaces for every classroom.[20]

Figure 5.3 Open-Air School in Suresnes, 1935. Left: To enhance the health of individuals, Henri Sellier designed this school. Eventually, his plan centred on creating an outdoor area where children from all walks of life could enjoy.[21]

Figure 5.4 Open-Air School in Stockholm, 1938. Right: This school is situated on a spacious urban site, and its design incorporates functionalism by featuring multiple wings of classrooms that provide easy access to nature. The school was architecturally conceived by Nils Ahbom and Helge Zimdahl.[22]

[20] Alfred Roth, *The New Architecture* (Zurich, Switzerland: Girsberger Zurich, 1951), p. 5.
[21] Ibid. p. 125.
[22] Hille, p. 61.

In Kuwait, the school building, known as *Madrasah*, is emblematic of the country's progress towards modernisation and its embrace of a more unified national identity and cultural transformation. Its physical context saw several dramatic developments due to the country's social, political, and cultural transformations in the second half of the twentieth century. Despite the country's modern educational reform already underway in the first half of the twentieth century, before the oil boom, it was only with the support of economic backing from oil revenue that the architecture of modern school buildings grew.

Earlier chapters examined how educational reform, societal culture, and political factors all impact the growth of a country's modern school architecture, making it one of the primary welfare programmes in the country's development plan. However, prior to the twentieth century, the physical layout of learning environments aligned with the idea of the one-room school known as a *Kuttab,* except that its space was positioned as part of the mosque or a private house construction, never becoming distinct as a separate building.[23] At the turn of the twentieth century, a wave of school buildings followed the reform of formal education.[24] While most of these schools simply adopted existing vernacular buildings, some erected new buildings with *no* or *an unknown* architect. All schools in the pre-oil era were single- or double-story structures that emphasised the traditional design model by including a central courtyard surrounded by many classrooms that varied in size, number of students, and gender (see **Figure 5.5** and **Figure 5.6**).[25] As was a common practice in the past, these schools continued to be constructed in the 1940s, using the same materials used in the construction of traditional buildings.[26]

After World War II, oil revenue prompted the country's desire to modernise by transforming its cities and constructing new infrastructure. Together with the reign of Sheikh Abdullah Al-Salem Al-Sabah, modernist school architecture went through two distinct phases: The first, from 1950 to the early 1960s, coincided with British semi-colonialism, the oil boom, and a major urban shift in Kuwait's development plan; and the second, from 1960 onwards, coincided with the establishment of a new national system and a social welfare programme (1961–1980s). Government entities oversaw pedagogical provision and financial matters related to the school's facilities but heavily relied on

[23] *Tarikh Altaelim Fi Dawlat Alkuayt* [History of Education in the State of Kuwait], ed. by Abdulaziz Hussein. Vol. 2, Majlis Alma'aref Fi 25 A'am (Asr Altanweir) (Kuwait: CRSK, 2002),(p. 262); Bader Al-Zuwair, *Madrasat Al-Mubarakiya* [The Al-Mubarakiya School] (Kuwait: That Al-Salasel, 2011), p. 21 and 195.

[24] It's worth noting that this time frame coincides with the signing of the Anglo-Treaty between Kuwait and Britain.

[25] Hussein, p. 263.

[26] Ibid.

foreign architects and contractors for the school's design and construction because of a lack of local expertise and a desire to achieve the greatest quality of the school-built environment. The influence of Western contractors and architects has resulted in a shift in the aesthetics of newly constructed schools in Kuwait.

Figure 5.5 Qabaliya girls' school, c.1950s. Left: This image was featured as a postcard in Ali Rayes's collection. It was originally captured by Studio Badran in the 1950s. The image depicts a female school in Kuwait, showcasing its traditional architectural design featuring a courtyard and the usage of locally sourced materials.[27]

Figure 5.6 Al-Sabah boy's school, c.1950s. Right: The postcards of Ali Rayes, initially shot by Studio Badran, were used to compile another traditional school. Shown here is a male-only school with a two-story building around a big courtyard and housing multiple classes.[28]

This section of the thesis is primarily concerned with the evolution of the physical contexts of modernist school buildings in Kuwait, with an emphasis on examining the work of architects and designers who overcame the challenges of modernisation, such as human resources, knowledge creation, social provision, economic expenditure, and industrial production. It begins by introducing what we might call the *traditional* school architectural style to highlight the latter's effects. The content begins in the 1950s and continues until Kuwait's independence and the formal introduction of a welfare system in the 1960s. This chapter dissects the evolution of modernist school architecture in thematic order, starting with cultural centre schools then moving on to the first prototype school design. The following chapter considers the new schools that came from architects' and planners' collaboration towards representing a welfare state. Finally, it concludes with a comprehensive breakdown of the school's physical development and its influence on social and cultural transformations over the decades.

[27] *Alkuwayt Fi Albataqat Albaridiya* [Kuwait in Postcards], ed. by Ali Rayes (Kuwait: CRSK, 2009),(p. 629).
[28] Ibid. p. 627.

5.2 DEVELOPING MODERNIST STATE SCHOOLS IN KUWAIT

With the country's first oil export in 1946, sophisticated educational institutions emerged as part of the state's modern architecture. Its physical context underwent rapid transformation in the following years, evolving from a traditional and vernacular design into a multi-complex and standardised layout using different construction methods, including prefabricated structures, resulting in the mass production of learning spaces (see **Figure 5.7**). This became apparent because of the pre- and post-independence shifts in social norms, educational practices, and economic and political factors. The speed and scale at which this progress occurred are remarkable in Kuwait's architectural history.

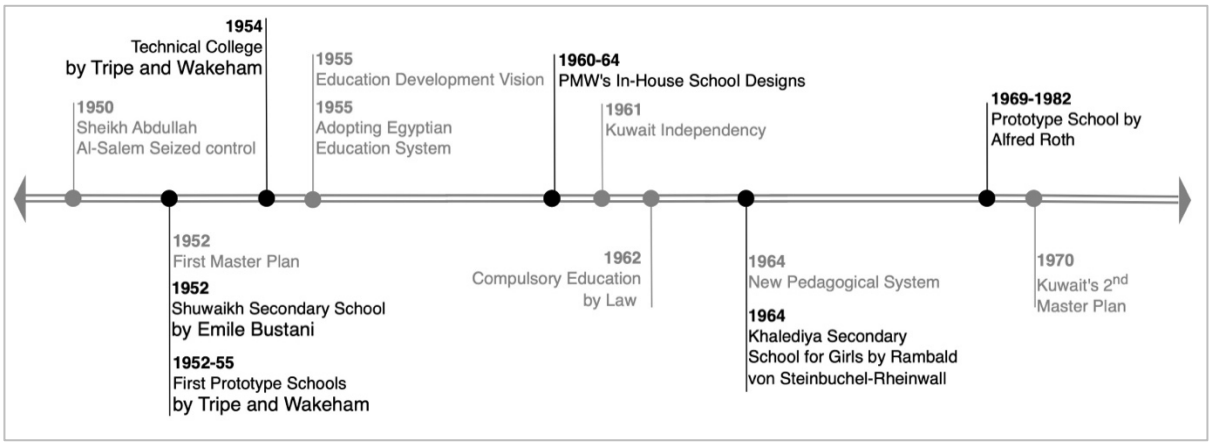


Figure 5.7 A timeline of the events that led to the development of modernist school buildings. The graph illustrates the various school typologies that arose following the discovery of oil, taking into account the significant political and social elements that influenced their growth.[29]

Traditional schools often have a central courtyard and classrooms clustered on one or two floors, with a width of no more than 5 metres. In addition to being used as a classroom, the courtyard acted as a gathering place for people of all ages. For instance, Mubarakiya School has hosted all of society's annual cultural and religious events since its inception in 1911, with its courtyard serving as a venue and becoming the first *'culture hub'.* According to records, the Education Council's original location was placed at Mubarakiya school before being relocated to its newly constructed building in 1949; additionally, the first painting exhibition in Kuwait was held there in 1936; similarly, the first theatre show was performed at Mubarakiya courtyard in 1939 under the title *Islam of Omar Bin Khattab,* with Sheikh Ahmad Al-Jaber and the British Colonel G. De Gaury in attendance; moreover, the first public summer club was opened at the school in 1952.[30] Not only did Mubarakiya School hold these events,

[29] Author, 2023

[30] Abdullah Al-Nouri, *Qisat Alta'aleem Fi Alkuwait Fi Nisf Qarn* [The Story of Education in Kuwait in Half a Century] (Kuwait: That Alsalasil, n. d.), p. 75; Hussein, p. 24; Al-Zuwair, pp. 135,137,151,154 and 177.

but Ahmadiya School started its first broadcast activity in 1948 and Sharqiya School ran its first musical activity in 1952; all of these events went on to become staples at other schools.[31] The activities held at schools increased the demands on the physical spaces of future schools and their pedagogical formation over time, despite the fact that no designer was recognised for this period. The result was that the schools became centres for cultural events, benefiting the students and the population at large.

It was not until the 1940s, however, that significant educational reform was implemented, and as a result, traditional school layouts were revised in numerous ways to accommodate pedagogical reform, necessitating the addition of more classrooms, instructor accommodations, playgrounds, and laboratories. In 1944, Kuwait's first education provision was drawn up, with human resource development in its plan, resulting in further school layout alterations.[32] Later, a three-year nursery level, a four-year primary level, and a five-year secondary level were implemented, in addition to extra vocational training aimed at producing more labour needed for the modernisation development plan.[33] The layouts and spatial arrangements of schools have been profoundly influenced by these political changes.

In most cases, school layout alterations were conducted in accordance with the original master plan that had been conceived by Minoprio, Spencely, and Macfarlane in 1952. Not only was land for higher education set aside in the Shuwaikh district, but new neighbourhoods were also developed, necessitating the construction of central amenities, including schools, in accordance with the English planner Ebenezer Howard's *Garden City* concept.[34] The Education Department's plan was already in place at the time, requesting the construction of a vocational college and a boys' secondary school in Shuwaikh district, as well as one girls' secondary school in Bneid Al-Qar district (later changed to Khalediya district), in addition to a series of standardised schools distributed throughout the new neighbourhoods.[35] With the new social provisions, financial abundance, foreign

[31] Al-Zuwair, p. 143 and 147.

[32] Ebrahim Abdo, *Dawlat Alkuayt Alhaditha* [Modern State of Kuwait] (n. p: Arab Record Foundation, 1962), p. 27; BRDC, *The Economic Development of Kuwait* (Baltimore: The Johns Hopkins Press, 1965), p. 20.

[33] Al-Zuwair, p. 103; Mohammed N. Raafat, *Kuwait Educational Guidance and Examination System* (Paris: 1966).

[34] Garden City was introduced in England in 1898, and it advocated for the development of industrially serviced suburbs set within expansive greenbelts for agriculture, recreation, and other needs. For more information see: Ebenezer Howard, *Gardin Cities of to-Morrow* (London: Swann Sonnenschein & Co. , 1902), p. 22; Antonio Minoprio, Hugh Spencely and Peter W. Macfarlane, *Plan for the Town of Kuwait* (London: 1951).

[35] The National Archives [TNA], London: FO371/109860, 'Report by Mr N M Reilly on Development of Kuwait to July ', 1954; Saba George Shiber, *The Kuwait Urbanization: Documentation Analysis Critique* (Kuwait: Kuwait Government Press, 1964), p. 378.

designers, Western standards, and cutting-edge facilities, a new age of modernist school architecture began in Kuwait.

Documents reveal that the Shuwaikh district was prioritised for higher education.[36] There were two major projects in this area: a Technical/Industrial College (as shown in **Figure 5.8**) designed by the British firm Tripe and Wakeham and constructed by the British contractor John Howard, and a large boys' secondary school (as shown in **Figure 5.9**), which Tripe and Wakeham were said to have designed but for which the construction supervision was handled by the CAT company (Lebanese engineer Emile Bustani and partners).[37] The plans for both projects called for a cluster of buildings to house various educational services, with the ultimate goal of centralising all of these functions in one complex. In a similar vein, a girls' secondary school (as shown in **Figure 5.10**) in the Khalediya district was designed by an Austrian architect, Rambald von Steinbüchel-Rheinwall (who had a German-based firm).[38] The school complex featured a variety of buildings for many functions and activities.[39] Ultimately, the design's attention to climatic and environmental considerations resulted in a high cost and innovative material use.[40]

Figure 5.8 Technical College under construction, n. d. The image was featured in the Architectural Design publication in 1957. The image portrays the edifices of the Technical College, likely the six accommodation buildings, in the midst of their construction phase.[41]

[36] Zahra Freeth, *A New Look at Kuwait*, 1st edn (Kuwait: Taylor and Francis, 1972), p. 18; Documentary-Committee, *Tarikh Thanawiat Alshuwikh (1953-1973)* [Al-Shuwaikh Secondary School's History (1953-1973)] (Kuwait: Ministry of Education, 2005), p. 56.
[37] Al-Shuwaikh Secondary School may have been designed by Tripe and Wakeham, but Emile Bustani was awarded the contract for overseeing its construction; The National Archives [TNA]: FO371/109860; Documentary-Committee, p. 56.
[38] Rambald von Steinbuchel, ' Escuela Secundaria Femeninar En Kuwait', *Informes de la Construcción,* 22. 217 (1970), 3-10.
[39] Ibid.; Ernst Zietzschmann, 'Girl's Secondary School in Kuwait', *Bauen + Wohnen,* 20 (1966).
[40] Zietzschmann; Steinbuchel.
[41] 'Educational Buildings in Kuwait; Architects: Tripe and Wakeham', *Architectural Design*. March (1957), 94-95 (p. 95).

Figure 5.9 Shuwaikh Secondary School complex, 1952. The image depicts the Shuwaikh complex, situated in the desert, which was specifically constructed for educational purposes. It highlights how the architectural style of the complex played a significant role in advancing Kuwait's modernity. The image depicts the primary complex, mosque, clock tower, club building, and instructors' residences.[42]

Figure 5.10 Khalediya Secondary School for Girls, 1966. The school complex, created by Rambald von Steinbuchel—Rheinwall, exemplifies the modernist architectural style and includes a theatre, administration building, accommodation, classrooms, gymnasium, and cafeteria. Similar to Shuwaikh School, this educational institution is also located in the heart of a desert environment, highlighting its notable advancement in modernity.[43]

[42] *Kuwait Almadhi* [The Past of Kuwait], ed. by Sulaiman Al-Awadhi (Kuwait: n.p., 1987),(p. 107).
[43] Kuwait University, Khaldiyah, Kuwait University Archives, , 1966.

To bring about modernity, Tripe and Wakeham and Taylor Woodrow (a contractor company) have thus far adopted Western educational best practices in Kuwait and introduced a new design typology for state schools that focuses on standardised layout design (see **Figure 5.11**).[44] The new state school building's aesthetic design was very different from the previous traditional and cultural-centre school types. It aimed to meet the demand for state schools in every community by creating a model school that could achieve both the new pedagogical formation and the master plan's requirements. The school's two-story, open-air design, which features classroom wings separated by hallways, allows for greater cross-ventilation and makes good use of natural light.[45] These schools spread around the neighbourhood from the 1950s until the 1970s under the supervision of the Ministry of Public Works.

Although it was easier to conceptualise and prepare for the second phase of school building development, which began after Kuwait gained independence in 1961, it nonetheless presented challenges. While education funding remained stable, political conditions shifted in response to local and global factors. For the five years leading up to independence, the Education Department has prioritised a new pedagogical level that aims to include 2-4-4-4 grade levels for students (kindergarten, primary, intermediate, and secondary levels), boosting the demand for new school capacity.[46] Following the country's declaration of independence and launch of its social welfare programme, the government mandated free and compulsory education for all children, resulting in a significant increase in student growth. Consequently, more requests came to improve school layouts beyond those offered by Tripe and Wakeham (more details are provided in **Chapter 6**).

To meet the demands of the welfare state programme and requirements for compulsory education, an in-house team of engineers at the Ministry of Public Works devised and implemented a few modified layout plans for schools.[47] The design, as evidenced by *Fox's* design typology, was similar to the finger-plan style of schools that gained popularity in the United States during the 1930s.[48] The plan for this school was to have a three-story structure connected to an administrative building. The classrooms were clustered along the building's fingers and connected by a single-sided hallway (as

[44] The National Archives [TNA], London: FO 371/109863, 'Development Projects and Contracts in Kuwait Appointment of British Advisers and Technicians', 1954; Simon C. Smith, *Britains Revival and Fall in the Gulf Kuwait, Bahrain, Qatar, and the Trucial States, 1950-71* (New York, USA: Routledge Curzon, 2004), p. 27.

[45] Educational Buildings in Kuwait; Architects: Tripe and Wakeham.

[46] Taher Razik, *An Appraisal of the Educational Structure* (Paris: 1981).

[47] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (3/3), Alfred Roth, 'The School Buildings of Kuwait', 1965.

[48] Hille, p. 35; Darian-Smith and Willis, p. 4; Alfre Roth, 'Schulbau in Heissen Klimazonen ', *Bauen + Wohnen,* 21 (1967).

shown in **Figure 5.12**). The classrooms had huge, uncovered windows, which resulted in poor environmental conditions.[49]

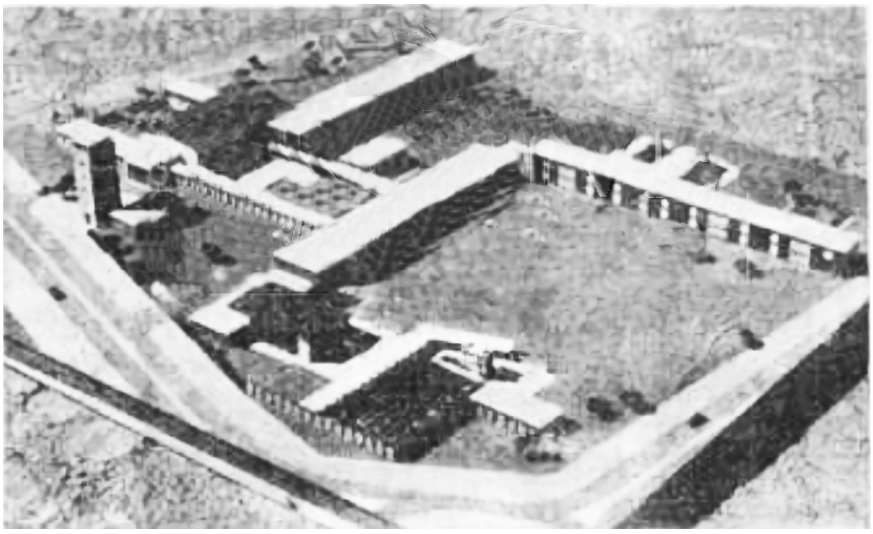


Figure 5.11 Salah Ad-din School, a primary school model. This school is an early prototype created by Tripe and Wakeham. The image, shown in the 1957 edition of the Architectural Design Journal, depicts the extensive areas used to establish open-air classrooms for primary level.[50]

Figure 5.12 A secondary school, Fox's model, 1968. This school, including three wings and open walkways on both sides, was designed by the in-house teams of Kuwait's Ministry of Public Works. The image exhibits the inherent stiffness in its aesthetic.[51]

Attempts to satisfy these demands ultimately failed, prompting another appeal for foreign assistance. The country has enlisted the cooperation of international bodies, such as UNESCO and the UIA, especially regarding welfare programme implementation. This situation precipitated the

[49] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162 (1/5), Alfred Roth, 'Schools in Kuwait', 1973.
[50] Badran, 'Almadares Alnamouthajiyah Alhadeetha', *Aleiman*, 1st November 1953, p. 589.
[51] Alamy Stock Photo, Ref. ED0XYP, Charles O. Cecil, 'A Kuwaiti Secondary School', 1968.

development of a Second Master Plan by Colin Buchanan in 1971, in which Swiss architect Alfred Roth participated in addressing the pressing needs of one hundred schools in the country.[52]

Given Roth's expertise in school architecture, his work in Kuwait corresponded with school distribution in neighbourhoods, prototype design for each level of both sexes, introduction of the prefabricated structural system, and supervision of school construction and design changes until the 1980s.[53] Roth's design typology in Kuwait was distinctive because he adopted a regionalist concept that revived the old courtyard house into modern prototype schools (as shown in **Figure 5.13**), with an emphasis on a modular system of classrooms and facilities (see **Figure 5.14**).[54] Similar plans were used for all grade levels, but there were differences in student gender, building size, extracurricular offerings, and the availability of athletic fields.[55] Roth intended to use prefabricated components to control the financial outcomes of one hundred schools by moving the building phase more quickly, easily, and affordably.[56] Over a two-decade period, from the 1970s to the 1980s, Roth's efforts in school design were put into effect to meet national demands (more details can be found in **Chapter 6**).

Nonetheless, changes to the school's architecture continued to reflect changes in pedagogy, policy, and environment. However, various approaches have been adopted to pursue excellent learning environments, focusing on the top schools in Kuwait's modernisation. With haste and enthusiasm, the country overspent on new school construction, despite Sheikh Abdullah's assurance that education funding was necessary obtainable because of the necessity of knowledge-based development for the next generation. Modifications to school buildings reflect the ever-evolving pedagogy, policies, and architectural practices that have shaped these educational institutions. The

[52] gta-ETH Archives [gta], ETH Zurich University, Switzerland: 131-0162/0165 (2/3), Allan McCulloch, 'An Update Letter from Colin Buchanan's Partner, Allan Mcculloch, to Professor Alfred Roth on Committee's Work on the 2nd Masterplan for Kuwait', 1970; gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0164 (2/5), KMPW, 'Symposium Report', 1969.

[53] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (1/3), Alfred Roth, 'Roth's Final Report on the 2nd Seminar for Schools in Kuwait, 18th December', 1969.

[54] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (2/3), Alfred Roth, 'Reports on Proposed Primary, Intermediate, and Secondary Proto-Type Schools, 30th January', 1970; gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (2/3), Alfred Roth, 'The Final Preliminary Design for a Prototype Kindergarten with 12 Classrooms in Kuwait, 10th October', 1970; gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (2/3), Alfred Roth, 'The Final Preliminary Design for a Prototype Primary School with 20 Classrooms in Kuwait, 10th October', 1970; gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (2/3), Alfred Roth, 'The Final Preliminary Design for a Prototype Intermediate School with 20 Classrooms in Kuwait, 10th October', 1970.

[55] gta Archives / ETH Zurich [gta]: 131-0162/0165 (2/3); gta Archives / ETH Zurich [gta]: 131-0162/0165 (2/3); gta Archives / ETH Zurich [gta]: 131-0162/0165 (2/3); gta Archives / ETH Zurich [gta]: 131-0162/0165 (2/3).

[56] gta Archives / ETH Zurich [gta]: 131-0162/0165 (2/3); gta Archives / ETH Zurich [gta]: 131-0162/0165 (2/3); gta Archives / ETH Zurich [gta]: 131-0162/0165 (2/3); gta Archives / ETH Zurich [gta]: 131-0162/0165 (2/3).

narrative faced by the challenges of the first and second waves of modern schools to meet the rising demand for education is remarkable (see **Figure 5.15**).

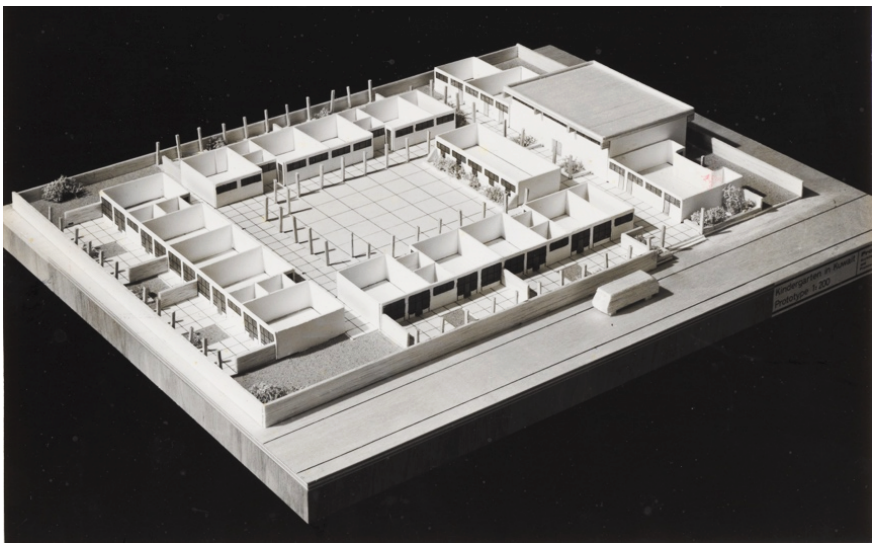


Figure 5.13 An alternative prototype design for kindergarten by Roth, 1969. In his school design concept, Roth utilised the idea of a traditional courtyard house encompassed by classrooms. The idea he proposed was accepted by the Kuwaiti government and implemented for several decades.[57]

Figure 5.14 A prefabricated structural unit under construction, February 1981. This image showcases one of the prefabricated structural systems employed by Roth in the construction of school classrooms. The implementation of it occurred primarily during the 1980s.[58]

[57] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: Ref. 131-0163,0164 (1/5), Alfred Roth, 'A Model of Kindergarten in Kuwait', 1969.

[58] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: Ref. 131-0164/0165 (5/5), Alfred Roth, 'School Prefabricated Structure', 1981.

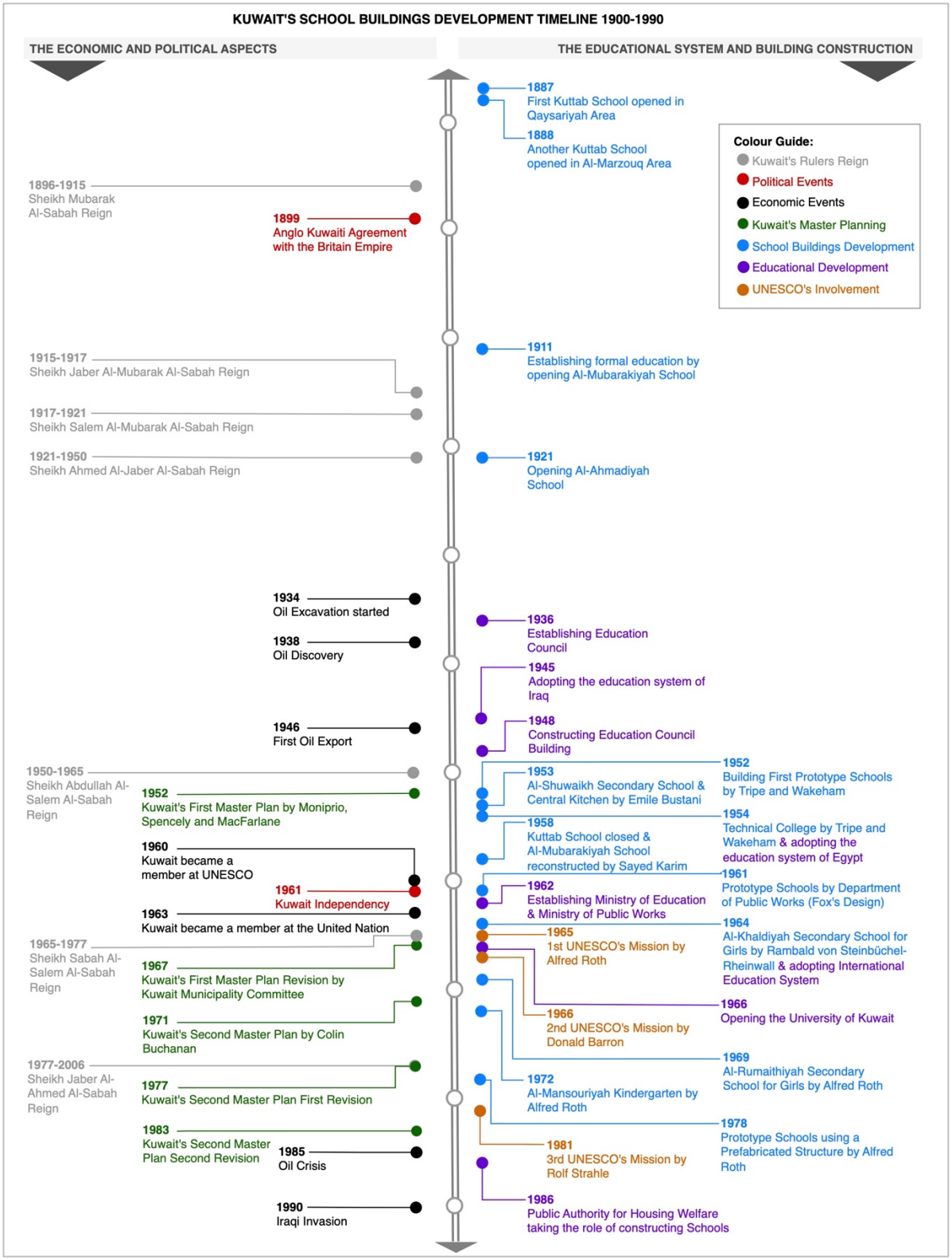


Figure 5.15 Kuwait's school buildings' development timeline, 1900-1990. This graph compiles several elements that occurred and influenced the evolution of school architecture in Kuwait. The graph's colour scheme illustrates the factors of political, economic, and social events.[59]

[59] Author, 2023.

5.3 A CULTURAL CENTRE

Technical and vocational schools and comprehensive high schools were developed in the twentieth century to better prepare the workforce.[60] Owing to the oil boom, Kuwait's economy required well-trained workers to compete globally. Thus, the government's control over education and the goal of creating a more engaged labour force necessitated the creation of vocational and secondary schools. It was assumed that secondary schools were for students with better skills who aspired to further study and more professional careers, whereas vocational schools were for faster entry into technical professions and to secure jobs.[61] However, the curriculum reflected these workforce divisions, as did the building layouts.

All new schools include Technical College, Shuwaikh Secondary School for boys, and Khalediya Secondary School for girls, featuring a complex layout with multiple buildings that serve a variety of functions, including classrooms, laboratories, student and faculty accommodations, a sports centre, a stadium and gymnasium, a library, a theatre, and more, creating one of the essential central cultures in Kuwait and the region.[62] First opening in 1954, the Shuwaikh School became the focal point for the community's ongoing social and cultural events, supplanting the role of the Mubarakiya School in Kuwait's and the region's society.

5.3.1 Technical College by Tripe and Wakeham (1952–1954)

In 1946, Kuwait began oil production and exports, creating a demand for qualified labourers. In response to increasing industrial and urban growth, Kuwait's pressing need for technical services has drawn employees and specialists from various specialisations. In 1947, the Kuwaiti Council of Education indicated that a critical mass of young people required specialised technical industrial education to efficiently implement the country's industrialisation agenda and meet labour market demands.[63] Kuwait's Planning Board fulfilled their request in 1952 by designing the Technical College at Shuwaikh on a large plot south of the secondary school. General Hasted's recommendations led to the selection of the expedition design team, with Hasted sending Tripe and Wakeham to the mission in an effort to surround himself with trustworthy individuals.[64]

[60] Darian-Smith and Willis, pp. 132-143.
[61] Ahmad Al-Jihayem, *Kuwait Schools*, an interview conducted by Zainab Murtadhawi (Online Video, 23rd April 2022).
[62] Arabian Gulf Digital Archive [AGDA], UAE: FO 371/109856, 'British Trade Mission to Kuwait', 1954; Documentary-Committee, p. 57.
[63] 'Hona Al-Kuwait [Here Is Kuwait]', *Al-Bietha*, 1st January 1948, p. 13; Sadeq Jalal, 'Hajatuna Elaa Altaelim Alsinaei' [Our need for industrial education], *Al-Raed*, 1st January 1953.
[64] According to L.H. Laing's confidential report, General Hasted and Philip O. G. Wakeham were acquainted due to their shared military experience and the fact that they were brothers-in-law; see: Arabian Gulf Digital Archive [AGDA]: FO 371/109856.

While it was impossible to obtain primary resources from the Technical College, such as blueprints and documentation, this section uses a variety of secondary sources to examine the philosophy behind the design approach.

According to a 1957 article, the Kuwaiti government charged Tripe and Wakeham and John Howard (the contractor) with building *'the best schools in the world'* in a desert environment with a hot and dry climate, a dearth of clean water, an absence of cutting-edge materials and technologies, and a scarcity of skilled labourers.[65] The design firm was challenged to find ways to design a school that could accommodate more than 500 students in extremely hot regions. Their primary design idea was to strike a good compromise between the building's solar exposure and other environmental considerations such as natural light and air ventilation. The Technical College and dormitories were eight miles outside Kuwait City in a model town built for education. The two-story Technical College was carefully planned to maximise utility while considering the local climate and employing the latest building techniques and materials.

It was developed on 480 acres with various interconnecting buildings for different functions (see **Figure 5.16**).[66] The layout was divided into two wings, with the right wing having four buildings and the left wing having three buildings connected to an external shaded walkway (see **Figure 5.17**).[67] The open-air building typology was designed to maximise natural lighting and air circulation.[68] Most of the buildings' practical spaces with windows faced northeast, whereas the vertical and horizontal louvred screens used on balconies were installed in the southeast.[69] Because only fans could be used for cooling and air conditioning was in low supply, the buildings were all designed with single-room depths to maximise cross ventilation.[70] The project was designed to have two distinct water distribution systems: one for drinking water and the other for other uses (e.g., washing dishes, bathing, or showering).[71]

Four large workshops, each with 3,200 square metres of space and storage areas, three two-story buildings with laboratories at the ground level and multiple classrooms on the first level, six student dorms with 21 fully furnished rooms, and a dining hall with a kitchen for more than 500 users were

[65] Educational Buildings in Kuwait; Architects: Tripe and Wakeham.
[66] Ibid.; Hussein, p. 172.
[67] Educational Buildings in Kuwait; Architects: Tripe and Wakeham.
[68] Ibid.
[69] Ibid.
[70] Ibid.
[71] Ibid.

developed in the Technical College complex (see **Figure 5.18**, and **Figure 5.19**).[72] Due to the Kuwaiti government's contract termination, a four-story administration building, library, clinic, and assembly hall were not built.[73] Air ventilation, heating, power, gas, cold and hot water, washrooms, and showers were installed at all locations.[74] Four workshops taught pupils carpentry, plumbing and sanitary works, electrical and wireless technologies, and auto mechanics.[75]

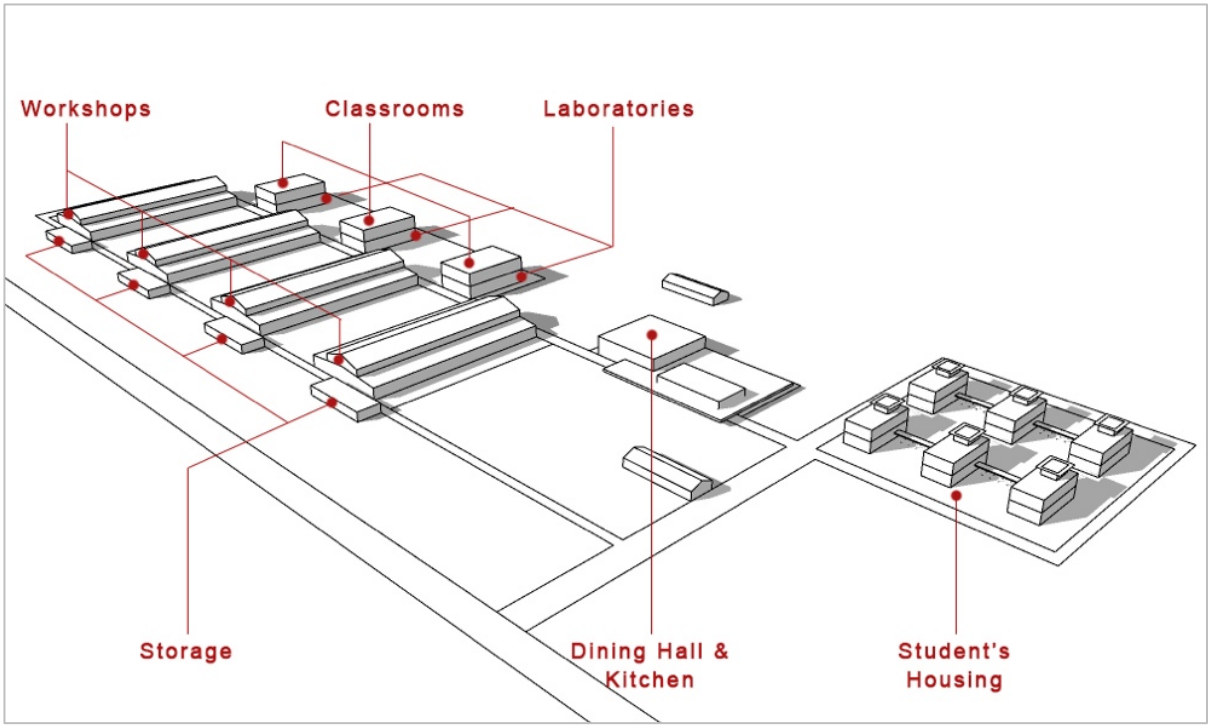


Figure 5.16 An examination 3D model for the Technical College of Kuwait. This illustration provides an initial examination of the Technical College's first-stage facilities and divisions. The depiction was created using a secondary source, specifically the image of Shuwaikh Secondary School (Figure 5.9). This illustration displays the intricate facilities comprising workshops, classrooms, laboratories, storage areas, a dining hall, a kitchen, and student accommodations. All these components are interconnected by outdoor pathways.[76]

[72] Jalal, *Al-Raed*; The National Archives [TNA]: FO371/109860; 'Koliya Al-Sinaeyah [Technical College]', *Sijil Al-Kuwait Alyaoum [Kuwait Record Today]*, 1956; Hanafi Ashour, '16 Sinaeat Hadithat Tudrus Fi Alkuliyat Alati Tasnae Alghad [16 Modern Industries Taught in the College That Make Tomorrow]', *Al-Gumhoria*, 1959; MoI, Qadiman Fi Alkuayt Alkuliyat Alsinaeia [in the Old Days in Kuwait the Industrial College],YouTube 2018 <https://www.youtube.com/watch?v=_QJ0gac0kNE>; Tripe and Wakeham, *Notes on New Schools* (Kuwait City: 1954).

[73] Arabian Gulf Digital Archive [AGDA]: FO 371/109856; Wakeham, p. 5.

[74] Educational Buildings in Kuwait; Architects: Tripe and Wakeham.

[75] Jalal, *Al-Raed*; Georges Britt, 'From Yesterday to Tomorrow, Kuwait Lauches a Vast Welfare Program by Wise Use of Wealth', *The Al-Kulliyah* 1952..

[76] Author, 2023.

Figure 5.17 Student's dormitories at Technical College, n.d. This image is a postcard sourced from Ali Rayes's collection. The image depicts a perspective of dormitory buildings, showcasing a two-story structure with a shaded hallway on one side and small windows on the other side, strategically positioned to align with the direction of the sun.[77]

Figure 5.18 Technical College classroom building. Left: An image of the classroom of the Technical College was featured in the Architectural Design Journal, highlighting the commendable efforts of Tripe and Wakeham in establishing top-tier educational institutions in Kuwait. The image showcases the specific materials employed to embody the essence of modernist architecture during that period.[78]

Figure 5.19 A dormitory block of the Technical College. Right: Like the previous image, this image provides another perspective of the students' dormitory building.[79]

[77] Rayes, p. 633.
[78] Ashour, *Al-Gumhoria*. 24.
[79] Educational Buildings in Kuwait; Architects: Tripe and Wakeham, p. 94.

Every component must be able to withstand the searing heat of the sun, the abrasiveness of frequent sandstorms, and the corrosiveness of salty atmospheres during humid seasons. Therefore, Tripe and Wakeham decided that the best way to ensure the strength of the framework, and more specifically, the protection of the reinforcement from corrosion in a humid saline environment, would be to utilise reinforced concrete with a high density.[80] However, the lack of experienced supervision necessitated the use of precast concrete elements with consistent dimensions for floors, beams, and columns, all laid out on a regular three-metre grid.[81] With longer spans, either concrete portal frames or light-steel trusses are required.[82] However, there was emphasis on selecting a finish that would last and require little upkeep. Some of the materials used to finish the building included glass mosaics for the structural concrete, ceramic tiles for the entryways and stairwells, travertine stone in small quantities for the gable ends and panel walls, terrazzo tiles for the floor finishes, coloured *Tyrolean* rendering for concrete blocks or brick panel walls, and acoustic boards for the ceilings.[83] With white roofs, desert-toned walls, and mosaic-decorated columns, this architecture was intended to evoke a sense of calmness and serenity.

Howard's company, however, was forced to import construction supplies and equipment from Britain and train workers from neighbouring nations due to a severe shortage of both.[84] Therefore, the initial budget for the project had to triple to £9 million, resulting in unsatisfactory financial outcomes that ultimately led to the termination of all future deals with the British corporations.[85] This could explain why boys' secondary schools were built by a local contractor, Bustani, instead of British companies.

Site building proved to be the project's greatest obstacle; John Howard was held responsible for the project's increased financial consequences. This was due to unanticipated difficulties during construction (see **Figure 5.20**), such as a dearth of water, appropriate sand and gravel, a delay in the arrival of materials, and a shortage of trained labourers. According to Tripe and Wakeham, the supply of necessary sweet water was deficient; to make concrete, they had to employ extremely salty well water, which could be found only 12 feet to 20 feet below the ground.[86] The sand in the

[80] Ibid.
[81] Ibid.
[82] Ibid.
[83] Ibid.
[84] Arabian Gulf Digital Archive [AGDA]: FO 371/109856.
[85] The National Archives [TNA], London: FO 371/104341, 'Report on Finance and Expenditure in Kuwait', 14 November 1953; The National Archives [TNA], London: FO371/104340, 'Letter from Political Agent in Kuwait to Sir Rupert Hay, the Poltical Resident in Bahrain', 24 Febuary 1953.
[86] Educational Buildings in Kuwait; Architects: Tripe and Wakeham.

desert also had the incorrect consistency; therefore, beach sand from Dimna (Salmiya today), five miles away, had to be used instead.[87] In addition, the lack of machine-mined gravel beds meant that massive volumes of wind-blown gravel in the northern portion of Kuwait had to be swept from the surface of the desert, which was a time-consuming and costly procedure.[88] By then, there were no local construction supplies in Kuwait, and the ingredients for high-quality concrete were scarce. To ensure the highest quality of the project, John Howard was forced to import supplies. This means that bricks from Baghdad, known as Amara, were used for panel walling alongside locally built concrete blocks, and all other materials were imported from Britain, with considerable transit damage and delays.[89] Ultimately, the contractor also had to bring artisans and labourers from Lebanon, Syria, Persia, and Iraq, who had to be taught to meet the objective.[90]

Technical College project completion was a challenge for both designers and contractors owing to unforeseen conditions and a lack of familiarity with the area. There were two phases of construction for the project: the first phase began on 1st October 1953, and included the construction of six dorms, three classroom laboratories, four workshops, and a dining hall; the second phase was scheduled to begin on 1st September 1954, and included the construction of a four-story administrative block, library, clinic, assembly hall, and additional dormitory.[91] The costs of the first phase tripled, resulting in the cancellation of the second phase and negative positioning for all five big British corporations. According to the Trade Mission's report on British contractors' positions in Kuwait:

> *'The work completed by the British contractors was very high, but the quality was good. The technical school was the worst example of the extravagance which had damaged British repute in Kuwait. It was not altogether fair to blame the architects of such projects who had followed the requirements of the Kuwait'.*[92]

Despite their disagreements about the contractors' performance, Tripe and Wakeham were tasked with constructing additional standardised state schools in Kuwait in partnership with Taylor Woodrow, another contracting company, which resulted in high costs and inefficiencies.

[87] Ibid.
[88] Ibid.
[89] Ibid.
[90] Ibid.
[91] Arabian Gulf Digital Archive [AGDA]: FO 371/109856.
[92] Ibid.

However, political struggle might have been brewing in the background of the contract termination. Earlier chapters noted that the nationalist movement that emerged in the wake of the Suez Crisis in 1956 influenced the decision of some Arabs to advocate for Kuwait to avoid conducting deals with the British. In exchange, several construction jobs went to regional specialists, such as the secondary school in Shuwaikh, which was given to the Lebanese engineer Bustani. He had the special bond to frame the work with the least cost and good quality using local labourers and materials due to his regional expertise. According to the evidence presented, Bustani offered the government of Kuwait a fixed-price agreement instead of the plus 15%, which negatively impacted the profits of the five big British corporations.[93] In conclusion, regardless of who designed Shuwaikh School—Bustani or Tripe and Wakeham—the building of the largest school in the area cost just £5 million as opposed to £9 million for the Technical College, notwithstanding the latter's higher construction quality.[94]

Figure 5.20 Technical College under construction, 1952. The construction phase posed the greatest difficulties for foreign contractors, as they had to navigate through several unforeseen impediments that arose during the project. The image featured in QalahJi's 1955 book depicts the discussion of Kuwait's progress in modernisation.[95]

5.3.2 Shuwaikh Secondary School by Emile Bustani (1952–1954)

Bustani was a prominent political figure in Lebanon and in economics, with degrees in civil engineering, and he was an avid supporter of Arab causes and nationalism. He had strong ties to the Western world, particularly Britain and America, where he completed his

[93] Ibid.
[94] Ibid.; Documentary-Committee; The National Archives [TNA], London: FO371/114745, 'Letter from Mr C a P Southwell. Kuwait Oil Company to Mr La C Fry, Foreign Office, with Enclosures', 1955.
[95] Mahmoud QalahJi, *Alkuwait Alhadeitha* [Modern Kuwait] (Beirut: Mahmoud Qalahji, 1955), p. 110.

education at the Massachusetts Institute of Technology (MIT) in 1933.[96] In 1937, he founded the construction company CAT, which became notable for its work laying oil pipes, constructing roads, and developing cities across the Middle East in the 1940s and 1950s.[97] The company's operations reached as far as Lebanon, Syria, Iraq, Bahrain, Qatar, and Kuwait, where he established the General Company in Ahmadi under the direction of his brother Faiz Bustani.[98] They were responsible for completing tasks for the Kuwait Oil Company and contributing to the development of Kuwait City. Being a major player in the industry due to their access to the latest technology, the company imported machinery from America and Britain to proceed with their work in the region.

It was the British writer and journalist Desmont Stewart's belief that Emile Bustani's personality would prove to be the most effective tool in his quest to gain allies and influence.[99] With decades of cunning and easily aroused suspicion, he was dealing with patrons unfamiliar with modern life. The key to his success was his ability to win the trust of these dynastic monarchs; the entire regiment of sheikhs had such strong bonds that they trusted him when no one else could, as stated by Stewart. Because of his familiarity with the area and people, particularly Sheikh Abdullah Al-Jaber, and his previous work in the field, he was given the opportunity to lead the construction of a Shuwaikh Secondary School. Bustani placed high value on his time spent in Kuwait and in the Gulf because it was there that he built the foundation for his reputation. More importantly, Kuwait served as a setting in which his business could grow, project by project, developing the skeletal framework upon which it would eventually stand.

Bustani's strategy in building Kuwait's largest secondary school cemented its position as the country's preeminent cultural centre, surpassing even the Mubarakiya School. In 1951, six miles outside Kuwait City, on a plot of land measuring 2.5 million square metres, this boarding school for boys was erected (see **Figure 5.21** and **Figure 5.22**), as indicated by the country's First Master

[96] CIS-MIT, 'Emile Bustani Middle East Seminar', 2022 <https://cis.mit.edu/events-seminars/emile-bustani-middle-east-seminar> [accessed 1st November 2022].
[97] C.A.T.-Group, 'Company Overview', 2022 <https://www.catgroup.net/thecatgroup> [accessed 1st November].
[98] Eskandar Maarouf, *Alkuayt Mushahadat Wa Mulahazat Suhufiat Fi Alamarat Alshaqiqa* [Kuwait views and press notes in the sister Emirates], 1st edn (Baghdad: Eskandar Maarouf, 1953), p. 244; Desmond Stewart, *Orphan with a Hoop: The Life Ol Emile Bustani* (London: Chapman and Hall, 1967), p. 9.
[99] Stewart, p. 10.

Plan.[100] The school took the lead in the area's modern development by being constructed on a strip of desert ground near the sea, where there were no other buildings or settlements. About 640 local students were housed in the complex's several buildings, which, like the Technical College, served a variety of educational purposes (classroom building, dormitory, *Jame'e* [mosque], library, museum, amphitheatre, dining hall, and sports facilities) (see **Figure 5.23** and **Figure 5.24**).[101] The main building, depicted in **Figure 5.25, Figure 5.26** and **Figure 5.27**, is a two-story dome-topped edifice with three wings, each containing nineteen classrooms, three extensive laboratories for chemistry, biology, and natural science, a museum, an amphitheatre, a large hall for festivities, and a cafeteria.[102] The large courtyard is enclosed by the building's three sets of wings that continue orthogonally and intersect at the rear. The front is wrapped in shallow arcades, whereas the back is framed by curved wings that merge at the central gateway, displaying empathetic architecture as described by Shiber.[103]

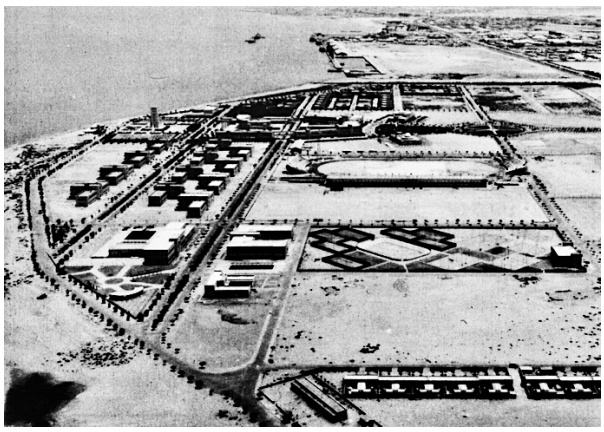


Figure 5.21 Aerial view of Shuwaikh Secondary School, c. 1952-54. Left: An image from the British Petroleum Archives collection depicts the educational area established according to the First Master Plan. The arid terrain displayed in the image has been transformed into a network of roadways and subdivided into several multi-purpose structures, creating the most extensive educational complex in the area.[104]

Figure 5.22 An aerial view of the Shuwaikh Secondary School complex, n.d. Right: This image showcases the Shuwaikh School following its construction, providing a clear view of the large land on which the many facility buildings were developed.[105]

[100] Ahmad Al-Sharbasi, *Ayam Al-Kuwait* [Kuwait Days] (Kuwait: Dar Al-Arabi Book, 1952); Minoprio, Spencely and Macfarlane, pp; Mona Al-Jaber Al-Sabah, *Sheikh Abdullah Al-Jaber Al-Sabah (1898-1996): Pioneer of Culture and Education* (Kuwait: The Emiri Diwan. Historical Documents Center, 2014); Documentary-Committee.

[101] Al-Sharbasi; Al-Sabah; Ibrahim Eid, This Is Kuwait (Part 1) Education,Kuwait c.1960 <https://youtu.be/4rnqVst6C1M>; Documentary-Committee.

[102] Al-Sharbasi; Al-Sabah; Documentary-Committee.

[103] Shiber, p. 102.

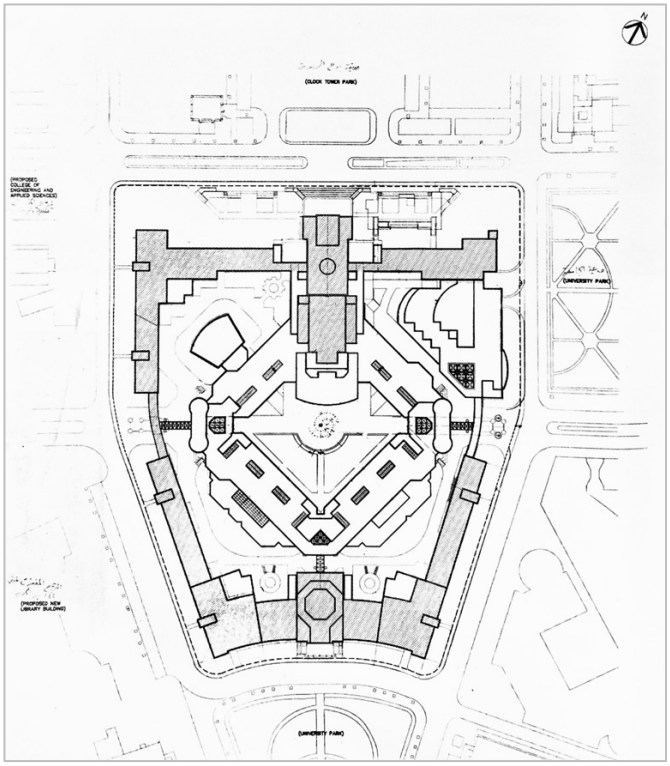
[104] Aerial View of Al-Shuwaikh Secondary School, BP Archives,, 1952-54.

[105] Shiber, p. 131.

Figure 5.23 Shuwaikh Secondary School's Mosque and dormitory buildings, n.d. The image showcases the primary entrance, which is characterised by a roundabout and centred by a large globe, a mosque, and dormitory buildings in the background.[106]

Figure 5.24 Dormitory building at Shuwaikh School, n. d. This is a close-up view of one of the dormitory buildings. It has two floors and a main entrance, with two wings on each side that open onto an arched terrace. [107]

[106] The Afaq Archives, Kuwait University: The Photography Section, 'Shuwaikh Secondary School Buildings', n.d.
[107] QalahJi, p. 111.



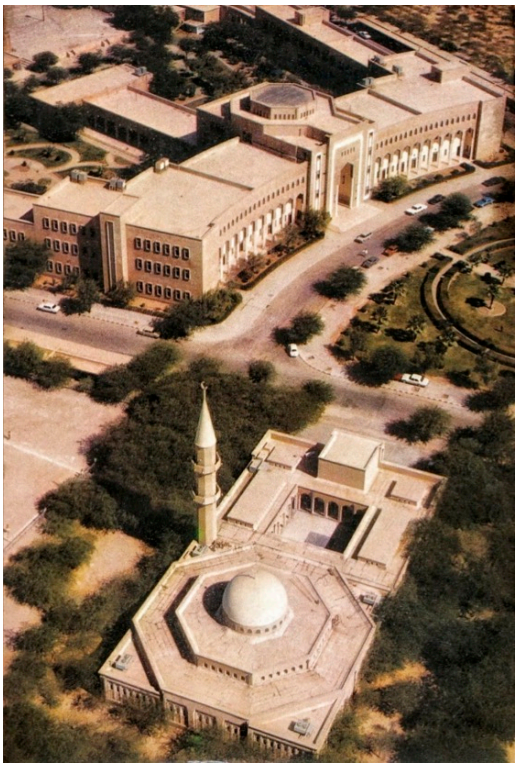


Figure 5.25 The layout of Shuwaikh School's main building, n.d. Left: The proposal includes the primary building, comprising multiple wings, all oriented around a garden. The lower wing symbolises the primary entrances located in front of the roundabout of the complex, whereas the upper entrance faces the sea.[108]

Figure 5.26 Shuwaikh School's main entrance and Jame'e [mosque]. Right: Oscar Mirtri's image was featured in his 1975 book on Kuwait.[109]

Figure 5.27 Shuwaikh Secondary School, main building, n.d. The image, found in QalahJi's book, depicts the main building as viewed from within the garden. The primary entrance of the building was characterised by a domed hall that connected to the classroom wings on either side.[110]

[108] Roberto Fabbri, Sara Saragoca and Richardo Camacho, *Modern Architecture Kuwait 1949-1989* (Switzerland: Niggli, 2016), p. 40.
[109] Oscar Mitri and Gerard Boulad, *Kuwait*, 1st edn (Editions Deloisse, 1975), p. 60.
[110] QalahJi, p. 111.

The campus also includes a mosque (shown in **Figure 5.28**), a library, and eight dorms for the students to live in during the school year. Each dorm could house eighty students, while the faculty occupied separate living quarters.[111] The sports fields of Shuwaikh School include a stadium, a gymnasium, a swimming pool, two football fields, two basketball courts, and three tennis courts.[112] Moreover, landscape design was given equal weight throughout the school's construction; the main building is situated in the midst of an entrance garden, and a fountain with pigeons perched on it serves as both the school's slogan and a symbol of the students' commitment to world peace, with reference to a floral map of Kuwait (see **Figure 5.29**).[113] Also present are a clock tower (see Figure **5.30**) and the globe that the CAT firm generously provided as a special (see Figure **5.31**).[114] This school, constructed according to the most up-to-date standards, possessed every imaginable amenity and stood out from others in the region and beyond as the largest model institution of its kind. The best guarantee of a lifetime of comfort and welfare was supplied by the Farmer and Dark Company, who furnished the school with the same exacting standards as the building itself in terms of beauty and durability.[115]

According to the documents, the school's original blueprints were created in England, and the CAT company's role was limited to supervising the construction of the building.[116] Despite the fact that the identity of the building's original designer has been lost to history, though speculation has centred on Tripe and Wakeham, Bustani, and Wilson and Maison (as noted in the book *Modern Architecture Kuwait 1949–1989* due to the design's similarity with the Abadan Institute of Technology in Iran), the site building work carried out by CAT coincided with remarkable financial outcomes in a short amount of time.[117] The reasons for the contractor's longevity in Kuwait appear to include the company's access to skilled labour, cutting-edge technology, and willingness to embrace local materials. According to Austrian traveller and author Max Reisch, when he visited Kuwait in the early 1950s, thousands of technical and mechanical personnel from Lebanon, Palestine, Egypt, Iraq, Syria, Kuwait, and Persia worked under the supervision of English and American engineers at construction sites.[118] The secondary school, he said, actually rose from sand and was converted into buildings.[119]

[111] Al-Sharbasi, p. 89.
[112] Ibid.
[113] Eid.
[114] Stewart, p. 637.
[115] Mohammed Al-Shaibani, 'Tareekh Thanawiyat Al-Shuwaikh' [Al-Shuwiakh Secondary School History], *Turathna*, 2005; Documentary-Committee, p. 74.
[116] The National Archives [TNA]: FO371/114745.
[117] Fabbri, Saragoca and Camacho, p. 40.
[118] *Max Riesch Fi Alkuwait 1952* [Max Reisch in Kuwait 1952], ed. by Adnan Al-Ta'amah (Kuwait: CKRS, 2011),(p. 49).
[119] Ibid.

Images of the school's construction sourced from the British Petroleum (BP) Archives also show CAT's much appreciated efforts, even though primary sources were insufficient to fully comprehend the construction method and materials employed. Similar to Howard's method, as shown in **Figure 5.32** and **Figure 5.33**, workers drew water from the site's well. In **Figure 5.34 and Figure 5.35**, they can be seen using a block-building machine to shape bricks, which they dried in the sun before usage, negating the need to import the material from elsewhere. On a trip to Kuwait in 1953, De Candole reported his observations at the Shuwaikh School:

> *'They are quite fabulous in the spaciousness and light of their design, the beauty of their construction and the lavishness of their equipment; in fact, they provide everything the educationist could desire. The new secondary school is foremost in the educational programme'.* [120]

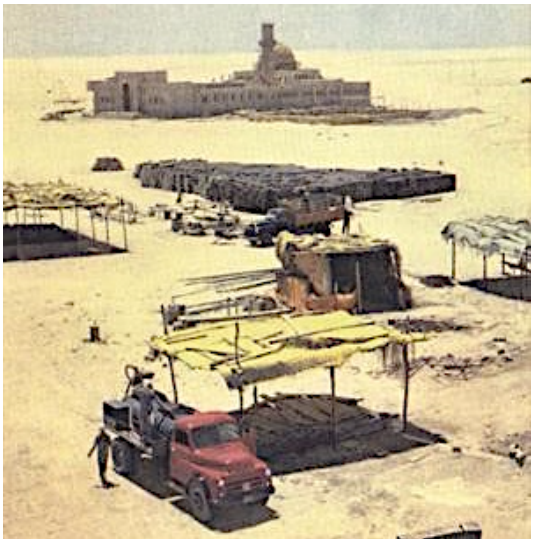


Figure 5.28 Shuwaikh School mosque under construction, 1952. Left: Max Reisch captured a shot depicting the ongoing construction of the Shuwiakh School mosque. In a barren desert devoid of any natural resources, foreign contractors are making arrangements to procure the necessary materials for the construction project.[121]

Figure 5.29 Shuwaikh Secondary School Garden, 1961. Right: This image was featured in the 1962 edition of Al-Arabi magazine, as part of an article highlighting the Shuwaikh school's transition into a university-level educational institution.[122]

[120] E. A. V. de Candole, 'Developments in Kuwait', *Journal of The Royal Central Asian Society,* 42. 1 (1955), 21-29.
[121] Al-Ta'amah, p. 50.
[122] Abdulhaleem Muntasir, 'Jamieat Alkuayt' [Kuwait University], *Al-Arabi*, 1st August 1962, p. 129.

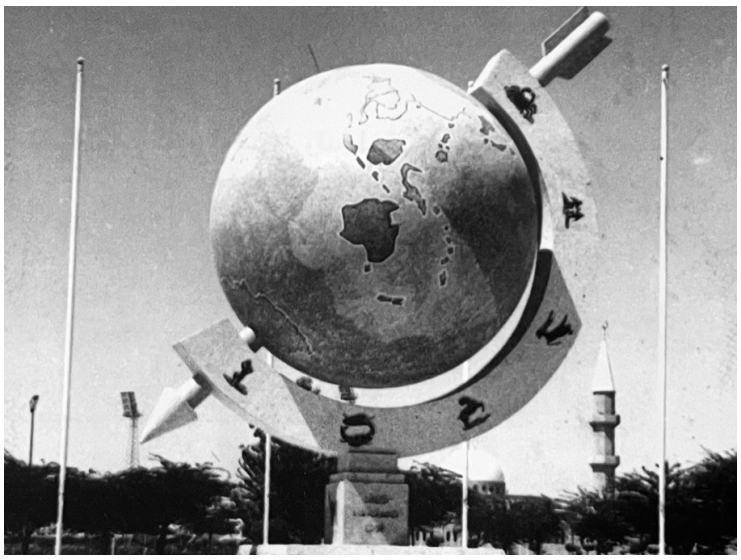


Figure 5.30 A clock tower at Shuwaikh Secondary School, c. 1960s. Left: The well-known tower of Shuwiakh School is seen in this shot, which was initially captured by Azmat Sheikh and was subsequently published as a postcard. [123]

Figure 5.31 Planet Globe at Shuwaikh Secondary School, c. 1960s. Right: An additional postcard with a depiction by Azmat Sheikh of the global sphere that was positioned at the centre of the main entrance roundabout.[124]

Figure 5.32 Site construction process at Shuwaikh Secondary School. Left: The image found in the British Petroleum Archives depicts labourers extracting water from a well at the Shuwaikh School site. The shot, taken by Raymond Wilson, dates back to the years 1950-1952.[125]

Figure 5.33 Shuwaikh School, main building under construction. Right: The shot, captured by Raymond Wilson between 1950 and 1952, portrays the procedure of obtaining water from a well for the purpose of mixing concrete. The credit for this image is attributed to the British Petroleum Archives.[126]

[123] Rayes, p. 643.
[124] Ibid. p. 637.
[125] Raymond Wilson, New School, Drawing Water for Cement Blocks, BP archives, , 1950-52.
[126] Raymond Wilson, The New State Secondary School, BP Archives, , 1950-52.

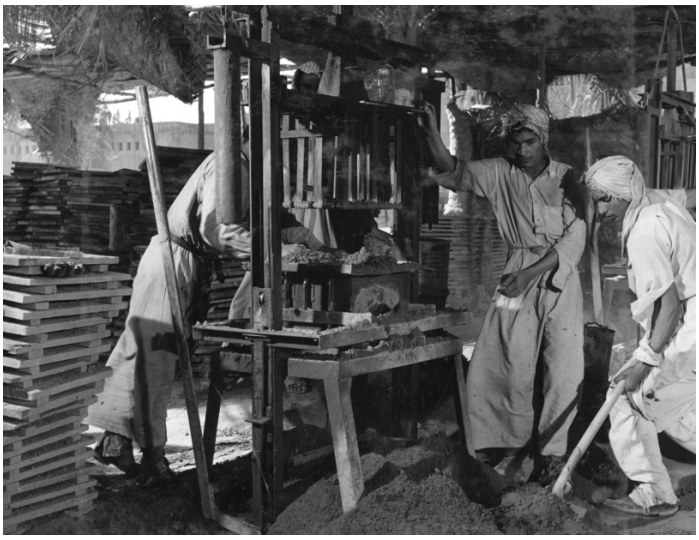


Figure 5.34 Site construction process at Shuwaikh School. Left: The image depicts the process of manufacturing concrete blocks for the state secondary school using mechanised brick moulding equipment. The image was taken by Raymond Wilson between 1950 and 1952.[127]

Figure 5.35 Shuwaikh School construction phase. Right: The image from the British Petroleum Archives collection depicts the concrete blocks placed in the sun for drying following the moulding process. The blocks were utilised in the construction of the secondary school, as seen in a image taken by Raymond Wilson between 1950 and 1952.[128]

Zahra Freeth, in her book *A New Look at Kuwait,* revealed through an examination of her thoughts about the school's architect that he:

> *'… use the traditional arch as a basic motif and these buildings have stood the test of time and still look pleasing and appropriate in the Kuwait scene, while more outré structures lose their appeal as their ephemeral fashions pass'* [129]

She also called the Shuwaikh School a source of '*national pride'.* The school's first year of operation in 1953 was met with a grand celebration in honour of its pioneering role in education.[130] Until 1965, it functioned as a secondary school for boys when the state-run higher education system in the form of a university was relocated to the former Shuwaikh Secondary School in 1974.[131] The complex's proportions and amenities were ideal for a college campus, as per a UNESCO report.[132] In addition to serving as an educational institute, the complex has also become a major cultural attraction for locals and visitors by hosting events such as the annual gathering of the Arab Literature Club and Arab Sporting Competitions. Furthermore, after Kuwait's independence in 1961, the country's

[127] Raymond Wilson, Macking Concrete Blocks for the State Secondary School, BP Archives,, 1950-52.
[128] Raymond Wilson, Concrete Blocks Ready for Use in the Construction of the Secondary School, BP Archives,, 1950-52.
[129] Freeth, p. 18.
[130] Documentary-Committee, p. 162 and 217.
[131] Ibid. p. 183.
[132] UNESCO, *International Yearbook of Education* (Paris: 1961), p. 217.

inaugural note of half a Kuwaiti dinar featured an image of the main building entrance façade and the globe statue of Shuwaikh Secondary School in recognition of the school's role as a regional leader in education and cultural transformation (see **Figure 5.36**).[133]

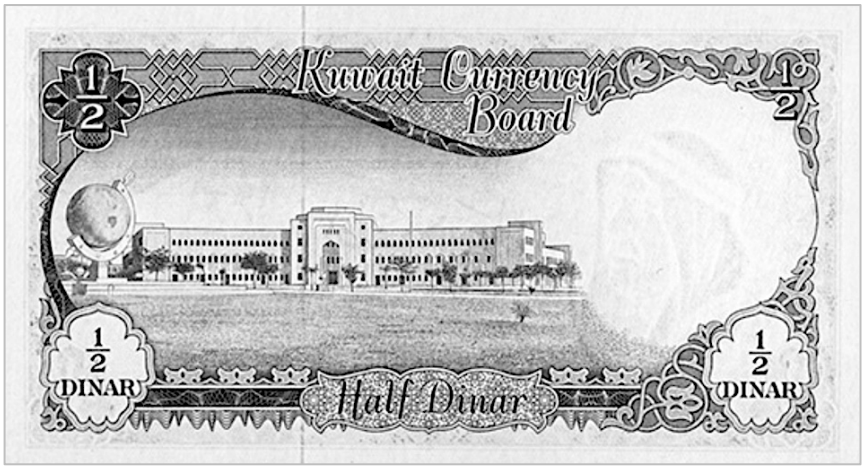


Figure 5.36 A half Kuwaiti dinar, 1961. The picture displays the inaugural currency that was issued for Kuwait upon its independence as a new state country. The half Kuwaiti dinar banknote has an image of Shuwaikh Secondary School, symbolising the nation's commitment to education.[134]

5.3.3 Khalediya Secondary School by Steinbüchel-Rheinwall (1962–1964)

Educational opportunities for boys and girls are intended to be equal in Kuwait. However, their physical spaces often had to be separated along gender lines to adhere to the religious tenets of segregation (excluding kindergartens). Nonetheless, in practice, boys were preferred by girls in school-building programmes. When a proposal for boys' secondary schools at Shuwaikh (in the education zone) was accepted by the Planning Board in 1951, Bneid Al-Qar (in Kuwait City) was set aside for girls' schools.[135] However, for unknown reasons, there was a delay in constructing girls' secondary schools. After nearly a decade, in 1960, the government formally invited Saba Shiber to evaluate the country's First Master Plan, to which he had made several adjustments. To reduce the impact on city traffic, Shiber proposed moving girls' secondary schools to Khalediya district.[136] In 1962, a German firm led by an Austrian architect was tasked with designing and constructing a secondary school for girls. The idea of a cultural centre was adopted in a manner analogous to that at the Shuwaikh School.

[133] Abdullah Al-Bikhait, 'Awl Abiril Yusadif Aldhikraa Alkhamseen Liaisdar Aldiynar Alkuaytii 'Awal Eumlat Kuaytiat Rasmia''[The first of April marks the 50th anniversary of the issuance of the Kuwaiti dinar, the first official Kuwaiti currency], *Kuna,* 2011.

[134] Abdullah B. Al-Bikhait, 'Dhikraa Murur 48 Sanah Alaa Sudur Wa Tadawul Aldiynar Alkuwaiti [Anniversary of 48 Years for the Issuance of the Kuwaiti Dinar]', *Al-Bousitah*, 2009, p. 13.

[135] This could be due to the fact that Saba Shiber made adjustments to the original master plan and the school's site was moved from the Bneid Al-Qar neighborhood to the Al-Khalediya neighborhood; see: Shiber, p. 165.

[136] Ibid. p. 378.

Steinbüchel-Rheinwall, a Graz native, was chosen as the architect for Khalediya Secondary School. He attended universities in Berlin and Munich and obtained his architectural engineering degree in 1926.[137] Like Ludwig Mies van der Rohe, Le Corbusier, and Walter Gropius in the 1910s, he worked as an architect in Paris from 1927 to 1930 under the supervision of Professor *Peter Behrens*.[138] Beginning in Berlin in 1930, he headed his firm until 1949, when he relocated to Frankfurt. His specialty was post-war modern architecture for large-scale projects, including hotels, housing developments, industries, offices, and Lufthansa's agencies.[139] In 1954, he received the Hesse State Award for outstanding architecture (Parkhotel Bad Nauheim).[140] However, due to the lack of available information, it is unclear how Steinbüchel-Rheinwall was involved in the secondary school project in Kuwait. There exists a dearth of primary or secondary resources addressing the approach to and process of Khalediya Secondary School design and construction. Therefore, only two articles from 1966 and 1970 pertaining to Steinbüchel-Rheinwall's practices served as the basis for this section.[141]

Khalediya Secondary School. (as shown in **Figure 5.37**), like Shuwaikh and the Technical College, was planned as a cultural centre offering a range of educational facilities within one complex. Steinbüchel-Rheinwall was given access to a one-kilometre plot of land where he could build a girls' school with a capacity of 1,000 students; as shown in **Figure 5.38** to **Figure 5.39**, the dormitories (Bldgs. 8, 9, and 10) were for 350 students and 100 teachers, and there was a theatre (Bldg. 16) with a stage and seating for 1,600 people.[142] Additional features include a swimming pool with different levels, a stadium with a regulation-sized playing field and grandstands, several smaller playing fields, and a concert hall with seating for four 150 people, split between two large rooms (see **Figure 5.39** and **Figure 5.40**).[143]

[137] Ernst Zietzschmann, 'Zu Unserem Heft [a Notre Volume]', *Bauen + Wohnen,* 20 (1966).
[138] Ibid.
[139] Ibid.
[140] Ibid.
[141] Zietzschmann; Steinbuchel.
[142] Zietzschmann; Steinbuchel.
[143] Zietzschmann; Steinbuchel.

Figure 5.37 An aerial view of Khalediya Secondary School, 1964. An image from the Kuwait University archives depicts the front facade of Khalediya Secondary School for females. The large campus was specifically designed to accommodate a total of 1,000 students and encompass all necessary educational amenities within the premises.[144]

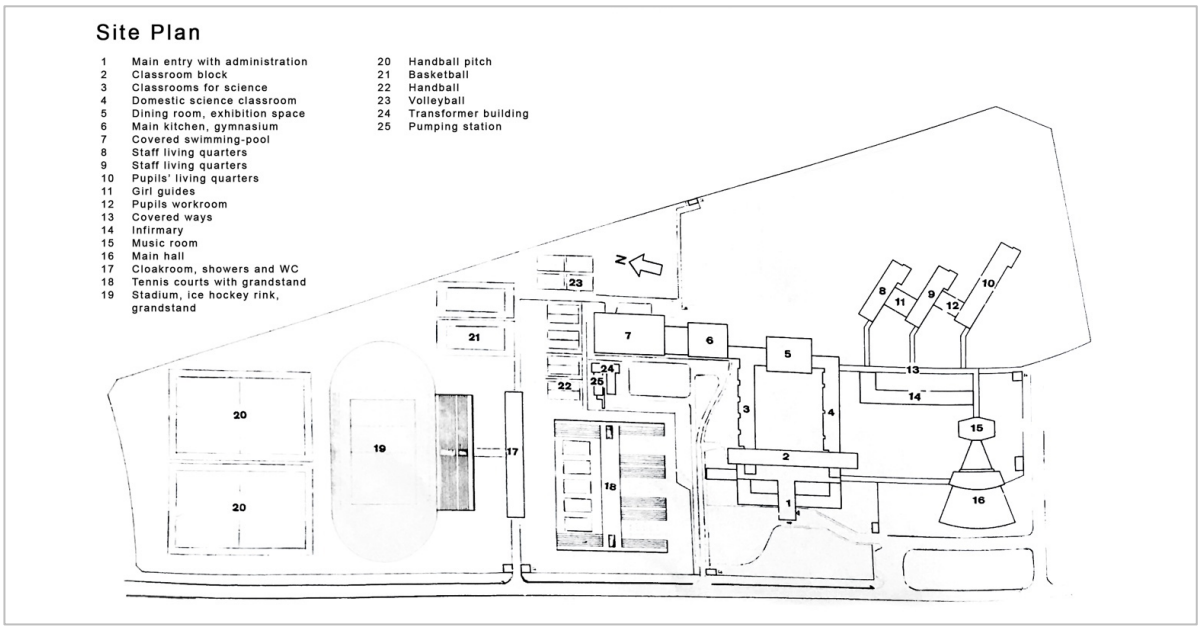


Figure 5.38 Khalediya Secondary School site layout. The map displays the complete architectural design of the secondary school layout. The school comprises administrative facilities, classrooms and laboratories, and sports fields.[145]

[144] The Afaq Archives, Kuwait University: The Photography Section, 'Khalediya Campus', 1964.
[145] Zietzschmann, p. 144.

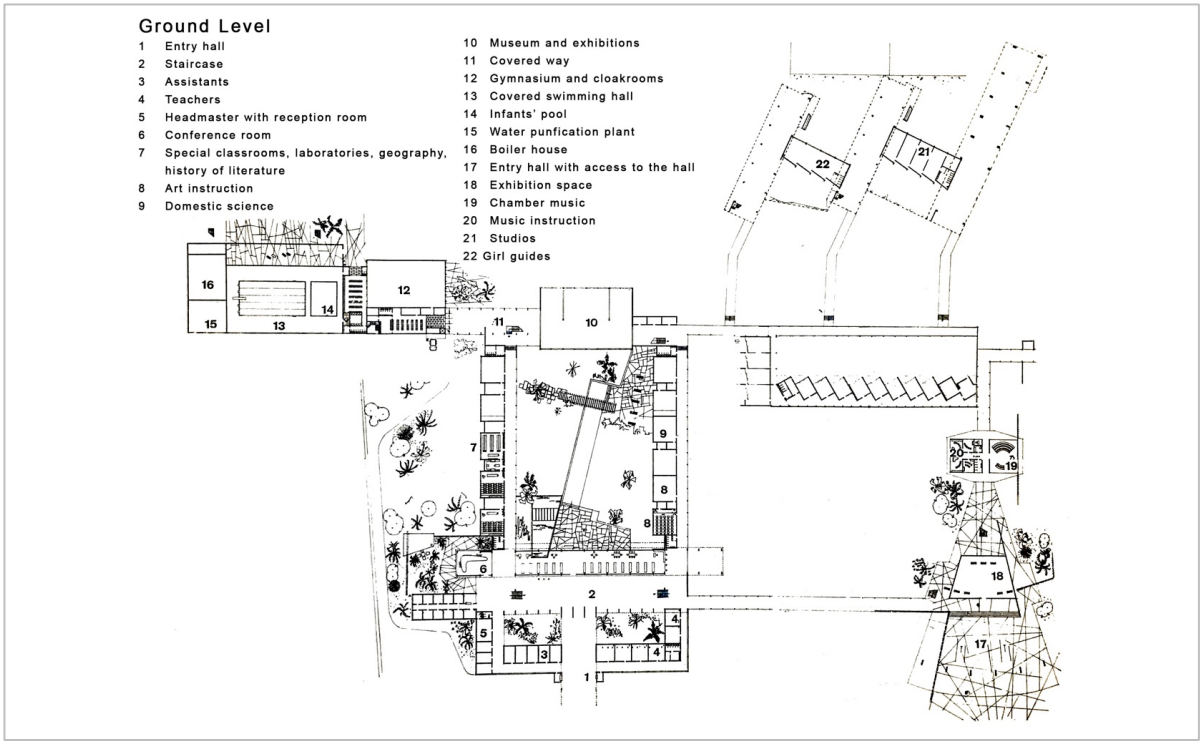


Figure 5.39 Khalediya Secondary School plan, ground level.[146]

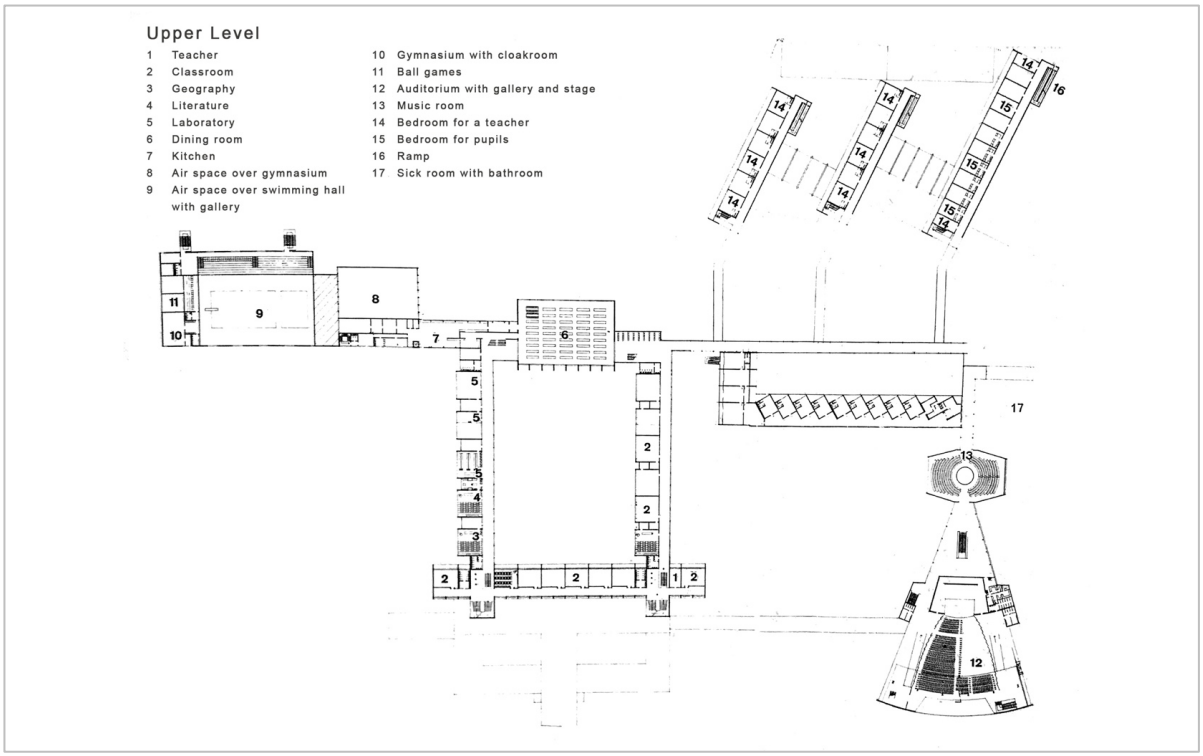


Figure 5.40 Khalediya Secondary School plan, first level.[147]

[146] Ibid. p. 145.
[147] Ibid.

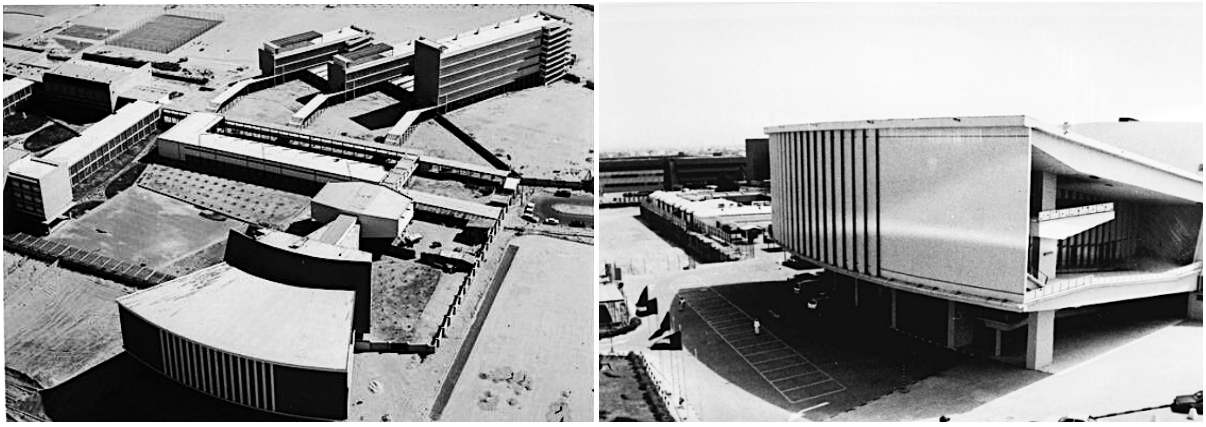


Figure 5.41 Khalediya School for Girls. Left: The image, obtained from the archives of Kuwait University, depicts Khalediya secondary school, including its theatre hall and other facilities, all interconnected by a covered walkway. The image was captured in 1974.[148]

Figure 5.42 Khalediya theatre hall. Right: The image depicts the ongoing building of the theatre hall in 1962.[149]

Figure 5.43 Khalediya theatre building, a side view, 1964. The image sourced from the gta ETH/Zurich Archives, captured by Roth, depicts the theatre hall (building 16) as viewed from either the side or the main road.[150]

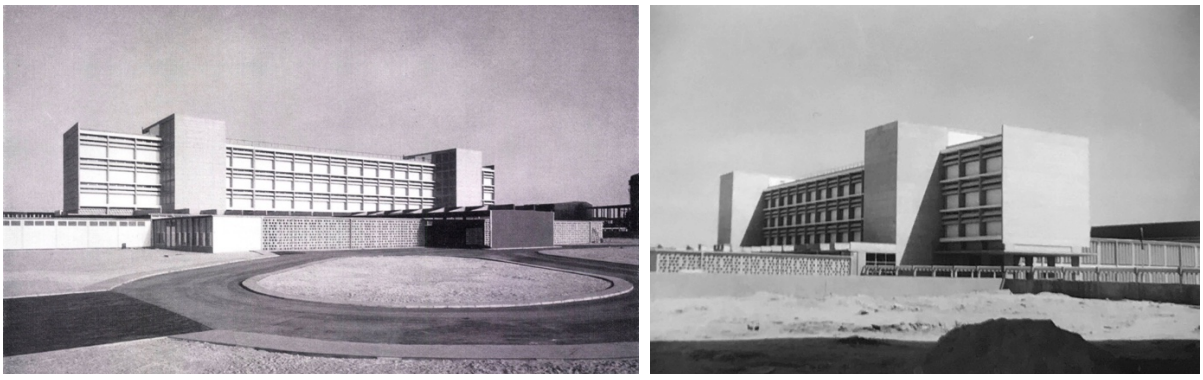


Figure 5.44 The main entrance to the Khalediya campus. [Left][151]

Figure 5.45 The main building is from the south-west. Right: This image was located among the gta ETH/Zurich Archives. It is an image captured by Roth during his visits to Kuwait in 1965.[152]

[148] The Afaq Archives, Kuwait University: The Photography Section, 'Khalediya Campus, Postcard', 1974.
[149] The Afaq Archives, Kuwait University: The Photography Section, 'Khalediya Campus under Construction', 1962.
[150] Alfred Roth, Girls' Secondary School, Kuwait, gta Archive, 1964.
[151] Zietzschmann, p. 144.
[152] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: Ref. 131-0162/0165 (3/3), Alfred Roth, 'Khalediya Secondary School', 1965.

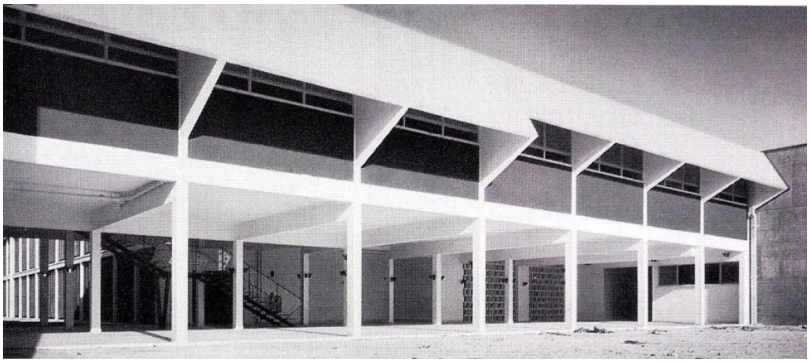
While Steinbüchel-Rheinwall's directing design principles emphasised the efficient separation of building masses and related functions, consideration of environmental factors in light of the region's hot climate, and the use of high-quality building materials, this design also incorporated increased levels of gender privacy. Therefore, cultural centre distribution has significantly benefited from the distinct separation of its building units, aiming to provide privacy. The main campus, with regular classrooms and a stadium, a swimming pool, and a gymnastics pavilion, can be accessed directly from the street, as shown in **Figure 5.41**, making it easier to host sporting events open to the public; the dormitory is entirely separate from the main campus and can only be reached through the main campus's dining hall and library; and finally, students can only gain access to the theatre through the main campus (see **Figure 5.42, Figure 5.43, Figure 5.44** and **Figure 5.45**).[153] It was intended that males would not have visual access to female students anywhere besides in the sports field; a private space was a priority during the planning process.

By designing for shade from the sun, cross ventilation from the horizontal and vertical planes, and protection from regular sandstorms, the school's physical focus shows adherence to environmental principles that are in harmony with the climate condition. The architect did extensive work on the use of *brise-soleils*, from which the solutions were implemented, as shown in **Figure 5.46** and **Figure 5.47**; these were vertical on the east and west façades and horizontal on the south (see **Figure 5.48** and **Figure 5.49**).[154] Both the main campus and theatre were connected to the school's main area by long covered walkways (as shown in **Figure 5.50**), organised in terms of straight axial symmetry. Similarly crucial was cross ventilation, both on the ground and the upper levels, which necessitated the provision of vertical air circulation along the exterior walls.[155] The dining room, theatre, and concert hall were the only public spaces designed with air conditioning.[156]

[153] Zietzschmann; Steinbuchel.
[154] Steinbuchel.
[155] Ibid.
[156] Ibid.

Figure 5.46 Teachers' dormitory at Khalediya School. Left: This image portrays Building No. 9, which serves as a dormitory for teachers. It showcases vertical shading components and is viewed from the northeast.[157]

Figure 5.47 Students' dormitory at Khalediya School. Right: This image depicts Building No. 10, which functions as a residential facility for students. The louvres with black shading are prominently displayed when viewed from the southeast.[158]



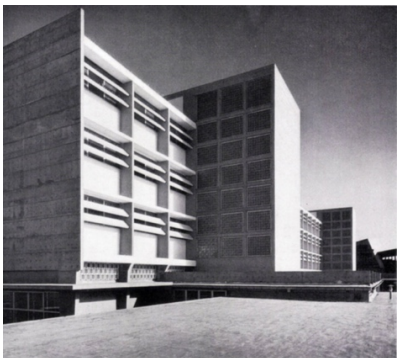


Figure 5.48 Khalediya School Kitchen. Left: This image was captured from the eastern side, providing a view into the kitchen of building 6. The substantial projections provide protection for the cooking areas against the intense sunlight.[159]

Figure 5.49 Offices and classrooms at the main building, Khalediya School. Right: This image depicts the classrooms and administrative offices from a north-western perspective, featuring horizontal sunbreaks.[160]

Figure 5.50 Covered walkway at Khalediya School. The image provides an extensive overview of the shaded paths specifically built to connect the various buildings at Khalediya School.[161]

[157] Zietzschmann, p. 147.
[158] Ibid. p. 148.
[159] Ibid.
[160] Ibid. p. 146.
[161] Ibid. p. 147.

Furthermore, Steinbüchel-Rheinwall made an obvious effort to employ high-quality construction materials despite a lack of information regarding the associated costs. Exposed concrete was used in nearly all campus buildings, with selected areas receiving a red, blue, or yellow finish, similar to his project in Köln (Parkcafé).[162] These colours were used extensively throughout the complex, which was significant because of the architect's ties to the Deutscher Werkbund.[163] However, according to Ernst Zietzschmann, fair-faced concrete with reinforcing steel was partially painted in bright hues.[164] Additionally, all structural features were bulletproof in case any repairs needed to be made, and there were no available artisans.[165]

Khalediya School unveiled one of the top learning environments that was used by Kuwait University two years after it ceased operation as a secondary school in 1962, with the help of these principal designs to create one centre for both education and cultural practices, not just for students but also for the general public (see **Figures 5.53 to 5.54**).[166] Today, the school buildings that evolved into universities are still in operation for educational objectives, except for the administration building, some classrooms, dining hall, and courtyard, which have all been destroyed.

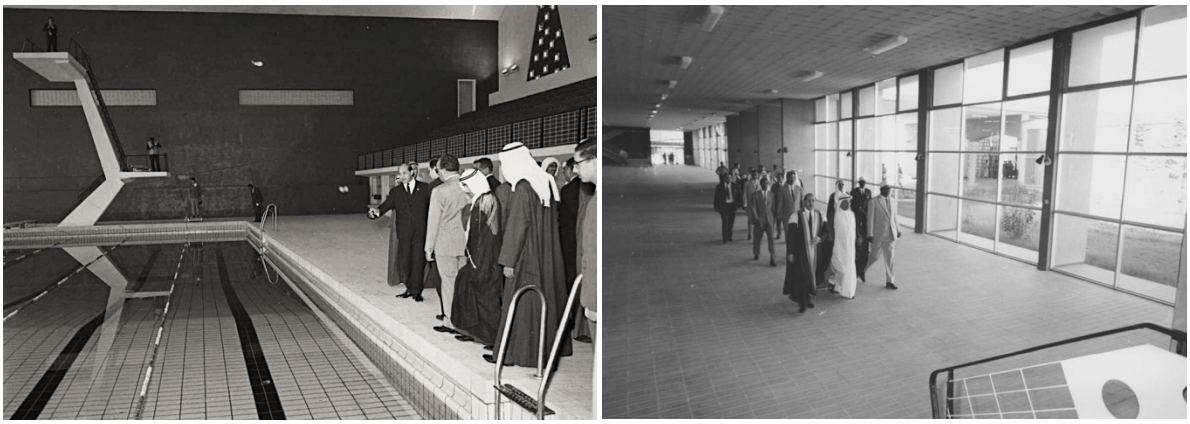


Figure 5.51 Swimming pool at Kuwait University in 1966. Left: The image depicts the former Khalediya secondary school, which has been repurposed for university education. The image was captured on the day of the university's opening, while the team was engaged in a campus tour.[167]

Figure 5.52 Kuwait University on the opening day of 1966. Right: During the opening ceremony of Kuwait University, the administrative team conducted a comprehensive tour of the campus. This image, acquired from the Kuwait University Archives, depicts the inside of buildings with modern designs and large windows designed to maximise natural light infiltration.[168]

[162] Oliver Grebe, 'Rheinparkperle, Schön Wär's: Kaffee Und Kuchen Im Park-Café', *koeln architektur.de*, 2014.
[163] Especially when he participated in the Sezession Graz and Berliner Bauausstellung exhibitions; see: Walter Gropius and Konrad Wachsmann, 'Cropius, Hirsch, and the Saga of the Copper House', 2021.
[164] Zietzschmann; Steinbuchel.
[165] Zietzschmann.
[166] Abdullah Z. Al-Sara'awi, *Ma'alem Men Alkuwait* [Landmarks from Kuwait] (Kuwait: n. p. , 1977), p. 155.
[167] The Afaq Archives, Kuwait University: The Photography Section, 'A Look at the Swimming Pool', 1966.
[168] The Afaq Archives, Kuwait University: The Photography Section, 'Kuwait University's Opening Ceremony Day', 1966.

Figure 5.53 A geography lecture at Kuwait University, 1966. Left: This image is part of the Kuwait University Archives collection. The image represents the level of participation in a geography lecture at Kuwait University.[169]

Figure 5.54 Military training at Kuwait University, n.d. Right: The image depicts a weekly military training session held at the university. The image shows a pathway that has been aesthetically constructed to provide protection against sunlight and provide a cross-ventilation.[170]

In 1966, when the Ministry of Education planned to found Kuwait University, the Shuwaikh and Khaldiya School complexes were chosen as the sites for the new university; their buildings are still being used for the same function today.[171] On the other hand, the Technical College operated until 1976, when the government terminated its programme, and no more information about its demolition is known to exist, except that it has been replaced by the Public Authority of Applied Education and Training today.[172]

In an effort to create a cohesive learning environment, architects and builders began arranging numerous activities spread out across learning spaces; an approach predicated on establishing an entire campus with all of its buildings beginning to resemble a ‘cultural centre’ or small town. The school’s new and modern campus was designed to expand upon the school’s previous model of a single courtyard where a wide variety of cultural events were held. These schools, first vocational and then higher education, were established with the same best intention as Ahmadi City: to offer welfare services for its people. They were created to assign the best designers, provide the most advanced technology, import the best materials, and recruit the most talented workers. These schools brought urbanisation to a previously deserted area, allowing for the growth of a city and its surrounding community. The ‘cultural centre’ schools are notable for several reasons, not the least

[169] The Afaq Archives, Kuwait University: The Photography Section, 'Geography Class', 1966.
[170] The Afaq Archives, Kuwait University: The Photography Section, 'Students Getting Trained ', 1966.
[171] UNESCO, *International Yearbook of Education* (Paris: 1960), p. 46; UNESCO, p. 217; Farah Al-Nakib, *Kuwait Transformed a History of Oil and Urban Life* (Stanford, California: Stanford University Press, 2016), p. 170.
[172] PAAET, 'Brief About Technological Studies College', 2022 <https://e.paaet.edu.kw/colleges/AR/CollegeOfTechnologicalStudies/AboutUs/Pages/Brief.aspx> [accessed 05 November].

because they are still serving their original purpose today, demonstrating their longevity and usefulness. It has also played an important role in Kuwaiti society and culture for decades, with a lasting societal impact that is now legendary.

5.4 STATE PROTOTYPE SCHOOLS

5.4.1 First Standardise State Schools by Tripe and Wakeham (1952–1955)

In 1945, the Kuwaiti government adopted the Egyptian schooling system, which divided students into three-year nursery, four-year primary, and five-year secondary levels, each with a separate school facility.[173] On the other hand, the importance of education in society has become more widely recognised, causing the number of students to rise from 600 in 1937 to 5,340 in 1950.[174] These elements played a role in elevating the urgency of building new state schools in Kuwait. Since funding for the Education Department increased in 1950, the government began a programme to construct new nursery and primary schools in 1952, in partnership with the British firm Tripe and Wakeham.[175]

To incorporate Kuwait's people into modern society, the government looked forward to constructing new and modern schools, the first of their kind in Kuwait's history. An article in Al-Arabi magazine with the subtitle *'Here a new generation is made'* discussed how the nursery is seen as the first step in shaping the modern personality of a Kuwaiti child.[176] School was seen as a place where children might be exposed to and taught values and beliefs that would shape their identity and the future of their nation. According to the editor-in-chief of Al-Arabi magazine, Ahmad Zaki, the nursery corrected mistakes in parenting.[177] The idea behind nursery schools was to provide children between the ages of four to six with a safe space where they could experience the joy of childhood through consistent activities and basic education that they may have been missing at home.[178] On the other hand, primary schools were intended to provide students with age six to nine with a foundational education that would enable them to progress up their educational levels and become well-informed and self-assured adults.[179] Foundations were laid for students' future success in reading, writing, and arithmetic and their ability to express themselves via art, language, music, and

[173] Raafat, p. 5.
[174] Hussein, p. 154.
[175] Arabian Gulf Digital Archive [AGDA]: FO 371/109856; The National Archives [TNA]: FO371/109860.
[176] 'Jawlah Fi Riyad Alatfal Alnamouthajiyah Bel-Kuwait', *Al-Arabi*, 1st November 1959.
[177] Ahmad Zaki, 'Hadith Alshahra: Hajar Al'umi 'Awal Kursiin Fi Madrasat Alhayat' [Hadith of the month: Mother's stone is the first chair in the school of life], ibid.1st June 1966.
[178] Abdo, p. 29; Al-Sabah, p. 58; Al-Sara'awi, p. 128; QalahJi, p. 96.
[179] Al-Sara'awi, p. 128; Abdo, p. 31.

play. Consequently, educational pedagogy incorporated the need for a school's necessary amenities, such as sports programmes, libraries, and other extracurricular offerings.

Unlike boarding secondary schools in Shuwaikh and Khalediya, nursery and primary schools were designed as day schools. Tripe and Wakeham ensured that the plans were in line with the best pedagogical practices and that the construction met the highest Western standards.[180] Their note on school design was that no buildings significantly similar to those intended to be oriented in Kuwait or the nearby Gulf Sheikhdom were included in the assignment provided by the Department of Education; therefore, the issue required studies based on Western practices. The first set of standardised schools to use a newly developed typology occurred in response to Minoprio, Spencley, and Macfarlane's creation of Kuwait's First Master Plan.[181] This meant that many additional schools would have to be constructed in the rapidly expanding suburbs, such as the Shamiya and Shuwaikh districts, in addition to the existing schools required within the third-wall areas (such as Sharq, Qibla, Megwa, and Mirqab).[182]

In addition to the designers' work with John Howard, a contracting company at the Technical College, they also worked with Taylor Woodrow (Kuwait Research Centre contractor), D. and C. and William Press (The Central Kitchen and Town Water Supply contractor), and Holland and Hannen and Cubitts (Emiri Hospital contractor) to ensure the design of five nursery schools and three primary schools.[183] The projects were distributed as shown in **Table 5.1**:

[180] Wakeham, p. 6.
[181] Minoprio, Spencely and Macfarlane, pp. 12.
[182] Wakeham, p. 6.
[183] Ibid.

School Level	School Name	Location	Gender	Contractor	Cost
Nuesery	Al-Mansour School	Shuwiakh*	Mixed	D. & C. William Press	£400,000
	Shamiya School	Shamiya	Mixed	Taylor Woodrow	£510,000
	Megwa School	Megwa	Mixed	Taylor Woodrow	£431,000
	Tarik School	Qibla	Mixed	Taylor Woodrow	£270,000
	Muhallab School	Sharq	Mixed	Holland & Hannen & Cubitts	£620,000
Primary	Shamiya School	Shamiya	Boys	Taylor Woodrow	£1,350,000
	Al-Siddiq School	Sharq	Boys	Holland & Hannen & Cubitts	£1,680,000
	Salah Ad-Din School	Mirqab	Boys	D. & C. William Press	£1,520,000

*It was initially planned to have it at Al-Jahra, but the documents show a move in its location to Al-Shuwaikh Residential District.

Table 5.1 A list of school projects erected in Kuwait, 1952-1954. The Kuwaiti school buildings constructed from 1952 to 1954 include details about the contractor firms involved and the associated costs.[184]

The prototype design was planned for the nursery school to house 105 children (15 per class), with a full complement of facilities, including six classrooms, workshops, an assembly hall, dorms, a clinic, a school kitchen and server, a dining hall, a staffroom, housing for ten teachers, and a headmaster's suite (see **Figure 5.55** and **Figure 5.56**).[185] With an average of 36 students per class (828 in total), three one-story buildings and one two-story structure were proposed for the boy's primary schools, including 18 classrooms, two laboratories, two art rooms, a workshop and scout room, an assembly hall for 800 people, a kitchen and server, a clinic, a library, a gymnasium, a swimming pool, playing fields, changing rooms, housing for 30 teachers, a staff lounge, a dining hall, and separate quarters for the headmaster (see **Figure 5.57**, **Figure 5.58** and **Figure 5.59**).[186] The projects were built on property belonging to the Department of Education and consisted of 16,000 square metres for nursery schools and 63,000 square metres for primary schools.[187]

According to a UNESCO report, new state schools boasted lavish amenities that had never before been seen in the region, inspiring parents to send their children to school and ushering in a new era of prosperity.[188] However, as stated by Donald Barron, these prototype school buildings, which included five nurseries and three primary schools, gave off an unwelcoming impression because of

[184] Ibid.; The National Archives [TNA], London: FO371/109860, 'Third Report on Financial Control, Development, Progress and Expenditure in Kuwait, 22 January', 1954; The National Archives [TNA], London: FO371/109860, 'Fourth Report on Financial Control, Development, Control and Expenditure, 18 October', 1954; The National Archives [TNA]: FO371/109860.

[185] Tarik nursery was planned to accommodate 75 students only. Wakeham, p. 7.

[186] Ibid.; Badran, *Aleiman*.

[187] According to another source, the nursery school was 6,000 square meters and the primary school plot was 48,000 square meters in size; See: Hussein, p. 267; Abdullah Al-Ghunaim, 'Eimarat Almadaris Fi Awayil Alkhamsinat' [School Architecture in the Early Fifties], *Resalat Alkuwait [Kuwait Message]*, 2012..

[188] Donald G. Barron, *Kuwait: The Design of Schools and Related Problems* (Paris: 1967).

the excessively sloppy usage of concrete that gave off a costly and brutalist appeal at the time.[189] According to the findings of the fieldwork conducted in this study, there are currently approximately 20 school buildings that can be considered Tripe and Wakeham's typology.

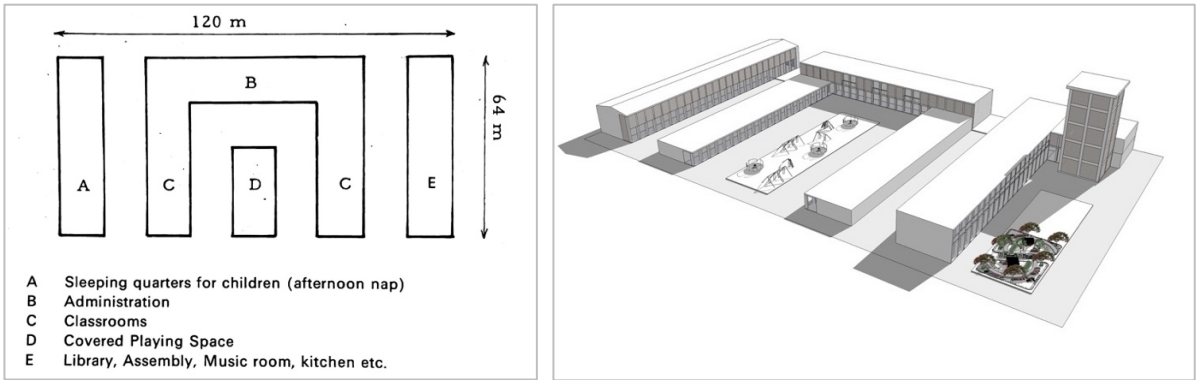


Figure 5.55 Nursery layout design in Kuwait. Left: The image was included in the Second Master Plan study conducted by Buchanan, which was a nursery plan developed by Tripe and Wakeham. The layout illustrates the allocation of nursery building units throughout various areas, including sleeping quarters, administration, classrooms, playgrounds, and other amenities such as a library and music room.[190]

Figure 5.56 A 3D model of the nursery school design. Right: The illustration was created by the author, using secondary materials as the basis.[191]

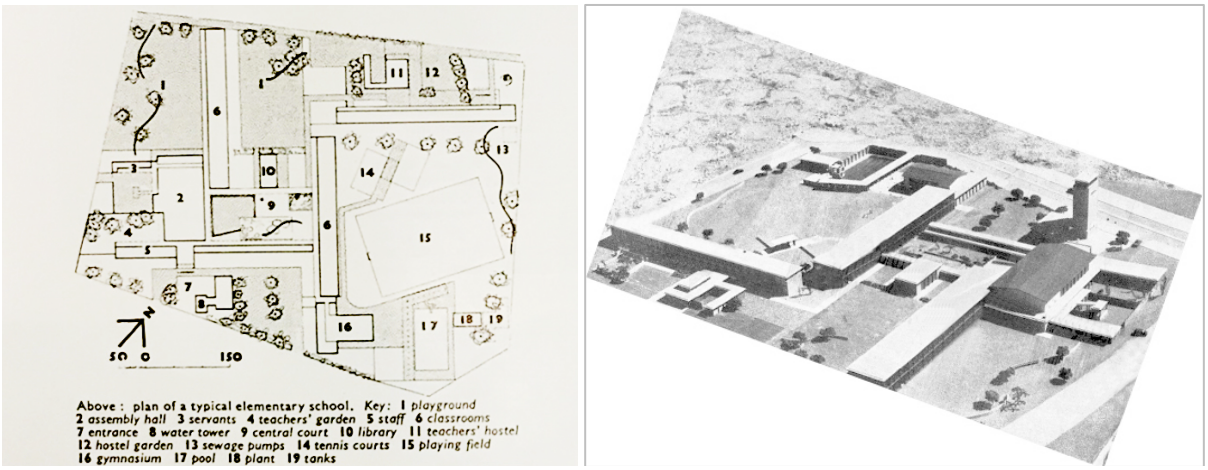


Figure 5.57 Al-Siddiq School primary school plan. Left: A plan of a standard primary school designed by Tripe and Wakeham. The image was featured in the Architectural Design Journal in 1957.[192]

Figure 5.58 Al-Siddiq School primary school model. Right: This 1957 article from the Architectural Design Journal features a picture of a three-dimensional model of the Al-Siddiq primary school.[193]

[189] Ibid.
[190] Colin Buchanan, *Studies for a National Physical Plan for the State of Kuwait and Masterplan for the Urban Areas* (1970), p. 8.
[191] Author, 2023.
[192] Educational Buildings in Kuwait; Architects: Tripe and Wakeham, p. 95.
[193] Ibid.; modified by Author.

Figure 5.59 A view of Al-Siddiq primary school, n. d.[194]

Tripe and Wakeham took a similar approach to the design of the Technical College, putting an emphasis on the climate condition in the school's design. The open-air plan was well-timed to offer shelter from the sun's rays and ventilation from the breeze.[195] It is why the essential rooms and windows were located on the northeast side of the building, and cross-ventilation was prioritised on the southwest. Despite the designers' best efforts to study the local weather and include principles for designing in hot climates, the UNESCO missionaries who visited in 1961 and 1964 issued these principles, citing the expansive windows as an example of an element that was inappropriately out of place.[196]

Moreover, the design emphasises classrooms that feature one thick wall connected by patterned shaded corridors that reflect thin, hollow brick (as shown in **Figure 5.60**, **Figure 5.61** and **Figure 5.62**) placed between the reinforced columns.[197] These hollow bricks let in light and air but blocked the sun's radiation, lowering the inside temperatures. In addition, bright primary colours with some dark red, dark green, and light grey colours were used in an effort to emulate natural sunshine throughout the building.[198] Furthermore, miniature mosaics made of green glass were used on the walls of the building interior (see **Figure 5.63**). Although Barron criticised Tripe and Wakeham's design for being unfriendly and brutalist, it created an entirely new environment that was previously unseen in the region and was especially welcoming to children (see **Figure 5.64** and **Figure 5.65**).

With the courtyard concept implemented, the distribution of classroom views was directed inward, as shown in **Figure 5.66** and **Figure 5.67**, and as justified by Tripe and Wakeham*:*

[194] Ibid.
[195] Wakeham, p. 6; Educational Buildings in Kuwait; Architects: Tripe and Wakeham.
[196] Barron, p. 16; gta Archives / ETH Zurich [gta]: 131-0162/0165 (3/3).
[197] Wakeham, p. 5; Al-Ghunaim, *Resalat Alkuwait [Kuwait Message]*.
[198] Wakeham, p. 5; Educational Buildings in Kuwait; Architects: Tripe and Wakeham.

'… unless the building is sited near the sea, no desirable "view" exists in Kuwait. Although these may be planted and irrigation take place, it is unlikely that a good view ever exits in the Western meaning of the word. The western type of plan with glazing on exterior elevations is not applicable to Kuwait. The traditional Arab plan of all rooms looking on to a central courtyard would appear to be the cost satisfactory.'[199]

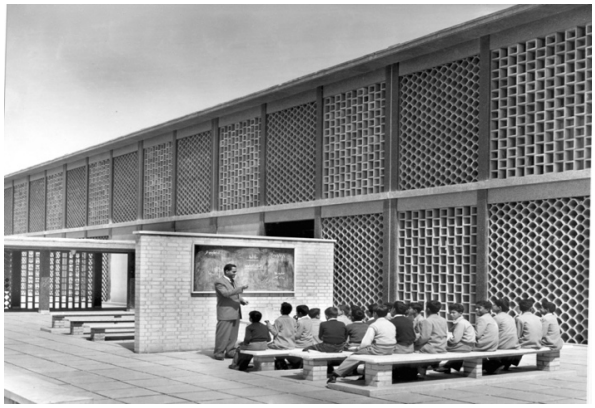


Figure 5.60 Ceramic screens are used at several schools. Left: The image depicts a detailed view of the ceramic screen pattern utilised in prototype schools in Kuwait.[200]

Figure 5.61 Ceramic screens decorate the school architecture. Right: An image depicts several ceramic screens utilised in state schools in 1954.[201]

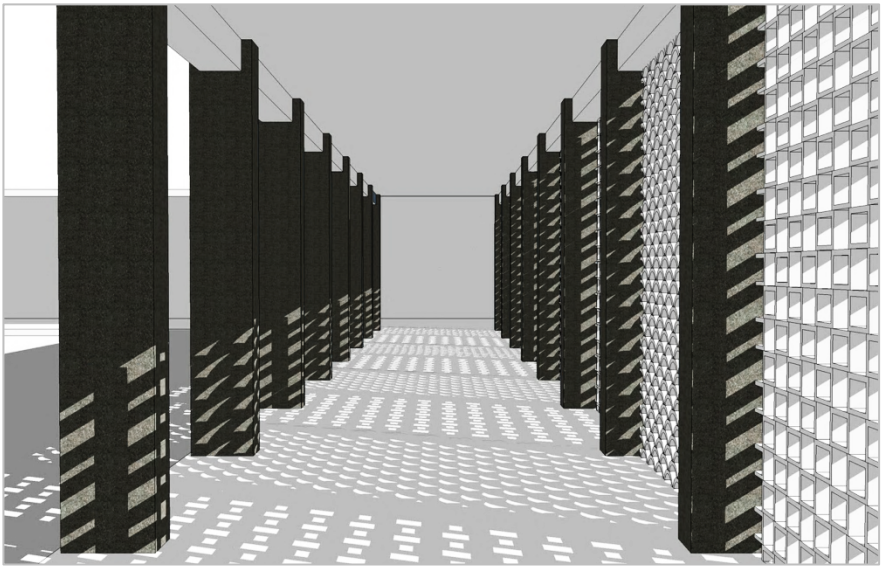


Figure 6.62 A 3D perspective for the school hallway. The provided illustration, produced by the author, depicts the ceramic screen design employed in the school corridors as well as the resulting shadow pattern formed by the reflection of sunlight.[202]

[199] Wakeham, p. 7.
[200] Educational Buildings in Kuwait; Architects: Tripe and Wakeham, p. 92.
[201] The British Petroleum Archives [BP], University of Warwick: Ref. 107086/032, © BP plc., 'Outdoor Class in Kuwaiti School', 1954.
[202] Author, 2023.

Figure 5.63 The glass mosaics used in the school. The image displays the implementation of little glass mosaics adorning the walls of nursery school toilets. The image shows fixtures that have been resized to accommodate the little hands and bodies of the pre-schoolers.[203]

Figure 5.64 Children play in the outdoor garden of the nursery. Left: A postcard from Ali Rayes's collection, with nursery children's outdoor drawing activity; the image depicts the pleasant atmosphere that was created for the age of the students, c. 1960s.[204]

Figure 5.65 An outdoor class at nursery school. Right: A postcard with nursery children outdoor music class, c. 1970s.[205]

[203] 'Jeel Jadeed Tasna'aho Reyad Alatfal Fi Alkuwayt', [Kindergarten in Kuwait Creates New Generation], *Al-Arabi*, 1st October 1963, p. 125.
[204] Rayes, p. 665.
[205] Ibid. p. 667.

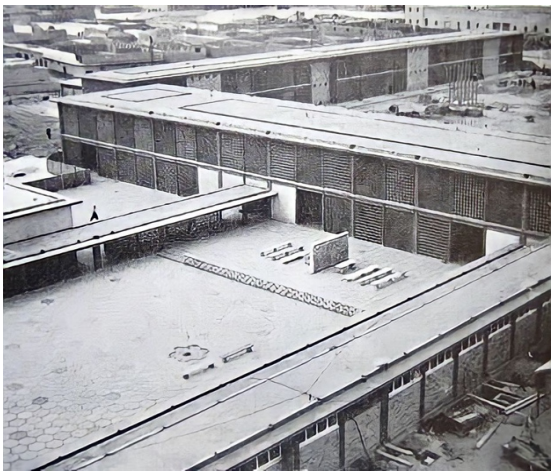


Figure 5.66 Salah Ad-din School courtyard. Left: The image depicts an outside area of a primary school, namely a courtyard, with benches for students to sit on. An image that was included in QalahJi's book.[206]

Figure 5.67 A nursery school's courtyard, 1956. Right: An image of a nursery school discovered in the British Petroleum Archives. The image reveals a school building with a modern architectural style and a landscaped playground.[207]

As a result, the courtyard was tiled with local materials and patterns, prepared with shrubs and small trees, and outfitted with permanent benches strategically placed for resting (as in **Figure 5.66**) or for use in outdoor classrooms (as shown in **Figure 5.68** and **Figure 5.69**).[208] Despite the designers' best efforts to shield students from the sun's radiation, the open-air setting they offered for classes could only be used during a few cooler months.

While the blueprints for the schools were drawn up in the London offices of the designer, a select team of architects travelled to Kuwait in early September 1952 to oversee the construction.[209] They encountered unexpected difficulties at the construction site as they worked with several contractors. The lack of fresh water, scarcity of local supplies such as sand and aggregate, and shortage of labour posed problems that predictably drove up the initial cost estimate (£250,000 for the nursery school and £678,000).[210] However, these firms collaborated with a Kuwaiti partner to produce the first social spaces, as pointed out by Muhannad Albaqshi's thesis, and the modernist learning environment in this region.[211]

[206] QalahJi, p. 142.
[207] State School, BP Archives,, 1956.
[208] Wakeham, p.
[209] Ibid.
[210] Educational Buildings in Kuwait; Architects: Tripe and Wakeham; Abdullah Al-Ghunaim, 'Sharikat Aliainsha' Alkuaytiat W Sharikat Taylor Woodrow Alanjlizia' [Kuwait Construction Company and Taylor Woodrow British Company], *Resalat Alkuwait [Kuwait Message]*, 2012; The National Archives [TNA]: FO 371/104341; The National Archives [TNA]: FO371/109860.
[211] Muhannad A. Albaqshi, 'The Social Production of Space: Kuwait's Spatial History' (unpublished doctoral thesis, Illinois Institute of Technology, 2010), p. 136.

Figure 5.68 Primary school courtyard in Kuwait. Left: An outdoor bench for resting in one of the primary schools, n. d.[212]
Figure 5.69 Outdoor class at a primary school. Right: A fixed bench used for an outdoor class in one of the primary schools, 1956. An image from the British Petroleum Archives.[213]

5.4.2 Other Attempts (1955–1960)

An additional seven nurseries and five primary schools were designed by Tripe and Wakeham in July 1954 (one was allocated to girls), as stated in Reilly's report on Kuwait's progress.[214] According to him, these schools were planned as part of the Education Department's long-term growth strategy, along with the new Education Department offices at Naif Avenue, which were estimated to cost £1,300,000.[215] It is unclear whether the school shown in **Figures 5.70, 5.71, and Figure 5.72** was built according to the blueprints provided by Tripe and Wakeham or whether it was designed by a different architect, such as Sayed Karim, who rebuilt the Mubarakiya School in 1957. He was tasked with creating three schools in Kuwait: Mubarakiya, an intermediate school, and a primary school, as claimed in Manar Moursi's article in the book *Essays, Arguments and Interviews on Modern Architecture Kuwait*.[216] This was due to the lack of additional information concerning the school's location or design layout. With the distribution of classrooms, administrative offices, covered swimming pools, and playgrounds, the school's layout was broken into three primary building masses connected by a lengthy fourth building mass. The layout, which served as the secondary and intermediate levels under the new pedagogical ladder that appeared in 1955, was implemented in the most pristine neighbourhoods.[217]

[212] Al-Ghunaim, *Resalat Alkuwait [Kuwait Message]*. 8.
[213] Primary School Kuwait Town, BP Archives, 1956.
[214] The National Archives [TNA]: FO371/109860.
[215] Ibid.
[216] Manar Moursi, 'Sharing and Building Modernities: Egyptian Architects in Kuwait 1950s-1990s', in *Essays, Arguments and Interviews on Modern Architecture Kuwait* (Kuwait: Gulf Museum Consultancy Company, 2015), pp. 116-135 (p. 121).
[217] Raafat, p. 2.

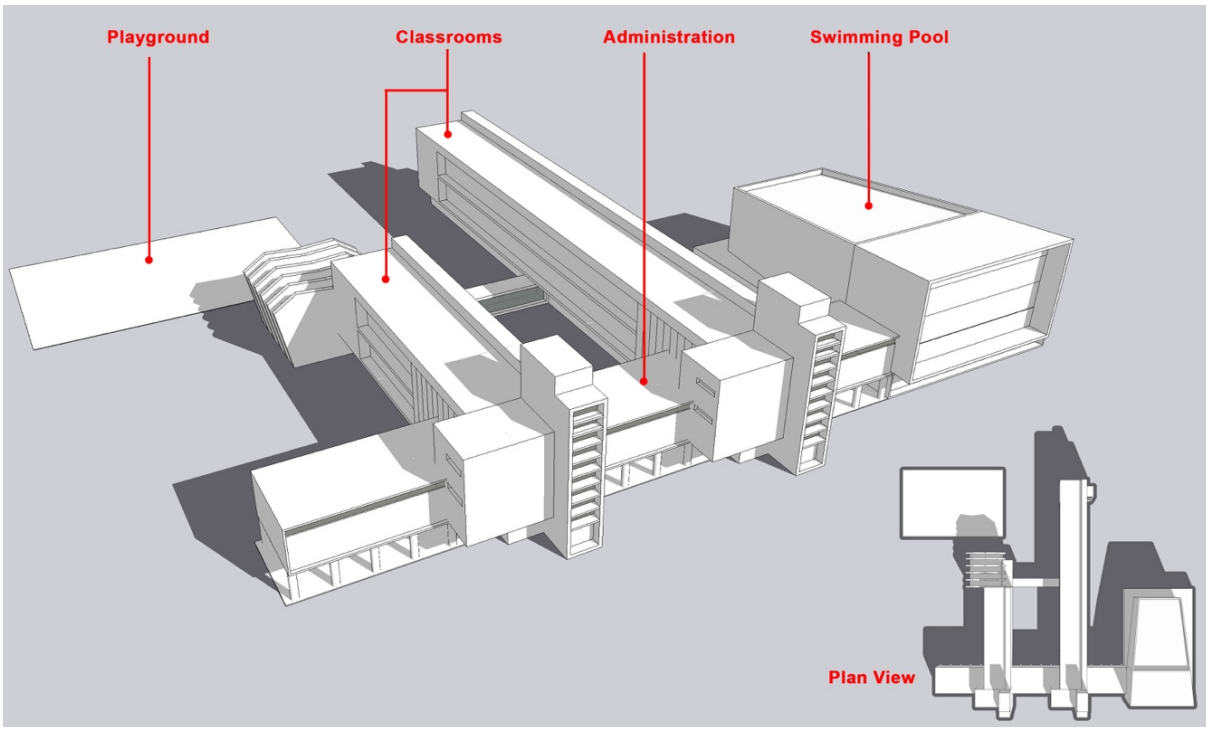


Figure 5.70 A 3D model of Kuwait's intermediate school. The illustration, produced by the author, was derived from secondary sources. The school showcases its design spaces in a modernist finger-plan style.[218]

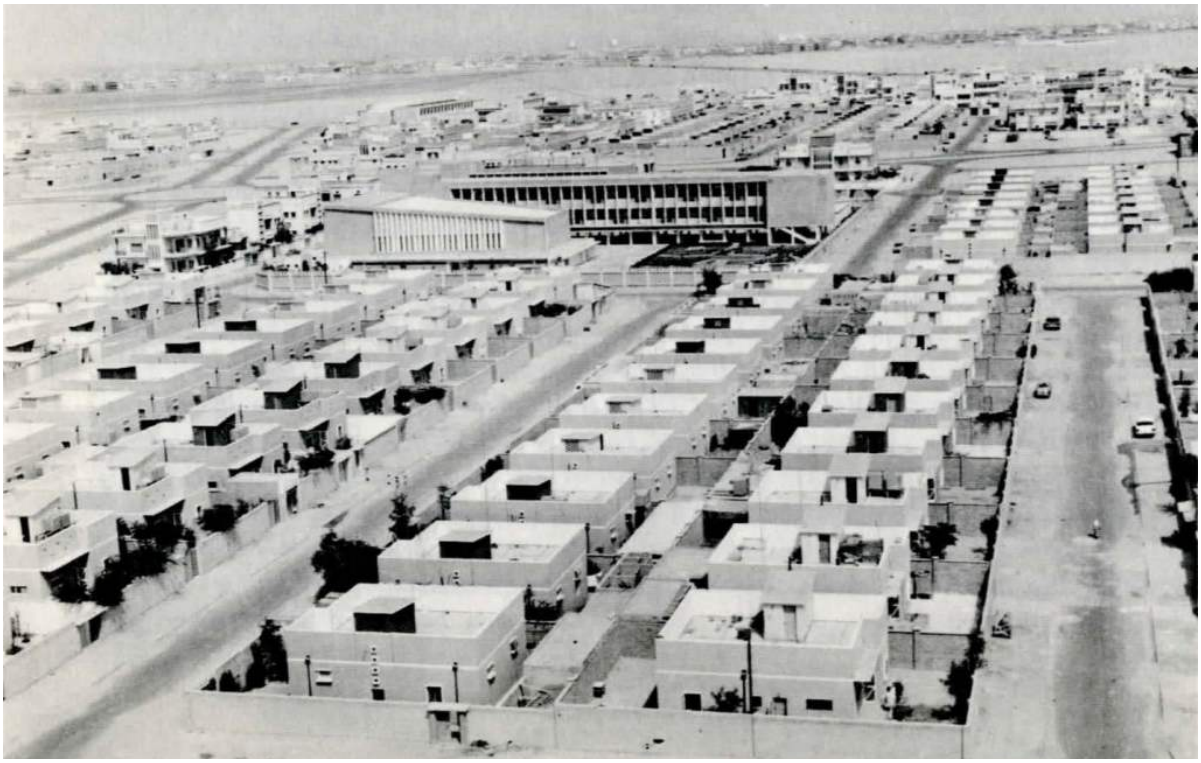


Figure 5.71 Intermediate school in Kuwait. The image displays a suburb in Kuwait with a recently constructed school, without any indication of the specific date it was taken. However, the picture was featured in Shiber's 1964 book.[219]

[218] Author, 2023.
[219] Shiber, p. 174.

Figure 5.72 Intermediate school at Fiha districts in the 1960s. The image displays an aerial view of the school located in Kuwait's neighbourhood. The school land is clearly significant and occupies a prominent location in the suburb.[220]

Figure 5.73 Salmiya Intermediate School for girls, 1961. An image representing the architectural design of a school in Kuwait's welfare book showcased a pioneering endeavour aimed at modernisation. This school typology could potentially be attributed to the designs of Tripe and Wakeham.[221]

[220] *Ukoos Awal* [First Pictures], ed. by Jaber Al-Hindal. 3 vols. Vol. 2 (Kuwait: NCCAl, 2018),(p. 118).
[221] Wizarat al-Irshad wa-al-Anba, *Kuwait Today: A Welfare State* (n. p.: Quality Publication Limited, 1963).

The first school in Kuwait, Mubarakiya, was in dire need of refurbishment. In 1957, Egyptian architect Karim, a graduate of ETH-Zurich University, was tasked by the Department of Education with creating a new, cutting-edge school architecture over the first known.[222] It is noteworthy that the ruler of Kuwait charged Karim with designing two palaces and several cinemas during the same period.[223] His Mubarakiya design mirrored the layout of a similar courtyard-based plan surrounded by classrooms facing inward, but on a grander scale and with more functional spaces (see **Figure 5.74**). The building, with two more stories, had its main entrance on the west side, facing the main road. As shown in **Figure 5.75**, its semi-curved or edged façade was covered in *bris-soleil* and horizontal and vertical shade panels, as used in modernist cinemas (also see **Figure 5.76**). Although the Mubarakiya School was never a prototype, this state school in Kuwait Town operated until 1985 as a boys' intermediate school and became one of the iconic symbols of the modernisation era.[224]

Private schools existed alongside state schools and were created for students with special needs or the children of expatriate workers (see **Figure 5.77** and Figure **5.78**). As indicated in **Chapter 4**, the Kuwait Oil Company (KOC) contracted with Wilson Mason's British company to develop a town plan for Ahmadi City that included housing units and amenities for the company's employees, including schools.[225] According to the *Ahmadi Planning Report*, two private schools, namely the Anglo-American School (1951) and the Indo-Pakistani School (1952), were established far before the state school buildings in Ahmadi City.[226] As exemplified by some of Bustani's projects erected in Ahmadi City according to Eskandar Maarouf's 1953 book, it is unknown whether Wilson Mason and Partners or Bustani's firm designed these schools.[227] In conclusion, this study had limited access to information on this subject.

[222] Fabbri, Saragoca and Camacho, pp. 24-34.
[223] Moursi.
[224] *Tarikh Altaelim Fi Dawlat Alkuayt* [History of Education in the State of Kuwait], ed. by Abdulaziz Hussein. Vol. 1, Alta'aleem Fi Alkuwait Month Nash'atha Hatta Sanat 1355 H (1936m), Albedayat Alulla (Kuwait: CRSK, 2002),(p. 115).
[225] BP Archive, KOC, 'Kuwait Building Programme, Al-Ahmadi', 1947.
[226] BP Archive, Warwick University: KOC, 'Report on Al-Ahmadi City'.
[227] Maarouf, p. 224.

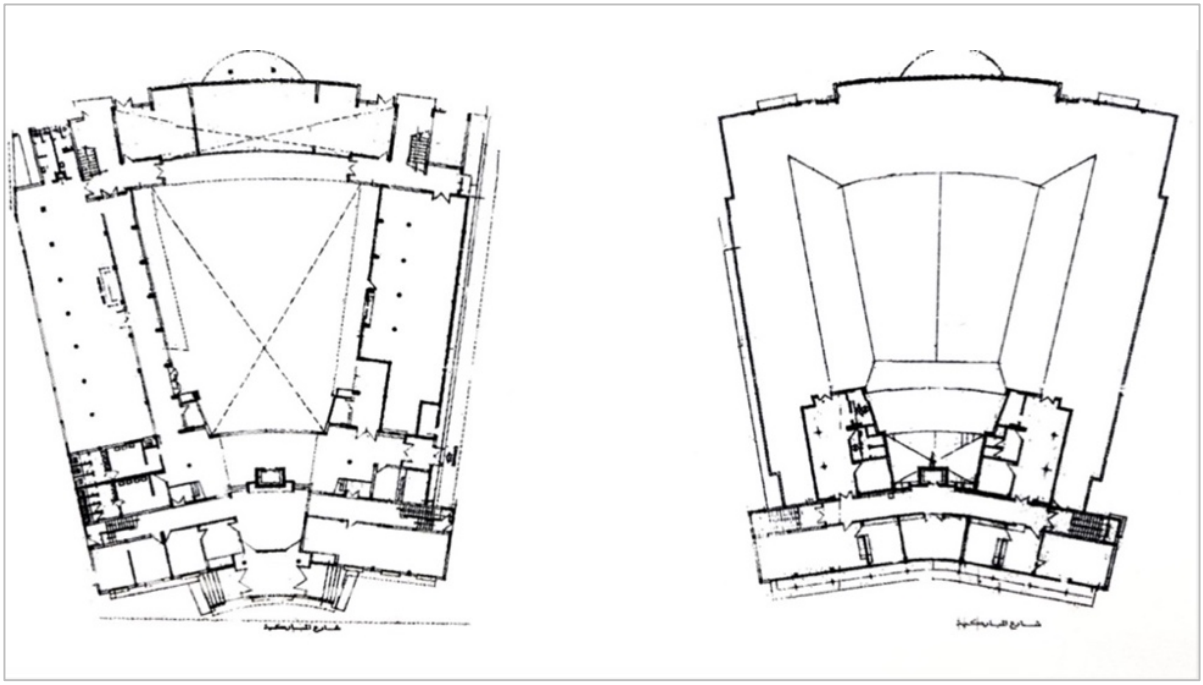


Figure 5.74 New Mubarakiya School plans, n.d. The illustration represents the floor plans of the ground floor and first floor of the renovated Mubarakiya school. Sayed Karim, the designer, became the winner in the competition for the reconstruction of the school. He designed a novel form of school architecture that had an open courtyard surrounded by classrooms. His modernist approach focused on including cross-ventilation, natural lighting, and sun protection.[228]

Figure 5.75 The renovated Mubarakiya School, Kuwait Town, 1958. Left: The image sourced from the British Petroleum Archives depicts the recently renovated Mubarakiya school building, which was constructed under the supervision of Sayed Karim. The building has a state-of-the-art design with its vertical and horizontal louvres.[229]

Figure 5.76 Cinema building in Kuwait town, 1960. Right: The cinema, another modern architectural creation by Sayed Karim, showcases a voluminous theatre and horizontal structures, complemented by vertical shading elements. Multiple cinemas with identical architectural designs were constructed around the country. As of now, solely the one situated in Al-Ahmadi remains undamaged.[230]

[228] Fabbri, Saragoca and Camacho, p. 58.
[229] New School, Kuwait Town, BP Archive,, 1958.
[230] The British Petroleum Archives [BP], University of Warwick: Ref. 107058/26, ©BP plc., 'Kuwait Cinema', 1960.

Figure 5.77 Workers' children studying at school in Ahmadi, 1949. Left: This image, sourced from the British Petroleum Archives collection, depicts children of workers attending school in Ahmadi city. The arrangement and distribution of tables in the classroom suggest a place within a house that closely resembles those found in Britain. Nevertheless, its precise location remains uncertain.[231]

Figure 5.78 Workers' children playing at school in Ahmadi, 1949. Right: Here is another image depicting workers' children in Al-Ahmadi city. The image shows the children engaged in a game of basketball under the guidance of their instructor.[232]

5.5 CONCLUSION

The space that housed the functions of teaching and learning evolved into a place for schooling, which was influenced by various pedagogical, political, social, religious, and economic influences. Its built environment has served a learning purpose and has transmitted comprehensive meaning to the nation's social development and cultural transition throughout history. In this chapter, the history of modernist school architecture in Kuwait was explored to examine the role of various foreign architects in shaping the best educational facilities during the first era of modernisation (the 1940s–1950s). With the goal of narrating the significance of school buildings using limited primary archival materials and secondary sources, this chapter investigated how the country's modernisation and cultural transformation have contributed to the physical layout of school architecture.

The chapter focused on the first wave of modernisation, which occurred during the British protectorate in Kuwait, corresponding to the influx of oil revenues after World War II and the ascension to power led by Sheikh Abdullah Al-Salem Al-Sabah, who emphasised the modernisation of educational infrastructure. By highlighting these three key variables (the British protectorate, oil

[231] The British Petroleum Archives [BP], University of Warwick: Ref. 107088/029, ©BP plc., 'Students Class at Ahmadi School', 1949.
[232] The British Petroleum Archives [BP], University of Warwick: Ref. 107088/030, ©BP plc., 'Students Playing at School', 1949.

revenue, and the ruler's vision), this chapter analysed how the transition in the architectural design of educational institutions was incorporated by a modernist style of Western principles. In conclusion, these transitions gave rise not only to new expectations for schools as a place of education but also as a hub for civic and political activities. Although the modernist school of architecture initially had a significant societal impact, it ultimately failed to meet the financial demands of the government and design standards set by international institutions that emerged in the 1960s.

The historical interpretation shows how the physical environment of schools underwent numerous significant changes in response to the modernisation that occurred throughout the nation. Rapid school architecture development was caused by government control over education development and its vision towards creating a new generation that would be eager to accept a modern and industrialised way of life. Therefore, the link between education and national growth has become increasingly evident and rationalised in modern society's human resource development, advocating for greater educational spaces. While the Kuwaiti government invested heavily in the school development plan, it lacked the necessary in-house architectural expertise. This presented an opportunity for the British to become involved in and contribute to providing Kuwait with world-class educational facilities, following their previous failure to engage politically in shaping Kuwait's educational system.

The outcomes show how foreign designers and contractors have followed Western educational best practices in Kuwait and established a new design typology for state schools that relies on a standardised layout design. Their efforts demonstrated a regionalist approach to tackling climate-related issues, and the outcomes were directly associated with the design of open-air school typologies, multi-complex facilities, and high-quality materials. Although Western contractors were pioneers in introducing modernism, in the eyes of the government, they ultimately failed because of a lack of reliable water resources, high-quality building supplies, reliable construction equipment, and a skilled labour force. The evidence provided in this chapter confirms that the Arab nationalist movement, which eventually overthrew British authority, may have replaced the aforementioned with regional designers and contractors who were experts in regional and climatic conditions. Despite the incorporation of regional expertise into Western modernity along their educational and career journeys, there is evidence of substantial political turmoil affecting the progress of educational architecture progress. It has been demonstrated that school buildings across the

country do not express the national identity in their aesthetic design as much as they do in their architectural context. Consequently, all modernist schools of architecture initially had a significant influence on society but ultimately did not meet the government's needs and the standards established by international institutions from the 1960s onwards.

Finally, this chapter makes an important contribution to understanding how changes in school architecture in Kuwait during the first wave of modernisation reflected changes in pedagogy, policy, and society while funding education was feasible. The shift in Kuwait's school layout reflects the West's modernist movement, but it has also been influenced by local requirements, legislation, and architectural practices that have shaped these educational institutions. In Kuwait's architectural history, the narrative of the challenges modern schools face in fulfilling the expanding need for educational facilities is remarkable.

CHAPTER SIX

TOWARDS A WELFARE STATE:

THE NEW SCHOOLS

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The establishment of a welfare system in Kuwait after independence had a major impact on the development of the country's educational infrastructure. The implementation of mandatory education was pivotal in accelerating the construction of new school buildings. Educational architecture has undergone standardisation and modularisation, progressing in line with global advancements. Additionally, prefabricated components have been incorporated to meet the needs of an expanding student population. This chapter builds upon the previous ones by exploring the educational built environment as modern and welfare-oriented architecture. Specifically, it investigates the international style employed by Alfred Roth, a Swiss architect renowned for his expertise in school architecture. This chapter examines the construction of new schools over twenty years, which was made possible by Roth's competence and government welfare programmes (as shown in **Figure 6.1**). It highlights the rational and functional methods used to create different types of school buildings that have had a lasting impact on the memories of children and the overall fabric of neighbourhood communities.

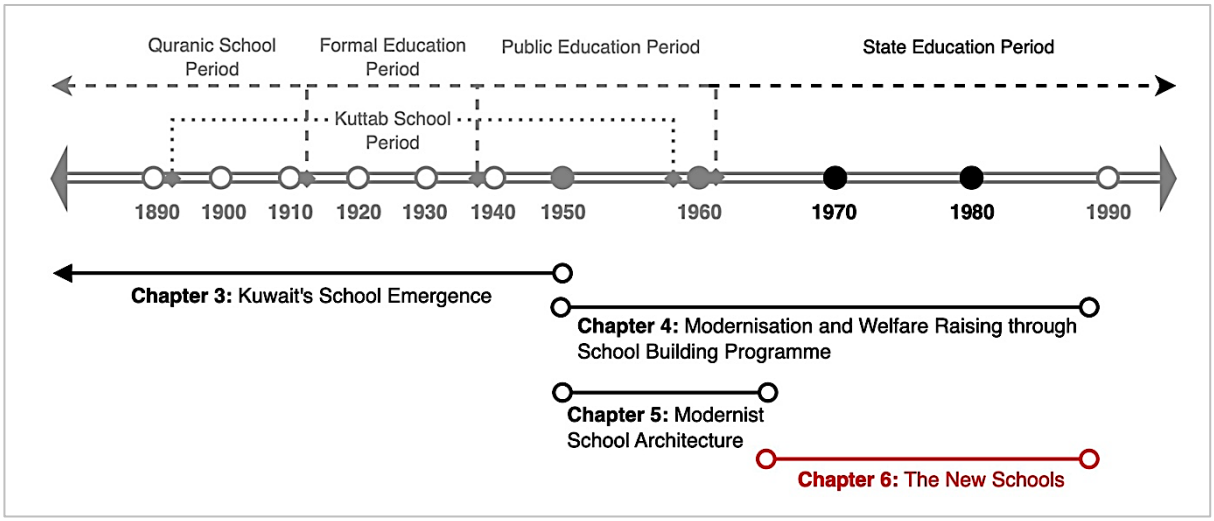


Figure 6.1 The chronological context of Chapter Six of this study.[1]

[1] Author, 2023.

6.1 OVERVIEW

This chapter analyses the international architectural style that met the requirements set out by the Government of Kuwait and its impact on the modern educational built environment. It analyses the new school typology that emerged over a twenty-years' time span due to Roth's expertise and the welfare state programme.

The emergence of Kuwait's welfare system in the second part of the nineteenth century significantly influenced school design. The introduction of mandatory schooling was a turning point in the nation's social provision, prompting a thriving production of school buildings by the masses. John Meyer, Francisco Ramirez, and Yasemin Soysal, in their article titled *World Expansion of Mass Education, 1870–1980,* demonstrated that many countries have shown that mass schooling emerged and spread in precisely the same way, especially after WWII.[2] A flurry of new school typologies has emerged, with many adopting cutting-edge construction methods, such as prefabricated structural elements, resulting in increased outputs in shorter periods. The prefabricated design was viewed as an innovative solution in Britain and other countries for the rapid construction in a short time of many school buildings, as well as residences and other public facilities, to meet post-war government demands.[3] Consequently, this building technique had an impact on the architecture of schools, making them more standardised and modular. On the contrary, just as economic prosperity brought about by new building techniques and technical advancements impacted the development of schools, the political systems of countries placed a strong focus on social provision and education as fundamental rights.

With the rise of international organisations, such as the World Bank, UNESCO, and the International Union of Architects (UIA), which worked together to assess the standards for both the quantity and quality of educational facilities, a more standard method of design emerged by the turn of the twentieth century to evaluate the scope and scale of large school buildings. The evolution of school layouts over time has demonstrated the close relationship between education and design. As curricula expanded, so did the scope and diversity of school typology.

[2] John W. Meyer, Francisco O. Ramirez and Yasemin Nuhoğlu Soysal, 'World Expansion of Mass Education, 1870-1980', *Sociology of Education,* 65. 2 (1992), 128-149.

[3] *Education Buildings, Listing Selection Guide* (United Kingdom: Historic England, 2011), pp. 6, 7; Lindsay Baker, *A History of School Design and Its Indoor Environmental Standards, 1900 to Today* (Washington, US: National Clearinghouse for Educational Facilities, 2012), p. 18; Meyer, Ramirez and Soysal.

Immediately after Kuwait's independence, Sheikh Abdullah Al-Salem established a welfare system that was among the most generous in the world, with a focus on education as a means of modernising the country's society. Government entities oversaw educational provisions with the assistance of international organisations, such as UNESCO, and managed the schools' finances; nonetheless, they mainly depended on foreign architects and builders to create schools. The government hired international architect Roth, highly recommended by UNESCO, to ensure the highest quality of the constructed school context. His approach to school architecture has been confirmed by outcomes conducted at different architectural scales: one looking at the size and number of students, one at the building's function and volume, and one at the urban distribution and walkability of access to schools.[4] Roth's efforts, which spanned twenty years, produced the most practical and rational school architecture in Kuwait's modernisation history, which influenced the development of the country's neighbourhoods and its urban fabric.

Swiss architect Alfred Roth [1903–1998] was a professor at the Federal Institute of Technology in Zürich (ETH), the chief editor of *Werk, bauen+wohnen Journal*, a leading proponent of the Neues Bauen movement, and a major spokesman for the International Congress of Modern Architecture (CIAM).[5] Early in his career, he was exposed to the works of modern architecture pioneers, such as Le Corbusier, Alvar Aalto, Henry van de Velde, and Piet Mondrian, all of whom influenced his aesthetics and approach to architectural practice.[6] Parallel to his success were a number of architectural projects worldwide that, as he discussed in his book, *The New Architecture,* sought to integrate a functional approach, technical execution, economic considerations, and aesthetic synthesis.[7] He led the UIA's research group on school design, where he eventually collaborated with UNESCO to establish a set of universally accepted design standards for educational institutions worldwide.

Roth's educational design philosophy, as outlined in his book, *The New School*, focuses on three key aspects of design: the surrounding neighbourhood and town, the school building and its components, and individual classroom units.[8] His approach focused on addressing specific issues

[4] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0157,0164,0165,0166, Alfred Roth, 'A Drawing of Schools in Kuwait, Proto-Types, Primary-Intermediate-Secondary, Sport Fields and Total Areas', 1970; gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (2/3), Alfred Roth, 'Reports on Proposed Primary, Intermediate, and Secondary Proto-Type Schools, 30th January', 1970.
[5] Stanislaus von Moos, *Alfred Roth: Architect of Continuity* (Switzerland: Waser Verlag, 1985), p. 9 and 17.
[6] Ibid.; 'Obituaries: Alfred Roth, 'One of the Original Modernists'.', *Architects' Journal,* 209. 1 (1999), 20.
[7] Alfred Roth, *The New Architecture* (Zurich, Switzerland: Girsberger Zurich, 1951), pp. 7-9.
[8] Alfred Roth, *The New School* (New York, USA: Frederick A. Praeger, 1957), pp. 8, 24, and 42.

related to school architecture to indicate the fundamental principles involved and potentially provide an incentive for a methodological solution. In neighbourhood and town areas, Roth sought to highlight the fusion of school buildings with the surrounding urban environment, viewing public education as a social obligation.[9] He considered various factors to achieve this objective, including communal school planning, current faulty advancements, student aptitude, distance to schools, school dimensions and location, and pedagogical principles. When considering schools at the building scale, additional issues were examined to ensure the development of spatially organised and effective schools, and a welcoming environment. The influences on the school and its components (as shown in **Figure 6.2**) stem from considerations of pedagogical theories and architectural design, physiology and regeneration, building techniques, cutting-edge innovations, design criteria and shape, building levels, organic space grouping, plan adaptability, outdoor classrooms, school landscapes, artistic ornamentation and colours, and students with special needs.[10] Nevertheless, the most fundamental principles of school architecture centred on classroom units, as this was the most appropriate space for the various teaching methods, considering the quantity and size of students.[11] Roth recognises the importance of incorporating healthy, social, and former conventional types into classroom modules, as well as well-regulated classes and more unrestrained activities. His goal was to set these issues within the broader framework of learning, living, and creative processes. As a result, his explorations have gone beyond the realm of architecture proper, touching on town planning and even social, cultural, and aesthetic fields.

At ETH Zurich, where Roth spent his academic career, a comprehensive personal archive has been kept; it includes documentation of his lifetime's work as an architect and his tenure as editor of the Swiss architectural journal *werk, bauen+wohnen*. His original report on schools in Kuwait (see **Figure 6.3**), as well as the accompanying blueprints, correspondence letters, photographs, and personal notebooks (see **Figure 6.4**), all played an essential role in this study. Moreover, based on a scant selection of archival materials from the Ministry of Public Works and the Public Authority of Housing Welfare, this section analyses Roth's role in establishing the enduring 'New Schools' in Kuwait, which have met the approval of the Kuwaiti government and the international standards set by UNESCO.

[9] Ibid. p. 8.
[10] Ibid. pp. 24-53.
[11] Ibid. p. 42.

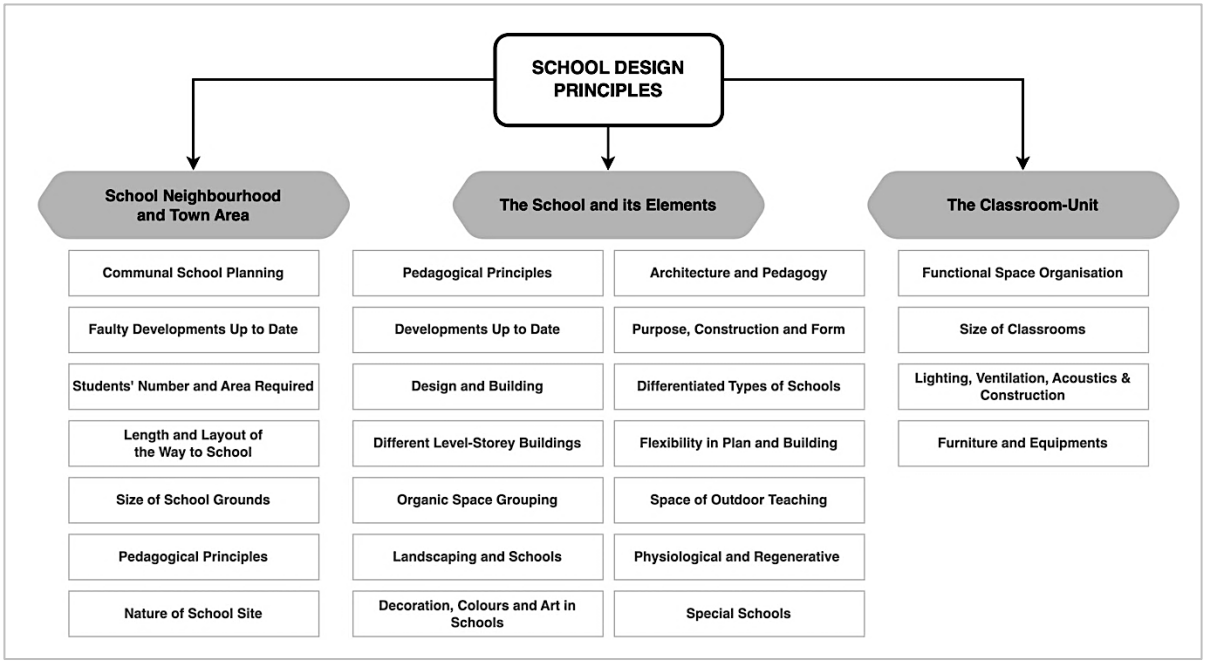


Figure 6.2 Roth's school design principles. This diagram outlines Roth's design concepts for school architecture, which emphasise three primary scales: the school neighbourhood and town area, the school and its components, and the classroom units.[12]

Figure 6.3 The school buildings of Kuwait. Left: This image relates to Roth's initial report on the construction of schools in Kuwait. The report was found in the archives of gta/ETH Zurich and dates back to 1965.[13]

Figure 6.4 Alfred Roth's notebook on Kuwait projects. Right: Within Roth's preserved documents, a significant notebook was located. In this notebook, Roth recorded various details pertaining to school projects and the initial concept of utilising a prefabricated structural element. This image showcases his draft of the Unicon structural system that was used for Kuwaiti schools.[14]

[12] Author, 2023.

[13] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: Ref. 131-0162/0165 (3/3), Alfred Roth, 'The School Buildings of Kuwait Report ', 1965.

[14] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: Ref. Kuwait Notebook, Alfred Roth, 'Alfred Roth's Notebook on Kuwait Projects', n.d.

This chapter focuses on the development of the built environments of modern schools in Kuwait, paying special attention to the achievements of Roth in addressing the problems associated with modernisation in areas such as human resources, social provision, international organisation, economic outlay, and industrial output. The chapter's timeframe begins around 1960–1965, shedding light on Kuwait's Public Works Department/Ministry of Public Works and its efforts to offer a school typology (Fox's model) that could match the ministry's new requirements. New schools designed by Roth and planner Colin Buchanan as part of the welfare state initiatives were implemented later. This period is characterised by generally consistent government support for education, and the chapter concludes with a thorough analysis of the evolution of school-building programmes, exposing the number of political changes that had an impact on the architectural context of Kuwaiti schools.

6.2 GOVERNMENT'S ATTEMPT: FOX'S MODEL

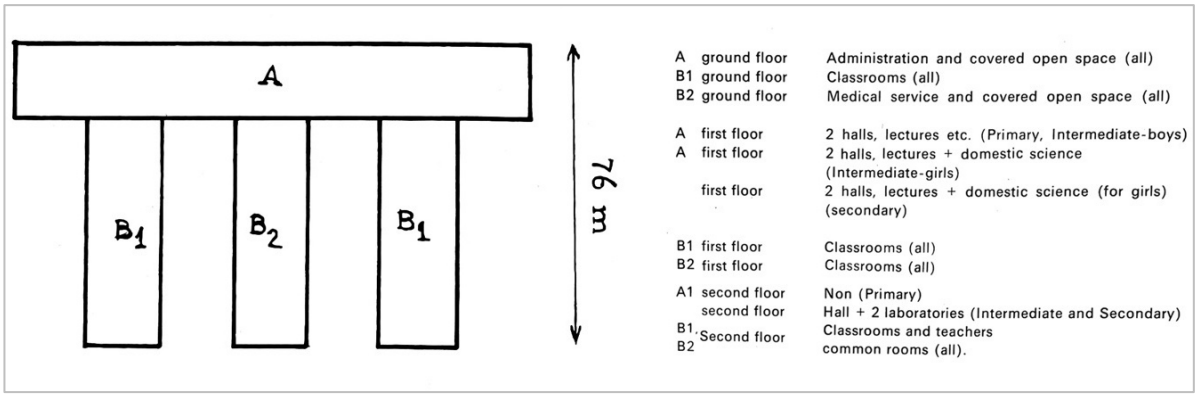


Figure 6.5 Layout of primary, intermediate, and secondary schools in Kuwait. This image showcases the conceptual layout design for school buildings at all levels, excluding kindergarten, that have been executed by the Ministry of Public Works in Kuwait. An image that was published as part of Buchanan's study for the Second Master Plan of Kuwait.[15]

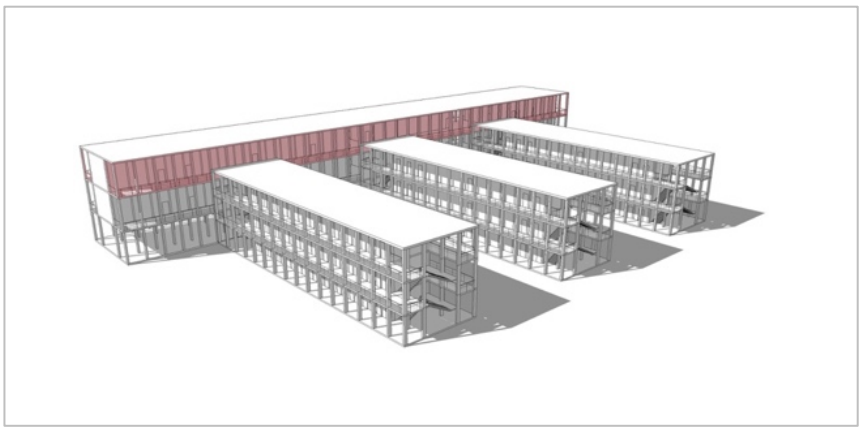


Figure 6.6 A 3D model of the Fox's school design scheme. This design typology has been observed in several areas in Kuwait. It should be noted that certain schools consist of a third wing spanning three levels, while others are built with two levels, as illustrated.[16]

[15] Colin Buchanan, *Studies for a National Physical Plan for the State of Kuwait and Masterplan for the Urban Areas* (1970), p. 61.
[16] Author, 2023.

Figure 6.7 Ibn Hayyan School at Ahmadi, 1959. Left: The image, which was obtained from the University of Milwaukee's Archives, indicates a school that was constructed based on Fox's architectural design. The inflexibility of this particular architecture is clearly evident in this context.[17]

Figure 6.8 Fox's model design school. Right: The image shows a group of girls engaging in an activity of handball, with the school building visible in the background, showcasing its various wings or units. Oscar Mitri included the image in his 1975 book about Kuwait.[18]

Kuwait's independence in 1961 and the formation of its new welfare state made education mandatory and accessible to all citizens from the ages of 6 to 14 and offered the possibility of continuing further education at no cost to the students.[19] This has led to an increase in enrolment, necessitating the construction of more educational buildings. Therefore, the Ministry of Public Works design team worked to create a practical and functional design layout adaptable to educational institutions serving students of varying ages (primary, intermediate, and secondary). As shown in **Figure 6.5** to **Figure 6.8** of Buchanan's report, the layout was developed using Tripe and Wakeham's nursery design principles.[20]

This design typology, known as *finger-plan* or *E-Shape,* was popularised in America in the late 1920s (see **Figure 6.9**), having been influenced by architect Ernst May's work in Germany (see **Figure 6.10**), which aimed to maximise the inflow of natural light and air as well as the feeling of connection to the outdoor environment.[21] In this configuration, the three-story school building was split into three interconnected wings, each of which housed a set of classrooms surrounded by a covered hallway

[17] University of Milwaukee Archives [UWM], USA: Ref. 36f2, 44-12-12, Harrison Forman, 'Aerial View of Kuwait City', c. 1960s.
[18] Oscar Mitri and Gerard Boulad, *Kuwait*, 1st edn (Editions Deloisse, 1975), p. 74.
[19] Mohammed N. Raafat, *Kuwait Educational Guidance and Examination System* (Paris: 1966), p. 4; UNESCO, *International Yearbook of Education* (Paris: 1961), p. 216; Buchanan, p.
[20] Buchanan, p. 7 and 8.
[21] 'Modern School Buildings for Secondary Education: Main Principles and Design Concepts. The Portuguese and the International Production of the 1930's.', (2012); R. Thomas Hille, *Modern Schools, a Century of Design for Education* (New Jersy, USA: John Wiley & Sons, Inc., 2011), pp. 35, 87, 91 and 106; Baker, p. 11.

on one side, typically exposed to sunlight.[22] However, the actual layout used in Kuwait covered the hallways on both sides of the classrooms instead of just one. It is not apparent whether this was due to poor heat protection practices or because the site orientation was too simple to ignore.

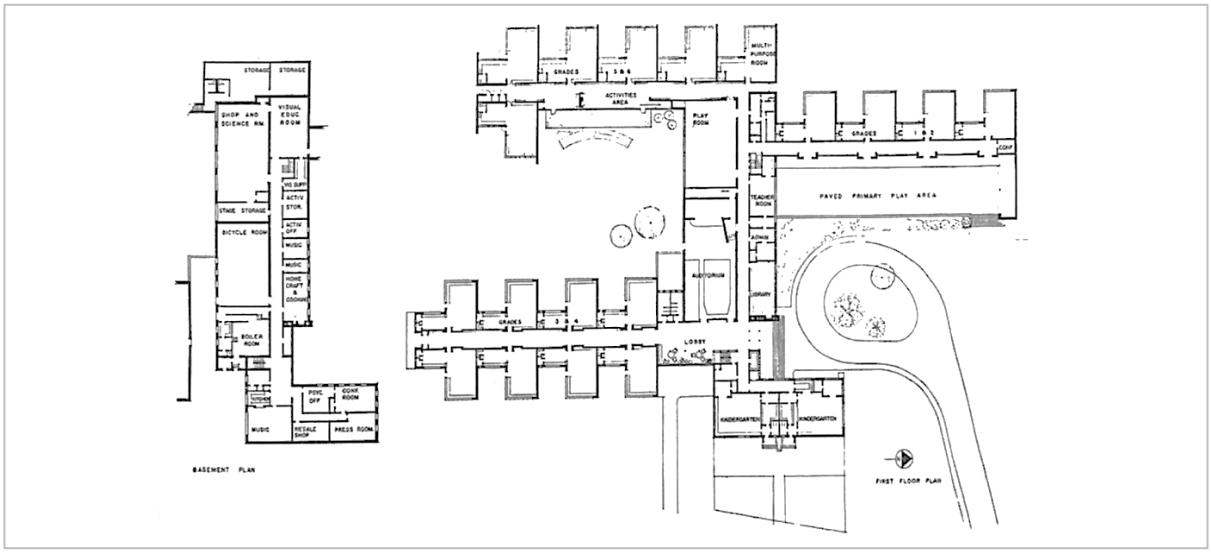


Figure 6.9 Crow Island Elementary School, 1939. This layout plan is for a finger-plan school in Illinois, USA, created by Perkins, Wheeler and Will partners. The concept design for this school originated in the 1930s. The school is comprised of a central building with four wings extending from it, each including common rooms. Each classroom in this design features its own separate outdoor courtyard. The layout prominently displays the arrangement of classrooms along linear hallways, which have become widely adopted as an international architectural style. [23]

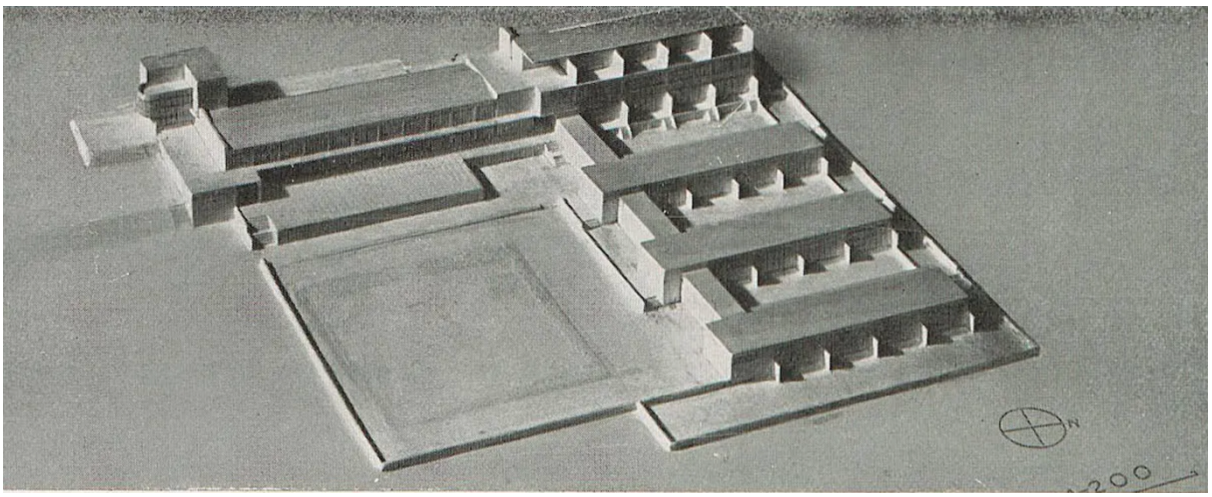


Figure 6.10 Charles-Hallgarten School by Ernst May, 1929-1930. This graphic represents the finger-type schools that were immensely popular in Germany. The school design aligns with May's chosen educational hypothesis, which prioritises innovative pedagogical ideas that emphasise ample natural light and a conducive environment. The finger-type design was chosen to optimise this characteristic.[24]

[22] Hille, p. 106 and 108.
[23] Jeffery A. Lackney, 'New Approaches for School Design', in *The Sage Handbook of Educational Leadership*,ed. by Fenwick W. English (Los Angeles, London: SAGE Publications, Inc., 2011), (p. 353).
[24] 'Deutsche Bauen in Der Udssr', *Enrst May Mitarbeiter Albert Loecher*, September 1930, p. 198.

Although the origin of implementation for this typology in Kuwait is unknown, the concept is widely recognised in the government sector, where it is referred to as *Fox's Design.*[25] According to a published interview with Abdulaziz Sultan, engineer and owner of the Kuwait Engineer Office (KEO), Fox was a German engineer whom he had worked with at the Ministry of Public Works during the 1960s and was responsible for introducing this design typology of schools.[26]

Despite the fact that it would have seemed that this design typology was more practical, it was criticised for being unfriendly, receiving the harsh moniker *'the jail,'* and unsuitable for students of all ages, as noted in an interview with Sabah Al-Rayes.[27] Secretary-General of Kuwait's Supreme Council for Planning and Development, Khaled Mahdi, reflected on his time spent in one of these schools, recalling how unpleasant it was to use the three-story stairwell every day, how students had to find shady areas in which they congregated during the warm spring months, and how the asphalt playgrounds radiated heat into the air during football and basketball play.[28]

During Roth's visit to the Kurtoba Intermediate School for Girls (as shown in **Figure 6.11**), he criticised the building's appearance, reporting that it resulted from a focus on function, which gave it a straightforward, rigid expression.[29] In his report, Roth emphasised the size of the classrooms, noting that they were outdated, did not have the necessary teaching facilities, nor was the furniture was suitable.[30] He also berated the large curtains that covered windows, blocking the utilisation of natural light while using artificial lighting.[31] However, the critique that stood out was that it had the worst climatic adaptation. There were major issues with environmental responsiveness in this type of design compared to past practices, where designers considered the layout orientation, increased cross-ventilation, and incorporated heat-protection shades and components. Therefore, Roth offered a revised proposal in which he lowered the volume and expenditure of the existing design type to boost its effectiveness.[32] As shown in **Figures 6.12** to **6.22**, the original layout was altered to include smaller and more classrooms, with a one-sided hallway and no open-end staircase or restrooms. Consequently, the school floors were lowered so that classes could be held on two levels,

[25] Sabah Al-Rayes, *Kuwait Schools*, an interview conducted by Zainab Murtadhawi (Online Video, 18th April 2022).
[26] Richardo Camacho, 'Interview with Abdulaziz Sultan', in *Modern Architecture Kuwait 1949-1989*,ed. by Roberto Fabbri, Sara Saragoca Soares and Ricardo Camacho (Zurich: Niggli, 2017), pp. 162-163.
[27] Al-Rayes; Khaled Mahdi, *Kuwait Schools*, an interview conducted by Zainab Murtadhawi (Online Video, 17th April 2022).
[28] Mahdi.
[29] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162 (1/5), Alfred Roth, 'Schools in Kuwait', 1973.
[30] Ibid.
[31] Ibid.
[32] Ibid.

with a third floor added only for laboratories. Roth's suggestion was never put into action, but the Kuwaiti government highly valued his report and recommended it for future school designs.

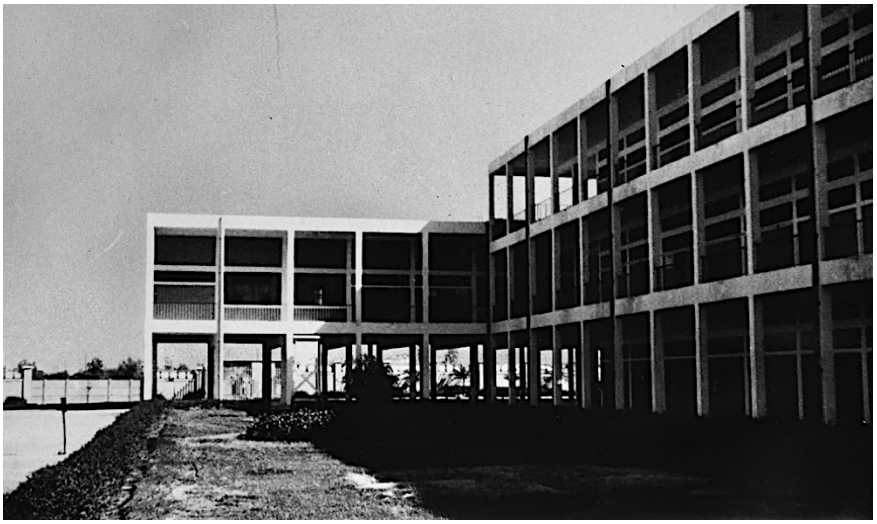


Figure 6.11 Kurtoba Intermediate School for girls, 1964. Roth captured the image on his visit to the school, accurately anticipating the school's inflexibility and vulnerability to harsh weather conditions. An image obtained from the archives of gta/ETH Zurich.[33]

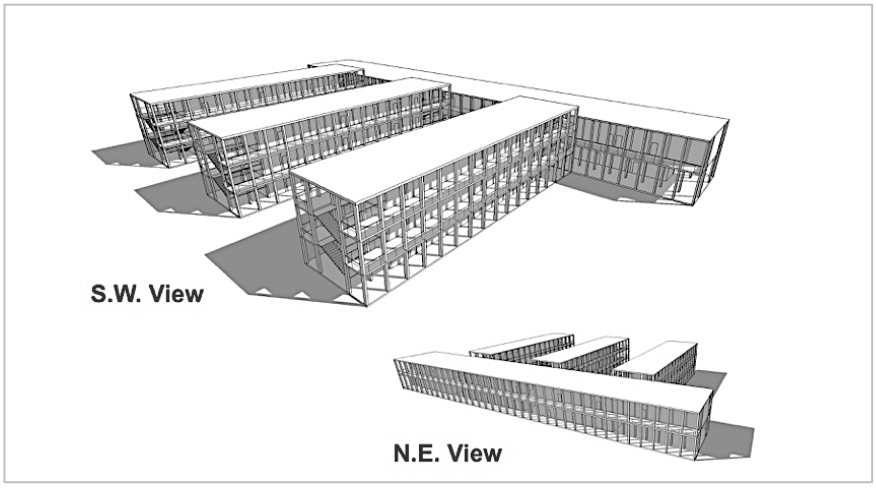


Figure 6.12 A 3D model of a standard school building. This three-dimensional graphic depicts the design of Kuwait's standard schools, which adhere to the Fox model. The illustration displays both the elevations in the southwest and northeast orientations.[34]

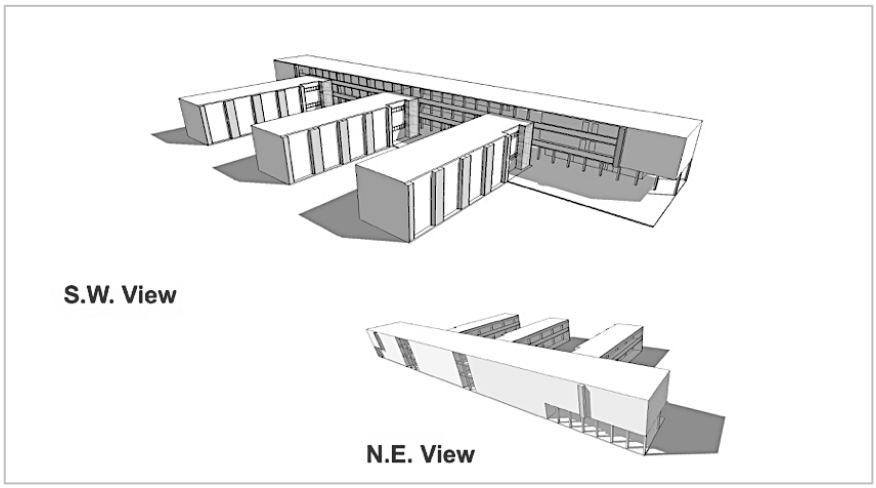
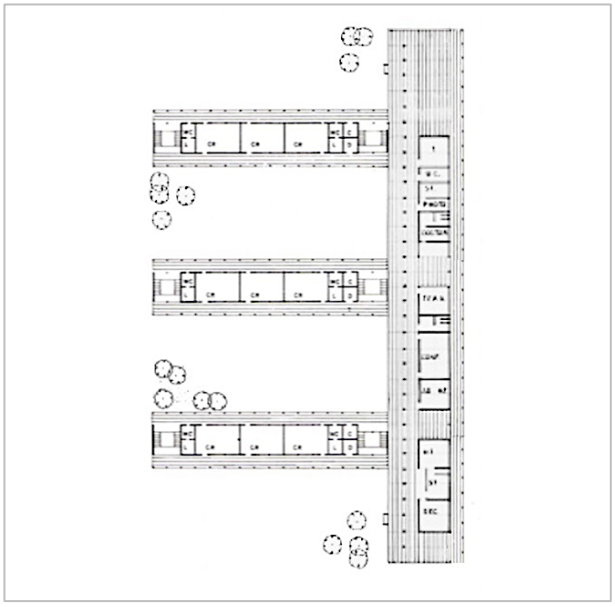


Figure 6.13 A 3D model of a standard school building alteration. This image illustrates the modifications made by Roth in his revision of the prior design. The image depicts significant modifications to the elevations, floor levels, and hallways.[35]

[33] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-F-12-1-1/4, Alfred Roth, 'Kurtoba Intermediate School ', 1964.
[34] Author, 2023.
[35] Author, 2023.



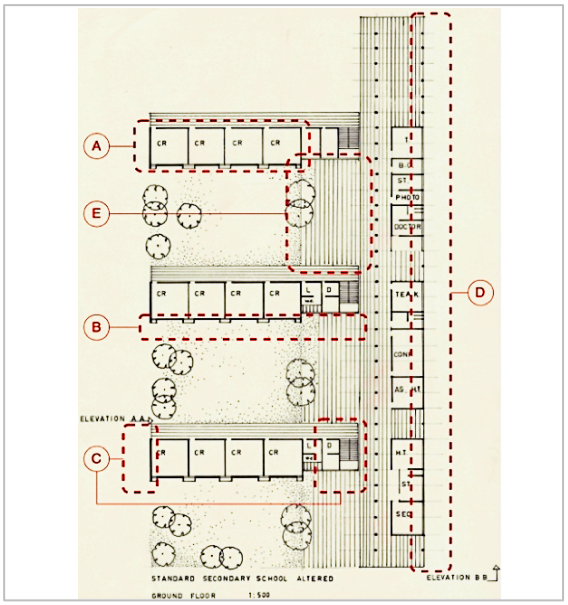
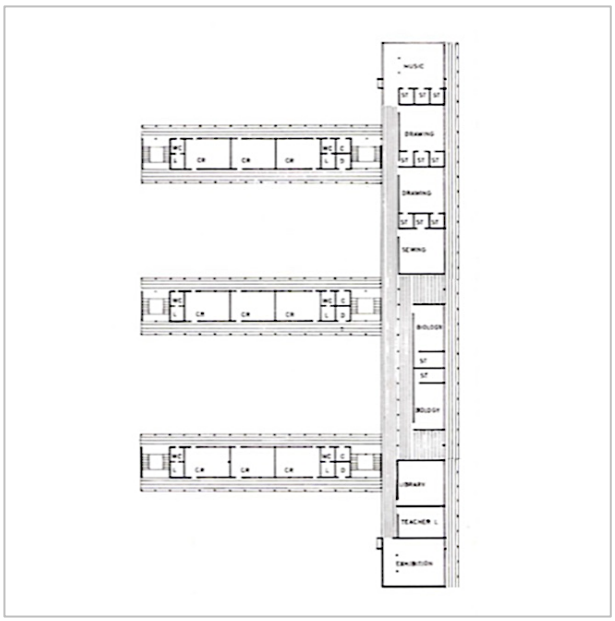


Figure 6.14 A standard school building, ground floor. Left: This is the original floor plan of the typical Fox school design, as released by Roth in 1967.[36]

Figure 6.15 Roth's alteration to the standard school building, ground floor. Right: Roth made some changes to this school design, which is shown in the layout. Among the changes he made were making the classrooms bigger (A), reducing the number of hallways (B and D), eliminating additional stairs (C), and extending the flooring into the courtyard area (E). [37]



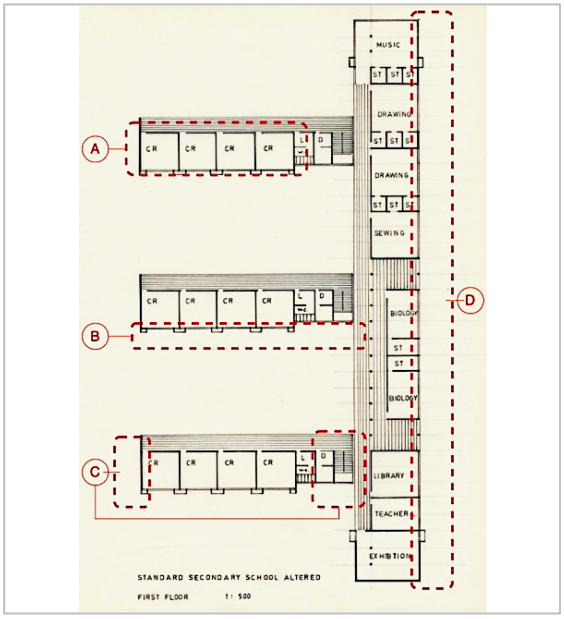


Figure 6.16 A standard school building, first floor. Left: This is a generated first floor plan, by the author, for the typical Fox school design, in which it reflects the original concept. The first floor includes classrooms and laboratories.[38]

Figure 6.17 Roth's alteration to the standard school building, first floor. Right: Roth implemented modifications to the school design, as depicted in the layout. Among the changes, he made the classrooms bigger (A), reduced the number of hallways (B and D), and eliminated additional stairs (C).[39]

[36] Alfre Roth, 'Schulbau in Heissen Klimazonen ', *Bauen + Wohnen,* 21 (1967), (p. 397).

[37] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0162 (5/5), Alfred Roth, 'Standard Secondary School Altered, Ground Floor', 1964.; annotated by the Author.

[38] Roth.; modified by the Author.

[39] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0162 (5/5), Alfred Roth, 'Standard Secondary School Altered, First Floor', 1964.; annotated by the Author

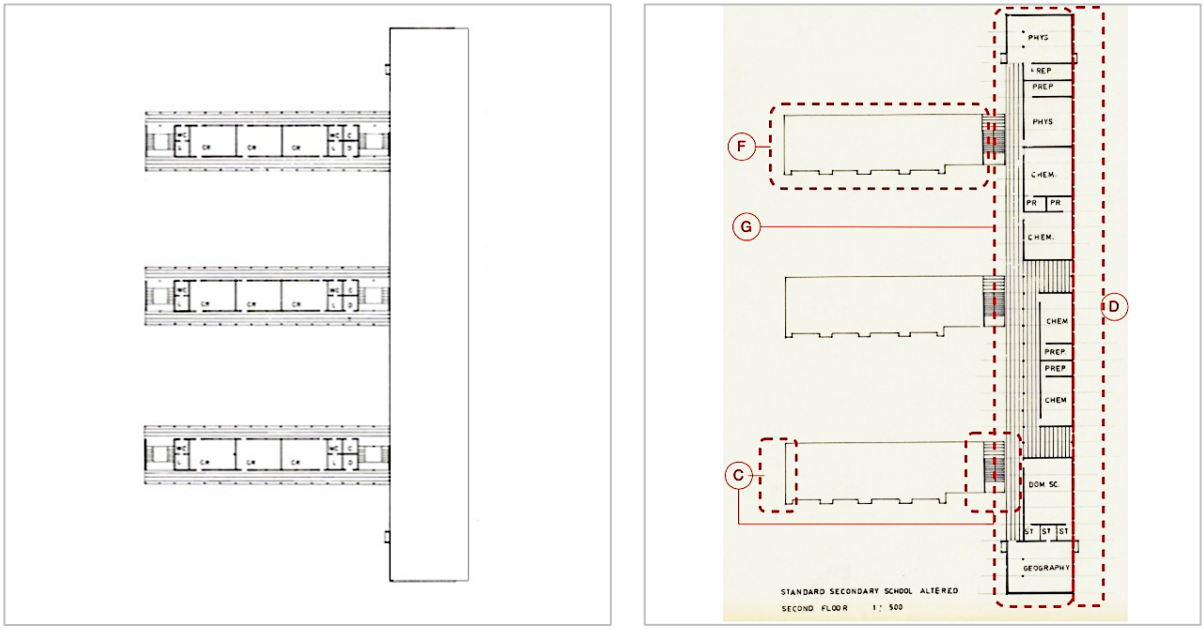


Figure 6.18 A standard school building, second floor. Left: This is a generated second floor plan, by the author, for the typical Fox school design, in which it reflects the original concept. The second floor only includes classrooms.[40]

Figure 6.19 Roth's alteration to the standard school building, second floor. Right: This layout also illustrates the alterations implemented by Roth on the second floor. Among the changes, he eliminated additional stairs (C), reduced the number of hallways (D), removed classrooms (F), and added laboratories (G).[41]

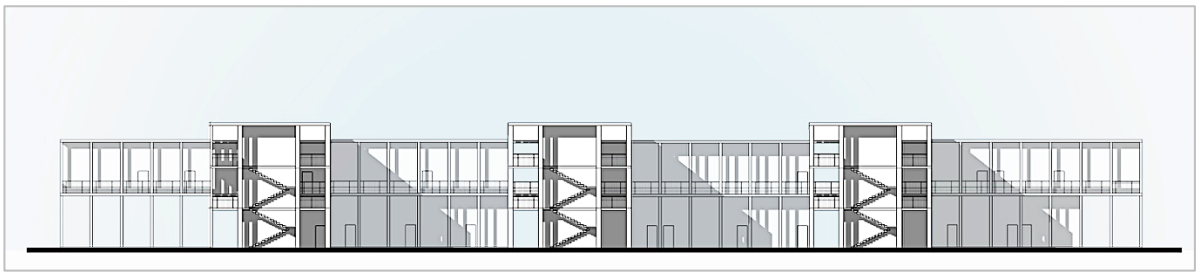


Figure 6.20 A standard school building, southwest elevation. This is a generated elevation by the author, for the typical Fox school design, in which it shows the southern west view.[42]

Figure 6.21 A standard school building, southeast elevation. This is a generated elevation by the author, for the typical Fox school design, in which it shows the southern east view.[43]

[40] Roth.; modified by the Author.
[41] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0162 (5/5), Alfred Roth, 'Standard Secondary School Altered, Second Floor', 1964.; Annotated by the Author.
[42] Author, 2023.
[43] Author, 2023.

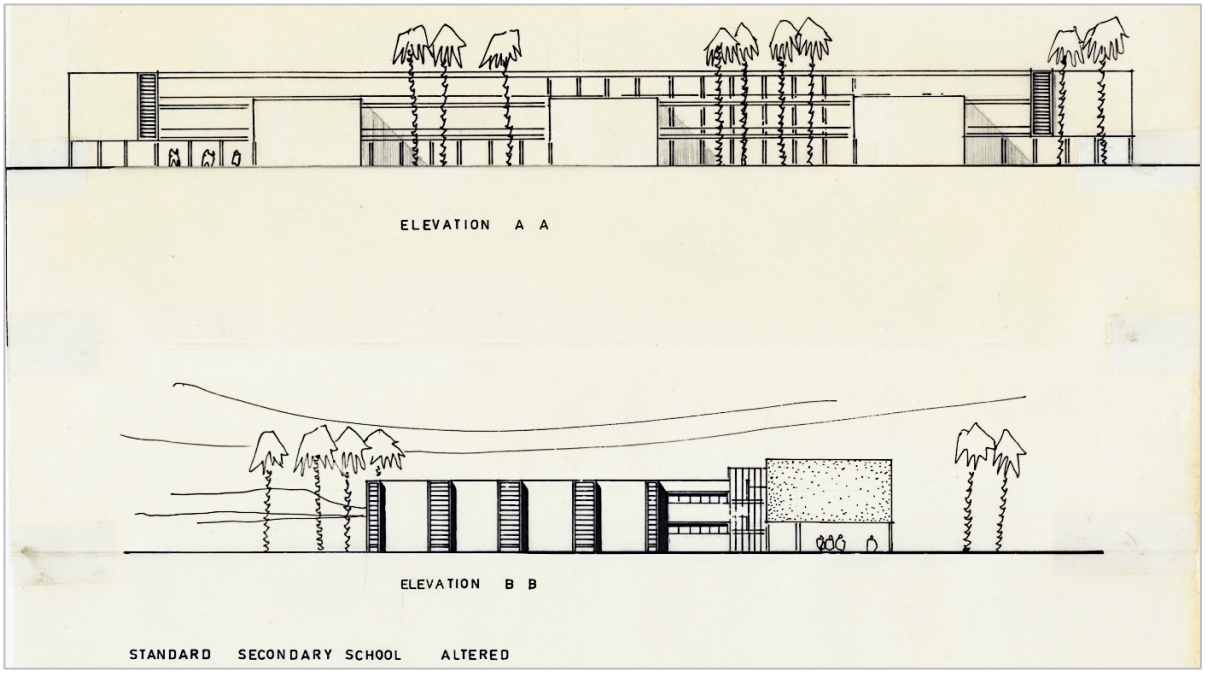


Figure 6.22 Roth's alteration to the standard school building's, southwest and southeast elevations. This blueprint depicts the modifications made by Roth to the standard schools' elevations. Both elevations demonstrate Roth's response to the prevailing climate conditions as he attempted to seal off the building's apertures.[44]

6.3 THE NEW SCHOOLS

6.3.1 Alfred Roth (School Architecture Specialist in Kuwait)

Roth offered a second prototype design (as shown in **Figure 6.23**) for a secondary school with his report and a more compact layout for the school's facilities.[45] The design that he developed for the school was inspired by the layout of traditional oriental houses, which often have large courtyards with classrooms that open inward and are walled off from the outside to provide proper climatic conditions. The work was performed in response to a letter Roth received on August 3, 1965, from Ahmed Duaij, head of the Planning Board in Kuwait, asking him to critically evaluate the country's current educational institutions critically.[46] This was due to the fact that Roth was widely recognised as a leading expert on school architecture and because the International Union of Architects (UIA), which provides consulting services to UNESCO, recommended him for the position. Note that this suggestion came from British architect Leslie Martin of Cambridge University, who was working at

[44] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0162 (5/5), Alfred Roth, 'Standard Secondary School Altered, Elevations', 1964.
[45] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (3/3), Alfred Roth, 'The School Buildings of Kuwait', 1965.
[46] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162 (2/5), Ahmed Duaij, 'An Invitation Letter Sent to Alfred Roth by Director of Kuwait's Planning Board on 3rd August', 1965.

the time as a consultant for the development of Kuwait City by the Ministry of Public Works.[47] Consequently, Roth was able to participate in several significant school buildings in Kuwait and enjoyed opportunities to collaborate on more projects in the area.

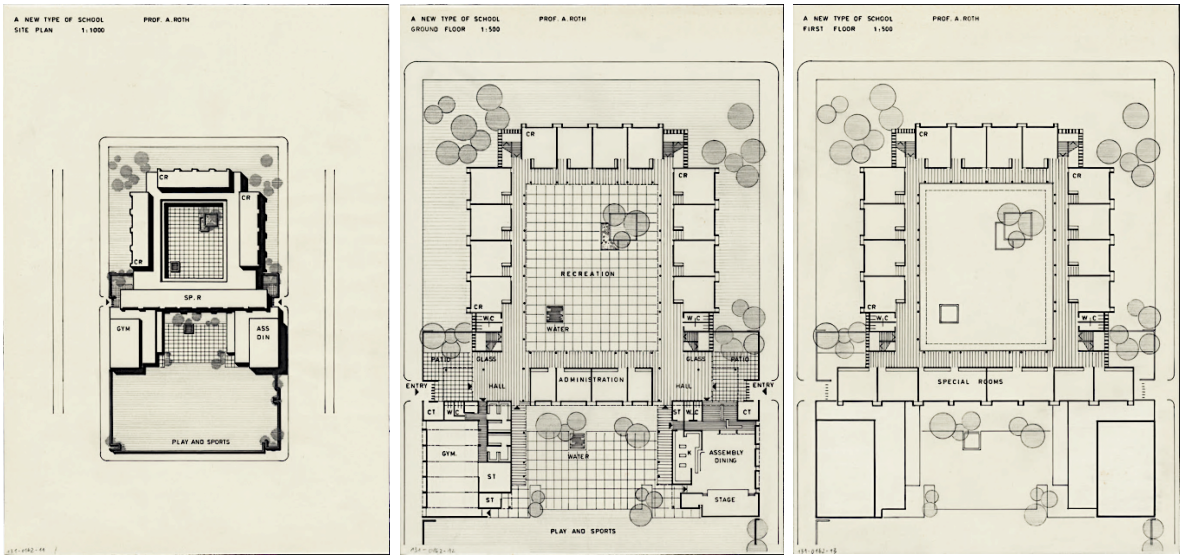


Figure 6.23 Roth's first proposal for school design in Kuwait, 1964. In addition to Roth's assessment of the Kuwaiti school, he made modifications to the current standard school (based on Fox's model) and put forth an alternative design that incorporates a courtyard design.[48]

The architect's first trip to Kuwait was from 10 to 13 October 1965, during which he was able to observe three kindergartens of Tripe and Wakeham's model (Tarik, Balqees, and Khalediya), one intermediate school of Fox's model (Kurtoba), and two secondary schools (Shuwaikh boy's school and Khalediya girl's secondary school).[49] In his December 1965 review, he considered the influences of educational pedagogy, environmental factors, technological advancements, and international principles on optimal school design.[50] Roth criticised the principal designs adopted by previous architects and designers, pointing out their inadequacy for the climate, particularly their open and loose layouts, insufficient heat protection of window sizes, weak distribution of school facilities and spaces, and old equipment and furniture used, which did not correspond to the most up-to-date method of teaching.[51] The report also included guiding principles that influenced the design of schools, with an emphasis on adaptability in light of changing educational needs, building size and layout, class size, student enrolment, and outdoor spaces.[52] According to a letter of gratitude written

[47] Moos, p. 194.
[48] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0162 (5/5), Alfred Roth, 'A New Type of School', 1964.
[49] gta Archives / ETH Zurich [gta]: 131-0162/0165 (3/3).
[50] Ibid.
[51] Ibid.
[52] Ibid.

by Duaij on December 21st, 1965, Roth's report was well-received by the Planning Board and was subsequently translated into Arabic and shared with the Ministry of Public Works and the Ministry of Education.[53]

Nearly a year later, on 8 November 1966, Roth again received an invitation to visit Kuwait to build a secondary school for 650 girls.[54] Beginning then, he spent the next two decades designing the vast majority of Kuwait's modern school buildings: Rumaithiya Secondary School for Girls (1969), Mansouriya Kindergarten (1972), prototype schools (1970–1975), and new prefabricated schools (1976–1981).[55] In addition, he collaborated with Buchanan in respect of Kuwait's Second Master Plan, in which his work aided in allocating schools across many districts of the country (as discussed in **Chapter 4**).[56] His final trip to Kuwait was documented to have taken place on 7 April 1982.[57] In addition to the Paralysis Institute and hotel projects (which were never built), and a private coastal house (1976), Roth was involved in the design of several other projects in Bahrain, Jordan, and Lebanon.[58]

Roth gained a reputation as a result of his functionalist school architecture, such as Saint Louis's Holy Ghost Parish School in America as well as the Skopje Secondary School in Yugoslavia (see **Figure 6.24**).[59] These examples were handed to Duaij, director of the Planning Board, alongside Roth's book *The New Schools,* which offered a unified framework for his work.[60]

[53] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162 (2/5), Ahmed Duaij, 'A Letter from Ahmed Duaij to Alfred Roth on 21st December', 1965.

[54] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162 (2/5), Ahmed Duaij, 'An Invitation Letter from Ahmed Duaij to Alfred Roth on 8th November', 1966.

[55] Moos, p. 194; Roberto Fabbri, Sara Saragoca and Richardo Camacho, *Modern Architecture Kuwait 1949-1989* (Switzerland: Niggli, 2016), pp. 126, 140 and 210.

[56] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162 (2/5), Soud Al-Fouzan, 'An Invitation Letter from Ministry of Public Works to Alfre Roth to Join the Kuwait Development Committee on 18th November', 1968.

[57] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: Notebook, Alfred Roth, 'Alfred Roth's Notebook on Kuwait', 1977-82; gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (3/3), Alfred Roth, 'Report on Inspection of Two Completed Schools Realized with Prefabricated Elements Produced by Irec', 1982.

[58] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162 (2/5), Ahmed Duaij, 'An Invitation Letter from Director of Planning Board to Alfred Roth for the Paralysis Institute on 9th November', 1966; gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-K-104, Alfred Roth, 'A Letter to Faisal Sultan from Alfred Roth on Seaside House Design on 24th May', 1976; Moos, p. 194.

[59] Roth, pp. 177, 183, 245 and 261; Moos, p. 118; Hille, p. 192 and 194.

[60] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162 (2/5), Alfred Roth, 'A Letter from Alfred Roth to Ahmed Duaij on Schools and Institutions on 11th August', 1965.

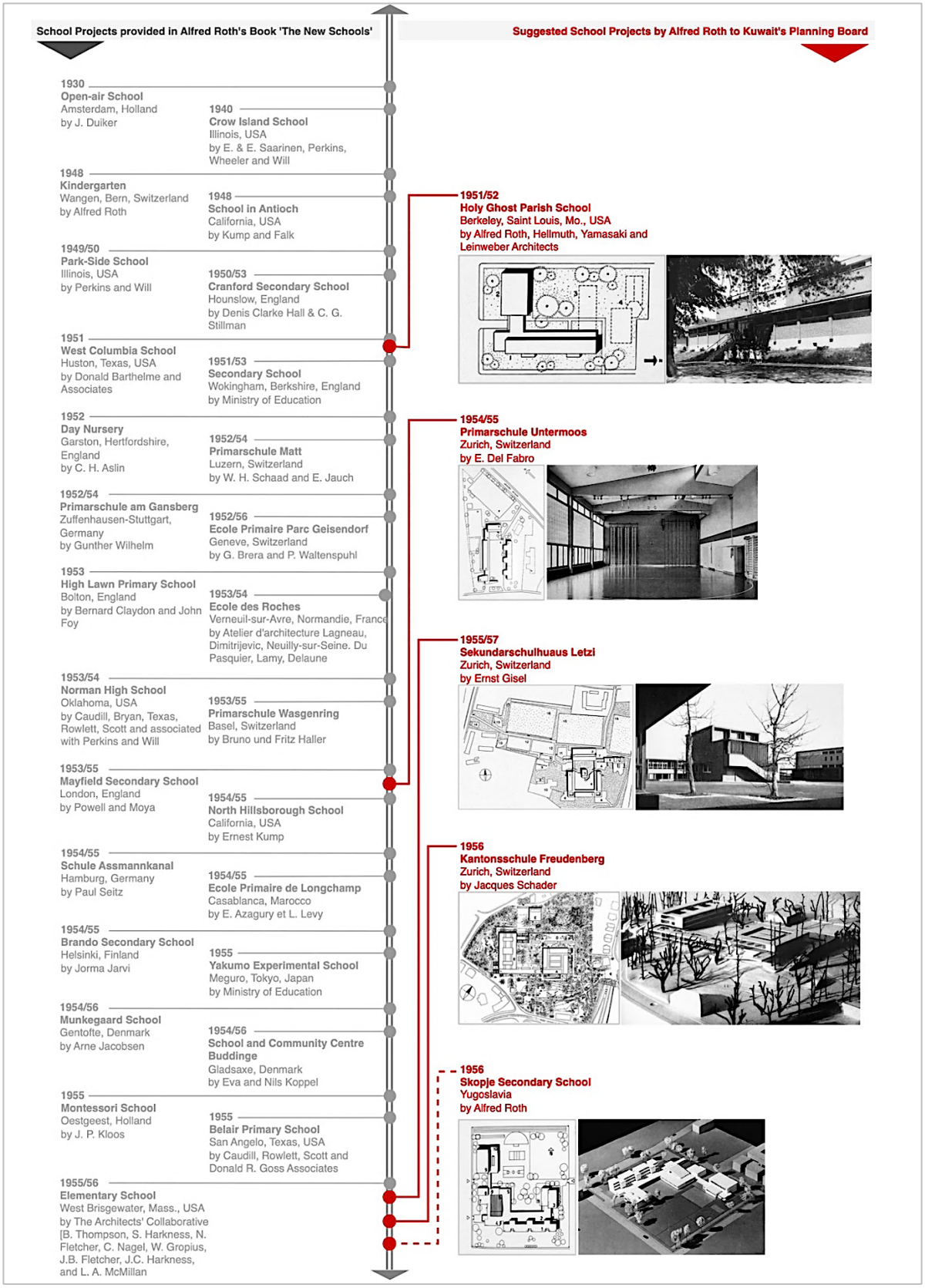


Figure 6.24 School examples provided in *The New School* book, 1957. This diagram, generated by the author, displays a selection of school buildings that Roth examined in his book. In addition, he presented the examples to the Kuwaiti government alongside his report.[61]

[61] Roth, pp. 178, 182, 185, 186, 246, 247, 251, 262, and 263; Moos, p. 119.

He significantly affected Kuwait's modern architecture, discussed below. This section begins by discussing Roth's earliest efforts to develop a secondary school model that catered specifically to female students, focusing on the importance of interdisciplinary cooperation in establishing a welcoming atmosphere, a responsive climate, and pedagogy tailored to the unique needs of Kuwait's programme. Second, it examines Roth's methodology for creating prototype school buildings that accommodate students of all grades and genders, as well as his stated plan to employ prefabricated components, which were ultimately executed in the second set of prototype schools in the late 1970s. The section ends with a critique of Roth's logical strategy for meeting the needs of the new country through his modernist motif, culminating in Rolf Strahle's final assessment of Kuwait's progress towards UNESCO.

6.3.2 Rumaithiya Secondary School for Girls (1967–1971)

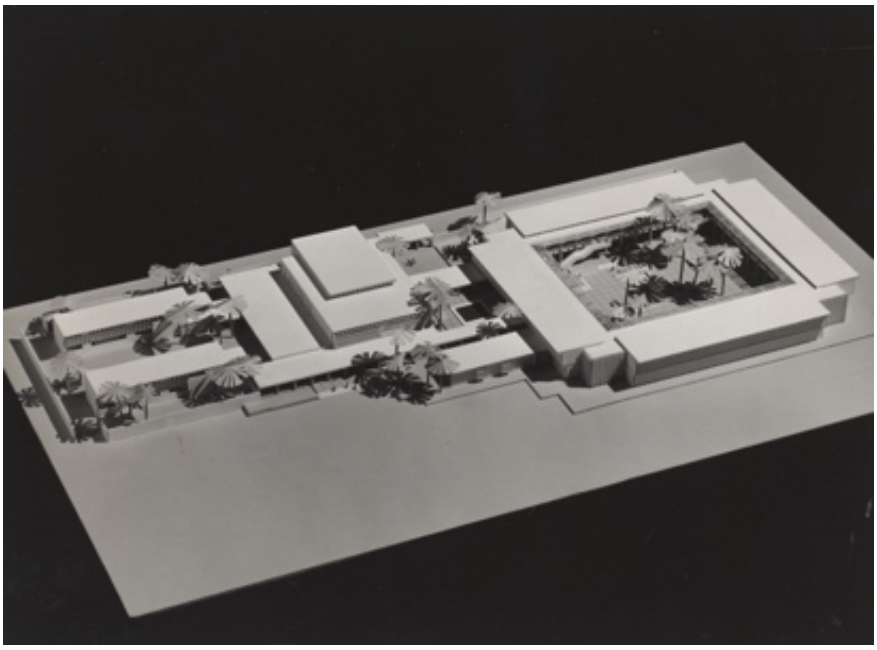


Figure 6.25 Rumaithiya Secondary School model, n.d. This image comes from the Roth collection in the gta/ETH Zurich Archives.[62]

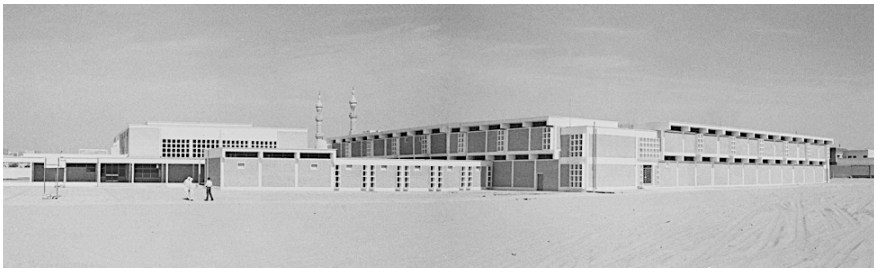


Figure 6.26 Rumaithiya Secondary School, south view, 1971. The image offers a broad perspective of the entrance to the school buildings and showcases the straightforward architecture featuring grid-based classrooms.[63]

[62] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0162 (5/5), Alfred Roth, 'Rumaithiya School Model', n.d.
[63] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0162 (5/5)), Alfred Roth, 'Rumaithiya School', 1971.

Documents reveal that a site measuring roughly 200m by 200m (40,000 square metres) was allotted by Kuwait Municipality in 1966 to be used as a secondary school for girls in the Rumaithiya district (unit 8).[64] There, Roth erected the prototype school for Kuwait, a compact, modern school (see **Figure 6.25** and **Figure 6.26**). In the same regionalist vein, Rumaithiya School was designed around a central courtyard with twenty-four classrooms, each measuring 8 x 8.50 m, facing inward (see **Figure 6.27**).[65] The main building is two stories high; there are a variety of laboratories on the lower level, and on the upper level, there are classrooms that can be reached via a gallery.[66] In addition to classrooms, playgrounds, and administrative offices, there is a prayer room, a vast multipurpose hall that can be merged with the nearby gymnasium, a dining hall with a kitchen, a cloak room, and several secondary rooms, as shown in **Figure 6.28** and **Figure 6.29**. In addition, twenty-four rooms with two beds each, a shared bathroom, and a shared kitchenette were allocated towards the teachers' accommodation.[67] There were two tennis courts, a baseball field, a gymnasium, and a sports field.[68]

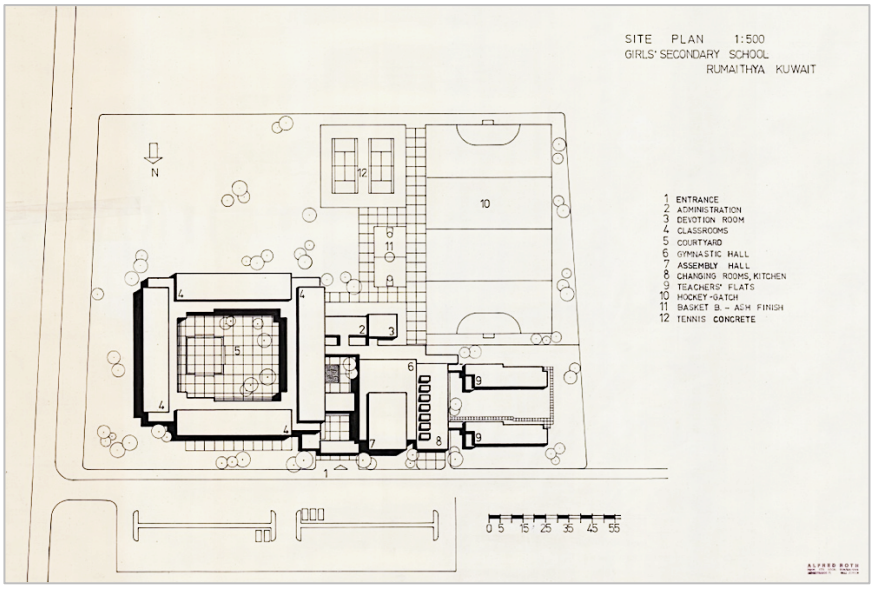


Figure 6.27 Rumaithiya Secondary School, site plan. The design centres around a central courtyard that is surrounded by classrooms, along with a smaller courtyard connecting it to the library and gymnasium. Additionally, there are two wings that accommodate the residences of the teaching staff. The school premises are extensive, encompassing both the building and the playground areas, although significant landscaping is lacking.[69]

[64] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162 (1/5), Kuwait-Municipality, 'Detailed Plan and Elevations for the Location of the Secondary School for Girls in Al-Rumaithiyah', 1966.

[65] gta Archives / ETH Zurich [gta]: 131-0162 (2/5); gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162 (1/5), Alfred Roth, 'Girl's Secondary School, Rumaithiya, Kuwait, Cubic Calculation Report', 1969.

[66] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162 (2/5), Alfred Roth, 'Scope of Works', 1967.

[67] Ibid.; gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162 (1/5), Alfred Roth, 'School Building in Hot Climate, Reference to the Example of Kuwait', 1967.

[68] gta Archives / ETH Zurich [gta]: 131-0162 (2/5).

[69] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0162,0163, 0167, 0171, Alfred Roth, 'Rumaithiya School, Site Plan', 1969.

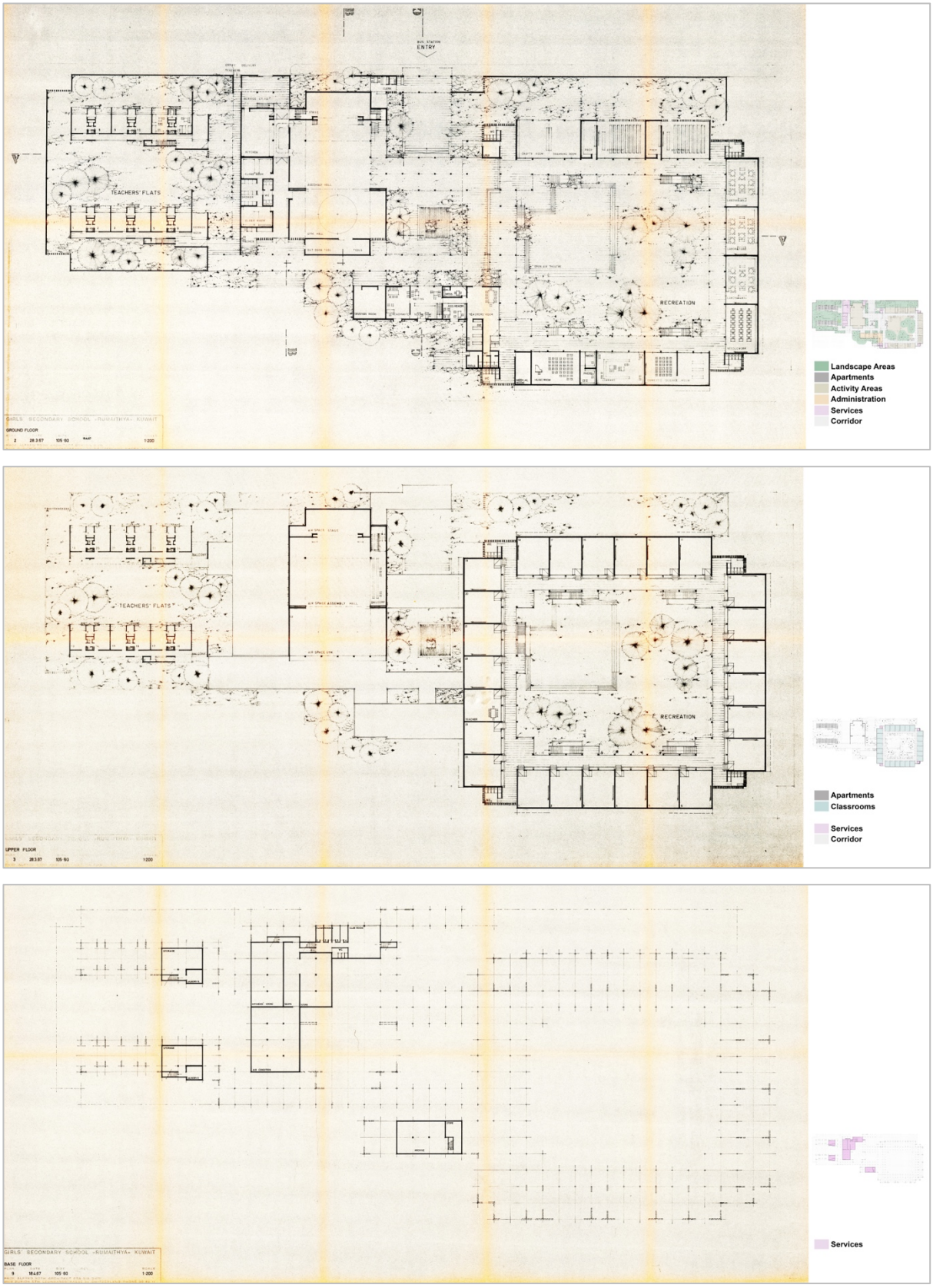


Figure 6.28 Rumaithiya Secondary School layouts, 1969. Top: ground floor plan; middle: first floor plan; bottom: upper floor plan. A collection sourced from gta/ETH Zurich Archives.[70]

[70] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0162 (5/5), Alfred Roth, 'Secondary School Drawing Plans', 1969.

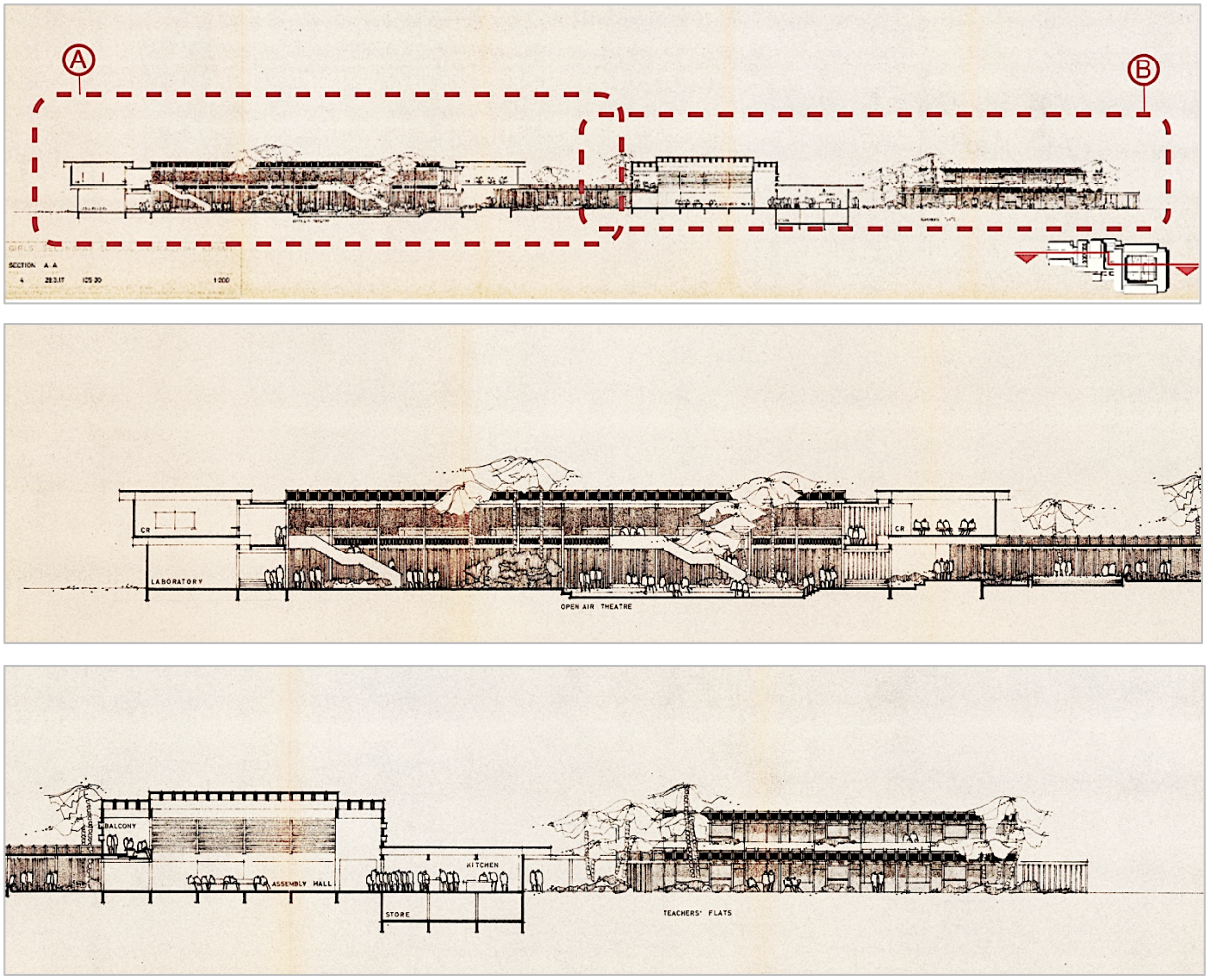


Figure 6.29 Rumaithiya Secondary School sections, 1969. Top: The drawing shows a cross-section of the school, specifically along the main entrance, showcasing the two courtyards and the classrooms surrounding them. The magnified portion is displayed in the middle (A) and bottom (B) figures.[71]

Compared to Steinbuchel-Rheinwall's design of Khalediya and Tripe and Wakeham's typology, Roth's proposal was the most rationalist typology for Kuwait because of its compact design, suitable volumes, associated functions, and economical price. Roth spent at least a year researching cultural means, the state of education, the local climate, and the accessibility of building supplies and techniques before beginning design work on the school in 1969.[72] There is documentation of his extensive efforts to network with officials from UNESCO (G. Sing and D. Barron), the Planning Board (Duaij, Shiber), the Ministry of Education (P. J. Healy), the Ministry of Public Works (M. R. Assaf, M.

[71] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0162 (5/5), Alfred Roth, 'Secondary School Sections', 1969.
[72] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162 (2/5), Alfred Roth, 'A Letter from Alfred Roth to Ahmed Duaij, General Director of the Planning Board, on 8th February', 1967; gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162 (1/5), Alfred Roth, 'A Letter from Alfred Roth to Ahmed Duaij, General Director of the Planning Board, on 17th October', 1968.

Mustafa and Sami Mishri), the Municipality of Kuwait (Hamed Shuaib), and other building contractors both in and outside Kuwait.[73]

In his report titled *Cubic Calculation,* Roth formulated a design solution with a rational size required for each person by determining the smallest possible dimensions for a single classroom, hallways, a multipurpose hall, and apartments for teachers (see **Figure 6.30**).[74] The initial built-up area of the grid system was 45,046 square metres.[75] These calculations were made in conjunction with the use of prefabricated components, which he had planned to implement with the Swiss structural engineering company, Ruoss and Zurnuhle, but the necessary technology was not yet accessible in Kuwait; therefore, reinforced concrete (as shown in **Figures 6.31** to **6.34**) was cast on-site and covered with white limestone bricks instead.[76] Roth strongly advised the use of prefabricated structures to cut costs and speed up the building process.[77] Although the necessary technology was unavailable at the time, the initiative to install it continued and was ultimately successful in subsequent schools.

Architecture is an outward manifestation of a designer's thoughtful consideration of how to meet the demands of a site's climate and inhabitants. As evidenced by archival records, the Ministry of Education had originally requested air conditioning installation but ultimately decided against it because of economic considerations.[78] Therefore, air conditioning was only available via window units in teachers' apartments and administration building.[79] However, Roth's sole option was to create channels between the concrete floors and beams to allow for natural cross-ventilation from the courtyard to the outside, as shown in **Figure 6.35** and **Figure 6.36**. Sunshades were inserted into

[73] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162 (2/5), Alfred Roth, 'A Letter from Alfred Roth to Hamed Shuaib, Director of Municipal Planning Department on 16th December', 1965; gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162 (2/5), Alfred Roth, 'A Letter from Alfred Roth to Saba Shiber, the Planning Borad, on 5th July', 1967; gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162 (2/5), Alfred Roth, 'A Letter from Alfred Roth to Ahmed Duaij, General Director of the Planning Board, on 27th June', 1967; ibid.; gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162 (2/5), Alfred Roth, 'A Letter from Alfred Roth on Prototype Schools and Al-Rumaithiyah School to Sami Mishri on 2nd July', 1970; gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162 (2/5), Alfred Roth, 'A Letter from Alfred Roth to M. Mustafa, Cheif Engineer at Ministry of Public Works, on 29th January', 1971.

[74] gta Archives / ETH Zurich [gta]: 131-0162 (1/5).

[75] Ibid.

[76] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162 (2/5), Alfred Roth, 'Proposal for Architect's Contract, Al-Rumaithiya Secondary School for Girls, on 15th September', 1967; gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162 (2/5), Alfred Roth, 'A Letter from Alfred Roth to Ahmed Duaij, General Director of the Planning Board, on 16th August', 1967.

[77] gta Archives / ETH Zurich [gta]: 131-0162 (2/5).

[78] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162 (2/5), Faisal S. Essa, 'A Copy Letter from Faisal Sultan to Sami Mishri, Cheif Engineer at Ministry of Public Works, on 11th March', 1969.

[79] Ibid.

the vertical and horizontal window openings to minimise overheating on the upper floors.[80] The outer walls included as little glass as possible, whereas sun-blocking tools were used to cover the pathways (see **Figures 6.37** to **6.42**). Furthermore, the unique sun-shading measures taken externally and internally by the patio created a pleasing sculptural impression (see **Figure 6.43**). In addition to aesthetic synthesis, Roth worked briefly on constructing an indoor ecosystem that included water and plants. No colour scheme was applied in the Rumaithiya School; however, the white-colour sand-limestone wall, as shown in **Figure 6.44** and **Figure 6.45**, occupied a prominent spot on the ground level and deserves special attention.

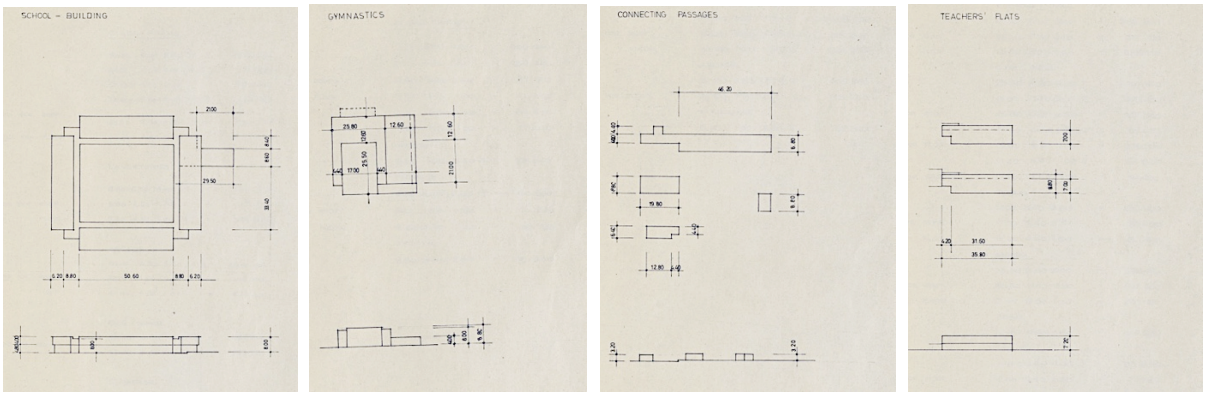


Figure 6.30 The cubic calculation report, 1976. The images depict the methodology employed by Roth to devise a grid system for the layout of a school building, encompassing classrooms, a gymnasium, hallways, and teachers' apartments.[81]

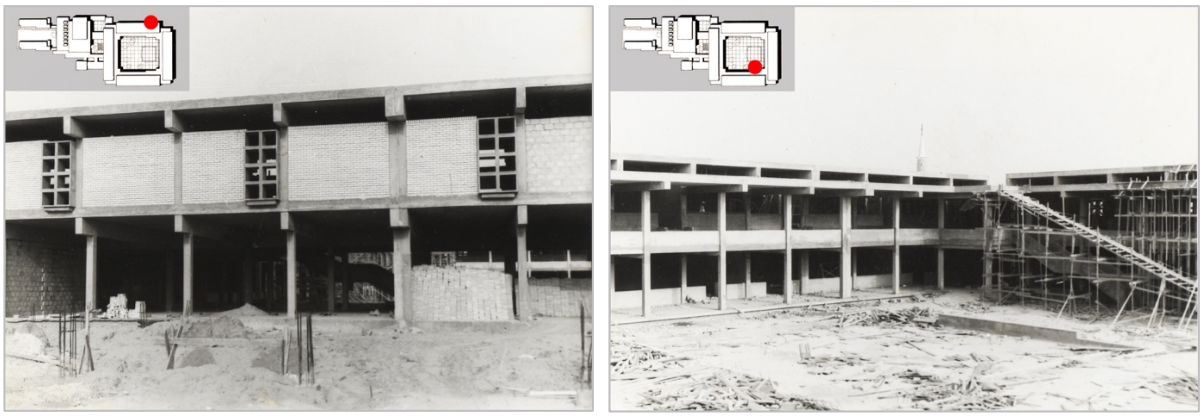


Figure 6.31 Rumaithiya School in construction process, reinforced concrete structure, 1970. Left: The image depicts the classrooms at their highest level of completion during the construction process. The image displays a horizontal aperture situated at the top of the wall, which serves as a deliberate opening intended to facilitate cross-ventilation.[82]

Figure 6.32 Rumaithiya School in construction process, reinforced concrete structure, 1970. Right: The image depicts the utilisation of a reinforced concrete building in the school, as viewed from the inside courtyard.[83]

[80] Ibid.
[81] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0162 (1/5), Alfred Roth, 'A Cubicle Calculation ', 1976.
[82] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0162 (5/5), Alfred Roth, 'Rumaithiya School', 1970.
[83] Ibid.

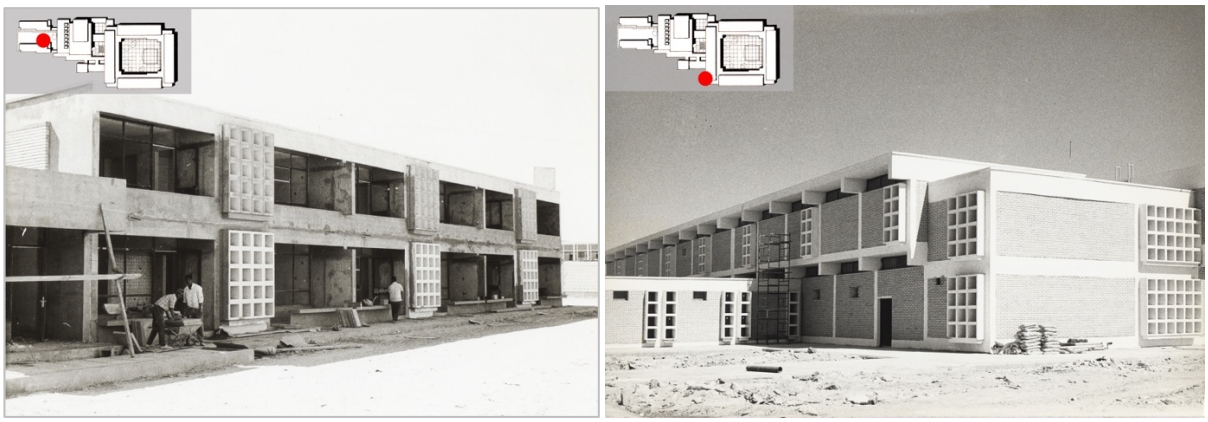


Figure 6.33 Rumaithiya School during the construction process, concrete cast on-site, 1970. Left: Building teachers' apartments with ready-cast components on-site.[84]

Figure 6.34 Rumaithiya School after construction, concrete cast on-site, 1971. Right: View from the south-west view, with the narrow windows that give the building its uniform look.[85]

Following Shiber's advice, the construction work was awarded to a renowned company, KEO, led by Faisal Sultan Essa.[86] The collaboration that developed from this experience was useful for upcoming school projects. In spite of this, the Ministry of Education unexpectedly announced a change in policy while the building was in progress. According to the records, they opted to use Rumaithiya School for intermediate-level education instead of secondary-level education.[87] As a result of the revision, a request was made for ten additional classrooms, two additional laboratories, a single inspector's room, and a single room with limited amenities.[88] Roth solved the problem by adding a single-story building to the old structure, making a small courtyard in the process, while it was KEO's responsibility to create the revision plans.[89] Obviously, the shifts in educational policy and pedagogy affected the school layout, but designers' foresight allowed for these changes to be accommodated as they arose during construction. In addition to the positive outcomes of his work, Roth was able to keep the school's budget under control, with the total cost coming in at 270,000 KD less than the initial estimate of 500,000 KD.[90] Documents show that the designer was given a 4.5 percent contract rate.[91] Although the exact layout was never replicated, numerous schools incorporated features such as the courtyard in the years that followed.

[84] Ibid.
[85] gta Archives / ETH Zurich [gta]: Ref. 131-0162 (5/5)).
[86] gta Archives / ETH Zurich [gta]: 131-0162 (2/5).
[87] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162 (2/5), Alfred Roth, 'A Letter from Alfred Roth to Sami Mishri on Proposed Minor Alterations to the Former Project of Rumaithiya Intermediate School, on 29th November', 1971.
[88] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162 (2/5), Alfred Roth, 'Proposed Minor Alterations to the Former Project of Rumaithiya Intermediate School', 1971.
[89] gta Archives / ETH Zurich [gta]: 131-0162 (2/5).
[90] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162 (2/5), Alfred Roth, 'A Letter from Alfred Roth to Ahmed Duaij on 1st November', 1971; gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162 (2/5), Faisal S. Essa, 'A Letter from Faisal Essa to Alfred Roth, Regarding Girl's Secondary School at Rumaithiya, on 16th June', 1971.
[91] gta Archives / ETH Zurich [gta]: 131-0162 (2/5).

The principles of functionalism, technical execution, economic considerations, and aesthetic synthesis guided Roth's practice of regionalism in Kuwait. At that time, the school was approved by the government of Kuwait and its users, exemplifying the country's shift towards a welfare state. According to the site investigation, minor adjustments to the buildings' layout were made, mostly to accommodate the climate, but the school continued to function as an intermediate school for girls.

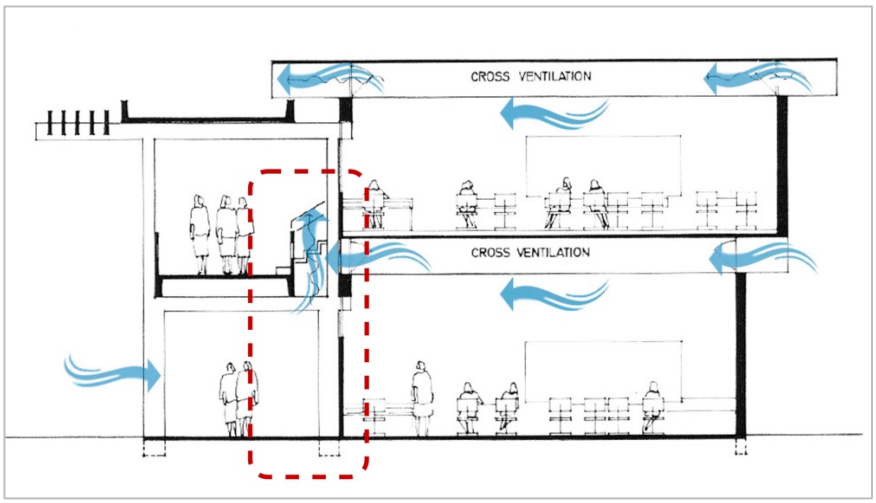


Figure 6.35 A cross-ventilation section through classrooms. Left: An illustration of the cross ventilation on the ceilings of the classrooms (horizontally) and the hallways (vertically).[92]

Figure 6.36 Rumaithiya School, the cross-ventilation path, 1971. Right: An image from the gta/ETH Zurich Archives, displaying the horizontal gap designed for the cross-ventilation.[93]

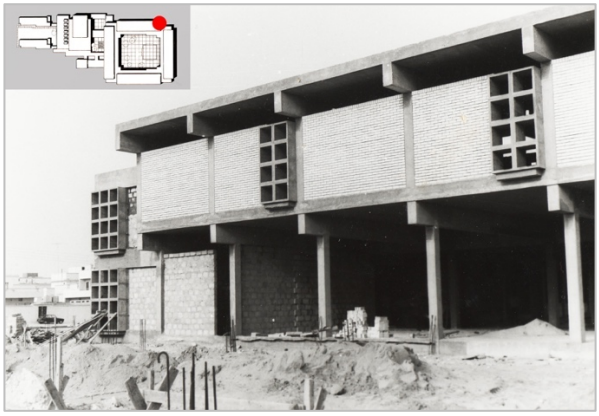


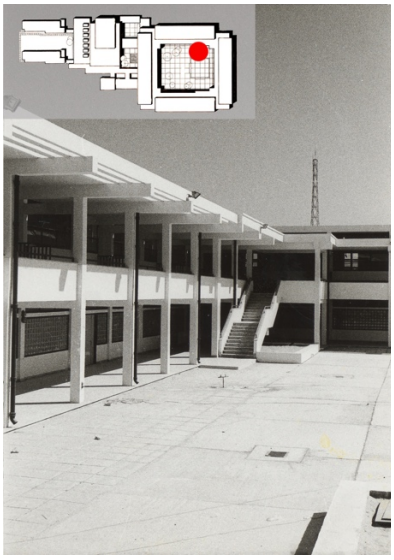
Figure 6.37 Rumaithiya School during the construction process, sunshade blocks, 1971. Left: The image portrays the pre-cast sunshade being installed on windows from an external perspective during the construction phase.[94]

Figure 6.38 Rumaithiya School during the construction process, classroom windows, 1971. Right: The image showcases the utilisation of spacious windows in the classrooms, which may be opened inward.[95]

[92] Roth, p. 398.; annotated by the Author.
[93] gta Archives / ETH Zurich [gta]: Ref. 131-0162 (5/5)).
[94] Ibid.
[95] Ibid.

Figure 6.39 The teachers' flat at Rumaithiya School, sunshade blocks, 1971. Left: North elevation at the teacher's apartment with wide rebound windows and cubical pre-cast openings.[96]

Figure 6.40 Rumaithiya School during the construction process, south elevation openings, 1971. Right: South-elevation window at a teacher's apartment with a few small pre-cast openings.[97]



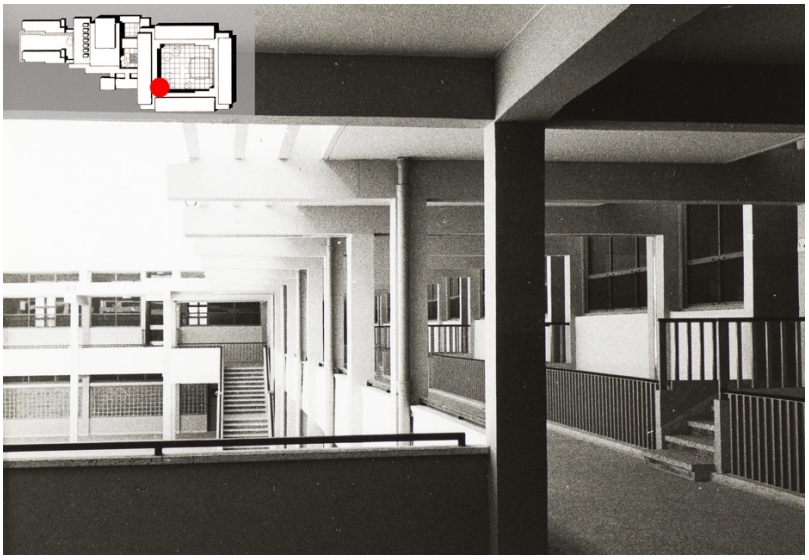


Figure 6.41 Rumaithiya School courtyard's view, horizontal sunshade, 1971. Left: In this image, the hallway outside classrooms on the upper floor is shaded by the horizontal sunshades.[98]

Figure 6.42 Rumaithiya School classroom's view, horizontal sunshade, 1971. Right: Elements of shade protruded from the upper-floor hallway.[99]

[96] Ibid.
[97] Ibid.
[98] Ibid.
[99] Ibid.

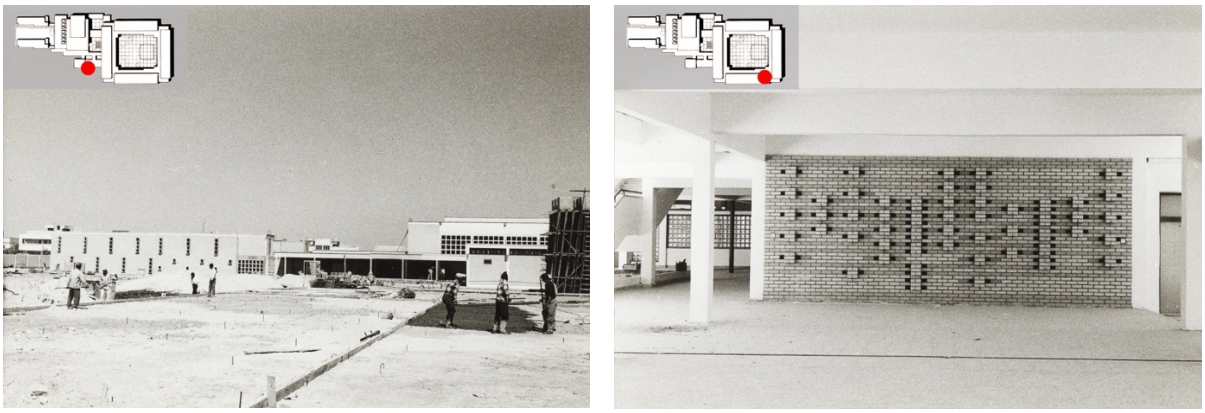


Figure 6.43 Rumaithiya School during the construction process, backyard, 1970. Left: The image depicts the backyard of the school building, namely the area where the sports fields are situated. In the picture, workmen can be seen preparing the ground for the pouring of concrete.[100]

Figure 6.44 The pattern wall at Rumaithiya School, 1971. Right: A coloured white sand-limestone wall with a simple pattern. The image is sourced from the archives of gta/ETH Zurich.[101]

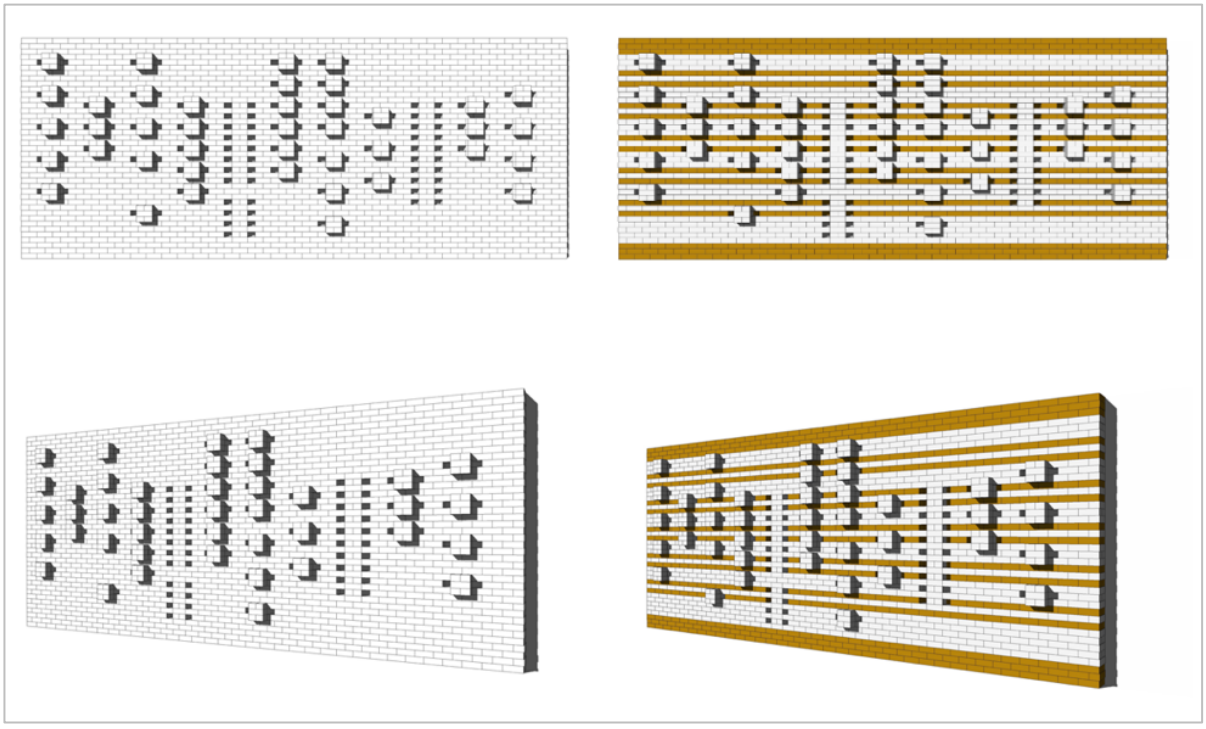


Figure 6.45 A 3D model of the pattern wall. The illustration, generated by the author, provides a clear perspective of the patterned wall created by Roth. The illustration depicts the utilisation of sand-limestone brick as a motif for projection, complemented by Roth's incorporation of yellow and white colours.[102]

[100] gta Archives / ETH Zurich [gta]: Ref. 131-0162 (5/5).
[101] gta Archives / ETH Zurich [gta]: Ref. 131-0162 (5/5)).
[102] Author, 2023.

6.3.3 Prototype Schools (1970–1975)

In parallel with the construction of Rumaithiya School, the Ministry of Public Works held a competition to obtain designs for kindergartens.[103] Five proposals were submitted. Roth evaluated the proposals and submitted a report, stating that the proposals lacked adequate layout.[104] His assessment was that the proposed spaces were too small and randomly arranged, leading to open layouts that offered children no sense of seclusion.[105] Unfortunately, further specifics on this contest are scant, but it resulted in Roth being commissioned by the Minister of Public Works, Khalid Essa Al-Saleh, to design the state's prototype schools, including kindergarten, primary, and intermediate schools. This commission was made because of the state's welfare initiative and the pressing need for 100 additional schools over the next five years.[106]

Roth successfully met with Minister Al-Saleh on the 31st of March 1969, regarding the state-prototype school-built programme.[107] Al-Saleh, in the presence of Mahmoud Mustafa (Ministry of Public Works's advisor), broached the subject of the school programme and the lack of coordination between the ministries of public works and education, suggesting to Roth that a school study commission be formed, with representatives from both ministries and Roth supervising the work of the commission.[108]

Similar recommendations had been made in 1966 by UNESCO Commissioner Donald Barron, namely, to establish a research and development team to develop basic criteria and guidelines for designing new schools in Kuwait.[109] However, the mission was to conduct in-depth critical research on all aspects of school construction, including pedagogy, architecture, town planning, and the economy.[110] Roth was well-prepared for his new role because he had previously headed the UIA's *'School Building Commission'.* On 21st May 1969, Roth prepared a proposal for setting up the *School Study Commission,* where he classified milestone topics, such as the committee's structure and members; topics covering the development of pedagogy for education over the next ten years for all

[103] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162 (2/5), Alfred Roth, 'A Brief Criticism on the Five Competition Projects for a Kindergarten in Kuwait', 1968.
[104] Ibid.
[105] Ibid.
[106] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (1/3), Alfred Roth, 'Roth's Final Report on the 2nd Seminar for Schools in Kuwait, 18th December', 1969.
[107] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162 (2/5), Alfred Roth, 'A Letter from Alfred Roth to Faisal Sultan on 15th April', 1969.
[108] Ibid.; gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (1/3), Alfred Roth, 'A Letter from Alfred Roth to Khalid Essa About School Study Seminaries on 21st May', 1969.
[109] Donald G. Barron, *Kuwait: The Design of Schools and Related Problems* (Paris: 1967).
[110] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (2/3), Alfred Roth, 'A Proposal for the Organisation and the Working Program of a Special School Study Comission (Ssc)', 1969.

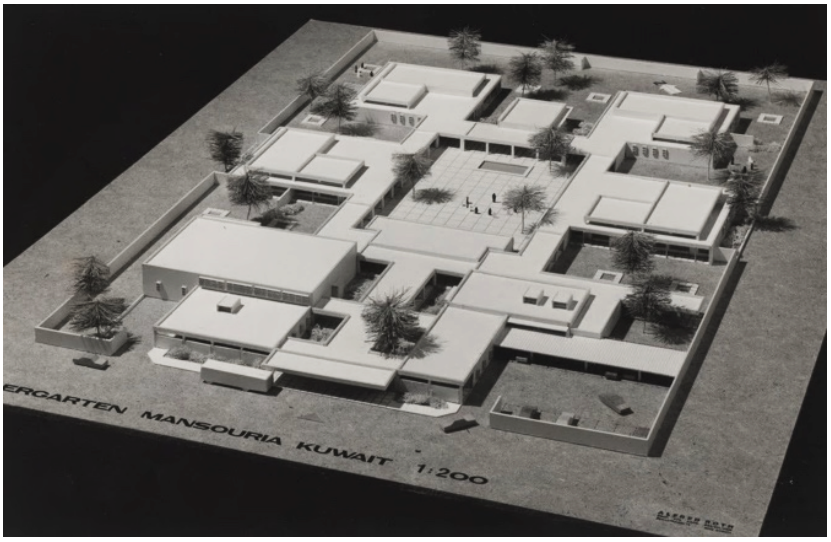
levels from kindergarten to university; principles of school design, technical concerns, construction techniques, and the teacher's accommodation and urban distribution of schools.[111] Moreover, Roth participated in the activities of the Second Master Plan's Board, where he and Buchanan worked on school allocations (as discussed in **Chapter 4**).[112] Roth reported initial work on school distribution in Sabahiya City and the Riqa, Ardiya, Jahra, Mina Abdullah, and Ahmadi districts.[113]

Roth presided over the first productive gathering on 2nd November 1969, which included representatives from the Ministries of Education (Mohamoud Sa'ad El-Din, Mohammed Bashir, P. J. Healy, Salim Dahir, P. J. Healy, Mohammed Bashir, and Abdulaziz Al-As'ousi) and the Ministry of Public Works (Mahmoud Mustafa, Mohammed Assaf, and M. Shoukry).[114] The committee surveyed all school headmasters, and the results illuminated the key aspects of the necessary curricula for schools.[115] Each prototype school received a summary report as a result of the Study Commission. Roth reported that a kindergarten design was the first completed project; thus, he began his architectural work by creating one prototype kindergarten for the Mansouriya district, one primary school for Sabahiya City, and one intermediate school for the Abdullah Al-Salem district.

The prototype kindergarten was all-inclusive and had a far more flexible spatial programme than the prevalent typological design of Tripe and Wakeham in Western societies. Roth based his approach on the pedagogical theories of Johann Heinrich Pestalozzi, who believed that schooling should be viewed as an extension of the education that children receive at home.[116] Following Rumaithiya School, the Mansouriya Kindergarten (as shown in **Figure 6.46** and **Figure 6.47)**) construction project was undertaken. On a plot of 10,950 square metres, the kindergarten utilised the design concept of four block units, each featuring a set of three classrooms (a total of 12 classrooms), a teaching room, and a garden space overlaid by a sleeping room, all centred around an open courtyard (see **Figure 6.48** and **Figure 6.49**).[117] A covered walkway united the remaining buildings and their respective functions, which included the music room, administration, library,

[111] Ibid.
[112] gta Archives / ETH Zurich [gta]: 131-0162 (2/5); gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0164 (2/5), KMPW, 'Symposium Report', 1969; gta Archives / ETH Zurich [gta]: 131-0162/0165 (1/3).
[113] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162 (2/5), Alfred Roth, 'A Letter from Alfred Roth to Saleh Al-Saleh, Minister of Education, in Regard to the Master Plan of as-Sabahiya City Distribution of Schools, 19th February', 1970; gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (1/3), Alfred Roth, 'Report on Primary School for the Cities of Riqa, Al-Jahra, Mina Abdullah, Aridiyah in Kuwait ', 1971.
[114] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (2/3), Alfred Roth, 'School Design Seminary Report', 1969.
[115] gta Archives / ETH Zurich [gta]: 131-0162/0165 (1/3).
[116] Roth, p. 10.
[117] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (2/3), Alfred Roth, 'The Final Preliminary Design for a Prototype Kindergarten with 12 Classrooms in Kuwait, 10th October', 1970.

assembly hall, and front gate.[118] Roth's design reconceived classrooms as places where children can feel as safe and close to adults as they do at home (see **Figures 6.50** to **6.53**).[119] The kindergarten featured multiple socialist areas that coincided with gardens, playgrounds, an animal barn, and a closed physical setting decorated with patterned walls of light yellow limestone. It offered a dynamic and intimate feeling that was ideal as an environment for children. Regarding the construction methods, Roth attempted to use a system of modular units, such as 0.55 metre, 1.10 metre, 2.20 metre, and 3.30 metre, with a standard height of 3.85 metre in each classroom, and the major windows were covered with shades.[120] In this case, the idea of employing prefabricated structural elements failed, as had been the case previously. Therefore, similar to the Rumaithiya School for Girls, this building employed a system of reinforced concrete slabs.[121] By 1972, Roth had successfully constructed a kindergarten at the cost of approximately 100,000 Kuwaiti dinars.[122]



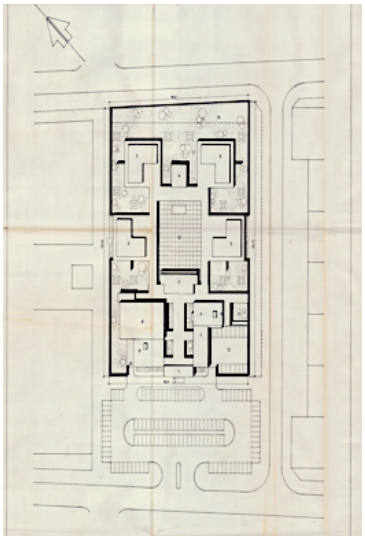


Figure 6.46 Mansouriya Kindergarten model, 1972. Left: The image, which was obtained from the gta/ETH Zurich Archives, depicts a 1:200 scale model of a kindergarten. The model accurately reflects the thematic approach employed by Roth in designing this school, which features a central courtyard around a cluster of classrooms, each with its own access to an outdoor garden.[123]

Figure 6.47 Mansouriya Kindergarten site layout, 1972. Right: The drawing displays the site plan of a kindergarten, showcasing convenient accessibility and parking facilities located in front of the main gate. [124]

[118] Ibid.

[119] gta Archives / ETH Zurich [gta]: 131-0162/0165 (2/3).

[120] gta Archives / ETH Zurich [gta]: 131-0162/0165 (2/3); gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (2/3), Alfred Roth, 'The Final Preliminary Design for a Prototype Intermediate School with 20 Classrooms in Kuwait, 10th October', 1970; gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (2/3), Alfred Roth, 'The Final Preliminary Design for a Prototype Primary School with 20 Classrooms in Kuwait, 10th October', 1970.

[121] gta Archives / ETH Zurich [gta]: 131-0162/0165 (2/3).

[122] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (1/3), Alfred Roth, 'A Letter from Alfred Roth to Faisal Sultan About Cost Estimation of the Three Projects of Prototype Schools', 1970.

[123] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0163,0164 (1/5), Alfred Roth, 'Mansouriya Kindergarten Model', 1972.

[124] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0163,0164 (1/5), Alfred Roth, 'Mansouriya Kindergarten Site Plan', 1972.

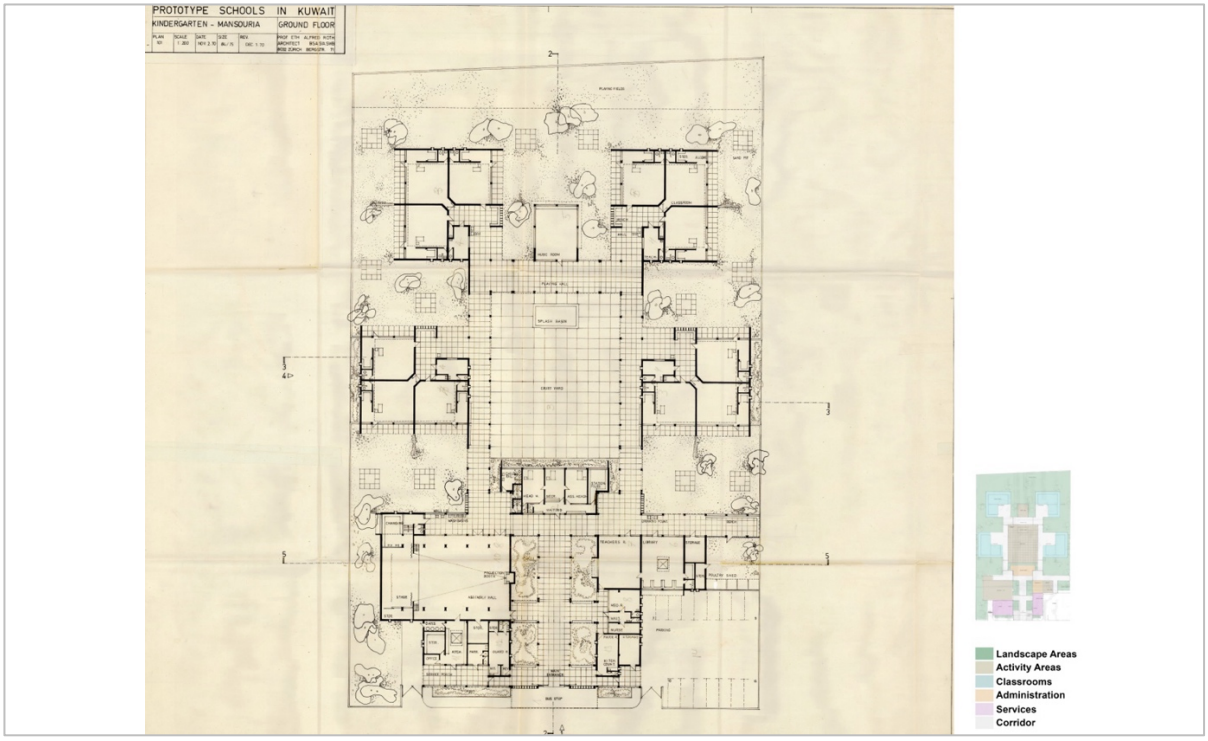


Figure 6.48 Mansouriya Kindergarten layout, ground floor, 1972. A detailed layout of the kindergartens' facilities is shown in the blueprint. You can find each facility on the coloured keymap. According to the image, the kindergarten's green spaces are the largest. [125]

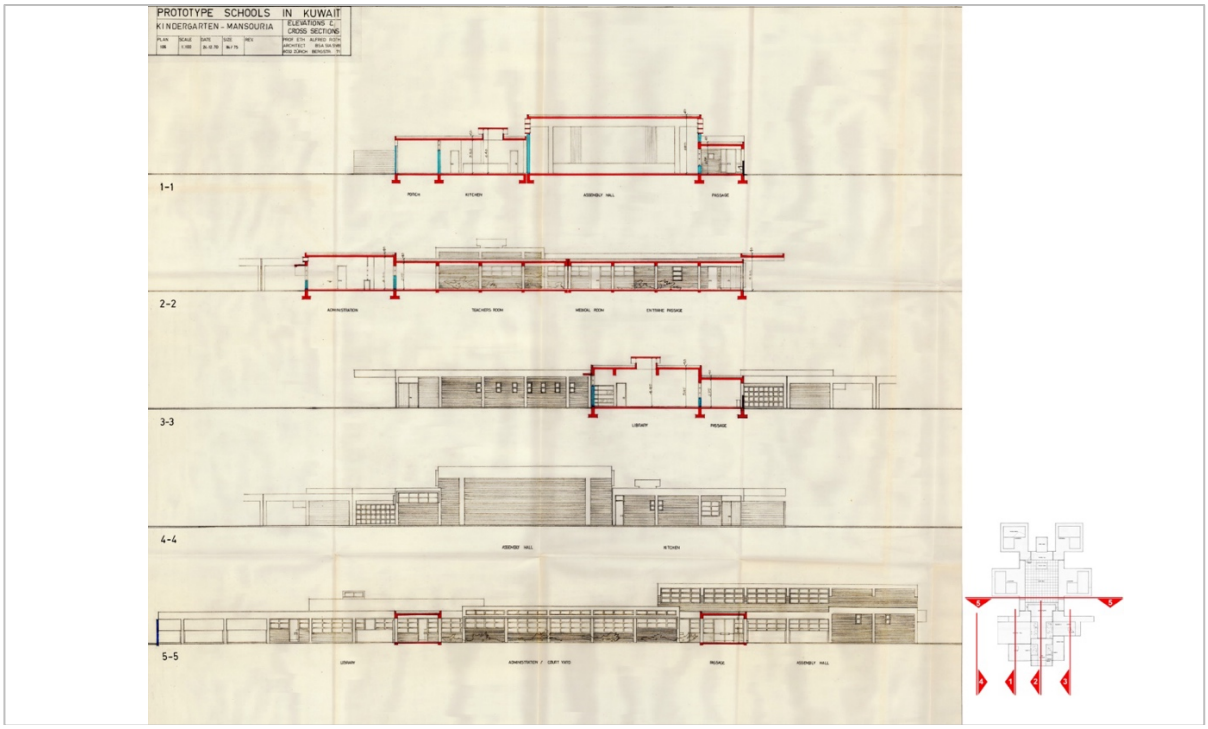


Figure 6.49 Mansouriya Kindergarten sections, 1972. The layout provides a clear representation of how the space in the kindergarten is allocated to meet the needs of students between the ages of 4 and 6. [126]

[125] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0163,0164 (1/5), Alfred Roth, 'Prototype Schools-Kindergarten, Mansouriya', 1972.

[126] Ibid.

Figure 6.50 Mansouriya Kindergarten, main entrance, 1972. Left: A photograph was captured subsequent to the completion of the construction, depicting the primary entrance adorned with the school's name prominently displayed at the top. [127]

Figure 6.51 Mansouriya Kindergarten, courtyard, 1972. Right: The image presents a view of the main courtyard, showcasing the adjacent classrooms and the presence of on-site planters for flora.[128]

Figure 6.52 Mansouriya Kindergarten, classrooms, 1972. Left: From the backside of classrooms, one can observe the direct accessibility of each classroom to outdoor areas, with distinct partitions separating each class.[129]

Figure 6.53 Mansouriya Kindergarten, pattern wall, 1972. Right: This image depicts a patterned wall that Roth has installed at schools to divide the backyard from the main hallways.[130]

In Kuwait, kindergartens were allowed to accommodate both genders, whereas the rest of the schooling hierarchy had to be for one specific gender only. Roth was obligated to offer a design typology that would be suitable for both sexes at the primary, intermediate, and secondary levels because educational requirements tended to be comparable. While similarities existed between the two spacing programmes, dissimilarities emerged in the realms of sports and extracurricular activities (see **Figure 6.54**).[131] In an effort to emulate the Rumaithiya School, Roth presented a model for a courtyard school serving primary and intermediate students. Sabahiya Primary School (as shown in **Figure 6.55** and **Figure 6.56**) and Abdullah Al-Salem Intermediate School (as shown in

[127] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0163,0164 (1/5), Alfred Roth, 'Mansouriya Kindergarten', 1972.
[128] Ibid.
[129] Ibid.
[130] Ibid.
[131] gta Archives / ETH Zurich [gta]: 131-0162/0165 (2/3).

Figure 6.57 and **Figure 6.58**) were designed to have two-story classrooms and facilities around the central courtyards and were connected to the buildings' main entrances by covered walkways.[132] Twenty classrooms in each school were set up around the *'garden courtyard,'* while the *'general courtyard'* housed the rest of the facilities.[133] The intermediate school model differed from that of primary schools in that the courtyard and sports fields were much larger to accommodate the larger student body. A total of 27,000 square metres was constructed for primary schools, and 29,600 square metres were constructed for intermediate schools.[134]

Considering the potential use of prefabricated components, Roth adopted a structural module system analogous to that used in kindergartens. Roth also made a second attempt at using prefabricated construction elements in these schools. In 1972, he showed Al-Saleh, the Minister of Public Works, the STUP prefabricated system developed by Freyssinet in Paris (as shown in **Figure 6.59**), which emphasised the reinforced prestressed concrete elements.[135] This was more appropriate for Kuwait's climate than the English and German CLASP systems.[136] Ultimately, Roth's efforts fell short because the industry was not prepared for this technology.

Like the Rumaithiya School, originally intended for secondary school use but ultimately converted to serve intermediate students, Abdullah Al-Salem's school was relocated to serve the secondary level upon the education minister's request.[137] However, no further modifications to the school design were recorded. In addition, the fieldwork conducted in this study did not reveal any evidence of the construction of Sabahiya or Abdullah Al-Salem schools. Roth's work in Kuwait, however, was put on hold while the Ministry of Public Works continued to develop and build several prototypes, some of which deviated from the original plan, but no mention was made of the architect's oversight.

[132] gta Archives / ETH Zurich [gta]: 131-0162/0165 (2/3); gta Archives / ETH Zurich [gta]: 131-0162/0165 (2/3).
[133] gta Archives / ETH Zurich [gta]: 131-0162/0165 (2/3); gta Archives / ETH Zurich [gta]: 131-0162/0165 (2/3).
[134] gta Archives / ETH Zurich [gta]: 131-0162/0165 (2/3); gta Archives / ETH Zurich [gta]: 131-0162/0165 (2/3).
[135] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (1/3), Alfred Roth, 'A Describtion Report on Schools with Prestressed Prefabricated Stup Elements', 1971; gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (1/3), Alfred Roth, 'A Letter from Alfred Roth to Faisal Sultan About Schools with Prefabricated Prestressed Stup Concrete Elements', 1971.
[136] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (1/3), Alfred Roth, 'A Letter from Alfred Roth to Khalid Essa on 9th May', 1972.
[137] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (1/3), 'A Letter from Secretary of Ministry of Public Works to Alfred Roth in Regards to the Schools on 12th October', 1972.

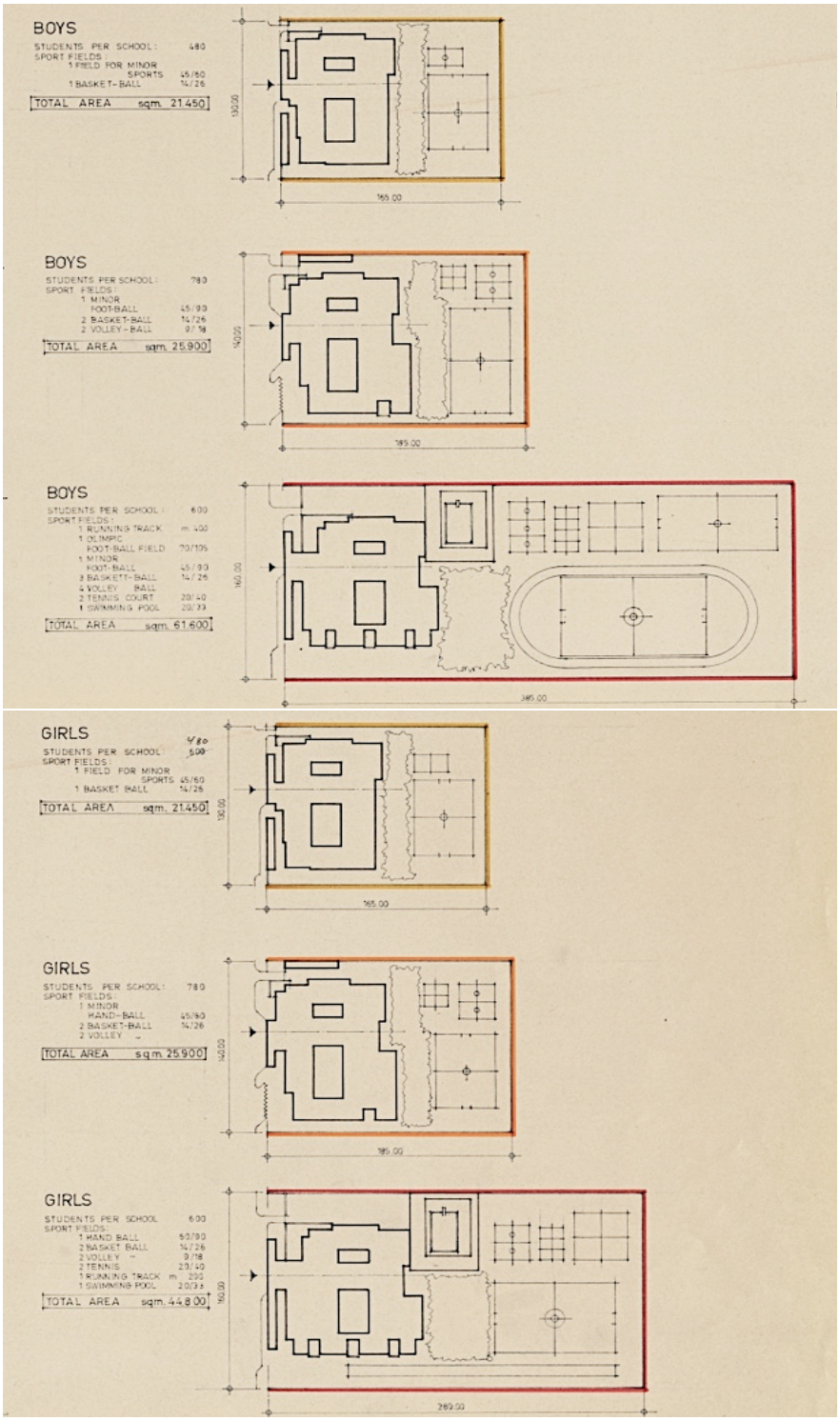
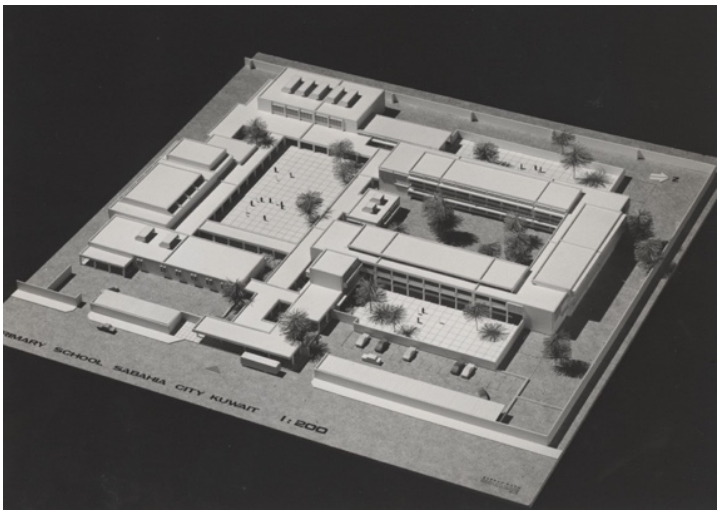


Figure 6.54 Primary, intermediate, and secondary school types, 1970s. The graphic depicts Roth's provision of prototype schools that cater to both genders and all grades. His ideas revolve around creating education venues that offer identical opportunities but allow for flexibility in adapting specific functions to suit each gender at every level. The uppermost group depicts educational institutions encompassing all levels of schooling exclusively for males, while the lower image portrays schools specifically catering to female students. The disparities in sports fields are evident. Images were obtained from the gta/ETH Zurich Archives.[138]

[138] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0157, 0164, 0165,0166, Alfred Roth, 'Prototype Schools', 1970.



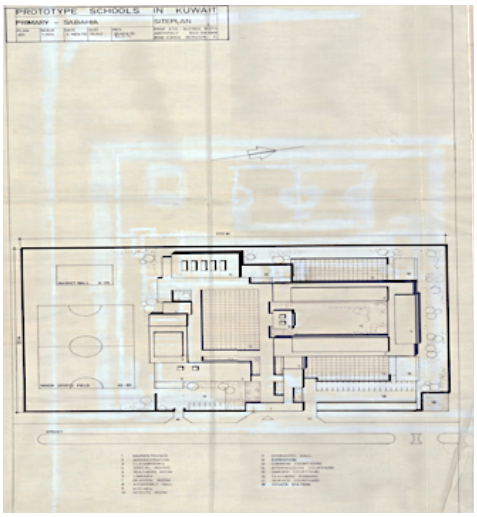
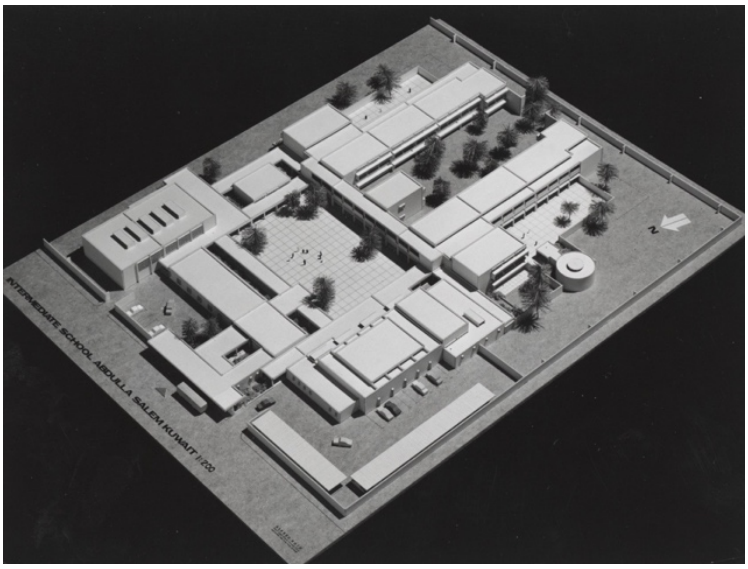


Figure 6.55 Sabahiya Primary School model, 1970. Left: A three-dimensional model of a primary prototype school. The design revolves around two courtyards, one by classrooms and the other encompassed by school facilities such as laboratories, a library, a theatre, a gymnasium, and a cafeteria (see the gallery in **Appendix F** for a more thorough plan).[139]

Figure 6.56 Sabahiya Primary School, site layout, 1970. Right: The site plan illustrates the school's accessibility, with two entrances designated on the elongated side of the building.[140]



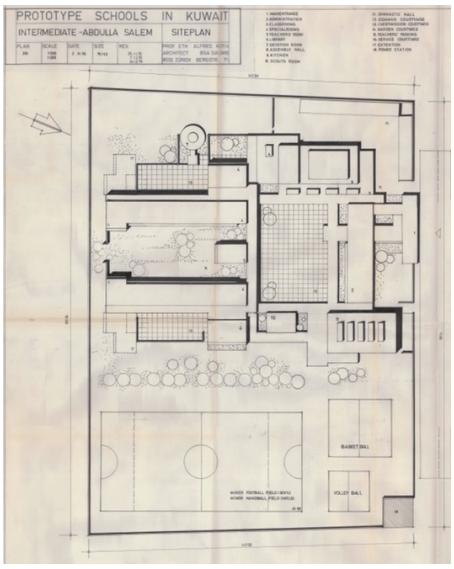


Figure 6.57 Abdullah Al-Salem Intermediate School model, 1970. Left: Like primary school, this concept illustration demonstrates that the intermediate level also has two courtyards. Yet, the distinguishing factor is the size of these spaces, as students aged 11 to 14 require larger grounds.[141]

Figure 6.58 Abdullah Al-Salem Intermediate School, site layout, 1970. Right: This layout depicts the precise arrangement of the school facilities and athletic fields, along with the inclusion of two entrances accessible from the main road (see the gallery in **Appendix F** for a more thorough plan).[142]

[139] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0163,0164 (1/5), Ref. 131-0182/0188, Alfred Roth, 'Sabahiya Primary School Model', 1970.

[140] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0163,0164 (1/5), Ref. 131-0182/0188, Alfred Roth, 'Prototype Schools in Kuwait, Primary-Sabahiya', 1970.

[141] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0163,0164 (1/5), Ref. 131-0182/0188, Alfred Roth, 'Abdullah Al-Salem Intermediate School Model', 1970.

[142] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0163,0164 (1/5), Ref. 131-0182/0188, Alfred Roth, 'Prototype Schools in Kuwait, Intermediate- Abdullah Al-Salem ', 1970.

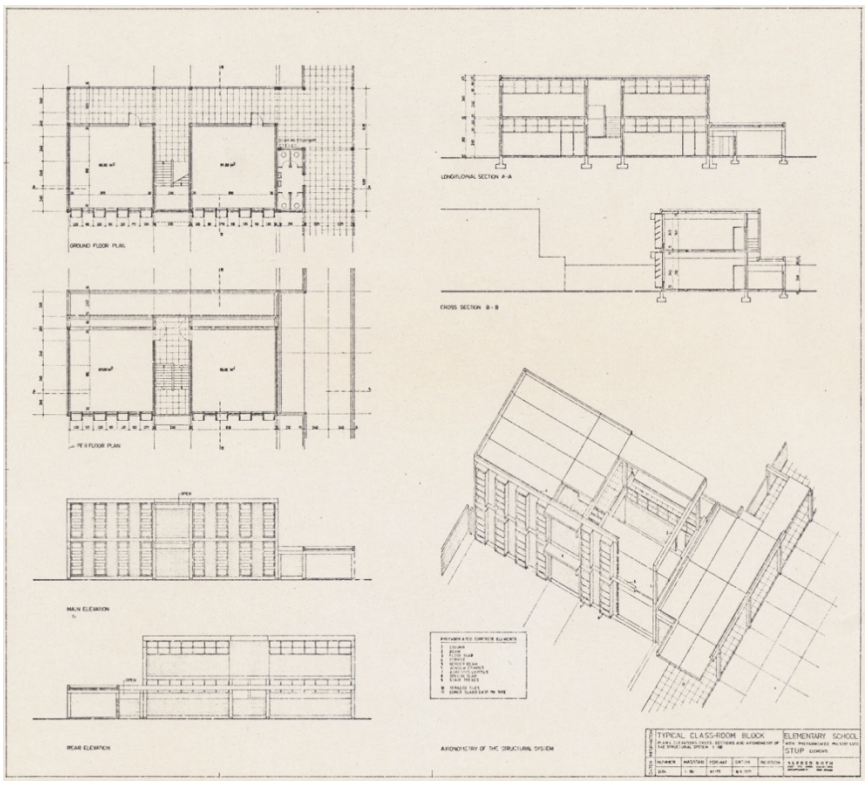


Figure 6.59 Typical STUP classroom block. The drawing, acquired from the gta/ETH Zurich archives, depicts the utilisation of STUP prefabricated components that were specifically designed for prototype schools in Kuwait. The plan layout, sections, elevations, and isometric view collectively offer a thorough depiction of the system's compactness.[143]

6.3.4 New Prototype Prefabricated Schools (1976–1981)

Roth and Al-Saleh's professional relationship profited immensely from the development of friendly relations between them, which was especially useful in the prefabrication industry. After leaving his post as Minister of Public Works, Al-Saleh's interest in prefabricated systems prompted him to establish a new business, the Industrial and Real Estate Company (IREC), to investigate the feasibility of implementing this structural system in Kuwait.[144] Although the main intention of the project was to maintain a prefabricated structure for hospital buildings, the new school buildings profited from the planned work.[145] According to the documents, Roth had Zurich's Steiger Partner AG and H. Henauer, a structural engineer, work together on a new prefabricated structural system called the Freyssinet System for schools.[146] They used the same or related prefabricated concrete elements for hospitals in the construction of all four school types. These were paired down to the essentials and eventually comprised only the foundation blocks, pillars, floor slabs, roof vaults and channels,

[143] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0164/0165 (5/5), Alfred Roth, 'Typical Classroom Block', n.d.

[144] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (3/3), Khalid Al-Essa, 'A Letter from Khalid Essa to Alfred Roth on 2nd July', 1973.

[145] Ibid.

[146] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (3/3), Alfred Roth, 'Brief Description of Projects of Prefabricated Schools in Kuwait, 14th October', 1975.

horizontal-roof slabs, external and internal elevation wall units, and wall and sill slabs along the open corridor.[147] Aluminium was commonly used for window frames, whereas metal was used for standard doors. **Figures 6.60 and 6.61** show the layouts of these components.[148]

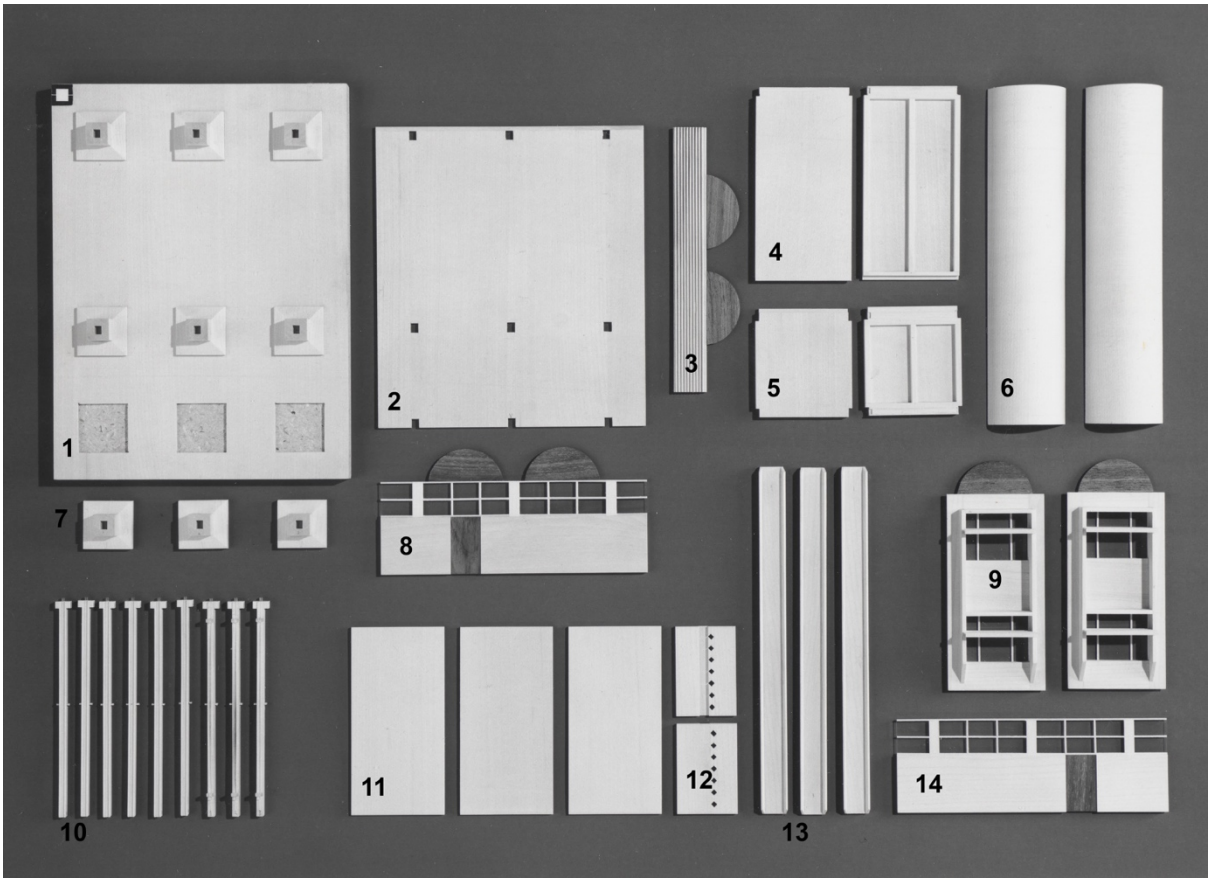


Figure 6.60 The prefabricated system elements were designed by Steiger Partner AG and R. Henauer, n.d. The image depicts a detailed representation of the prefabricated system components, which include the following elements: (1, 2, 4, 5) floor slabs, (3, 12) sunshade louvres, (6) roof vaults and channels, (7) foundation blocks, (8, 14) external walls, (9) sill slabs, (10) pillars, (11) internal elevation wall units, and (13) horizontal beams.[149]

[147] Ibid.
[148] Ibid.
[149] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0164/0165 (5/5), Alfred Roth, 'Prefabricated System Elements ', n.d.

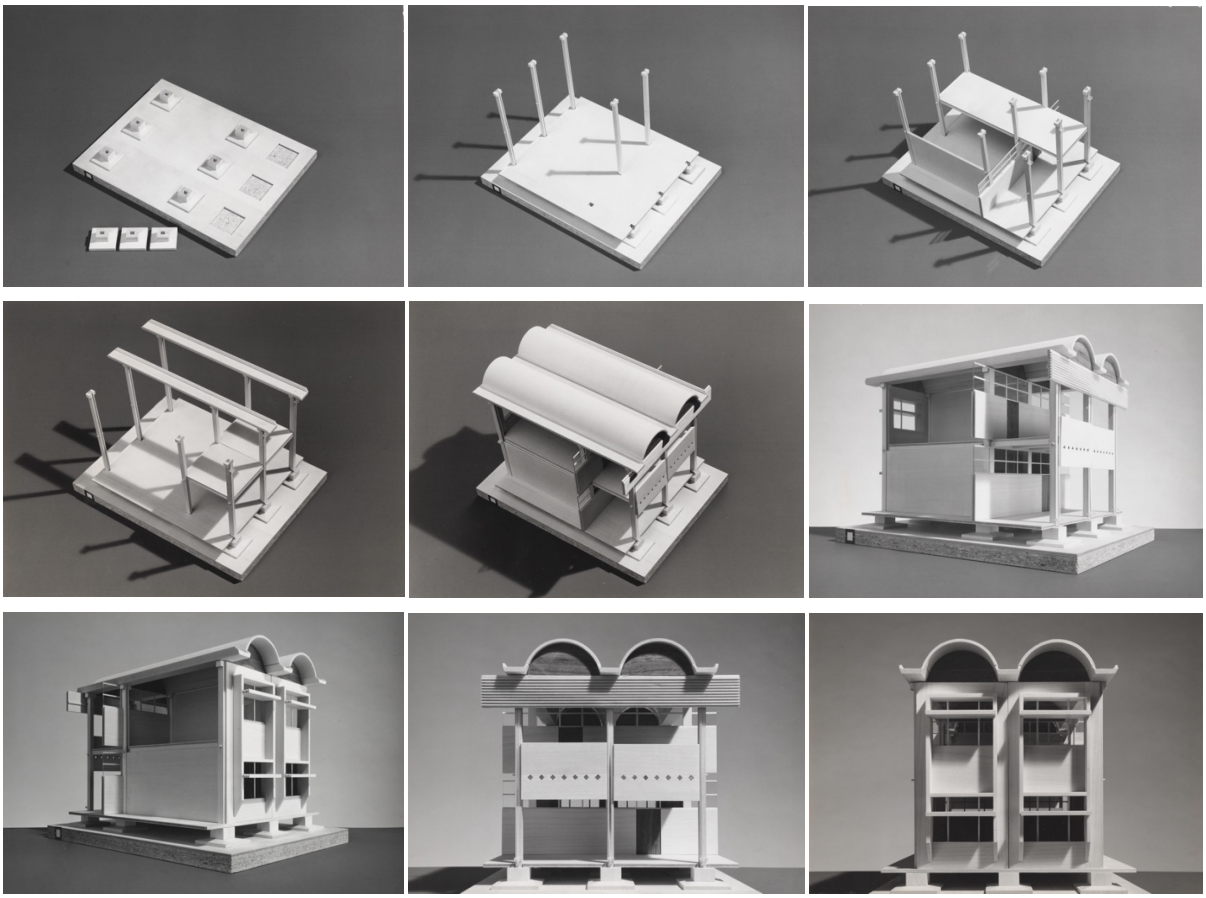


Figure 6.61 A Freyssinet system, a model sample. The image collection above, acquired from the gta/ETH Zurich Archives, vividly depicts the prefabricated structural components and the sequential technique by which they are interconnected during the construction process. The initial phase of the model installation involves the utilisation of the main floor slab and foundation blocks. Subsequently, the vertical columns or pillars are erected, followed by the installation of roof beams and floor slabs. Prior to the final stage, the vertical walls are put in place, and the process concludes with the installation of window frames and sunshade louvres. [150]

Roth immediately started working on various Freyssinet System School and planning models, while maintaining the preceding studies' dimensioning module. This arose from the government's mandate to build 150 additional educational facilities.[151] The courtyard concept, which emphasised the introverted character rather than open schools of the Western type, coexisted with Roth's all-school typologies in Kuwait. He offered four distinct types of schools, each catering to a different stage of education (kindergarten in a single-story structure; primary, intermediate, and secondary schools in separate two-story buildings) in accordance with the latest pedagogical requirements (see **Figures 6.62** to **6.66**). All classrooms were planned to use a 3.6-metre module, a reference to the Freyssinet System's modular, prefabricated design (an example of the built school is shown in **Figure 6.67**). However, by July 1976, IREC had approached the French Freyssinet International

[150] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0164/0165 (5/5), Alfred Roth, 'Freyssinet System', n.d.
[151] gta Archives / ETH Zurich [gta]: 131-0162 (1/5).

concrete firm in Paris and negotiated a contract to take over the company's prefabrication technology for schools in Kuwait.[152] The firm immediately erected a massive industrial hanger—roughly 100 metres long—and several ancillary structures in Kuwait (as shown in **Figure 6.68** and **Figure 6.69**).

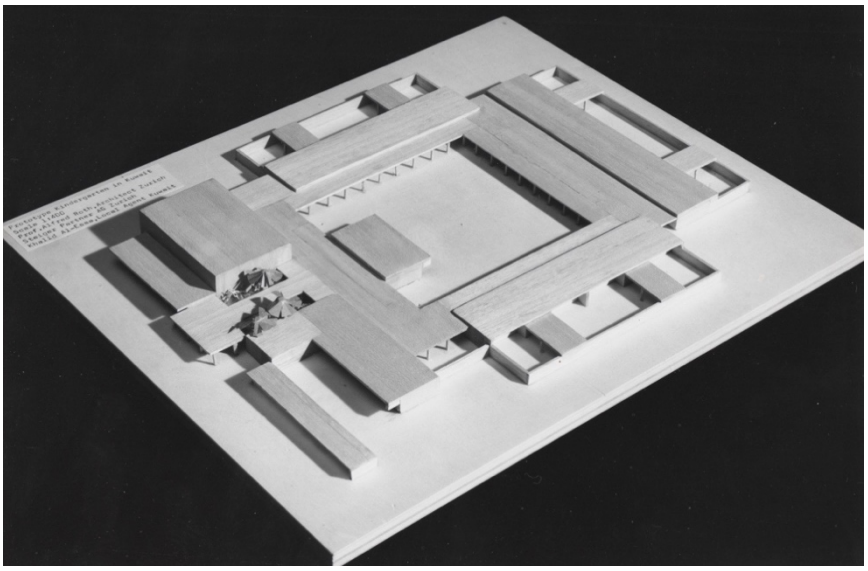


Figure 6.62 A new prototype kindergarten, 1975. The image displays a conceptual model for a new prototype kindergarten, with a central courtyard as the focal point, encircled by a sheltered hallway that connects to a cluster of classrooms. The evidence for constructing this kindergarten is ambiguous (see the gallery in **Appendix F** for a more thorough plan).[153]

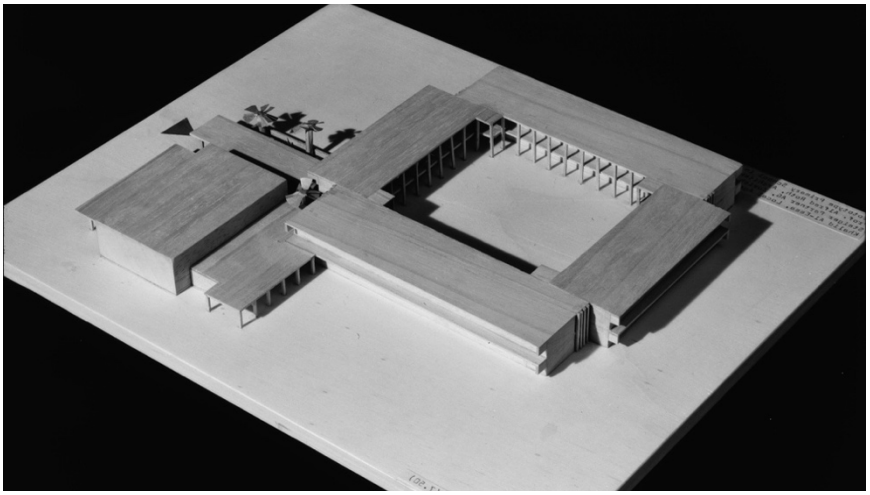


Figure 6.63 A new prototype primary school, 1975. The image depicts one of the design possibilities that Roth presented to the Ministry of Education. The evidence for constructing this school is ambiguous (see the gallery in **Appendix F** for a more thorough plan). [154]

[152] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (1/3), Alfred Roth, 'A Letter from Alfred Roth to Khalid Essa About the Prefabricated Schools on 29th July', 1976.

[153] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0162 (5/5), Ref. 131-0163,0164(1/5), Alfred Roth, 'Prototype Kindergarten Model', 1975.

[154] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-F-12-1-1-4 (5/5), Ref. 131-0163,0164(1/5), Alfred Roth, 'Prototype Primary Model', 1975.

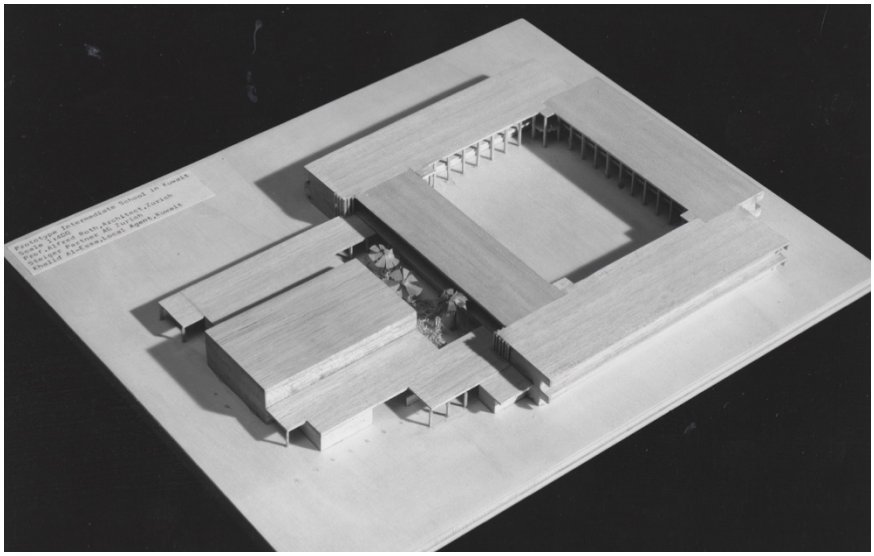


Figure 6.64 A new prototype intermediate school, 1975. This image showcases a new prototype intermediate school designed by Roth, which follows a similar approach to kindergarten and primary schools. These models were easier to adapt to the concept of a prefabricated system; however, it remains uncertain if it was actually implemented or not (see the gallery in **Appendix F** for a more thorough plan). [155]

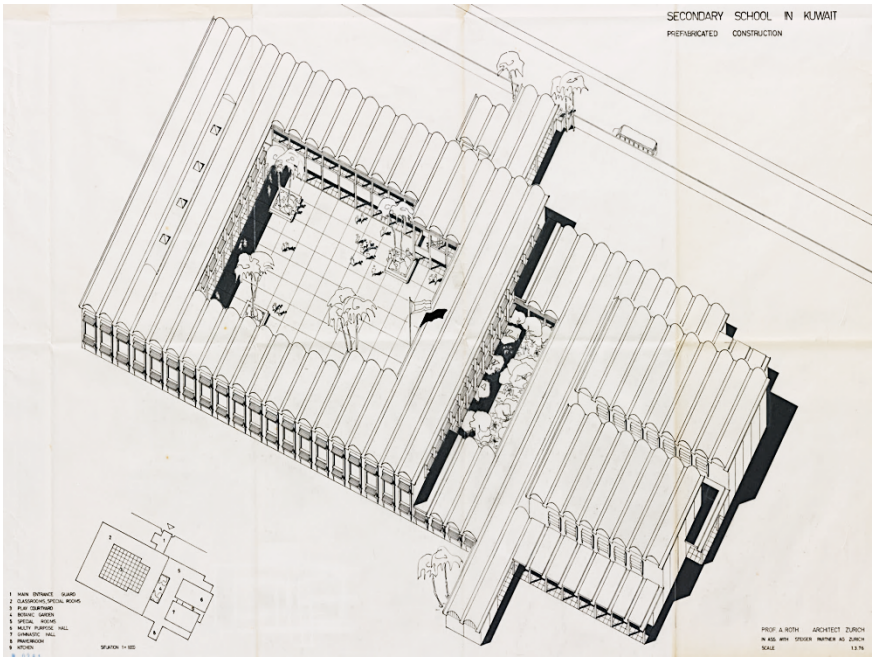


Figure 6.65 A prefabricated secondary school, c. 1977. The drawing depicts an alternate design for a secondary school that makes use of vault components to form units in a novel way, suggesting a new kind of prefabricated school.[156]

Figure 6.66 A prefabricated secondary school elevation, n.d.[157]

[155] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-F-12-1-1-4 (5/5), Ref. 131-0163,0164(1/5), Alfred Roth, 'Prototype Primary School', 1975.

[156] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0162 (5/5), Ref. 131-0182/0188, Alfred Roth, 'Prefabricated Prototype School', 1977.

[157] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0162 (5/5), Ref. 131-0182/0188, Alfred Roth, 'Prototype Intermediate School', 1975.

Figure 6.67 A prefabricated prototype school, c. 1977. Neither the type nor the grade level of this school is shown in the image. Nevertheless, it reveals the inner courtyard view of the prefabricated vault concept in action. While bearing similarities to other models, this particular one distinguishes itself through its unique vault shape and intricate decoration, potentially suggesting the participation of the local sector (IREC).[158]

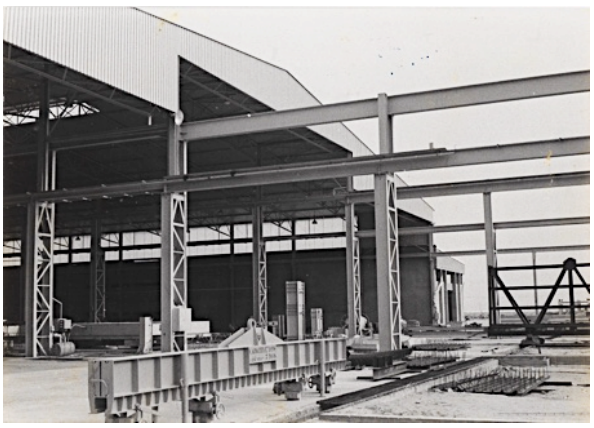


Figure 6.68 The prefabricated structural factory, 1977. left: This image showcases the IREC's initiative facility in Kuwait, aimed at manufacturing prefabricated components.[159]

Figure 6.69 The prefabricated structural factory, 1977. Right: An alternative view on the speedy construction of the large structure, which was initially conceived as a prefabricated component design by the French company Freyssinet International and later modified by IREC. [160]

The Kuwaiti government founded the National Housing Authority in 1974, with a mandate to direct the construction of communities, homes, and utilities.[161] Records show that Roth conferred with the National Housing Authority on the updated requirements for new schools.[162] However, the architect played a supporting role in the contractual process, while KEO and IREC served as the government's primary dealers.[163] Roth's contribution was limited to the provision of a conceptual design, while

[158] gta Archives / ETH Zurich [gta]: Ref. 131-0162 (5/5), Ref. 131-0182/0188.

[159] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0164/0165 (5/5), Alfred Roth, 'Prefabricate Structural Factory ', 1977.

[160] Ibid.

[161] PAHW, 'Public Authority for Housing Welfare: Our History', 2017 <https://www.pahw.gov.kw/About_en> [accessed 18th November].

[162] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (3/3), Alfred Roth, 'A Brief Describtion of Kindergarten in Kuwait on 23rd June', 1978.

[163] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (3/3), Alfred Roth, 'Agreement Letter between Alfred Roth and Irec on 16th December', 1976.

KEO was responsible for creating blueprints and making the necessary modifications, which led to a sour conclusion in terms of the school environment.

Given the National Housing Authority's reduced plot size, the new prototype schools required a more compact learning environment. The architect's latest plan was primarily identical to his earlier plans (see **Figure 6.70** and **Figure 6.71**), with a rational approach in addition to the use of thermally placed concrete and prefabricated components. In his diary, Roth depicted a prefabricated part taken from an American system called the *UniCon.*[164] The components included 120-centimetre-wide prestressed concrete slabs for the ceilings, bearings, two-story, thermally insulated outside wall elements with or without window openings, covered corridor elements, and single-story partition wall elements (as shown in **Figure 6.72** to **6.74**). However, it appears that, owing to National Housing Authority requests and alterations made by IREC, the actual construction of these school typologies differed significantly from their initial design. In 1982, Roth noted that his proposed school design was vastly different from the schools built, and that he thought his approach to be more cost-effective, simpler, and integrated, as well as providing better wind and sun protection.[165]

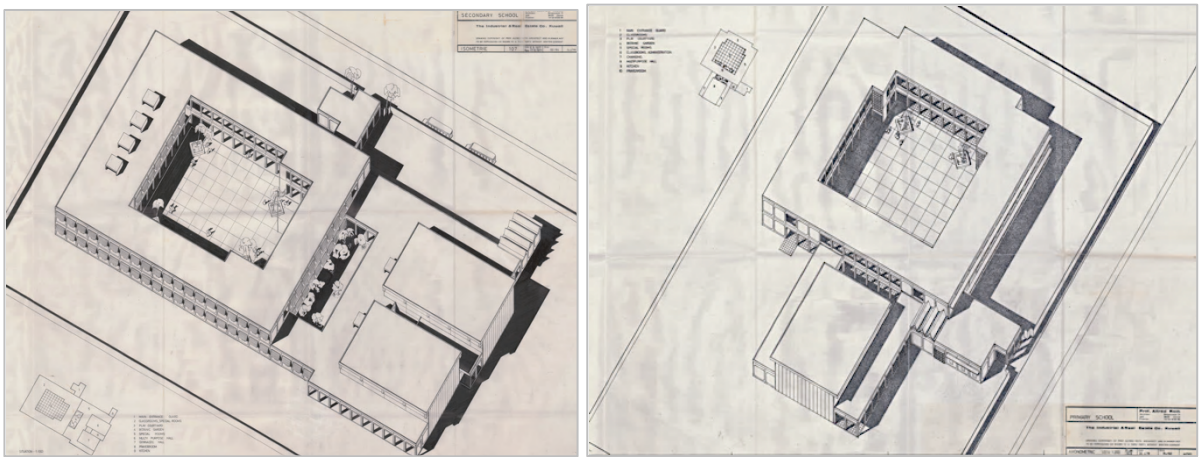


Figure 6.70 Secondary school prefabrication, a condensed design, c. 1978. Left: The drawing portrays a modified design of a secondary school using the newly developed prefabricated system manufactured by IREC. Furthermore, the isometric perspective accurately depicts the condensed size of the school, as per the specifications set by the Ministry of Education (see the gallery in **Appendix F** for a more thorough plan).[166]

Figure 6.71 A new school design using IREC's prefabricated system, 1977. Right: In the same vein as the secondary school, this is a primary school that implemented IREC's prefabricated system. In order to accommodate a new structural system, the design layout has been modified (see the gallery in **Appendix F** for a more thorough plan).[167]

[164] gta Archives / ETH Zurich [gta]: Notebook.
[165] gta Archives / ETH Zurich [gta]: 131-0162/0165 (3/3).
[166] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0164/0165 (5/5), Alfred Roth, 'Prototype School', c. 1978.
[167] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0164/0165 (5/5), Alfred Roth, 'Prefabricated School Structure by Irec', 1977.

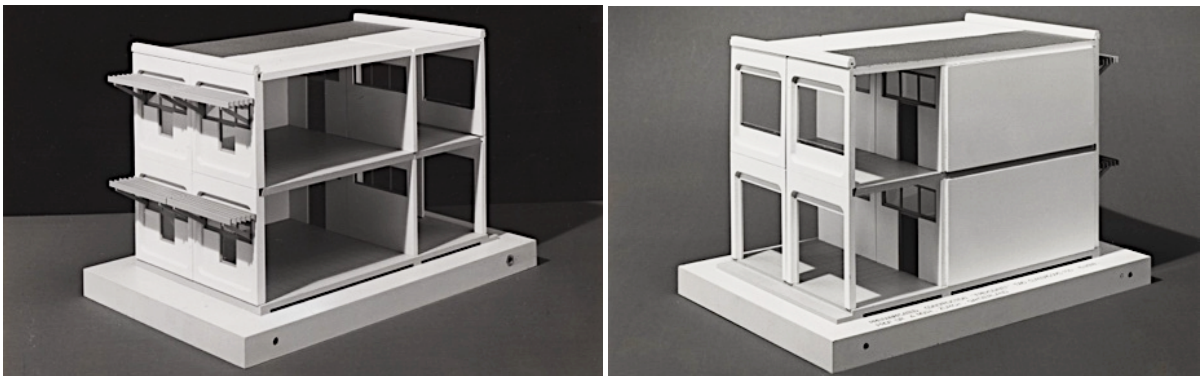


Figure 6.72 New prefabricated system for schools, n.d. The models depict a rebuilt prefabricated structural component, resembling the previous example, specifically tailored for Kuwaiti schools. This system design was created through cooperation between IREC and Freyssinet International.[168]

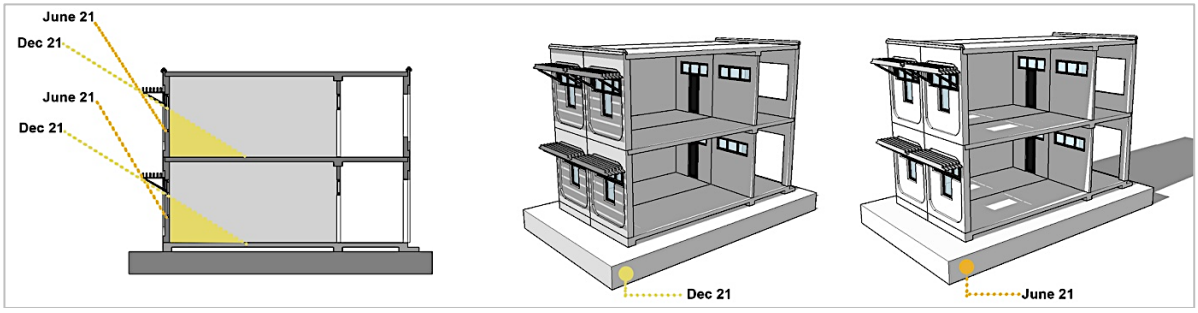


Figure 6.73 A 3D model analysis for the new prefabricated system. The illustration, generated by the author, examines the prefabricated units developed to demonstrate their notion of shielding the sun on the south side while allowing plenty of natural light to enter.[169]

Figure 6.74 The new prefabricated structure in production, c. 1978.[170]

[168] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0164/0165 (5/5), Alfred Roth, 'New Prefabricated Structural Elements ', n.d.
[169] Author, 2023.
[170] gta Archives / ETH Zurich [gta], TH Zurich University, Switzerland: Ref. 131-0162 (5/5), Ref. 131-0164/0165(5/5), Alfred Roth, 'Prefabricated School Structure ', c. 1978.

Additionally, the architect had suggested an evocative colour scheme in his proposal (as shown in **Figure 6.75**), with the intention of applying a similar scheme to schools in Skopje (see **Figure 6.76**), red and yellow for primary schools, green and yellow for intermediate schools, and blue and yellow for secondary schools. Unfortunately, all schools had to settle with an off-white paint scheme due to budget constraints, according to IREC's manager, Abdulaziz Al-Qatami, resulting in what the architect described as a weak and unpleasant colour.[171] Roth believed that by incorporating these colours, a building would be more visually appealing, stimulating, and expressive to children (see **Figure 6.77**).[172]

Regarding additional technical issues, Roth noted a lack of acoustic conditions and sun protection for the windows.[173] His role and recommendations for his final school projects appeared to have been the least strong because of his position as a third-party dealer. Later, in a friendly letter, he voiced his disappointment with Al-Saleh, stating, *'I feel somewhat disturbed that IREC does no longer need my assistance for their schools…'*[174]

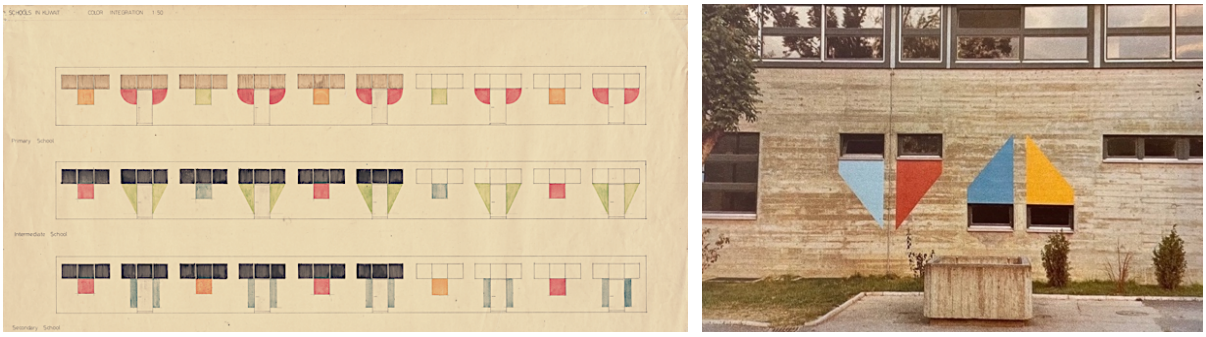


Figure 6.75 Roth's colour scheme for Kuwaiti schools. Left: The sketch, obtained from the archives of gta/ETH Zurich, depicts the colour scheme that Roth endeavoured to utilise for various educational levels.[175]

Figure 6.76 The Skopje secondary school in Yugoslavia, 1966-1969. Right: The image depicts the north-east elevation of Skopje school, showcasing the use of light and dark blue, red, and yellow colours on the wall. This colour scheme is consistent with the motif that Roth aimed to employ for Kuwaiti schools.[176]

[171] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (3/3), Abdulaziz Al-Qatami, 'A Letter from Abdulaziz Al-Qatami to Alfred Roth on 26th April', 1981.

[172] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (3/3), Alfred Roth, 'A Letter from Alfred Roth to Abdulaziz Al-Qatami for Schools' Colour Integrartion on 26th May', 1981; ibid.; gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (3/3), Alfred Roth, 'A Letter from Alfred Roth to Abdulaziz Al-Qatami for Schools' Colour Integrartion on 28th May', 1981.

[173] gta Archives / ETH Zurich [gta]: 131-0162/0165 (3/3).

[174] gta Archives / ETH Zurich [gta], ETH Zurich University, Switzerland: 131-0162/0165 (3/3), Alfred Roth, 'A Letter from Alfred Roth to Khlaid Essa on 28th December', 1981.

[175] gta Archives / ETH Zurich [gta]: Ref. 131-0162 (5/5), Ref. 131-0182/0188.

[176] Moos, p. 125.

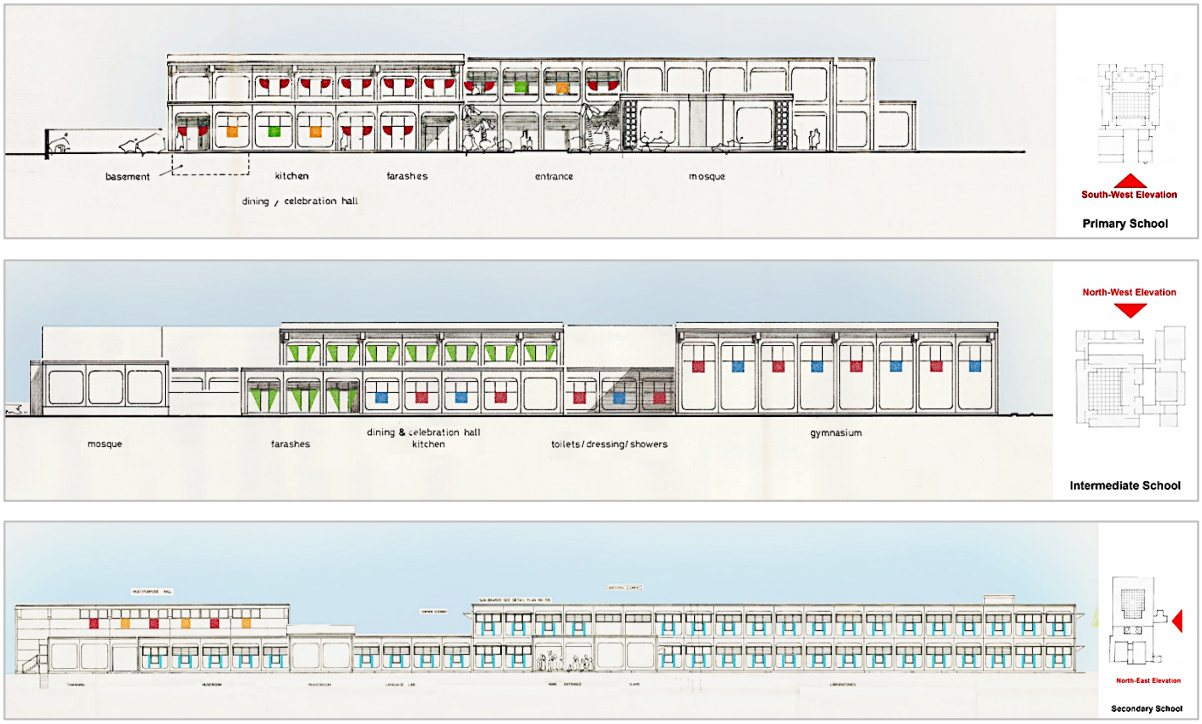


Figure 6.77 Kuwait schools in a colour scheme. The author has updated the photos to depict an imaginary elevation for a colour scheme inspired by Roth's concept. The first image depicts an exterior view of a primary school, including the colours red, green, and yellow. The second image shows an elevation of an intermediate school, with the colours green, red, and blue. The third image displays the building view of a secondary school, showcasing the colours red, yellow, and blue.[177]

After twenty years of commitment to Kuwait's state schools, during which Roth oversaw the implementation of many rational and cost-effective reforms, his involvement in Kuwait ceased in the early 1980s. The work strategy that reduced his oversight of the designs; the government's new role through the National Housing Authority, which resulted in the use of local firms rather than foreign designers; and the budgetary restrictions following the 1980 economic crisis that slowed the development process (as discussed in **Chapter 4**) could all have played a role in Roth's service ending. However, his functionalist, regionalist, rationalist, and economic prospects affected Kuwait's modernist school. Given Roth's pragmatic approach to materials and design, the absence of adornment indicated the building's state as a component, which was perceived as unyielding and aesthetically weak. Both his wall art and uniform colour palette, which appealed to the children's visual preferences, served as decorations. As one of the few remaining functionalists inspired by Le Corbusier and a modernist architect more deeply rooted in this concept, the yields of the International Congress of Modern Architecture (CIAM) and his designs for educational institutions were regarded as the most useful for Kuwait compared to preceding designers. Roth's regionalist

[177] gta Archives / ETH Zurich [gta]: Ref. 131-0164/0165 (5/5); gta Archives / ETH Zurich [gta]: Ref. 131-0162 (5/5), Ref. 131-0164/0165(5/5).; modified by the Author.

design, which reintroduced the courtyard concept into modernist school designs to better accommodate climatic conditions, is generally cited as a crucial cause of his massive success in Kuwaiti schools.[178] However, this was not necessary for its significance; earlier architects also attempted to incorporate climate-appropriate designs into school buildings. His rational approach towards problem solving in accordance with pedagogical development, spatial organisation, design principles, technical issues, construction methods, and materials resulted in a variety of typologies that satisfied financial requirements, which was a major factor in his continued collaboration with the government of Kuwait.

Although Roth had broad international experience in school design, his experience in Kuwait was unique. He was able to develop his skills in a regional and climatic context that was very different from his native Europe, in which he confidently asserted that he had created a new type of school. Although his buildings were relatively small, they were nonetheless significant in the grander state-building narratives of the time. His schools were more influential on Kuwaiti society and urban growth than others in the modern era. Through neighbourhood designs that included other services and public spaces, schools became an integral element of the country's infrastructure. His belief in education as a tool for individual and collective liberation led him to conclude that the Kuwaiti government needed a rationalist and functionalist approach and an impartial logic that would help the country achieve its broader goals of social progress and more progressive modern representation.

6.3.5 UNESCO's Report (1981)

In 1981, UNESCO tasked Strahle with another assessment of Kuwait's educational facilities. His stay lasted three months, from April 28th, 1981, to July 28th, 1981.[179] The primary goals were to evaluate the current state of school facilities, identify areas for improvement, and provide solutions. Like previous missionaries' assessments, Strahle's report examined the layout of schools, and the technical aspects of their construction that affected students' comfort and safety. He evaluated nineteen schools across all sectors, focusing on topics such as school location, design layout, outdoor space, technology, furnishings, and maintenance.

[178] Moos, p. 196; Fabbri, Saragoca and Camacho, p. 214.
[179] Rolf Strahle, *Planning of School Buildings* (Paris: 1981).

Since the first collaboration between architect Roth and planner Buchanan, this report was the only one to analyse school distribution in Kuwait, in which Strahle drew attention to its unequal distribution. He justified his claim by saying that certain areas of Kuwait had a low population density and that many schools were often underutilised because of the high population density in other areas.[180] However, he suggested that the layout of schools and the decision to demolish or relocate them required more careful study before they could be put into practice.[181]

He also suggested a sense of harmony between the school's size and the surrounding urban fabric and that the school should make positive announcements to the community.[182] Saleh Yaseen, a former assistant undersecretary for educational infrastructure at the Ministry of Education (2001–2006), also raised this issue, claiming that schools have never carried the weight of harmony with their surroundings.[183] According to him, one of his foreign architect friends who had visited Kuwait said, upon seeing the local communities, *'How could parents who live in those beautiful villas accept to send their kids to these dump schools!'*[184] He pointed out the contrast between the shoddy school buildings and the expensive homes in the Kurtoba district. In Khaled Mahdi's opinion, this is the outcome of a typological layout in which prototype schools were built in each neighbourhood without any integration with its environment. As communities differed in population density and socioeconomic stratification, he argued that each school should have its own characteristics that complement those of the surrounding area.[185]

The nature of the school site and its spatial arrangement were investigated, with emphasis placed on the schools' enormous, underutilised spaces.[186] Strahle pointed out the poor orientation and inadequate insulation, because of which several schools experienced high cooling costs during their school days. During the fieldwork carried out for this thesis, it was found that the prototype schools had been altered to accommodate different site layouts without considering the direction of the sun, which resulted in the incorrect placement of sunshades and window apertures.[187] The last complaint related to parking space and capacity. Strahle offered several solutions to ease traffic congestion, including using a transit system that could eliminate forty automobiles.[188]

[180] Ibid. p. 3.
[181] Ibid.
[182] Ibid. p. 4.
[183] Saleh Yaseen, *Kuwait Schools*, an interview conducted by Zainab Murtadhawi (Online Video, 21st May 2022).
[184] Ibid.
[185] Mahdi.
[186] Strahle, p. 5.
[187] Ibid.
[188] Ibid. p. 5 and 6.

The school layout has received significant criticism, which has been validated by its performance in important areas. After seeing the scarcity of architects in the department of school facilities, Strahle recommended that school designs be entrusted to skilled architects working in conjunction with other specialists in the area, owing to their sophisticated design strategy.[189] Moreover, he emphasised the importance of a school's physical size, explaining that a smaller school building could offer a higher standard of teaching.[190] His analysis encompassed both old and new school buildings, including Roth's typology. To cut down on these enormous dimensions, he proposed that school fields be operated by many schools, each of which would include students of both sexes.[191] Strahle felt that the prototype schools' architectural aesthetics were lacking, particularly in that it led too quickly to a *'shoe box'* appearance despite the fact that it reduced both construction time and costs.[192] Concerns about the prototype schools were also voiced by Khaled Mahdi, who said that their uniform appearance gave the sense of a 'dry structure' of a soulless, identity-free concrete block.[193] In addition, Strahle took issue with the school's choice of colours and fence walls, saying that they failed to promote friendly integration and identity categorisation across schools.[194]

Other critiques relate to school buildings' safety and comfort requirements and technical matters, such as the placement and design of stairs, type of exit doors, air-conditioning systems, lighting and acoustic systems, and the installation. He also criticised the small size and low quality of the furnishings, saying that they were unsuitable for any grade above kindergarten level.[195] As international standards advance, these technical concerns always demand upgrades and regular maintenance, both of which are lacking in Kuwait's school buildings, according to Strahle.[196]

His report incorporated the novel necessity of employing solar energy in educational institutions.[197] Strahle's advice stemmed from the first initiative of its sort to adopt solar energy at Saqer Al-Rashoud Kindergarten by the Kuwait Institute of Scientific Research (KISR) and the Ministry of Electricity in 1981.[198] No less than 360 square metres of flat-plate collectors and four 10-tonnes of water-lithium bromide vapour absorption chillers supplied the 85-Celsius (°C.) solar thermal energy

[189] Ibid. p. 2 and 5.
[190] Ibid. p. 4.
[191] Ibid.
[192] Ibid. p. 5.
[193] Mahdi.
[194] Strahle, p. 9.
[195] Ibid. pp. 6, 7 and 9.
[196] Ibid. p. 4 and 12.
[197] Ibid. p. 12.
[198] 'Eiftitah Mashrue Tabrid Madrasat Saqr Alrushud Bialtaaqat Alshamsia', [Inauguration of the Saqr Al-Rushoud School Cooling Project with Solar Energy], *Akhbar Al-Ma'shad*, June 1981..

used by the kindergarten.[199] Strahle praised this initiative and pressed for its implementation in other schools. In addition, the use of schools as hubs for community services was one of his main recommendations. He emphasised that certain school buildings were used for adult education programmes and that the community could engage in extracurricular activities using the school's facilities.[200]

Finally, despite Strahle's severe criticism, school architecture in Kuwait advanced rapidly and met the government's need for the construction of new schools. However, it did so without addressing the more fundamental issue of whether these new schools were of sufficient quality. Consequently, and because of the complexity of school design, an ideal design will never be achieved in light of the ongoing evolution of pedagogy, international standards, and technological capabilities, yet this adaptation must be conceivable in school layouts. It is also worth noting that Strahle's report incorporated school buildings before and after Roth's typology. This explains why the same complaints have been featured in many UNESCO evaluations, showing that the school design has never been upgraded.

6.4 BEYOND ROTH'S WORK

Although the scope of this thesis is limited to the period up to the 1980s, this subsection provides a brief context for the years that followed to emphasise the relevance of the study period and to leave the door open for future research. The key factor in the development of school architecture, as described in **Chapter 4**, was the assurance of financial stability, which is why this research was extended to the early 1980s.

Political unrest and the economic collapse that hit the region in the 1980s resulted from changes in the international oil market.[201] Consequently, the Kuwaiti government had to implement rationing and rigorous and realistic accounting of public expenditure, including a decrease in the extent of improved welfare programmes, which slowed certain development plans down and halted new projects.[202] At the same time, the Ministry of Public Works was relieved of its duty to oversee the already constructed neighbourhoods and schools, and the National Housing Authority (now known as the Public Authority for Housing Welfare) was given the authority to oversee the design and

[199] Ibid.
[200] Strahle, p. 17 and 18.
[201] Jill Crystal, *Kuwait: The Transformation of an Oil State* (Boulder, San Francisco, Oxford: Westview Press, 1992), p. 53.
[202] Sulayman Khalaf and Hassan Hammoud, 'The Emergence of the Oil Welfare State: The Case of Kuwait', *Dialectical Anthropology,* 12. 3 (1987), 343-357 (p. 352).

construction of new neighbourhoods following the Ministry of Education criteria, along with any associated amenities such as schools. It should be noted that the Ministry of Public Works relinquished its duties regarding schools to the Ministry of Education and that the Ministry of Public Works was no longer responsible for the design or building of any school.[203] However, after 1989, there was a wide range of school typologies (generated internally) and building qualities because of the decision to divide the country into two sectors for the implementation of school design.

There was widespread destruction across Kuwait after the 1990 Iraqi invasion. Soon after the end of the war in 1991, a new socioeconomic period emerged, with a primary emphasis on the lengthy reconstruction and postponement of the state school development plan.

The Public Authority for Housing Welfare's contemporary school architecture typology, on the contrary, was entirely managed and created in-house, with each iteration utilising a trial-and-error approach to incorporate the necessary pedagogical requirements (see samples in **Table 6.1**). According to Yaseen, the challenge was to plan the school's physical layout without considering the broader implications of administrative concerns or philosophical approaches to teaching.[204] He based his assertions on a lack of expertise, pointing to the fact that architects in Kuwait were not obliged to specialise in any particular field, allowing them to design projects at any point.[205] This is not just an issue in the Ministry of Education but throughout the country's projects. When conducting an interview with architect Nasser Kharaibut, the current Deputy Director General for the Planning and Design Department at the Public Authority for Housing Welfare, he made it clear that the Public Authority for Housing Welfare uses both national and foreign expertise while designing the school.[206] Kharaibut reported that the Public Authority for Housing Welfare had recently entered a future school design project in an international competition, in which they won both the American Institute of Architects (AIA) Middle East Merit Award for 2019 in the area of *Architecture Unbuilt,* and the World Architecture News Award (WAN) of 2020 (see **Figure 6.78** to **Figure 6.80**).[207] He added that the Public Authority for Housing Welfare had the responsibility to

[203] MOE, 'Qitae Alminshat Altarbawiat Wa Altakhtit', 2022 <https://moe.edu.kw/about/Pages/Ministry%20Hierarchy/efps.aspx> [accessed 24th June].

[204] Yaseen.

[205] Ibid.

[206] Nasser Khuraibat, *Kuwait Schools*, an interview conducted by Zainab Murtadhawi (Online Video, 19th May 2022).

[207] Ibid.; PACE, 'Future Schools of Kuwait', 2020 <https://www.worldbuildingsdirectory.com/entries/future-schools-of-kuwait/> [accessed 10th Febraury]; ''Future Schools' Design Shortlisted for World Architecture News Award', 2020 <https://www.kuwaittimes.com/future-schools-design-shortlisted-for-world-architecture-news-award/>; ''Future Schools of Kuwait' Gets Shortlisted for Prestigious Design Award', 2020 <https://design-middleeast.com/future-schools-of-kuwait-gets-shortlisted-for-prestigious-design-awards/> [accessed 10th Febraury].

design and construct after taking important factors, such as the country's demographic study, the new neighbourhood capacity, the number of schools needed, and the school programme from the Ministry of Education, into consideration.[208] He also clarified that the Ministry of Education, not the Public Authority for Housing Welfare, was responsible for managing and renovating school facilities.[209]

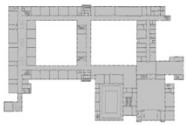
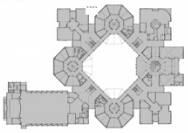
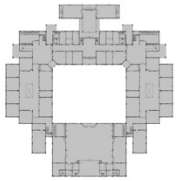
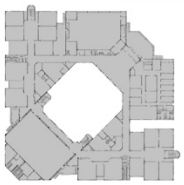
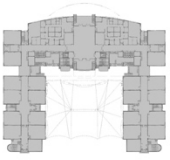
Year of Design	School Type	School Layout	School Section
2007	Kindergarten		N/A
1999	Secondary		
2000	Intermediate		
2005	Primary		
2007	Primary		
2007	Secondary		

Table 6.1 Public Authority for Housing Welfare's attempts in school designs from the 1985s onwards. The table exhibits a selection of school building layouts developed by the Kuwaiti government. All prototype schools constructed after 1985 uniformly embraced the concept of a courtyard, but over time, the structures grew increasingly enclosed and covered to facilitate air conditioning.[210]

[208] Khuraibat.
[209] Ibid.
[210] Public Authority for Housing Welfare Archive, Kuwait Government: PAHW, 'School Design Sample'.

However, the primary issue with school design identified by several previous assessments, experts, administrators, and end users, was climate adaptability. All key persons interviewed, including Khaled Mahdi, Saleh Yaseen, Nasser Kharaibut, Hasan Kamal, Sabah Al-Rayes, Jaber Abu-Alhassan, and Ahmad Al-Jihayem, agreed that no school design was effective in protecting students from Kuwait's extreme heat and dry climate.[211] Even with ample resources, the opportunity to bring in specialists, and the use of cutting-edge materials and technology, it appears that school architecture in Kuwait has not yet achieved a sufficiently adaptable design for its environment.

Figure 6.78 The future schools of Kuwait, 2020. These images depict the new school designed by PACE for the Public Authority of Housing Welfare. The design was recognised with WAN and AIA honours.[212]

Figure 6.79 The future schools of Kuwait, main entrance view. The image displays the primary entrance of the winning school design, which features a simplified form.[213]

[211] Mahdi; Yaseen; Khuraibat; Hasan Kamal, *Kuwait Schools*, an interview conducted by Zainab Murtadhawi (Online Video, 8th May 2022); Al-Rayes; Jaber Abulhasan, *Kuwait Schools*, an interview conducted by Zainab Murtadhawi (Online Video, 24th May 2022); Ahmad Al-Jihayem, *Kuwait Schools*, an interview conducted by Zainab Murtadhawi (Online Video, 23rd April 2022).

[212] '2020 Wan Awards Entry: Future Schools of Kuwait - Pace', *Education*, 2020 <https://www.worldarchitecturenews.com/article/1686819/2020-wan-awards-entry-future-schools-kuwait-pace> [accessed 23rd August].

[213] Roma Arora, ''Future Schools of Kuwait' Gets Shortlisted for Prestigious Design Award', 2020 <https://design-middleeast.com/future-schools-of-kuwait-gets-shortlisted-for-prestigious-design-awards/> [accessed 23rd August].

Figure 6.80 The future schools of Kuwait, internal perspectives. The images depict various internal perspectives of the school, including playgrounds, halls, and resting area.[214]

6.5 CONCLUSION

With the rise of the modern movement, reshaping the connection between the built environment and its social context has become a goal. School architecture, therefore, was primarily a catalyst for the concept of social production, particularly after WWII and in the context of recently founded nations. The concept that was conveyed by the standard school layout, functionalism-focused design, rational construction techniques, and modern manufacturing articulates its modern values. With the advent of independence and the adoption of a generous welfare provision that prioritised education as a secondary objective towards modernisation, this chapter completed the tail of modern school architecture in Kuwait.

[214] Ibid.

The second wave of modern school construction in Kuwait roughly corresponds to the country's independence. During that time, the country's constitution was written, its population grew, and its welfare state programme was founded. More rational and practical approaches are required as the architecture of modern schools increasingly reflects the mass production paradigm, calling for a more functional approach in adopting new pedagogy and requesting better construction practices. Roth, an expert architect, incorporated many architectural types into school designs. He proposed a regionalist-inspired model for open-air education in Kuwait that sparked a debate. His best work, however, was done in tandem with his comprehension of the interconnectedness of factors such as weather, industry, technology, and financial results. The key to establishing a permanent school model in Kuwait is a rationalist rather than a regionalist approach. Because of the economic crisis that hit Kuwait in the 1980s, development relied solely on in-house efforts, providing more proof that the modernist architectural trend in Kuwait was rooted in the oil industry. However, these modern schools represent sociocultural, political, and economic contexts, narrating Kuwait's modernisation as a significant period.

The findings of this in-depth analysis of Roth's school architecture typologies assess the degree to which Kuwaiti schools have adopted their design principles and shed light on the roadblocks that have prevented a more conducive learning environment from being developed. Although Roth was part of the master planning team tasked with improving the allocation of schools in the new suburbs, his advice was implemented only in Sabahiya and Rumaithiya districts. This highlights the absence of a well-defined urban planning concept supported by legislation or land policies that ensure sufficient school construction as a social obligation. Nevertheless, with restricted activities, schools serve as the core of social gatherings, albeit in a different manner than initially intended or presently needed.

Roth's work on the building of schools and its components was notable for advocating a rational approach to fulfilling the government's requirements while ensuring financial contentment. His perception aligned with the notion that children's education is inseparable from the environment in which they reside and receive education. Thus, the success of adopting pedagogical, spatial organisation, functional, and friendly environments, as well as technology and building methods, has been recognised in numerous school layouts and typologies in Kuwait for many years. There were problems with implementing prefabricated structural elements in school rationalisation, and Roth limited the oversight of every school, resulting in unforeseen changes to the original design,

which resulted in the gradual discontentment of these educational institutions. On the contrary, the modernist classroom unit was designed to align with students' cognitive capacity, engagement in activities, and social cohesion, and it was a prevalent concept ingrained in the minds of every youngster throughout the era. This chapter points out that the design strategy used to create these modules was heavily influenced by Roth's expertise and belief that children are the subject and not the objects of education. This led to the implementation of a nurturing and welcoming atmosphere that catered to the needs of each child. His consultation played a crucial role in successfully constructing school buildings in Kuwait during the 1970s and the 1980s and continues to do so today. However, specific problems have arisen owing to a lack of maintenance and coordination between experts in the field, such as educators, architects, and town planners. Nevertheless, while the progress made in the areas of classroom scale and building scale shows promise, further inquiry is needed to assess the outcomes of integrating schools and neighbourhoods.

To this end, the school's design in this chapter reflected the educational curriculum, health and safety, industrial innovation, and architects and designers' practices and helped build a sense of national identity and culture. This exemplifies how a country's socioeconomic, cultural, and political circumstances inextricably influence its school architecture. In particular, they highlighted the need to keep in mind how mass schooling and nation-state models were related. Educational systems and schools have contributed significantly to cultural and national unity. Supported by modernisation ideology and rational reason, this initiative effectively pushed the idea of integrating people, or more accurately, citizens, into new nation-states.

CHAPTER SEVEN

KUWAITI MODERNIST SCHOOLS AND BEYOND: EDUCATIONAL ARCHITECTURE CRITIQUE

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This research was conducted to illumine the factors that shaped the character and features of the architecture of Kuwaiti schools, in which an historical-interpretive approach was adopted. For the research, archival documents were utilised, the buildings were investigated, and interviews were conducted, which facilitated the comprehension of school architecture and Kuwait's modernist and welfare architecture based on a historical analysis. The chapter presents the results in relation to how they respond to the research question, which sought to answer how the cultural ideology and architectural significance of Kuwait's modernist school buildings throughout the twentieth century reflected the architecture of the modernist and welfare states. It provides an analysis of the findings that emphasise that the school architecture of the last century in Kuwait, beyond being a mere learning space, functioned as a centre for propelling the growth of knowledge towards modernity, a focal point for the formation of national identity, and a representation of a new mood of the modernist welfare movement that was ignited by the oil revenue. Furthermore, the arguments presented in this chapter highlight the importance and consequences for the future of school architecture in Kuwait. The chapter closes with a consideration of the empirical contribution of the thesis and possible future research directions.

7.1 OVERVIEW

The manufacturing techniques of the Industrial Revolution facilitated the incorporation of rationalist and functionalist principles into the post-World War I modernist architecture of the twentieth century. The movement, which originated as a representation of modernity, aimed to drastically alter the architectural expressions and ideals of modern forms of life, as reflected in urban developments, infrastructure planning, housing developments, and building construction and materials. It was believed that the movement could change the way people worked, lived, understood, and reacted to the world surrounding them. After WWII, this aesthetic flourished in the murky space between colonialism, nationalism, and modernism, especially in third-world nations. However, this theory is based on the presumption that modernism was first established in the West

and then applied differently throughout the world.[1] At the time, Western architects and planners had the opportunity to practice architecture in third-world nations, where all the principles for their practice were reachable, resulting in a different form of modernist and welfare architecture. Without the assurance of positive outcomes, architectural modernism in each nation resulted in a different contextualisation in conjunction with the nation's ideology, economic power, cultural norms, social aspirations, and political conflicts. This was a new kind of colonialism, imperialism, and nationalism whose influence lasted long into the post-war era and functioned as an effective analogy for modern industrial capitalism. This was moulded by the processes of independence or decolonisation in the modernist architecture symbols, as the escalation of the *'Cold War'* described by Łukasz Stanek.[2]

Through this thesis, Kuwait's architectural context was explored to highlight how Western powers shaped Kuwait's modernist educational institutions, influenced its architectural symbols, and transformed Kuwait's cultural ideology, particularly post-oil discovery. Considering Britain's semicolonial position in relation to Kuwait from the time of the Anglo-Treaty Agreement in 1899 until Kuwait's independence in 1961, the influence of the British Empire was profoundly felt in the development of modern Kuwait, both before and after independence.[3] Although this extraordinary situation has a sense of the colonial paradigm, the British had limited authority over Kuwait's political and economic circumstances. The nation's developing ideology was nevertheless shaped by the close ties that Kuwait and Britain formed during the period.

In contrast, the modernisation process in Kuwait was believed to be driven by the country's economic growth, which was fuelled in large part by oil profits made following World War II. This economic boom, along with the nation's commitment to modernity and welfarism, led to the reformation of schools. A new school typology emerged, with large and multi-building campuses supplanting traditional schools that were single buildings with multiple classrooms. New schools were constructed using a prefabricated system, and many prototype school buildings—the majority of which relied on Western architectural practices —were constructed. However, the arguments of this research suggest that Kuwait's social and political situation before oil discovery contributed to the post-oil modernity spectacle and that the country's economic strength sparked this growth.

[1] Mark Crinson, 'Imperial Modernism', in *Architecture and Urbanism in the British Empire*,ed. by G. A. Bremner (Oxford, UK: Oxford University Press, 2016), pp. 198-238 (p. 202).

[2] Łukasz Stanek, *Architecture in Global Socialism Eastern Europe, West Africa, and the Middle East in the Cold War* (Princeton and Oxford: Princeton University Press, 2020), p. 171.

[3] Arabian Gulf Digital Archives [AGDA], UAE: FO 93/137/18, 'Agreement of 23rd January 1899 with Shaikh of Kuwait', 1899; Arabian Gulf Digital Archives [AGDA], UAE: FO 93/137/10, 'Terminating the Agreement of 23rd January 1899 between the United Kingdom and the Ruler of Kuwait', 1961.

This study was conducted to provide a more thorough explanation of the modernisation phenomenon of Kuwait's built environment, particularly its educational architecture, and to illumine the significance of school architecture in Kuwait's modernisation and how its manifestations and historical contexts have evolved throughout the country's modernisation process and cultural transformation. To respond to this research question, it was critical to emphasise the effects of Kuwait's prosperity before and after the oil boom on newly constructed educational institutions to comprehend Western architectural practices in school designs within the context of Kuwait's modernisation period, as well as the welfare programme, and to argue that the significance of school architecture is attributable to its historical contexts rather than its design layouts and architectural expressions.

The research issue was resolved through the integration of the findings reported in several chapters, and it was established that the school architecture in Kuwait served a greater purpose beyond merely being a place for learning during the last century, operated as a hub for the growth of knowledge towards modernity, became a key element in developing national identity, and played a role in symbolising the modernist and welfare architecture that was propelled not only by oil wealth but also by societal, political, and cultural forces. These findings were analysed in this chapter, and their significance and ramifications for architectural value were discussed. The present and future of the modernist architectural context were examined, and the effects and consequences of its rise and fall on Kuwait's modernisation process were critically evaluated. Furthermore, the findings were contextualised, considering their consequences for the research question(s), and connections were drawn to relevant literature.

7.2 A CRITICAL ASSESSMENT OF KUWAITI MODERNIST SCHOOL ARCHITECTURE

In response to the many socioeconomic changes occurring worldwide, architectural modernism developed as a popular idea for problem-solving. To realise a utopian narrative, it aspires to provide functional spaces and buildings and create them using rational processes and cutting-edge materials and techniques. Its principles were considered in establishing towns and neighbourhoods and during suburban and urban expansion, which changed the daily aspects of society. However, the movement struggled to understand and address the social dynamics of individuals living in conflicting political environments, and consequently, many modernist buildings have raised questions about the movement's ability to realise its utopian goals. From a social science perspective, the concepts of urbanisation, nationalisation, modernisation, and welfare architecture

were utilised to enforce colonial rule and leave traces of imperialism throughout the modernisation era. However, there was also an attempt to build a new nation-state and identity. The result is a complex physical environment that elicits questions about its ideological context and national representation.

This study was conducted to examine the evolution of school architecture in Kuwait by describing the various factors and influences that shaped its architectural setting over a specific period, as discussed in previous chapters, encompassing both the pre- and post-oil export eras that followed in 1946. Each era in the history of school architecture in Kuwait and its distinct narratives were examined in this study. The first is the pre-oil era, when there was a strong emphasis on educational and pedagogical change. The second was the post-oil era, which saw the physical construction of school buildings as part of the modernisation process in Kuwait.

A. Prior to Oil Exploitation (1900s–1945)

In Chapters Three and Four, the pre-oil era, with a focus on the sociocultural and political factors that drove Kuwait's modernisation process, was examined. Specifically, educational reforms aimed at establishing a knowledge-based community, creating skilled human resources, and transforming the community's culture into a modern one were examined. This evolved from Qur'anic schools, Kuttab schools, formal schools, and early public schools adopted by the government. Nevertheless, the designs of these schools were constrained to undefined spaces or modified conventional courtyard houses. Therefore, the contention in this study was that oil wealth played a significant role in modernising of Kuwait's built environment, notably in the realm of school architecture, but was not the exclusive or primary driver. Other cultural, social, and political factors contributed to Kuwait's transformation into a modern state prior to its oil discovery. The critical evaluation of sociocultural and political variables highlighted the significant impact of Kuwait's rulers and merchants in delegating authority and managing public services, particularly education, which played a pivotal role in shaping all aspects of modernity. Consequently, a thorough evaluation was conducted to justify why and how post-oil modernist school architecture was valued in the context of Kuwait's modernisation.

B. Post-Oil Exploitation (1946–1989)

The second era, which is the primary time span examined in this study, is associated with the influx of oil income and the country's commitment to modernisation. In Chapters Five and Six of this study,

the many key actors involved in the modernisation project directed by Sheikh Abdullah Al-Salem, the ruler of Kuwait, during this era were examined. These actors included Kuwaiti merchants and government sectors; British advisors; and international organisations, as well as foreign, regional, and international designers and contractors. In this study, the era was divided into two parts (as shown in **Figure 7.1**): the first, from 1946 to 1960, covers the years from the British treaty leading up to Kuwait's independence, and the second, from 1961 to 1989, covers the years following independence and the beginning of the process of creating a new nation-state. The first period was characterised by numerous political upheavals, including the ruler's emphasis on wealth distribution, the country's position as a British protectorate, and the rise of the Arab nationalist movement. In the second period, political and economic factors were stable, which allowed for the establishment of a welfare programme and the propulsion of the process towards independence and the birth of a new state.

The strategy and methodology behind the creation of these modernist schools are described in detail in **Chapters 5 and 6**. The chapters demonstrate that school architecture in the first period was significant in Kuwait and the surrounding region owing to its physical design, built environment, and cultural history; however, they also emphasised the significance of the second period, indicating how modernist architecture was mainly concerned with mass production to accomplish the welfare programme's educational goals. In light of this, this research provides further insight into the typology and layout of school architecture developed in response to educational pedagogy and governmental demands. To spotlight the shortcomings of modernisation and welfare state growth, this section provides a more critical assessment of the school architecture that was adhered to towards attaining a utopian service, its means of existence as a modernist and welfare architecture, and its impact on urban print. Therefore, in the following sections, these two aspects were critically examined in terms of their inter-correlation points.

In the following section, the modernist school architecture that resulted from Kuwait's sociocultural transition is examined in relation to national economic growth and independence, with references to important architectural studies. The significance of the approach of modernist architects to addressing issues with school design through the modernisation process is discussed, and the question of whether or not the ambitious modernist vision was accomplished is examined. The aim here is not to examine whether the architects achieved their goal or if the school layout was functional or not, but rather to emphasise the advantages and disadvantages of modernism,

nationalism, and welfare that occurred via the planning and development of school architecture in Kuwait. Some key questions will be examined. What factors aided schools' development and provided them with a purpose for their existence? What obstacles stood in the way of realising the ideal goal? What role did the construction of new schools play in Kuwait's push towards modernisation? And how did architects contribute to that effort? These points are considered in the next subsection.

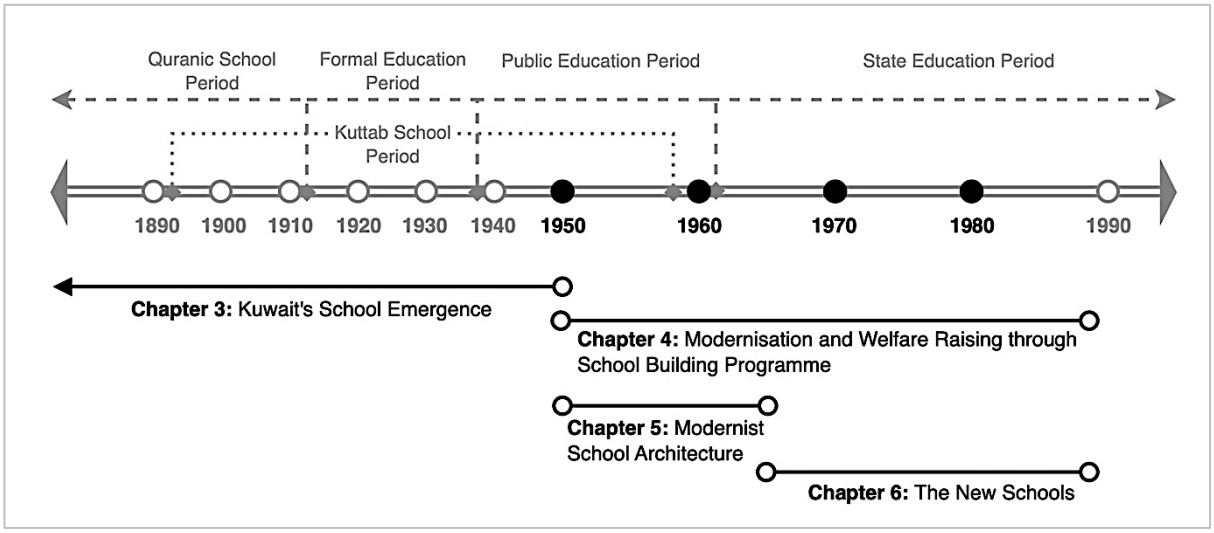

Figure 7.1 A timeline of the educational development era. The graph depicts a chronological representation of the time periods examined in this study, both before and after the discovery of oil. The thesis provides a clear and comprehensive description of the topic addressed in each chapter.[4]

7.2.1 How the Educational Revolution Propelled Modernity Prior to the Economic Boom

It has been suggested that the discovery of oil and the wealth it provided catalysed Kuwait's modernisation following World War II.[5] However, academics and historical architecture research dismiss this viewpoint as inaccurate, arguing that the modernisation movement involved numerous social, cultural, and political factors that predated oil discovery.[6] Farah Al-Nakib, a historian and professor at California Polytechnic State University's History Department, countered Stephen

[4] Author, 2023.

[5] Sulayman Khalaf and Hassan Hammoud, 'The Emergence of the Oil Welfare State: The Case of Kuwait', *Dialectical Anthropology,* 12. 3 (1987), 343-357; Stephen Gardiner, *Kuwait: The Making of a City* (Essex: Longman Group, 1983).

[6] Farah Al-Nakib, *Kuwait Transformed a History of Oil and Urban Life* (Stanford, California: Stanford University Press, 2016); Asseel Al-Ragam, 'Towards a Critique of an Architectural Nahda' (PhD, University of Pennsylvania, 2008); Reem Alissa, 'Building for Oil: Corporate Colonialism, Nationalism and Urban Modernity in Ahmadi, 1946-1992' (unpublished doctoral thesis, University of Califorina, 2012).

Gardiner, asserting that Kuwait's modernisation was the result of oil's unique creation.[7] She further argues that modernisation is mostly tied to the socio-cultural situation that existed long before the discovery of oil, in which merchants' dominance over the harbour was a key factor in the development of modernity. Similarly, Asseel Al-Ragam, professor at Kuwait University's School of Architecture, explained that the modernism movement resulted from the cultural *Al-Nahdah* [awakening] movement and that numerous political forces influenced Kuwait's urbanisation and welfare after the discovery of oil.[8] Architecture is a cultural and social phenomenon that influences and reflects human society. The architectural creations of both ancient civilisations and contemporary urban areas serve as tangible manifestations of people's lifestyles and cultural principles. Thus, the architectural context of each era mirrors its cultural norms and social and political characteristics, which are evident in the planning concepts, choice of materials, construction techniques, and symbolic significance embedded in building design. In Kuwait, oil profits were not the sole catalyst for modernisation; rather, their presence ignited and expedited the process of modernisation.

The modernisation of Kuwaiti education lends credence to and supports this claim, as established in this study. The sociocultural and political push towards modern education prior to the oil boom is examined in detail in Chapter Three, with particular attention paid to the different factors that contributed to the establishment of formal schools in Kuwait. In response to this awakening movement, educational reform became a crucial component in acquiring authority in Kuwait's pre-oil society during the struggle between merchants and the ruling family. The first school opened in 1911, and more schools soon followed. In this case, merchants successfully secured funding to hold distinct and standalone buildings for education. They also obtained control over their educational development to improve their status. This was in line with the early discovery of oil and the rise of the ruling family's economic clout. Consequently, facilities for public education growth and advancement have played a key role in guiding Kuwait towards modernity.

Another issue addressed in this period was that the education system was a potential colonisation instrument. Introducing the expansion of pedagogy, together with the immigration of human resources and the authority they granted to merchants; Iraq, Egypt, and Britain, brought political tension (see **Figure 7.2**). The British have made several attempts to promote educational pedagogy.

[7] Farah Al-Nakib, 'Kuwait's Modern Spectacle: Oil Wealth and the Making of a New Capital City, 1950-90', *Comparative Studies of South Asia, Africa and the Middle East,* 33. 1 (2013), 7-25; Gardiner.
[8] Al-Ragam.

Consequently, Kuwait initially adopted the Iraqi educational system before switching to the Egyptian system, which had many significant implications. The region's burgeoning Arab nationalism movement appears to be the main reason that the British advisors' best efforts to emphasise their colonial power were ignored in the education system. Many disputes regarding the delivery of education highlight the role and significance of education in the formation of societal culture.

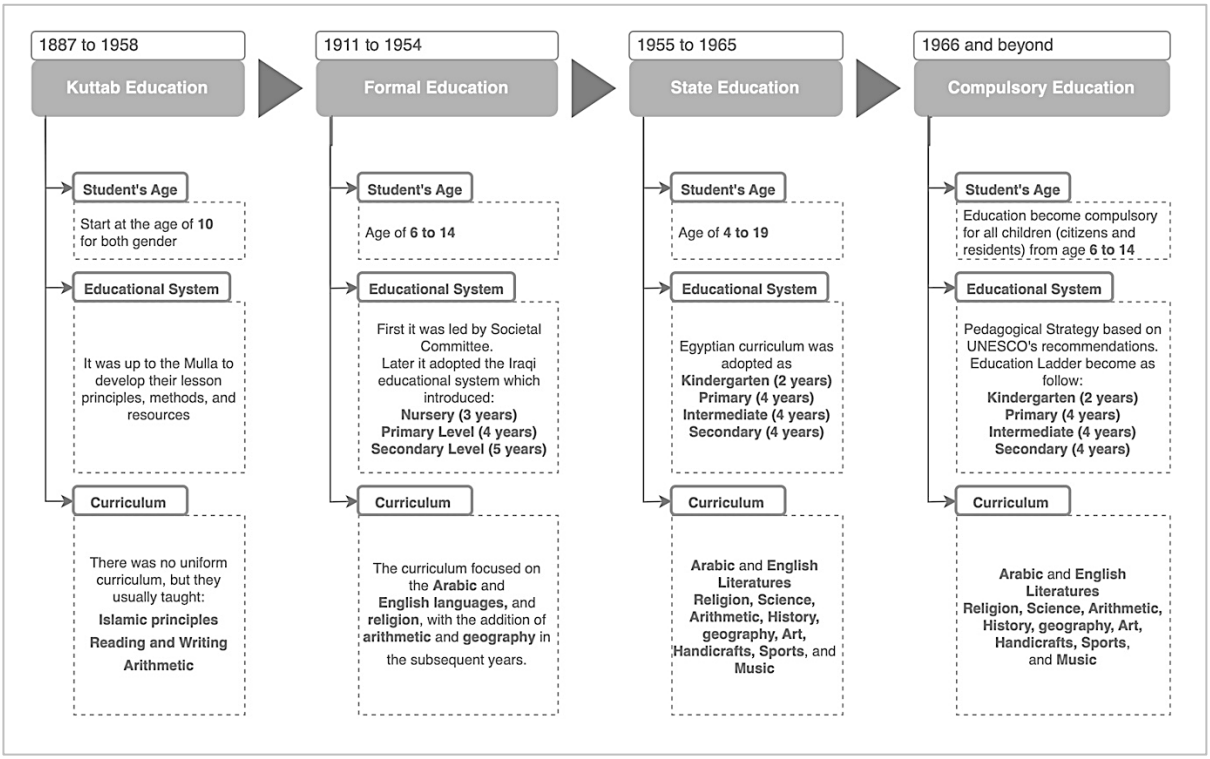

Figure 7.2 Kuwait's educational system's transformation. The graph provides a summary of various forms of schooling and their changing factors across time. These modifications led to a substantial alteration in the architectural prerequisites and constructed surroundings.[9]

Furthermore, the physical settings of the school were key in fostering sociocultural gatherings, and acting as catalysts for social change, and forming the learning spaces. The school building's spatial organisation, beyond being the setting for formal education, evolved into a social, political, and cultural core for society, even though it had been an adaptation of traditional building. It influenced the culture of modernism and social awakening; society was content and prepared to absorb the shift when oil was discovered, and the modernist vision was implemented. In addition, such cultural norms significantly impacted how modern schools were designed and how they were laid out in space. In this regard, the research shows that modern educational architecture is a continuation of

[9] Author, 2023.

political and social processes that predicted the discovery of oil, and that oil income merely accelerated its development.

7.2.2 The Modernisation Process in Kuwait Needed More Than Just Oil Wealth

The notion of *Alnahdah* [awakening] served as the major intellectual core for this growth process, which was sparked by the influx of oil revenue, as Al-Ragam emphasised. Al-Nakib, on the other hand, maintains that oil wealth accelerated the pace of Kuwait City's growth rather than shaped its development.[10] Reem Alissa, a professor at Kuwait University's Architectural College, using Ahmadi City as a case study, argues that oil wealth was a driveshaft for political, social, and cultural development in Kuwait's modernisation growth.[11] She provided evidence to support her argument that Ahmadi City adopted the British colonial modernity that the Kuwait Oil Company had introduced to its employees in the 1940s before acquiring a new lifestyle and urban modernity in the 1960s and the 1970s.[12] The effects of oil on Kuwait's growth were experienced differently in both regions owing to major variances in their nature, such as the cities' locations (Kuwait City was transformed from a traditional town into the capital, while Ahmadi City is a new city built on desert), the authorities' jurisdictions (Kuwait City was developed with cooperation from the state's structural departments; Ahmadi City, on the other hand, was entirely under the control of the oil industry—a company town), and resident features (Kuwait City was home to Kuwait's people, and Ahmadi was home to oil employees, most of whom were foreign) (see **Table 7.1**). These metrics pointed in opposite directions, casting uncertainty on whether oil was the primary driver of modernity or whether social and political factors were more significant.

	Case (A)	Case (B)
Location	Kuwait City	Al-Ahmadi
Period Start	1950s-1970s	1940s-1950s
Authority Jurisdiction	Government	Kuwait Oil Company
Resident Features	Kuwaiti citizens and foreign residents	Company employees and their family members
Urban Development Type	Affected by British modernity, Arab nationalism, and International Styles	Adopted British colonial modernity
Development Change	Tradition town to Capital city	New city built on desert
Drive to Modernity	Social and political drivers were the primary factor before the oil discovery	Oil industry was the primary dirver

Table 7.1 Two case studies for the influence of oil wealth on developing towns. This table presents the variations in the situations discussed in the argument to emphasise the influence of oil revenue on the development of Kuwait City compared to Al-Ahmadi City.[13]

[10] Al-Ragam; Al-Nakib.
[11] Alissa.
[12] Ibid.
[13] Author, 2023.

This research contributes to this argument through the lens of school architecture. Although it was stated that the pre-oil era social and political movement was the primary driver of Kuwait's modernity, it is crucial to note that the architectural upheaval and expansion of the educational built environment were facilitated by the steady flow of funds from oil profits. Furthermore, although schools were built in different geographical locations throughout the country, they were all part of the same government-run initiative to provide quality education to all residents. The implication of this is that the abundance of oil wealth fuelled the education and construction boom. However, the oil revenues were insufficient to build the ideal school architecture, and other elements led to its massive growth.

With oil revenue, the development of educational architecture occurred over three distinct periods, the first two of which were influenced by strong political tides (semi-colonialism from 1950 to 1954 and Arab nationalism from 1955 to 1961) and the third by the country's independence (a welfare state from the 1960s to the 1980s) (as shown in **Figure 7.3**).

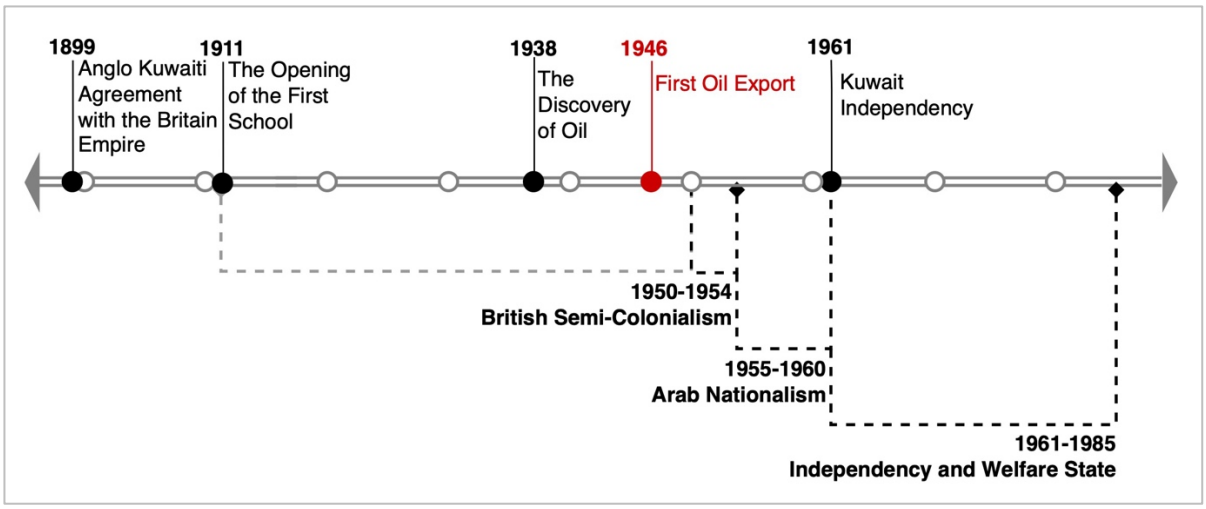

Figure 7.3 The three main distinct periods for architectural educational development.[14]

The semicolonial period witnessed the involvement of five British construction companies in the country's key projects, including schools. The period symbolised the Western context in creating modern Kuwait. The British believed that the West was the best source of modernism in the region and sought to move its authority from education policy to the construction of school buildings when they had previously failed to do so. Thus, the study demonstrates that school architecture, when compared to other significant projects, was undeniably employed as a means of highlighting the

[14] Author, 2023.

influence of the British presence, even if it did not align with colonial political meaning. However, the representation of their architectural expressions was inadequate compared with other noteworthy projects.

During the nationalist era, which was characterised by intense political strife in the wake of the Suez Crisis, the Kuwait authorities employed nationalist policies to promote the growth of school architecture. This happened with the exclusion of five British companies, Holland Hannen and Cubitts, D.C. William Press, John Howard Construction, Taylor Woodrow, and Richard Costain, from future projects as their performance became underwhelming, with the cost of educational construction projects tripling in four years from £3 million.[15] Consequently, some educational construction projects were discontinued, while others were transferred to local nationalist designers and contractors such as Emile Bustani and Sayed Karim. Finally, despite various problems, this study demonstrates that the architectural context of modernist schools was affected by the nationalist movement, even though they were not distinguished by a nationalist aesthetic. The most important aspect, however, was that Shuwaikh Secondary School and Industrial College served as venues for all national events, which encouraged Kuwait to advance towards independence.

Afterwards, the welfare programme became an ongoing nationalist movement that emerged with independence in 1961 and prompted international obligations regarding school architecture development. Fewer political conflicts occurred in the third era. This was attributed to several factors, including the rise in the student population, the development of new suburbs outside Kuwait City, and the prevalence of a national framework that prioritised the government's welfare programmes, which called for an abundance of output in school architecture.

As the economy and government became more stable in the 1970s, architects began to incorporate more functional designs and more rational approaches into Kuwait's modernist school buildings. After several dissatisfying attempts at accomplishing this aim on the local level, Kuwait ultimately resorted to relying on foreign designers under the guise of 'internationalism' to fulfil their vision. Consequently, Kuwait's urban pattern was created by the mass production of numerous typologies

[15] The National Archives [TNA], London: FO 371/104341, 'Report on Finance and Expenditure in Kuwait', 14 November 1953; The National Archives [TNA], London: FO371/104340, 'Letter from Political Agent in Kuwait to Sir Rupert Hay, the Poltical Resident in Bahrain', 24 Febuary 1953.

of school architecture throughout all its neighbourhoods and suburbs, representing the modernity of a welfare state without eschewing nationalist identity.

In conclusion, this study shows that, while oil wealth drove the architectural growth of educational institutions, the impact of political unrest and the development of the nation's infrastructure caused upheaval in the country's physically built environment during these times.

7.2.3 School Architecture in Relation to Its Urban Context

Relationships between school buildings and urban fabric became increasingly palpable around the turn of the twentieth century. It is hypothesised that because of the modernisation development process and the subsequent demand in school mass production for a state welfare social service, the symbolic significance of school buildings in their architectural context evolved. All the new plans for urban expansion were centred on schools. They were strategically located in new neighbourhoods to serve as focal points and anchors for the surrounding communities. Therefore, schools played a significant role in shaping the identity of the neighbourhood and suburb in which they were located, serving as a landmark that eventually created its image, which in turn determined the built environment's aesthetics and contributed to developing a positive daily lifestyle. This shift reflected the goal of increasing the connection between schools and the community by giving school buildings a more humane dimension and an open relationship with their surroundings.

Architectural historians have criticised Kuwait's urban development modernisation efforts, particularly the First Master Plan that was created in 1952 by British architects Minoprio, Spencely, and Macfarlane, in which they strongly emphasised urban capitalisation and paid less attention to neighbourhood designs and cultures when forging a sense of national identity.[16] Subsequent master plans had to expand Kuwait's welfare system's provision of social services in response to the original plan, which led to a more rational implementation. Al-Nakib asserts that neighbourhood units were constructed in response to facility and housing demands, rather than the social needs of the country.[17] Benyameen Ghareeb, a faculty member at Kuwait University's College of Architecture, offers a more thorough justification of neighbourhood unit design and housing development,

[16]Saba George Shiber, *'The Kuwait Urbanization, Being an Urbanistic Case-Study of a Developing Country'*, (Kuwait: 1964); Asseel Al-Ragam, 'Representation and Ideology in Postcolonial Urban Development: The Arabian Gulf', *The Journal of Architecture,* 16. 4 (2011), 455-469; Al-Nakib; Yasser Mahgoub, 'Architecture and the Expression of Cultural Identity in Kuwait', *The Journal of Architecture,* 12. 2 (2007), 165-182.

[17]Al-Nakib.

revealing that the government had tested different theories in designing suburbs with central amenities through architects and planners along with the change in their policy, which resulted in upheaval and growth in the urban fabric that now reflects the existing divisions between various populations.[18] Although the majority of the researchers concentrated on urban development and less on the design of neighbourhood units in relation to schools, Al-Ragam believed that state schools emerged as a public space in response to the nationalist movement. Muhannad Albaqshi, a faculty member of Kuwait University's College of Architecture, stressed the creation of public spaces, such as schools, as a step towards a welfare state.[19]

This study casts doubt on the significance of modern school development, considering modernisation efforts. With the goal of fostering cultural exchange and social cohesion, the presence of the modern school went beyond the realm of the learning space. Although this study was solely focused on the role of modernist schools in Kuwait's history of urban development, the findings reveal that when schools' architectural implementation became a type of mass production for a welfare programme, it severely lost its vitality as a community value and landmark.

The First Master Plan for Kuwait by Minoprio, Spencley, and Macfarlane focused on the urban distribution of planning zones, with higher education located in the education zone and basic levels concentrated in eight new neighbourhoods in accordance with Ebenezer Howard's *'Garden City'* concept.[20] At that time, as explored earlier, higher education schools played a crucial role in cultural integration, cultivating knowledge and awareness towards modernity. However, centralised variables were not given sufficient weight in the decision-making process for selecting the optimum urban location for school buildings.

With independence and the introduction of welfare programmes, another master plan by Colin Buchanan that considered the country's demographics was implemented.[21] Kuwait, at the time, joined international organisations such as the United Nations (UN) and the United Nations Educational, Scientific, and Cultural Organisation, which spurred additional variables to school

[18]Benyameen Amanwail Ghareeb, 'The Interplay between "Tradition," "Modernity," and Uneven Development: The Historical Development of Housing in Kuwait, 1950-2005' (PhD Thesis, University of Cincinnati, 2020).

[19]Al-Ragam; Muhannad A. Albaqshi, 'The Social Production of Space: Kuwait's Spatial History' (unpublished doctoral thesis, Illinois Institute of Technology, 2010).

[20]Antonio Minoprio, Hugh Spencely and Peter W. Macfarlane, *Plan for the Town of Kuwait* (London: 1951); Sharifah Alshalfan, 'The Aftermath of a Masterplan for Kuwait: An Exploration of the Forces That Shape Kuwait City', *Colleccion Monografias* (2018), 211-223.

[21]Colin Buchanan, *Studies for a National Physical Plan for the State of Kuwait and Masterplan for the Urban Areas* (1970); Omar Azzam, Colin Buchanan and Jacob Thijsse, *Policies to Be Adopted for a Master Plan of Greater Kuwait* (Kuwait: 1965).

distribution and design such as educational standards, accessibility regulations, school dimensions, and socioeconomic factors. However, these adjustments in the need for school development required a more rational and practical approach to problem solving, which was where a worldwide specialist of the CIAM's architect, Alfred Roth, stepped in. In light of this, initiatives and urban studies in Kuwait have been centred on a functional approach based on prototype designs; however, unlike the cultural centre scheme, this approach has not significantly impacted Kuwait's culture or social cohesion; rather, it has left meaningless marks on the neighbourhoods' urban fabric.[22]

Thus, this study demonstrates that educational architectural design strategies and political and urban planning decision-making have a significant impact on creating a particular cultural identity, including the school building's location and appearance, determining the school's status as a landmark, and shaping the overall community image. These factors were underestimated in Kuwait's modernisation towards the welfare state, where the placement of schools and the overall architecture conveyed the idea of modernity. Ultimately, this argument exposes a significant contribution made by modern school architecture to the urban fabric of Kuwait's neighbourhoods and suburbs, raising a question about the school's effectiveness in shaping the urban identity of the neighbourhoods and its future value.

7.2.4 Can Kuwaiti Schools be Characterised by Modernist and Welfare Architecture?

Architectural modernism advocates the use of design and cutting-edge technologies to improve the quality of life. Using innovative materials, such as concrete structures and steel frameworks, and the employment of new construction techniques, such as prefabricated components, modernists provide a solution to the requirement for functional mass buildings. Although the architecture of schools has changed drastically, international pedagogical reform has produced several concerns and critiques that architects view as challenges in the design of modern schools. The physical layout of a modern school is mostly related to its teaching approach and curriculum. However, how this approach was implemented and how modernist architects created school layouts had culturally distinct meanings and impacts that varied across nations. Therefore, debates over the relative importance of physical space, pedagogy, and power are also important for contextualising the development of educational architecture in the twentieth century.

[22]Khaled Mahdi, *Kuwait Schools*, an interview conducted by Zainab Murtadhawi (Online Video, 17 April 2022); Saleh Yaseen, *Kuwait Schools*, an interview conducted by Zainab Murtadhawi (Online Video, 21 May 2022).

Roberto Fabbri, the co-author of *Kuwait's Modern Architecture* book, provided a succinct overview of the evolution of modernist school architecture in Kuwait and briefly listed how pedagogy, school planning, international standardisation, and prefabrication practices all contributed to the creation of a prototype space of education in Kuwait that sought to reflect the country's aspirations for progress and modernity.[23] His article generated ideas that were harnessed in this study, which was conducted to examine the relationship between the physical layout of new schools in Kuwait and the country's progressive and welfare-oriented approach to education. This study was aimed at raising an argument about the cultural history of school architecture and its historical context in Kuwait by illuminating the power dynamics that shape the evolution of learning spaces and pedagogical approaches. Compared to Fabbri's essay, this research goes significantly further than Roth's work in examining the history of school buildings. The connection between a school's physical environment and the historical contexts in which different social, cultural, and political variables led to its reformation was examined in this study. The findings of this study highlight the significance of school architecture and the multiple aspects of space, power, and pedagogy conceived, built, designed, used, and renovated under the influence of the cultural and political circumstances of modernisation developments in Kuwait. This research enhances understanding of the evolution of school architecture in Kuwait through sociocultural and political lenses, which have played a significant role in its development.

The spatial shift in Kuwait's modernisation process and urban transformation has impacted architectural historians' research on modern schools, with a rising focus on the interactions of space, power, and pedagogy in the field of architecture. Al-Ragam noted that Kuwait's modernisation was facilitated by educational spaces, which were essential for fostering social transformation and cultural ambitions.[24] This was because of the different uses of state schools, which made them a crucial component of Kuwaiti culture and a hub for lively discussions. This thesis contributes to the notion that traditional schools, beginning with Mubarakiya School, served as both educational facilities and meeting places for a wide range of social and literary entities prior to the discovery of oil. Society gathered in these schools' courtyards and participated in all activities, including those connected to schools. These sociocultural activities highly determined future school pedagogical spaces. In response to the modernisation process, schools with culture centre missions, such as the Industrial College and Shuwaikh Secondary School, were established in the early 1950s and played

[23] *Modern Architecture Kuwait, Essays, Arguments & Interviews*, ed. by Sara Saragoca, Richardo Camacho and Roberto Fabbri. Vol. 2 (Switzerland: Niggli, 2018),(pp. 208-219).
[24] Al-Ragam.

a critical role in cultural reformation, giving society more political and cultural drive towards independence. Ultimately, the case made in this study is that pedagogical spaces serve as more than just a venue for education; they also facilitate effective socialisation (see **Figure 7.4**).

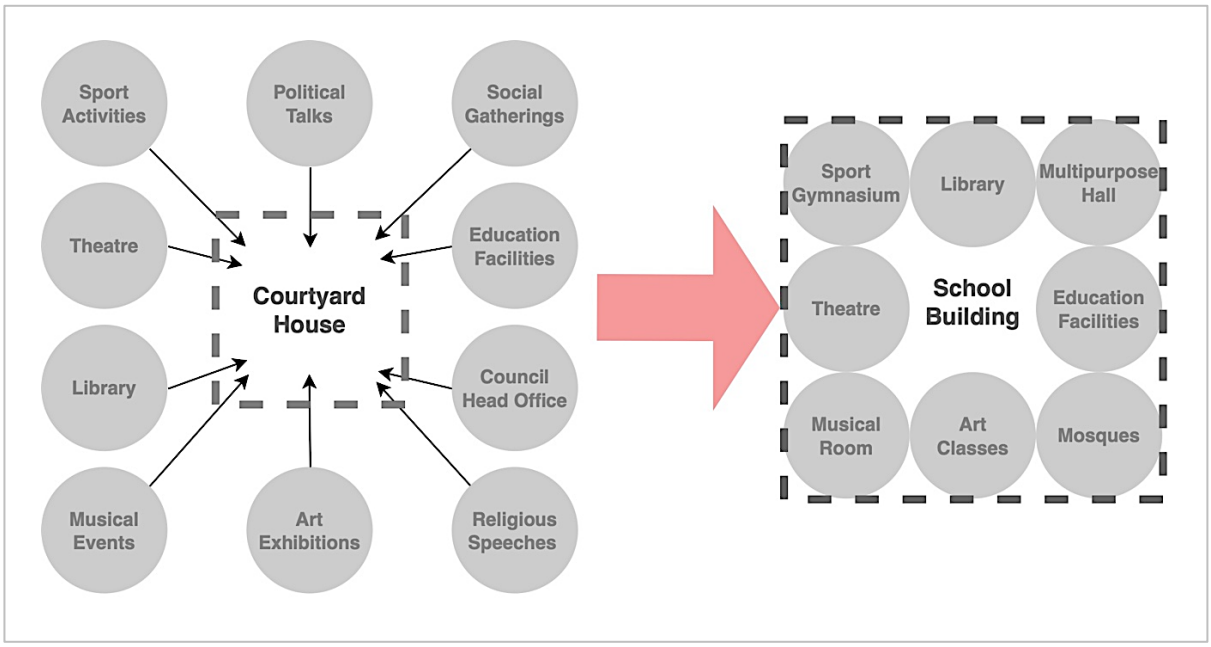

Figure 7.4 Educational space transformation. The graph depicts the transition from the traditional school courtyard house style to the modernist school buildings. In the courtyard house, all activities were conducted in one central location. However, with the emergence of modernist school buildings, these activities were allocated separate spaces and functions in the new design layout.[25]

The influence concentrated in one place as the cultural centre began to weaken as the prototype school typology emerged. Ruminating on the nationalistic movement and the historical consequences of political power over the design and effect of socio-spatial dynamics at the school, Al-Ragam noted the widespread establishment of schools as public spaces in the 1950s.[26] Furthermore, the technocratic argument advanced by Albaqshi claims that Kuwait's nationalist movement sparked the country's spatial development through its educational institutions, even as the nation's architecture has remained steadfast in its embrace of rational functionalism and regionalism, which highlights the gap between its aspirations for modernity and its actual reality.[27] This study, owing to the examination of the many political power shifts that shaped mass production, supports this claim. It demonstrates that school architecture had been a tool for launching welfare services even before the country gained its independence, and serving as

[25] Author, 2023.
[26] Al-Ragam.
[27] Albaqshi.

evidence towards an independent nation-state. Therefore, the assertion that the nationalist movement impelled mass education is correct, even though its architectural representation omitted this connotation owing to the nation's concentration on practical pedagogical spaces.

Owing to the widespread belief that foreign architects and designers could introduce the most cutting-edge techniques, Kuwait's modern architectural growth relies greatly on their work. Despite this reliance being dubbed terms such as *nationalism, regionalism,* and *internationalism,* the contention in this study is that the result of these efforts was a major impetus for colonialism. The growth of modern school buildings could not have occurred without political clout and the influence of professional undertakings. There has been some debate over the use of local versus foreign professionals during the early phases of modernising Kuwait. Unlike Gardiner, who believed that foreign architects' works reflected Kuwait's wealth and gave the modern city a sense of harmony and continuity, Shiber believed that Arab architects were more qualified to lead the modernisation process because of their familiarity with the local and regional contexts.[28] This may be true if we consider the cost and time spent on school construction projects during the early stages of modernisation; however, the study revealed that the physical components of schools designed by Lebanese or Egyptian architects nonetheless represented a novel type of modernity. Perhaps this can be attributed to the education and training provided in such schools, which familiarised the students with Western concepts of modernity. Thus, the architects, following in the footsteps of Hassan Fathy, could foster a distinct modern style with roots in their national cultures. Therefore, not all modern architectural buildings were Westernised; rather, some projects were designed and constructed by local architects who applied Western concepts to their ways of thinking.

However, as modern architectural practice moved towards regionalism and internationalism in their superficial meaning, the *Cold War,* as stated by Stanek, began following the end of the political conflict centred on the decolonisation process.[29] Although post-independence school architecture in Kuwait evolved in response to the international principles of UNESCO and the World Bank to fulfil the country's welfare provision, its implementation progressed in accordance with Western standards and by Western designers, outlining the shadow of the colonial hypothesis, as argued in this study.

[28] Gardiner, p. 55; Shiber, p. 115.
[29] Stanek, p. 171.

Ben Tosland, on the other hand, pursued another goal by analysing tradition and modernity within the architectural settings of the Gulf region, thus expanding the understanding of Western architecture.[30] His investigations revealed that traditional Arab architectural features and space syntaxes struggle with divergent ideologies and forms of Western-instigated modernism.[31] This thesis indicates that the attempt of Roth, as an internationalist architect nominated by UNESCO, at regionalism was based on a rationalist approach to adapting to climatic conditions and that his designs for multiple school typologies were created as an international style shaped by Kuwait's political and economic considerations. However, contrary to his claim, his regionalist approach was more concerned with utilitarian designs that were compatible with the local climate than with creating a clear representation of the modernist style or fostering any feeling of national identity. Kuwait's modern school architecture did not place significant emphasis on aesthetically representing national identity during its formative stages; rather, its mass production plan can be seen as one of the most important effects of rationalist practice and technological advancement in the nation's infrastructure development.

The final observations of the thesis provide valuable insights into the gaps in knowledge regarding the school-built environment that evolved because of Kuwait's modernisation strategy in the last century and the fluctuations in its architectural practices. The examination encompassed not only the development of the architectural physical context but also the interactions between the initial perceptions (social, political, and economic) of the government's needs and the phenomenon of modernism, as well as the implementation of welfare-oriented architecture during Kuwait's modernisation. In this study, the evolution of schools in Kuwait from the 1950s to the 1980s, as influenced by the phases of oil production and government policies, was explored. The pre-oil period, which experienced notable political developments and contributions to Kuwait's modern architecture, was also considered. By prioritising the examination of the narrative of sociocultural ambitions in school architecture rather than solely emphasising its physical depiction, a broader perspective was gained in comprehending Kuwait's historical context and defining its significant architectural values.

[30] Ben Tosland, 'European Architects at the Confluence of Tradition and Modernity in the Persian Gulf, 1954-1982' (unpublished doctoral thesis, Kent University, 2020).
[31] Ibid.

7.3 RETHINKING THE SCHOOL ARCHITECTURE

Higher-order capabilities, skills, learning tools, and technology are widely acknowledged as crucial for national success in the twenty-first century. Schools built in the last century were designed around the lecture method of instruction, which is ineffective in modern classrooms. Therefore, the pedagogical spaces and physical settings of both new and existing school buildings have been modified to encourage more active and in-depth student engagement in the classroom. For decisions to be made on whether to redesign new school buildings, renovate existing ones, admit that demolishing them is compulsory (because they no longer serve educational needs), or preserve some because of their significant cultural contribution embedded within, it is important to understand the design complexity of these buildings in delivering a contemporary vision of education and to evaluate their means of continuity in the future.

7.3.1 Present State of School Buildings

Most modern school buildings in Kuwait still operate with minimal modifications to their exterior and courtyard, new mechanical systems, and space distribution adjustments. According to Kuwait's building census of 2011, there were 5347 state buildings, with educational buildings accounting for 20% (see **Figure 7.5**).[32] Among the 1,089 educational buildings, there were 741 state schools, 207 private schools, 48 colleges, and 72 institutes. A total of 70.5% of state schools were built in the twentieth century (see **Figure 7.6**).[33] Most of the problems that plagued schools in the twentieth century are now readily noticeable, including the incompatibility of school layouts and designs with developments in pedagogy, inefficiency of school buildings in local climates, lack of building maintenance, and lack of integration of schools with the surrounding community.

The classrooms were designed based on a one-way teaching method, which is no longer considered functional with today's pedagogical improvements. According to *Men Huna Nubhir* [From Here We Sail], a community endeavour to enhance education, even educational theory in Kuwait, lags behind the most recent advancement.[34] The initiative's backer emphasises that their nationalist platform intends to reform Kuwait's educational system and educate the next generation of Kuwaitis on a firm foundation of science and the seriousness of labour, founded on competence and merit, to improve Kuwait once more. They published their first book last year under the title *Min*

[32] These buildings are General Governmental buildings, Religious Buildings, Sport Facilities, Health care Buildings, Educational Buildings and other Amenities. Kuwait-Government, *Altiedad Aleamu Lilsukaan W Almasakin W Almabani W Almunshat Lea'am 2011* [General Census, Housing, Buildings and Establishments for the Year 2011], (Kuwait: 2011), pp. 9-18.

[33] By 2019, the state schools reached 840.

[34] Esra'a Al-Eissa, 'Men Huna Nubhir', 2021 <https://www.fromherewesail.com> [accessed 15 January].

Huna Nubhir: Mubadaratan Wataniatan Li'iislah Watatwir Altaelim Fi Alkuayt [From Here We Sail: A National Initiative to Reform and Develop Education in Kuwait], which outlined the major problems and issues in the current educational system and how these problems should be considered when reforming the system to improve the future of the next generation.[35] Despite the absence of discussion on school architecture in these books, it is crucial to evaluate current school layouts and make any required alterations in light of the fact that this reform will have an effect on how schools operate and how they interact with their physical context.

Currently, a significant number of the physical structures of schools require maintenance because of roof overhangs that shed concrete fragments, inadequate wiring, outdated laboratories, a lack of standards for accessibility for people with disabilities, fire code compliance, and poor air and lighting quality.[36] However, the fundamental components of school buildings that present difficulties have not been satisfactorily addressed in terms of climatic adaptability. As gleaned from interviews with Khaled Mahdi (Secretary-General of the General Secretariat of the Supreme Council for Planning and Development), Hassan Kamal (Member of the Municipal Council of Kuwait), Nasser Kharaibut (Deputy Director General for Planning and Design at the Public Authority for Housing Welfare), and Saleh Yaseen (Former Assistant Undersecretary for Educational Facilities at the Ministry of Education), school buildings in Kuwait are not sufficient to provide a safe and healthy environment for students.[37] In the previous century, schools were typically unconditioned or lacked a sufficient cooling system; outdoor playgrounds were unsuitable for children, especially during the summer; and open pathways and spaces were exposed to dust storms, which may have contributed to the lack of school activities.[38] Consequently, most school buildings struggle to provide an environment that is pleasing in terms of both design and comfort.

Furthermore, schools in Kuwait, in focusing solely on the role of education, have become disengaged, and they no longer help the government realise its long-term goals. Therefore, such buildings do not promote growth beyond their role as learning centres. They do not foster civic pride,

[35] Esra's Al-Eissa and others, *Min Huna Nubhru: Mubadaratan Wataniatan Li'iislah Watatwir Altaelim Fi Alkuayt* [From Here We Sail: A National Initiative to Reform and Develop Education in Kuwait] (Kuwait: KFAS, 2021).

[36] Layla Al-Awadi, 'Assessment of Indoor Levels of Volatile Organic Compounds and Carbon Dioxide in Schools in Kuwait', *Journal of the Air & Waste Management Association,* 68. 1 (2018), 54-72; Lujain AlMatrouk, 'The Relationship between Gender Segregation in Schools, Self-Esteem, Spiritual Values/Religion, and Peer Relations in Kuwait', *Near and Middle Eastern Journal of Research in Education,* 2016. 1 (2016); Nadeem A. Burney and others, 'The Efficiency of Public Schools: The Case of Kuwait', *Education Economics,* 21. 4 (2013), 360-379.

[37] Mahdi; Hasan Kamal, *Kuwait Schools*, an interview conducted by Zainab Murtadhawi (Online Video, 8 May 2022); Nasser Khuraibat, *Kuwait Schools*, an interview conducted by Zainab Murtadhawi (Online Video, 19 May 2022); Yaseen.

[38] Mahdi; Kamal; Khuraibat; Yaseen; Ahmad Al-Jihayem, *Kuwait Schools*, an interview conducted by Zainab Murtadhawi (Online Video, 23 April 2022); Jaber Abulhasan, *Kuwait Schools*, an interview conducted by Zainab Murtadhawi (Online Video, 24 May 2022); Sabah Al-Rayes, *Kuwait Schools*, an interview conducted by Zainab Murtadhawi (Online Video, 18 April 2022).

civic engagement, or individual accountability, which are essential for a thriving democracy and an improved society.

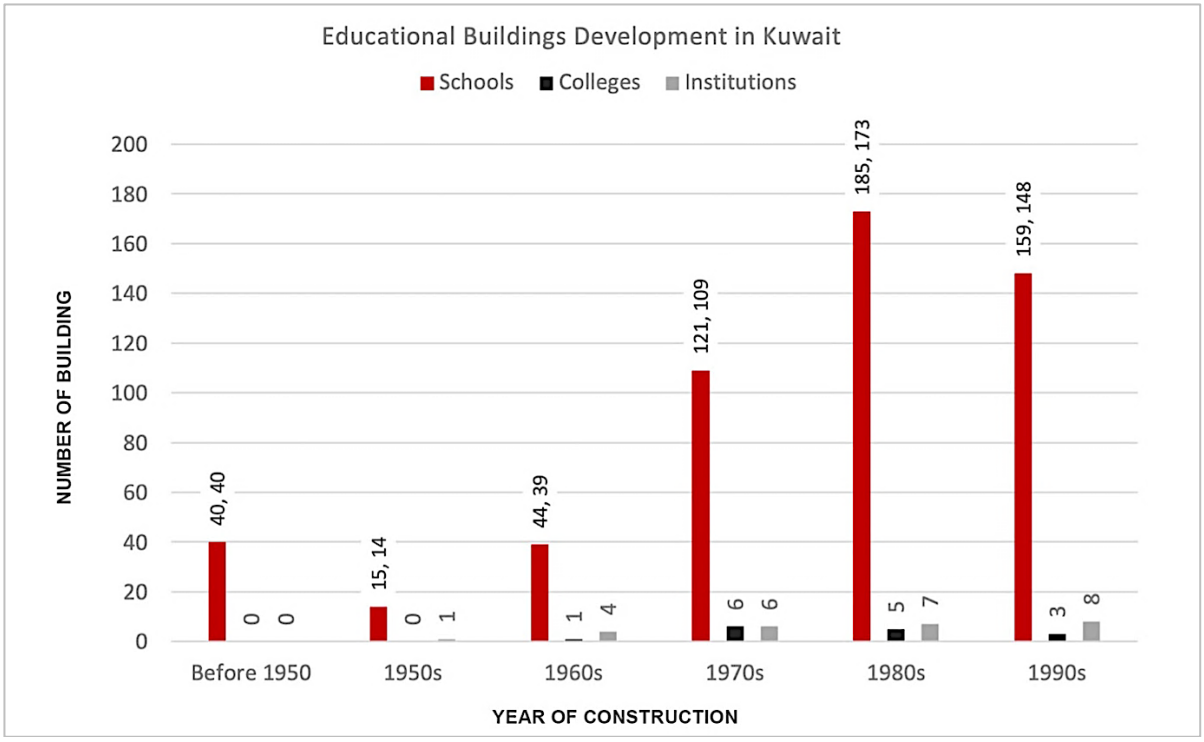

Figure 7.5 The number of different education institutions. The graph depicts the number of school buildings of various types that appeared in each decade, based on data from the Kuwait Census Report of 2011.[39]

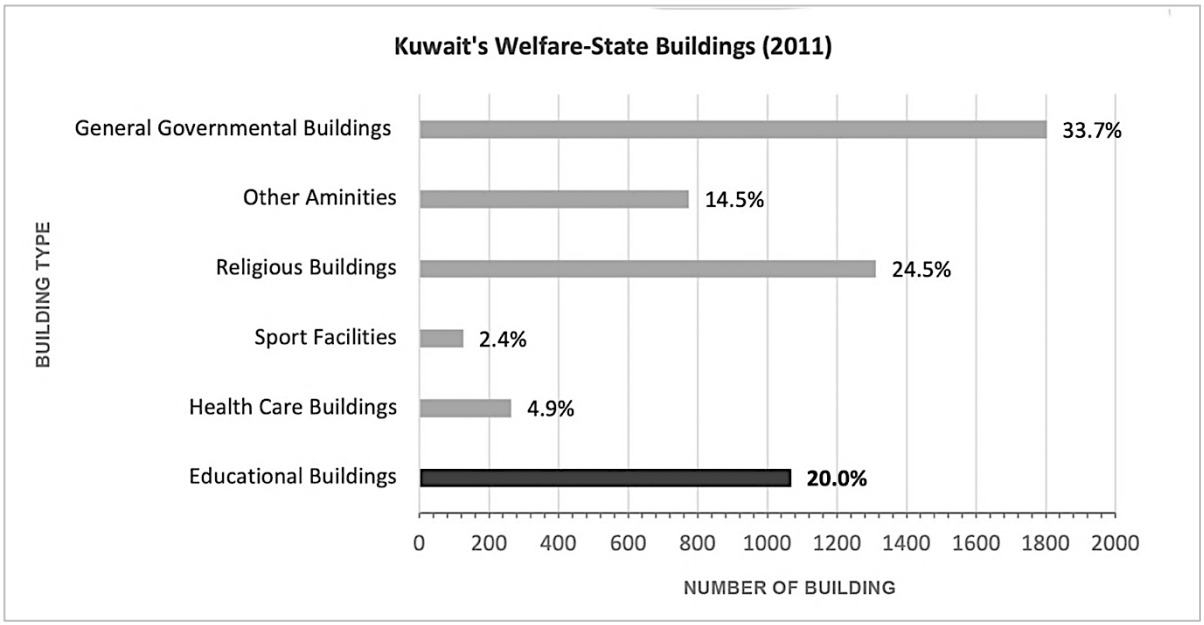

Figure 7.6 The number of government buildings. The graph depicts the total count of various government buildings constructed in Kuwait up until the year 2011. The educational buildings constitute 20% of the overall constructed facilities. The data is sourced from the Kuwait Census Report of 2011.[40]

[39] Kuwait-Government, p. 9 and 10.; illustrated by the Author.
[40] Ibid. pp. 16-18.; Illustrated by the Author.

7.3.2 Design Development of School Buildings: Obstacles and Challenges

School buildings in Kuwait are notable for having served their original functions for decades since they were first built. However, it is time to reconsider our views on how schools must be built. From what has been revealed thus far, it is clear that political, economic, and social norms in a nation impact school design. The future of school architecture requires consideration of all the factors that will play a role in the school building programme in Kuwait, such as the government's vision, demography, master plan, pedagogical growth, physically built environment, building system and building code, environmental performance, and cultural history.

Kuwait launched its Vision 2035 plan, in which the government hopes to make the country a regional and global financial and commercial metropolis that is more appealing to investors.[41] This strategy aimed to improve government efficiency and direct national resources towards intended outcomes. Reports show that pedagogical reform, school capacity expansion, and human capital enhancement in non-oil industries are high on Kuwait's list of priorities for educational development in 2035.[42] According to Amiri Decree No. 308 of 2006, the National Centre for Education Development was established in 2010 to improve the quality of education using evidence-based methods.[43] In an interview, Mr. Mahdi stated that 'transformation and innovation' will be key to the country's educational objectives for 2030.[44] Thus, it became clear that fostering students' imagination should be at the centre of educational theory.[45] Many targets, including administrative and pedagogical shifts, are prerequisites for advancing this goal.[46] To this end, national development programmes have been implemented, and the knowledge and insights of experts from other countries, as well as the personal experiences of Kuwaitis, have been drawn on. Regrettably, one of the obstacles to school architecture development is that its obligations do not include the design and development of school-building programmes.

To ensure consistency between the national development plan and the worldwide development vision, Kuwait has adapted its national objectives and policies to align with the UN's Sustainable Development Goals for 2030.[47] Kuwait continues to maintain its policy of providing free public

[41] SCPD, 'New Kuwait', 2022 <http://www.newkuwait.gov.kw> [accessed 15 January].
[42] SCPD, *Kuwait Voluntary National Review 2019* (Kuwait: n. p., 2019).
[43] NCED, 'Project of the National Center for Education Development', 2022 <https://nced.edu.kw/> [accessed 15 January].
[44] Mahdi.
[45] Ibid.
[46] The targets were as follows: give teachers credit towards licensure; switch to the Gate system for standardised testing; incorporate STEAM into the curriculum; decentralise school administration; and limit the Ministry of Education's responsibilities more to those of regulator and monitor than those of operator.
[47] SCPD, p. 38-40.

education to all residents, from kindergarten through university, with attendance at both primary and intermediate levels being compulsory.[48] In addition, the Creative Human Capital pillar has seen the development and rollout of new initiatives in light of Kuwait's focus on improving education quality.[49] Therefore, the Ministry of Education must, in addition to changing pedagogy and educating school administrators to successfully integrate ICT into classroom instruction, provide a learning environment compatible with the objectives of the SDGs.[50]

With these growth goals in mind, the Kuwait Municipality commissioned Perkins and Will, an international architectural and design firm based in America, to create the country's Forth Master Plan for 2040 (4KMP).[51] The 4KMP is driven by principles that ensure environmental stewardship, citizen-focused initiatives, and sustainability, as it operates at several levels, including national, regional, and urban.[52] Aspirations for economic diversification, asset and resource stability, future flexible career expansion, provision of social, health, and education services, and the promotion of resilience are all included in the plan.[53] According to their draft report, more than 440,000 students will be enrolled in state schools by 2030 (in addition to 277,500 students in private schools), exceeding their projection in the Third Master Plan, necessitating an increase in the number of school buildings.[54] In comparison, more than 1,300 school buildings for all grade levels are planned for state schools by the Ministry of Education's provision for 2025–2030.[55] It is necessary to conduct a research analysis to comprehend the school architecture setting and its urban disruptions, which have a significant influence on the future daily lives of communities and people, in order to implement these ideas.

Given the number of buildings planned as part of national policy, there is a great obligation to provide suitable school buildings that adhere to the most recent international standards and maintain all facets of the educational system. Owing to the complexity of their architectural design, schools must consider three key factors: educational requirements (including pedagogical needs and extra-curricular activities based on both gender and environmental aspects), social aspirations

[48] Ibid. pp. 9-12.
[49] Ibid. p. 11.
[50] Ibid. p. 12.
[51] Perkins and Will, an interdisciplinary architecture and design firm, was established in 1935 in Chicago by Lawrence B. Perkins and Philip Will, Jr. The firm believes that design can profoundly impact lives and improve communities through research-based approaches. Today, they are recognised as one of the most renowned and influential international design firms, distinguished by numerous awards and competition victories.; See: Perkins+Will, *A Draft Report for Kuwait's Fourth Master Plan* (Kuwait: Kuwait Municipality, 2021).
[52] Ibid.
[53] Ibid. p. 75.
[54] Ibid. pp. 75, 78.
[55] Ibid. pp. 77, 80.

(as directed by Kuwait Vision 2035), and the environmental situation (which is the most significant issue in Kuwait). With regard to the requirement that the built environment must offer students a healthy, safe, and comfortable environment, school architecture has become increasingly difficult in the twenty-first century. Technically, Kuwaiti school designs should adhere to the most contemporary architectural regulations to provide adequate air and light quality, energy efficiency, cutting-edge technology, comfortable furniture, ecosystems, and covered playgrounds that emphasise the principles of sustainability.[56]

The complexity of school design clearly exceeds the scope of an architect's work; thus, it is important to devise a bottom-up structure with no single player or facilitator in charge of the entire system. Instead, the school design must describe how dynamic systems would work when several sectors or people cooperated to develop school-building programmes. This approach, as recommended in this research, should be overseen by a permanent committee that would investigate all the above-mentioned aspects of school architecture, allow for the development of new typologies, and monitor any necessary modifications.

7.3.3 The Heritage Value of the Modernist School Architecture

Kuwait's modern architecture from the twentieth century provides priceless and comprehensive historical evidence for the influence of oil discoveries on the shift in the political and social aspects of its urban development, as well as a dramatic shift in its architectural style. However, owing to new construction activities in Kuwait City, these major architectural buildings with embedded priceless cultural heritage are in danger of demolition. Although Amiri Decree No. 11 of 1960 on the Antiquities Law and the amendments made to it in Law No. 9 of 1994 were aimed to preserving Kuwaiti heritage and protecting any architectural building that has been in existence for more than 40 years and has been recognised as having heritage value, there are no processes in place for the preservation and protection of modern architectural buildings, which resulted in loss.[57] Examples of demolished valuable modern heritage include the Sawaber Housing Complex (designed by Arthur Erickson in 1981), the Chamber of Commerce and Industry (1968), the Middle East's first ice rink (the 1970s), the Kuwait Airways Building (1980s), and some educational buildings, including Al-

[56] MoE, *'A Draft Report for School Buildings' Code'*, (Kuwait: Ministry of Education, 2020); Mishaan Al-Otaibi, *'Energy Efficiency Code'*, 5998/2019 (Kuwait: Ministry of Electricity and Water 2019).

[57] Kuwait-Government, *'Princely Decree No. 11 of 1960 of the Law of Antiquities'*, (Kuwait: Government Press of Kuwait, 1960); Kuwait-Government, *'Law No. (9) of 1994 Amending Some Provisions of the Antiquities Law'*, (Kuwait: NCCAL, 1994).

Ahmadiya School (1920), the first prototype schools designed (the 1950s),and the Technical College (1954) designed by Tripe and Wakeham.

Therefore, specific attempts to emphasise the challenges of identifying, documenting, and preserving modern architecture while promoting its adaptation towards a sustainable future are essential. The notion that much of what we learn through the architecture of our buildings, including schools, reflects broader cultural values is not novel. Therefore, it is worthwhile to examine modernist school architecture from a heritage preservation perspective, particularly in historical contexts such as Kuwait. Al-Ragam stated:

> *'Modern Heritage is worthy of preservation. We are fighting against a preconceived notion of what heritage is and what it should look like. The significance or value of modern architecture is not necessarily in its materiality or physical qualities aesthetics but for its intellectual achievements such as the first high density collective housing in the Gulf, or the first reinforced concrete building, the first technological landmark'.*[58]

From this perspective, while some of Kuwait's modern school buildings need to be improved, others need to be repaired, and a few should be designated heritage buildings that must be conserved, even though the issue does not directly relate to the research objectives. School buildings such as Mubarakiya, Kuwait's first formal school; Shuwaikh, the largest secondary school in the region; Khalediya, the competitive secondary school for girls; and Tripe and Wakeham's school design, the first prototype schools (see **Figures 7.7** to **7.11**), and Kuwait's first prototype intermediate school for girls for Roth's Rumaithiya (see **Figures 7.12** to **7.29**), make significant contributions to the context of Kuwait's modernisation history thanks to their intellectual achievements. Mubarakiya School, along with other traditional Kuwaiti schools, has been maintained thanks to the efforts of the Kuwait National Council for Culture, Art, and Literature.[59] Currently, other traditional schools in Kuwait host cultural and artistic events, and Mubarakiya School serves as a national museum for the history of education in the country.

[58] Cinatra Fernandes, 'Modern Heritage Worthy of Preservation', *Arab Times*, 2016.

[59] NCCAL, 'Kuwait Historical Buildings', 2023 <https://www.nccal.gov.kw/Pages/MonumentsAndMuseums/mbanitraekhya> [accessed 15 January]; NCCAL, 'Formal Education Museum', 2023 <https://www.nccal.gov.kw/Pages/MonumentsAndMuseums/متحف-التعليم-النظامي> [accessed 15 January].

Figure 7.7 Aisha Intermediate School, main entrance. Left: This school is one of the earliest examples of a prototype specifically created for the education of girls. It was designed by Tripe and Wakeham. The school has been included in Kuwait's heritage list; however, it needs an immediate conservation strategy. Photograph captured by Bedour Al-Awadhi; date unknown.[60]

Figure 7.8 Aisha Intermediate School, classroom view. Right: An image captured from the inner courtyard, showcasing the pattered wall as intended by the designer. Photo taken by Bedour Al-Awadhi; date not specified.[61]

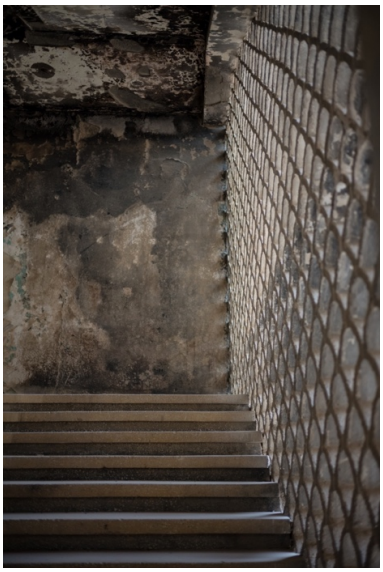

Figure 7.9 Aisha Intermediate School, staircase. Left: This is a close-up view of the patterned wall on the staircase. Photo taken by Bedour Al-Awadhi; date unknown.[62]

Figure 7.10 Aisha Intermediate School, outdoor staircase. Middle: The image depicts an angle of the patterned wall that covers one of the staircases of the school. Photo credits: Bedour Al-Awadhi, no date.[63]

Figure 7.11 Aisha Intermediate School, classroom corridor. Right: The image displays a shaded hallway connecting the aligned classrooms. Photo by Bedour Al-Awadhi, date not specified.[64]

[60] Maha Alessa, Personal Archives: meemalessa@gmail.com, Bedour AlAwadhi, 'Aisha School', 2018 [Accessed 15/09/2022].
[61] Ibid.
[62] Ibid.
[63] Ibid.
[64] Ibid.

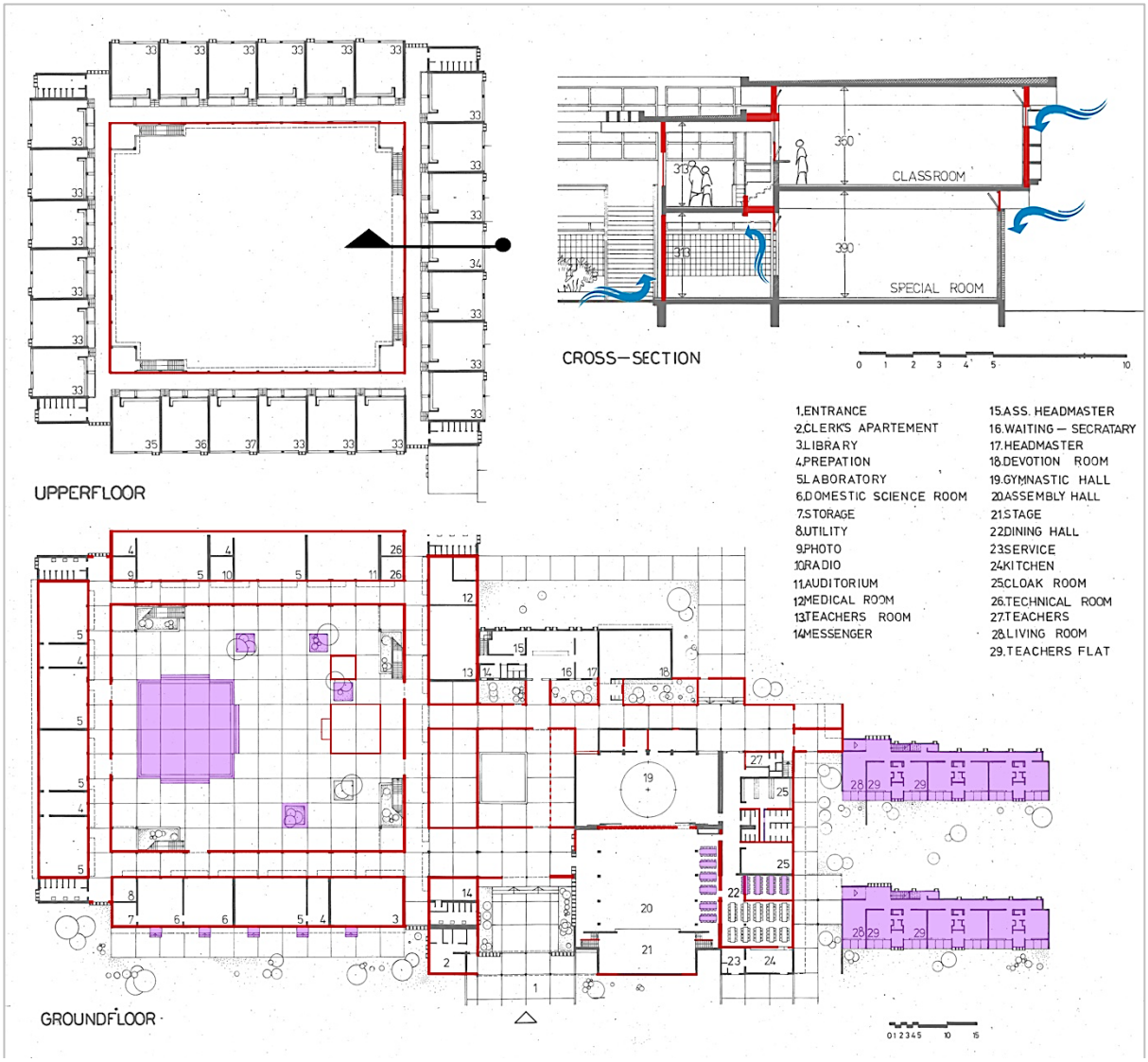

Figure 7.12 Qairawan Middle School for girls (former Rumaithiya Secondary School), an updated design layout. The school, which was the first prototype created by Roth, was designed in 1969 and completed in 1971. However, various modifications took place throughout its construction, including a shift in the school's intended function from secondary level to intermediate level. Today, the school remains intact for its intended use, but some modifications have been made. The modifications depicted in this figure mostly pertain to the inclusion of additional walls (highlighted in red) to enclose open areas in response to hot and humid weather conditions, as well as the elimination or disregard of certain spaces (highlighted in purple). These modifications left the school's cross ventilation concept ineffective and rendered it non-functional, as demonstrated in the draft section.[65]

[65] Alfre Roth, 'Schulbau in Heissen Klimazonen ', *Bauen + Wohnen,* 21 (1967).; modified by the Author.

Figure 7.13 Qairawan Intermediate School, Main entrance. [Left][66]

Figure 7.14 Qairawan Intermediate School, precast blocks. Right: Alongside the planters situated at the entrance, the image also showcases precast concrete blocks intended for window frames adorned with Arabic calligraphy.[67]

Figure 7.15 Qairawan Intermediate School, a classroom. Left: The classroom is equipped with a customised ceiling and air conditioning units and lacks any indication signalling the closure of the cross-ventilation opening above.[68]

Figure 7.16 Qairawan Intermediate School, laboratory. Right: A laboratory with fixed windows above the entry level could provide a clue about the presence of a cross-ventilation aperture.[69]

[66] Author, 2023.
[67] Author, 2023.
[68] Author, 2023.
[69] Author, 2023.

Figure 7.17 Qairawan Intermediate School, corridor. Left: The image depicts laboratories situated in a ground-floor hallway. On the right side, there are original glass-blocks, while the left side is fully enclosed by concrete brick walls with several replaced windows.[70]

Figure 7.18 Qairawan Intermediate School, classrooms' entry. Middle: The image shows the upper-level corridor that holds the classrooms, showcasing local décor in shades of blue.[71]

Figure 7.19 Qairawan Intermediate School, blocked cross-ventilation. Right: The image depicts a perspective of the fully enclosed upper and lower sections of the vertical cross-ventilation system.[72]

Figure 7.20 Qairawan Intermediate School, former fountain. Left: This image depicts the upper sun protection modules and a water fountain that has been substituted with a cement slab.[73]

Figure 7.21 Qairawan Intermediate School, horizontal sun blocks. Middle: The image depicts the interior courtyard, including a horizontal shade on the side. The walls, originally intended to be open corridors, have been fully enclosed.[74]

Figure 7.22 Qairawan Intermediate School covered courtyard. Right: The image displays the inside courtyard, which is shaded by a structural frame to offer protection from direct sunlight and ensure the safety of children.[75]

[70] Author, 2023.
[71] Author, 2023.
[72] Author, 2023.
[73] Author, 2023.
[74] Author, 2023.
[75] Author, 2023.

Figure 7.23 Qairawan Intermediate School, additional building blocks. Left: This is a view of the playground area, where more classrooms have been constructed and located at the back.[76]

Figure 7.24 Qairawan Intermediate School, sport fields. Right: This image displays a track for running that was not included in Roth's first design.[77]

Figure 7.25 Qairawan Intermediate School, instructors' apartments. Left: The image depicts a long-abandoned perspective of the instructor's apartment and amply illustrates the architectural concepts of sun shielding using site-cast modules and the setback of apartment doorways.[78]

Figure 7.26 Qairawan Intermediate School, instructors' apartment, south view. Right: a view from the back of the instructor's apartment, highlighting the tiny projected windows on the south elevation.[79]

[76] Author, 2023.
[77] Author, 2023.
[78] Author, 2023.
[79] Author, 2023.

Figure 7.27 Qairawan Intermediate School, instructors' apartment corridor. Left: An image of the instructor's apartment building's upper corridor, which has sustained damage and is currently out of service.[80]

Figure 7.28 Qairawan Intermediate School, instructors' apartment entrance. Middle: The lateral view of the instructor's apartment block showcases the entrance, adorned with pre-cast concrete modules.[81]

Figure 7.29 Qairawan Intermediate School, instructors' apartment room. Right: The image depicts the deteriorated indoor atmosphere of the instructors' flat room, necessitating repair.[82]

7.4 CONCLUSION

Architecture has always been a key factor in defining nations and reifying their culture, politics, and society. This thesis tells the tale of Kuwait's remarkable metamorphosis, which has had a significant influence on education, culture, the built environment, and everyday life. The key finding of this thesis is that Kuwait's modernist school architecture is notable not for its modern expressions but for its crucial architectural context in the country's modernisation history. Kuwait's modernist school architecture in the second half of the twentieth century was explored through a thorough analysis of archival materials, fieldwork at school buildings, and interviews with subject matter experts to identify the nation's modernist depiction, which influenced its ideology and cultural identity. This research reveals that the process of modernising Kuwaiti education began long before the discovery of oil, shifted to reflect Kuwaiti culture after the oil boom, pivoted into a welfare state programme after the nation-state was established, and moved into mass building production that shaped the city's urban fabric and reflected modernist school architecture.

[80] Author, 2023.
[81] Author, 2023.
[82] Author, 2023.

It is crucial to comprehend how pre-oil societal forces influence educational architecture, considering modernist phenomena. The research in Chapter Three reveals that early twentieth-century reforms in education significantly influenced the country's school architectural movement following the discovery of oil. Historically, the pedagogy of schools was emphasised because they were seen as a prime hub for the dissemination of society's values and norms in a variety of areas, including but not limited to academics, religious discourse, political sub-assemblies, artistic manifestations, and physical activity. Before their own dedicated building was constructed in Kuwait, traditional schools played host to the country's first cinema, theatre, podcasting activity, and sports events, propelling society towards modernity.

As the second half of the twentieth century progressed, these cultural norms were realised in physical spaces and became an integral feature of emerging modernist schools. This research shows how the desire for modernisation was initially expressed in the education sector and how Shuwaikh Secondary School, one of the largest schools in the world at the time, was constructed. Along with the Industrial College, which trained the necessary local workforce, Shuwaikh Secondary School was instrumental in bringing recognition to the country and guiding the people towards independence, as explored in Chapters Three, Four, and Five. In this thesis, numerous political tensions are highlighted to reflect the nationalist representation of architecture during the initial phase of modernisation, which was dominated by foreign architects and planners owing to a lack of experience and based on the country's desire for the best outcomes. Despite the lack of overtly nationalist design elements, the physical space provided by the schools was crucial in maintaining the momentum of cultural and political campaigns towards a new nation-state.

In the same way that the architecture of schools was crucial in ushering in a more modern way of life, they were also pivotal in establishing a foundation for the social welfare of the growing country. The fourth chapter of this thesis examines the context in which the urbanisation, educational system, and school mass production of the country affected architectural development as a social service. It describes how the layout and design of schools adapted to accommodate these factors, how the concept of typology emerged to satisfy the pressing needs of the country, and how different architects and designers collaborated to create an accurate representation of the most effective school model. Chapters Five and Six delve into the school design layout, recounting its typology theme, building techniques, and execution, ultimately concluding that the regionalist and

rationalist approach adopted by Swiss architect Roth was the most effective in meeting the needs of state schools in expressing the welfare system.

According to the findings, Kuwait's challenges and successes in modernist school buildings were determined by the country's reliance on oil revenue and influenced by political conflicts, a shift in teaching methods, and foreign architects' practices. They mirrored modern social and cultural notions, culminating in a cultural shift and a more progressive society. The outcomes of this research show that the growth of modernist schools in Kuwait impacted the physical environment and played an important role in the modernisation process, and brought the country's cultural understanding into the modern era. A significant turning point in the history of Kuwait's built environment is that the country's educational institutions far predated oil discovery and continue to play a pivotal role in the welfare system as the second pillar of the programme after housing.

In conclusion, architecture is a language through which we can interpret the built environment in the context of our everyday lives and learn from the past. Architectural studies have generally defined school architecture from a pedagogical perspective; however, this thesis addresses a new angle from which such architectural symbols can convey a new and important narrative. The research study was hampered by a lack of access to comprehensive resources in the local archives; more documents might contribute to the modern architecture of Kuwait and its region.

7.4.1 Research Significance and Contribution

One of the main contributions of this study is its compelling evidence that emphasises the various phenomena of the modern architectural movement, particularly in the context of Middle Eastern countries, where colonialism, nationalism, and welfarism have transformed architecture into a potent tool for cultural transformation, national representation, and the introduction of modern life. Reinterpreting school architecture in the semicolonial and post-independence eras of an oil-based nation such as Kuwait offers a variety of perspectives that illuminate the social and cultural context, urban infrastructure, and development of such institutions.

Schools in Kuwait play a part in the country's efforts to prepare its citizens for the global economy by providing them with a solid education and the skills they need to find employment in the global marketplace. Education and general well-being are vital components of a successful nation; naturally, Kuwait certainly had them as one of its main development priorities when it became an

independent nation. Therefore, schools have a significant impact on the neighbourhoods where they are located, as they are a focal point for families and foster connections across generations.

This research contributes to the fields of Kuwait's modern architectural history, the welfare state programme, and the developing architecture of schools by examining the development of learning spaces and places in Kuwait's school architecture that emerged during the economic boom of the 1950s and continued until the 1980s. Modernisation development was largely impacted by the country's oil discovery and influenced by various political movements, sociocultural norms, and international policies.

This study supports the claim that modernism originated in the West before being applied differently in the rest of the world. This study provides an empirical viewpoint on how economic power and external and internal political tensions acted as potent symbols of modernisation and how their effects persisted far into the post-independence period through the lens of modernist school architecture. In the post-independence period, the new schools reflected the country's position in serving society's provisions as a new nation. However, new modernist school ideas were frequently implemented in the pre-independence period, significantly affecting the country's national policy and cultural expressions.

This research also contributes to the welfare architecture context by focusing primarily on examining the relationship between school architecture and welfare programmes, launching fresh enquiries that link several fields of study and perspectives to modernist architecture. Through various data and resources, this research has provided new interpretations and arguments to comprehend the paradoxes and complexities of the context that have contributed to and determined the school-built environment and have been used to enhance the social provision that occurred towards the nation's independence and afterwards. With confidence in foreign expertise and reliance on the development of new cities and neighbourhoods, in addition to the adoption of modern building techniques, the architectural profession significantly increased the production of welfare architecture during this crucial time for the state by setting up a new daily regimen.

Moreover, this research has significantly contributed to the understanding of the connection between pedagogy and architecture through its in-depth spatial analysis of the design and evolution of school layouts, which is supported by the interpretation of archival materials, fieldwork,

and interviews. The study shows that school architecture was and can exceed its basic function, emphasising its significant role in reflecting sociocultural norms through its spatial organisation and space adaptation, all of which reflect the pedagogical needs of the time. The design typologies show the emergence and collapse of the architectural practices of foreign architects who believed that this region was a laboratory for modernist architecture. The myth of modernism was firmly established in school architecture, which promoted national representation, rationalism, and functionalism as the means to an idealistic architectural intention through many initiatives to reflect pedagogical needs, incorporate climatic considerations, and achieve financial outcomes.

School buildings are an integral part of Kuwait's efforts to modernise society, showing how different political authorities and their divergent ideologies mediate and engage the country's modernisation and urban creation. This study is the first to shed light on fresh angles from which to view modernist school architecture in the context of Kuwait's modernism and welfare architecture. This is in contrast to welfare architecture research, which is primarily focused on housing, and modern architecture studies, which are based on urban transformation and nation-building.

7.4.2 Future Research

Although this study offers a historical backdrop for contrasting and comparing Kuwait's modernist school buildings, further investigation is necessary to determine how Kuwait's contribution to the schooling of neighbouring countries, such as Bahrain, the United Arab Emirates, and Qatar, was related to Kuwait's school architecture. More extensive local research is imperative to identify the relationship between the growth of urban areas and school-building units. For oil-based architecture, there are two distinct stages to consider: the pre-independence era, which emphasises Kuwait's development; the British protectorate period; and post-independence, which is highlighted by the nationalist movement and welfare architecture.

This research also sheds light on Kuwait's welfare architecture, considering the contribution that schools have made to the development of the nation's welfare systems. Thus, each city received health and sports amenities as part of its welfare programme, which scholars have not investigated to comprehend the architectural context of the time. This provides a diverse setting that may provide researchers with a wealth of interesting materials.

In addition, the various factors that affect a school's physical construction in the field of school architecture were examined in this study. Consequently, there is a vast potential to contemplate how the design of a school affects the learning environment and its surroundings and what role it might play in improving the quality of life. Through its interpretation of the principal of school buildings, this research may serve as a fundamental foundation for future studies that will expand and deepen this interpretation to address the modern relationship between education and sustainable communities as well as recent history. To challenge the model school layout's continued usage over time, the relationship between pedagogy and learning spaces, climate adaptability, technological materials, and urban distribution in the context of sociocultural and political circumstances should be further researched.

Finally, the research did not analyse or investigate the legacy value of these school buildings; this is recommended to illuminate the historical interpretation of these buildings and their distinctiveness, which may highlight key values and preserve Kuwait's Modern Heritage. Although there is a serious dearth of studies on the time and the material, such research would expand and enrich the national and international archives and their original sources. Ultimately, any research aimed at analysing and tracking the architecture of Kuwait's modernisation would shed light on the relationship between oil and architecture in the area.

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APPENDICES

APPX. A: ETHICAL APPROVALS AND AGREEMENTS

APPX. B: ARCHIVES

APPX. C: INTERVIEWEES

APPX. D: SCHOOLS LIST

APPX. E: KUWAIT'S MASTER PLANS SUMMARY

APPX. F: GALLERY

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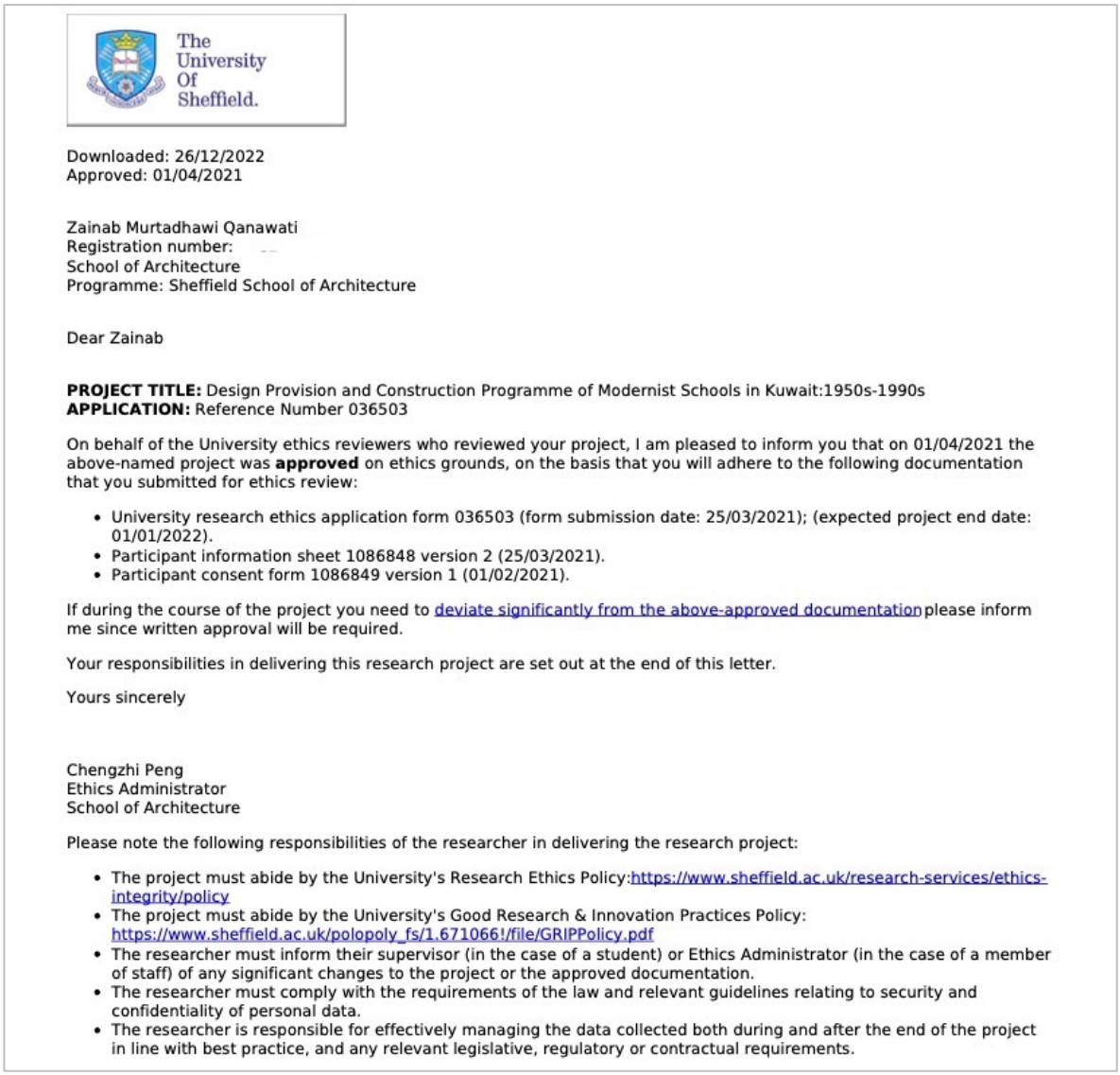
This study adopts a 'historical-interpretive' approach and employs several related research techniques to improve the validity of its findings and offer different insights on how interfirm connections are created. Interviews with experts in the respective professions, archival research for primary and secondary sources, and architectural field/work on school buildings are all included. Because of this, permission was required from the University of Sheffield, archival organisations, and Kuwait's government sectors in order to access archives, conduct interviews, and visit school buildings.

APPENDIX A. ETHICAL APPROVALS AND AGREEMENTS

This study was approved by University Research Ethics Committee (UREC) at the University of Sheffield (Application 036503/ 170275558) on 01/04/2021.



The University Of Sheffield.

Downloaded: 26/12/2022
Approved: 01/04/2021

Zainab Murtadhawi Qanawati
Registration number:
School of Architecture
Programme: Sheffield School of Architecture

Dear Zainab

PROJECT TITLE: Design Provision and Construction Programme of Modernist Schools in Kuwait:1950s-1990s
APPLICATION: Reference Number 036503

On behalf of the University ethics reviewers who reviewed your project, I am pleased to inform you that on 01/04/2021 the above-named project was **approved** on ethics grounds, on the basis that you will adhere to the following documentation that you submitted for ethics review:

- University research ethics application form 036503 (form submission date: 25/03/2021); (expected project end date: 01/01/2022).
- Participant information sheet 1086848 version 2 (25/03/2021).
- Participant consent form 1086849 version 1 (01/02/2021).

If during the course of the project you need to deviate significantly from the above-approved documentation please inform me since written approval will be required.

Your responsibilities in delivering this research project are set out at the end of this letter.

Yours sincerely

Chengzhi Peng
Ethics Administrator
School of Architecture

Please note the following responsibilities of the researcher in delivering the research project:

- The project must abide by the University's Research Ethics Policy:https://www.sheffield.ac.uk/research-services/ethics-integrity/policy
- The project must abide by the University's Good Research & Innovation Practices Policy: https://www.sheffield.ac.uk/polopoly_fs/1.671066!/file/GRIPPolicy.pdf
- The researcher must inform their supervisor (in the case of a student) or Ethics Administrator (in the case of a member of staff) of any significant changes to the project or the approved documentation.
- The researcher must comply with the requirements of the law and relevant guidelines relating to security and confidentiality of personal data.
- The researcher is responsible for effectively managing the data collected both during and after the end of the project in line with best practice, and any relevant legislative, regulatory or contractual requirements.

Note: Ethical approval letter received from the University of Sheffield, 2021.

Note: An early support letter provided by the supervision team, 2019.

Note: A letter to the MoE from the sponsor, KISR, requesting support and cooperation with the data gathering procedure, 2019.

Note: MoE's approval on the previous letter, 2019.

Note: A request letter to visit MPW's archive, with an approval signature from the deputy minister, 2019.

Note: A request letter to visit PAHW's archive, 2019.

University of Sheffield
Faculty of Social Science
Sheffield School of Architecture (SSoA)

Participant Information Sheet

Project Title:
Design and Construction of Modernist School Buildings in Kuwait: 1950s-1990s

Participant Information Sheet- for interviews

You are being invited to take part in this research study. Before you decide whether or not to participate, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Thank you for reading this.

The project entitled *"Design and Construction of Modernist School Buildings in Kuwait: 1950s-1990s"* is a PhD research carried on at the Sheffield School of Architecture, The University of Sheffield, United Kingdom (UK). The project date from March 2018 till August 2022.

1. The purpose of the study

School buildings represent one of the architectural models of the 20th century that were developed from the 1950s to the 1980s and massively produced in each neighbourhood of the city. After the establishment of UNESCO in 1946, education became one of the main aspects of developing nations and linking national cultures. In which UNESCO highlighted free primary education as compulsory and universal for all State members. For many countries, educational building programme grants top priority in developing their realms. Due to the population growth and the high demand for education, a massive number of school buildings were built in a short period as several replicated built schools. Educational buildings turned into school projects, and their design became more standardised with function and indoor comfort requirements. They represented a new typology design in the architecture of the 20th century. These schools were designed for new cities or suburbs and were built in modern urban areas acting as a social and physical landmark for the community. Educational architecture has, therefore, become a significant influence in changing societies of the 20th century and are essential to consider, architecturally, from a historical perspective.

Following independence with the end of the British protectorate in 1961, the new government of Kuwait launched a free formal public education, in which an extensive design and construction programme of school buildings commenced to meet the demand of more than one hundred schools across the country. The first series of state-school buildings in Kuwait were designed by multi-international architects evolves the British firm Tripe and Wakeham and Emile Bustani's CAT in the early 1950s; German architect Rambald von Steinbuchel-Rheinwall in the 1960s, and Swiss architect Alfred Roth in the 1970s- 1980s. Roth provided many alternative designs that became Kuwait's school prototype standard for decades. The school designs, therefore, represent a narrative of education-space development that transferred from the pre-modernist into modernist style.

This study will generate an understanding of how the modernisation movement shaped school building's design and construction for decades. The research questions how successful were the modernism principles to achieve governmental demands and educational services and if these schools can fit for the purpose in the 21st century? This research is conducting through archival materials, building investigations, and interviews.

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Sheffield School of Architecture (SSoA)

Participant Information Sheet

2. Intended participants

Different participants from governmental and industrial sectors will be recruited, in this study. The governmental sectors evolve the General Secretariat of the Supreme Council for Planning & Development (SCPD), the Municipal Council, the Ministry of Public Works (MPW), the Ministry of Education (MoE), and the Public Authority of Housing Welfare (PAHW). The industrial sectors evolve the Kuwait Engineering Office (KEO), the CAT company, and other related companies that will be identified as needed.

3. Do I have to take part?

It is up to you to decide whether or not to take part. If you choose to take part, you will be given this information sheet to keep (and be asked to sign a consent form), and you can still withdraw at any time* without any negative consequences. If you wish to withdraw from the research, please get in touch with Zainab Murtadhawi at z.murtadhawi@sheffield.ac.uk

*Please note there is a point at which it will not be possible for a participant's data to be withdrawn from the research (May 31, 2022).

4. Interviews

You will be asked to participate in an online call interview. An outline of the topics covered in the questions should be provided, and the questioning style should be explained (whether open-ended and whether the in-depth discussion is needed). The interview will take about 45 minutes to 1 hour. It involves questions and discussion about the government's provision and prospective plan for the state-school buildings' design and construction in Kuwait.

5. Possible disadvantages and risks of taking part

It is important to note that this research poses a low risk to participants, given that the research does not involve sensitive topics and that the research does not exercise any interference in the lives of research participants nor exposes them to unnecessary levels of risk.

6. Confidentiality

All the information that we collect about you during the course of the research will be kept strictly confidential and will only be accessible to members of the research team. You will not be able to be identified in any reports or publications unless you have given your explicit consent for this. If you agree to us sharing the information you provide with other researchers, then your personal details will not be included unless you explicitly request this. The audio recordings of your activities made during this research will be used only for analysis. No other use will be made of them without your written permission, and no one outside the study will be allowed access to the original recordings.

7. Research data and results

Due to the nature of this research, it is very likely that other researchers may find the data collected to be useful in answering future research questions. We will ask for your explicit consent for your data to be shared in this way. the information gained during the research project may additionally be published in connected publications such as academic journals, conference papers, book chapters, etc., and used for subsequent research. The information gained during the research project may be

University of Sheffield
Faculty of Social Science
Sheffield School of Architecture (SSoA)

Participant Information Sheet

published in connected publications such as academic journals, conference papers, book chapters, etc., and used for subsequent research.

8. Data Controller

The University of Sheffield will act as the Data Controller for this study. This means that the University of Sheffield is responsible for looking after your information and using it properly.

9. Ethical review

This study has been ethically approved via the University of Sheffield's Ethics Review Procedure. The University's Research Ethics Committee monitors the application and delivery of the University's Ethics Review Procedure across the University.

10. Contact for further information

In case you wish to obtain further information about this study, please contact:

Note: Interviewee Information Sheet, 2021

University of Sheffield
Faculty of Social Science
Sheffield School of Architecture (SSoA)

Participant Consent Form

Project Title:
Design and Construction of Modernist School Buildings in Kuwait: 1950s-1990s

Consent Form – for interviewees

1. Taking Part in the Project

Please tick the appropriate boxes	Yes	No
I have read and understood the project information sheet and the project has been fully explained to me. *(If you will answer No to this question please do not proceed with this consent form until you are fully aware of what your participation in the project will mean.)*		
I have been given the opportunity to ask questions about the project.		
I agree to take part in the project. I understand that taking part in the project will include being interviewed, being recorded *(audio)*.		
I understand that my taking part is voluntary and that I can withdraw from the study at any time/before [May 31st 2022]; I do not have to give any reasons for why I no longer want to take part and there will be no adverse consequences if I choose to withdraw.		

2. How my information will be used during and after the project

Please tick the appropriate boxes	Yes	No
I would like to give my permission to use my name and position for the purpose of the research.		
I understand my personal details such as name, position, phone number, address and email address etc. will not be revealed to people outside the project unless I specifically request this.		
I understand and agree that my words may be quoted in publications, reports, web pages, and other research outputs. I understand that I will not be named in these outputs unless I specifically request this.		
I understand and agree that other authorised researchers will have access to this data only if they agree to preserve the confidentiality of commercially sensitive and/or confidential information in the content of the interviews.		
I understand and agree that other authorised researchers may use my data in publications, reports, web pages, and other research outputs, only if they agree to preserve the confidentiality of the information as requested in this form.		

So that the information you provide can be used legally by the researchers

Please tick the appropriate boxes	Yes	No
I agree to assign the copyright I hold in any materials generated as part of this project to The University of Sheffield.		

Note: Interviewee Consent Form, 2021

University of Sheffield
Faculty of Social Science
Sheffield School of Architecture (SSoA)

Interview Questions' Form

Project Title:
Design and Construction of Modernist School Buildings in Kuwait: 1950s-1990s

Questions' Form

The participant will be asked to join in a face-to-face or an on-line call interview and the questioning style will be explained (whether open-ended and whether in-depth discussion is needed). The interview will take about 45 minutes to 1 hour. It involves questions and discussion about government's provision and prospective plan for the state-school buildings' design and construction in Kuwait.

An outline of the topics that will be covered in the questions:

a. Pedagogy (education system, subjects, levels and gender)
b. Social, political and economic (demands, law, population, costs, etc)
c. Physical environment (building, design, construction, facilities, urban, accessibilities, architects)

Proposed questions:

- After the discovery of oil, why did the government give a special attention to education development? Do you think there is a correlation between these two?
- Thinking about before and after the discovery of oil, what were the main influences on the educational project, in pedagogical, physical and social terms?

- What was the government's vision on school buildings, their design and their construction?
- Did the design and construction of school meet the satisfactory level that the government aimed to have? Does this satisfaction respond to its construction, its design, and its pedagogy?

- Do you think school buildings impact teaching pedagogies or contents? does its facilities impact the student's outcome? or teacher's efforts?
- How can the school buildings meet the satisfactory standards with regards to pedagogical change/ social and economic demands/ and physical environment?
- In your opinion, how flexible should be the school designs to adopt the change in the pedagogy? Do you have a school in mind that proves that flexibility? or one that goes against it?

- What is the government prospective plans for developing new school buildings? if there is a new plan, does it relate/ respond or consequence of the previous plans? if so, how?
- Is there any barriers or problem to adopt the current school buildings for future education? how or why?

Note: Interview Questions' Form, 2021.

The University Of Sheffield.

SSoA Sheffield School of Architecture

CONSENT FORM FOR BUILDING RECORDING

School Name: .....

Level Type: .....

Students' Gender: .....

Address: .....

Phone: .....

Visit Date(s): .....

School Headmaster: .....

Contact details (Phone/Email): .....

This ***consent form for building recording*** is part of the data collection process for the study project entitled "Modern Schools of Kuwait 1950s-1990s". The project is an architectural PhD research project led by Zainab Murtadhawi (student) and her supervisor Dr Jo Lintonbon at the University of Sheffield in the United Kingdom [Date: 2018-2022].

The purpose of the project is to explore the design process and the construction program of the public schools in Kuwait from the 1950s until the 1990s. The building recording process aims to investigate, measure, evidence and photograph school building changes in design, construction, material, function, and facilities over decades.

The building recording will take place at the school for two days.

All photographs will be used for research purposes and scientific publication only. My intention is not to intentionally photograph students and staff but where this inadvertently happened all individuals [students, teachers, staff, etc] in photos will be pixelated to ensure anonymity.

Your responses to this form will be kept confidential and not used in the research materials or reports.

If you have questions at any time about this study, you should contact the researcher on:
Moblie (KW):
Mobile (UK):
Email: Z.Murtadhawi@sheffield.ac.uk

Sheffield School of Architecture, Arts Tower, The University of Sheffield, Sheffield S10 2TN, United Kingdom- Tel: +44 114 222 0399

The University Of Sheffield.

SSoA Sheffield School of Architecture

☐ I confirm that I have read and understood the information written above and have had the opportunity to ask questions.

☐ I understand that my responses will be kept strictly confidential. I understand that my name will not be linked with the research materials and will not be identified or identifiable in the report or reports that result from the research.

☐ I agree for this building record to be processed.

☐ I understand that all data recorded will be used only for research and scientific publication purpose, from which any of students or staff would not be personally identified.

☐ I understand that no other use will be made of the records, and that no one outside the research team will be allowed access to the original records.

_____	_____	_____
Name of headmaster	Date	Signature
_____	_____	_____
Name of PhD Candidate	Date	Signature

Copies: *Once this has been signed by all parties the participant should receive a copy of the signed and dated consent form. A copy of the signed and dated consent form should be placed in the main project file which must be kept in a secure location.*

2

Sheffield School of Architecture, Arts Tower, The University of Sheffield, Sheffield S10 2TN, United Kingdom- Tel: +44 114 222 0399

Note: Consent Form for Site Visits, 2020

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A quick summary of the archives I've visited or viewed online is provided in this section.

APPENDIX B. VISITED ARCHIVES

gta Archives:

ETH Zurich
Institute for the History and Theory of Architecture
Stefano-Franscini-Platz 5
8093 Zurich
Switzerland
HIL C 64/65

+41 (0) 44 633 24 26 (administration)
+41 (0) 44 633 29 08 (archive services)
+41 (0) 44 633 28 87 (library services)
https://archiv.gta.arch.ethz.ch

Brief:

The gta Archives have been collecting and archiving primary sources on architecture, urban planning, civil engineering, design, and landscape design from the middle of the nineteenth century to the present day since the establishment of the Institute for the History and Theory of Architecture (gta) at the Swiss Federal Institute of Technology (ETH) in Zurich in 1967. Almost all of the materials in the archives are of global relevance, which is indicative of the active connections that keep Switzerland and ETH in the spotlight. The gta Archives has evolved with the university's Department of Architecture (D-ARCH), which began as the school's School of Architecture. The relevant posthumous papers and archives provide outstanding documentation of the D-teaching ARCH's activity and the architectural evolution of ETH.

Holdings:

The gta Archives focuses on cohesive original holdings from the nineteenth to the twenty-first century in architecture, architectural theory, local, regional, and national planning, garden architecture, and landscape design. Remarkable papers lose relevance. The primary assets include around 200 collections of posthumous papers of significant leaders (such as the Semper school, reform architecture around 1900, pioneers of modernism, Neues Bauen and the Solothurn School). Many ETH professors designed the school's

buildings. Thus, the gta Archives chronicle ETH Zurich's continuing restorations. The archives' posthumous document collections exhibit Swiss architectural culture's most important and globally relevant positions for over 150 years. The Archives holds unique collections (plan collection, photograph and image collection, model collection or cinematheque). The CIAM Archive is a rare collection that attracts international attention. It comprises records from the organization's Zurich secretariat, managed by Sigfried Giedion, and many famous members from throughout the world.

British Petroleum (BP) Archives:

University of Warwick
Coventry
CV4 7AL
United Kingdom

Tel: +44 (0) 24 7652 4522
Email us at: BPArchive@bp.com
https://blogs.warwick.ac.uk/bparchive/about/

Brief:

The archive for British Petroleum p.l.c. is known as the bp archive (incorporated as Anglo-Persian Oil Co Ltd in 1909). Among the legacy businesses it owns were Castrol Limited and the Burmah Oil Company Limited. A number of significant jointly held subsidiaries' archives were also kept there such as Kuwait Oil Co Ltd, Iraq Petroleum Co Ltd, and Shell-Mex & B.P. Ltd. Since 1921, the archive has been around. Its contents depict the development of the Company from its inception to the present.

Politics, culture, and society; international disputes and warfare; shifting landscapes; labour relations; economic and business issues; transportation (especially road, rail, and ocean tankers); technological advances; and advertising and livery are just some of the many topics covered by the Archive. For anyone interested in 20th-century Middle Eastern history and the profound effects of the oil business on the economies, societies, and cultures of the countries of the Middle East, the Company's Archive is an invaluable resource. In addition to being a primary resource for British, American, and Australian history, it also provides useful background on most other regions of the globe.

Holdings:

Numerous study papers, from political to commercial, have utilised the repository. Labour relations in Iran, from 1929 to 1951, British architects in the Middle East, from 1918 to 1939, rural imagery in UK gasoline advertisements, early 20th-century road tankers, employees as volunteers in two world wars, and the political and economic influence of the Bakhtiari tribe in Iran, from 1890 to 1915, are just a few of the subjects that have been covered. Along with the documentation of the day-to-day operations of the business, images, corporate magazines, films, file material, and promotional materials from SMBP and Castrol are also included.

The National Archives (TNA):

Kew, Richmond
Surrey,
TW9 4DU
United Kingdom

Tel: +44 (0) 20 8876 3444
https://www.nationalarchives.gov.uk

Brief:

Since 2003, documents dating back more than 900 years have been stored in what is known as The National Archives (abbreviated TNA), which serves as the official government archive of the United Kingdom. These documents can be found in a variety of formats, from parchment and paper scrolls to digital files and archived websites. The National Archives preserves documents from the central government and its agencies, as well as the court system in England and Wales. From the Domesday Book of 1086 to the current UK Government Web Archive, a wide range of records are represented here. Since all of Ireland was a part of the United Kingdom until 1922, records pertaining to the United Kingdom as a whole may include details about Scotland and Ireland. Military and naval documents, coast guard logs, customs and excise records, passenger lists, and more all fall under this category. This facility is the "keeper of some of the nation's most famous records, stretching back more than a thousand years," as well as the official archive of the United Kingdom and England and Wales.

Holdings:

Documents going back to 974 are kept there, making this archive one of the world's oldest and most important historical archives collections. It maintains, protects, and makes available 11 million public records, including the Domesday Book and government correspondence. Several collections on the Middle East political and cultural history are available within their archives, providing one of the riches documents, films, photographs, and official responds from early 20th century. To future generations, the National Archives is an invaluable and irreplaceable resource. Archival institutions around the country keep and preserve materials for use by future generations.

UNESCO Archives:

UNESCO Headquarters
7, Place de Fontenoy
Ground floor, UNESCO Library
75352 Paris 07 SP
France

Tel: +33 (0)1 4568 2242
Tel: +33 (0)1 4568 1059
E-mail: archives@unesco.org
https://unesdoc.unesco.org/archives

Brief:

The UNESCO Archives, which have been around since 1947, include a wealth of information in a variety of formats about UNESCO's activities and projects since 1946, as well as those of its predecessor agencies from 1925. The job of the archives department is to organise, protect, and make available the company's historical documents and files. The UNESCO Archives are the repository for the records of the organisations that were involved in the founding of UNESCO such as the Conference for the Establishment of UNESCO, London, 1945; Preparatory Commission for UNESCO, 1945–1946; International Institute for Intellectual Cooperation (IICI), 1925–1946.

Holdings:

There are about 120,000 microfiches and over 10,000 linear metres of paper documents, periodicals, photos, audio recordings, and motion pictures housed at the Archives. Since UNESCO's start of an electronic records management project in 2004, the archives and

records management section has expanded its archival holdings to include digital documents such as emails, databases, and website archives. Three times a year, the whole Internet and Intranet are captured in their entirety via a crawl of the UNESCO site by the web archive.

Arabian Gulf Digital Archives (AGDA):

National Library and Archives
PO Box 5884
Al Zahrah Street, Zayed Sports City District
Abu Dhabi
United Arab Emirates

Tel: +971 2 4183333
Fax: +971 2 4445811
www.na.ae
https://www.agda.ae/en

Brief:

The Arabian Gulf Digital Archives (AGDA) is an online repository for historical and cultural materials that shed light on the region's fascinating and complicated past. Documents of unique historical significance to the United Arab Emirates, the Gulf Cooperation Council nations, and the Arabian Peninsula are collected by the National Library and Archives of the United Arab Emirates (NLA), which is housed in the UAE. It is a division of the UAE Ministry of Presidential Affairs that seeks to protect the country's rich history, culture, and customs.

Holdings:

In a digital format, it provides easy access to information on the people and events that have formed the region over the last two centuries. The contents provide a glimpse into the past, with some of the information being made available for the first time. Letters, memoranda, transcripts, photographs, and official communication from world leaders and countries that influenced historical events are all preserved in AGDA. It's a public archive that anybody may use to learn about the fascinating history of the Arabian Gulf region at no cost. The majority of these records were authored by British authorities and reflect their viewpoints on events and their interactions with locals. They are a valuable

modern resource, but like all historical writings, they need to be interpreted in light of their time period.

Kuwait Government Archives:

Ministry of Public Works
Ministries Zone,
South Surra, 2 St,
Kuwait
Tel: +965 2539 6368
https://www.mpw.gov.kw/sites/en/Pages/HomePage.aspx

Public Authority for Housing Welfare
Ministries Zone,
South Surra,
Kuwait
Tel: +965 25301000
E-mail: info@pahw.gov.kw
https://www.pahw.gov.kw/home_en

Ministry of Education
Ministries Zone,
South Surra,
Kuwait
https://moe.edu.kw

Kuwait Municipality
Kuwait City
Kuwait
Tel: +965 22449002
E-mail: helpdesk@baladia.gov.kw
https://www.baladia.gov.kw/sites/ar/Pages/main.aspx

Brief:

Regrettably, the notion of archives as a whole is not relevant in government sectors in Kuwait. The materials kept in a warehouse are commonly referred to as archives. Consequently, usage of these assets is restricted, and approval is required. When searching for a certain piece of information, especially among the letters and written papers, you may find that it is difficult to do so since neither the materials nor their organisation is well thought out. Most government records were also destroyed or lost when Iraq was invaded. There was some helpful information in these files, such as blueprints, reports, and master plan reports.

Central Research for Kuwaiti Studies (CRKS):

Dasman
Zip Code: 15461
PO. B: 1024
Kuwait

Tel: +965 22210876
E-mail: crsk@crsk.edu.kw
www.crsk.edu.kw

Brief:

The Kuwaiti Research and Studies Centre was officially founded by Emiri Decree No. 178 in 1992. The organization's stated mission was to conduct scholarly investigations into the development of Kuwaiti society, politics, economy, culture, and heritage, as well as regional ties, and to disseminate the results of these investigations to academics, journalists, and cultural figures around the world. Additionally, a specialised library will be constructed to collect papers, books, periodicals, research, studies, and data related to the State of Kuwait in a variety of languages and then preserve and organise them using cutting-edge library science.

Holdings:

Political, military, social, and economic scientific materials may be found in abundance at the Library of the Kuwaiti Research and Studies Centre. The collection and preservation of library items pertaining to the State of Kuwait and the Arab Gulf area, as well as the Arab region and the world, is the focus of this organisation. Books, scientific references, encyclopaedias, journals, and a collection of special papers, official reports, maps, and electronic databases are all available in the library, and they cover the Centre’s fields of expertise in both Arabic and English.

Kuwait National Library (KNL):

Al-Qibla
Arabian Gulf Street
PO Box:26182
AlSafat 13122
Kuwait

Tel: +965 22929800
E-mail: National.Archives@nlk.gov.kw
https://www.nlk.gov.kw

Brief:

Founded in 1913 as Kuwait's first public library by the Charity Association, the National Library of Kuwait has a long and illustrious history. It wasn't until 1923 that a group of influential Kuwaitis advocated for the creation of a national library to hold the country's extensive and priceless archive of printed materials, including rare books, manuscripts, and journals. Because of the library's popularity and the high volume of visitors it received,

the government established the Library of Public Information inside the Department of Information in 1937. Over the following four decades, the Library of Public Information served as a beacon of knowledge and understanding for the people of Kuwait, collecting and conserving rare volumes on everything from Arabic literature to physics. When the National Council for Culture, Arts, and Letters took over management of the Public Information Library in 1979, it was renamed the Central Library of the State. Amiri Decree No. 52/1994, which was issued in 1994, gave legal approval for the establishment of the National Library of Kuwait and charged it with gathering, organising, safeguarding, and recording the nation's cultural and intellectual output. Over 50,000 books and volumes, 6,000 magazines (both Arabic and international), and a huge number of rare manuscripts had been added to the library by this point.

Royal Institute for British Architects (RIBA) Library:

66 Portland Place
London
W1B 1AD
United Kingdom

Tel: +44(0)20 7307 5355
E-mail: support@riba.org
https://www.architecture.com/contact-and-visit/riba-library

Brief:

Founded in London in 1834, The Royal Institute of British Architects (RIBA) is a worldwide organisation of professional architects dedicated to advancing the profession. The RIBA was established in 1837 with the support of a royal charter for the purpose of promoting architectural excellence in the United Kingdom and beyond. The Library is the biggest architectural library in Europe and one of only three in the world. Over four million objects are now stored there, some of which are on show permanently at the V&A at the V&A and RIBA Architecture Gallery, while others travel to temporary exhibits at the RIBA and other museums in Europe and North America.

Holdings:

150,000 books and 20,000 pamphlets, with the earliest book dating from 1478, drawings, models, 2,000 architectural titles collected, including complete sets of Architectural

Review, Architects' Journal, and Country Life, and 1.5 million photographs make up the collection's 1.5 million items.

Qatar Digital Library (QDL):

PO Box 5825
Doha
Qatar

E-mail: qnlinfo@qnl.qa
https://www.qdl.qa/en

Brief:

In October 2014, a partnership including the Qatar Foundation, the Qatar National Library, and the British Library launched QDL, a bilingual online library. The goal of the collaboration was to digitise and make publicly available on the QDL a wealth of cultural material chronicling Arab and Islamic history. It has one of the most comprehensive archives of information ever assembled online pertaining to the countries of the Persian Gulf.

Holdings:

A total of 500,000 pages covering the history of the Persian Gulf area are included in the digital library, which features a multilingual interface in English and Arabic. There are about 475,000 pages from the India Office Records and Private Papers (containing the archives of the East India Company and its successor organisations) and 25,000 pages of mediaeval and modern Arabic and English manuscripts. Many images, maps, and illustrations are included inside its pages.

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The purpose of this section is to provide a summary of the interviewees with their consent to share their information.

APPENDIX C. INTERVIEWEES

Eng. Ahmad Al-Jihayem

Chairman for the Capital Governorate committee
Municipal Council of Kuwait

Architect and creator of Al-Jazera Consulants in Kuwait, Ahmad al-Jihayem presides as the company's managing director. In 1968, he received his bachelor's degree in architecture from Montana State University in the United States. Back in 1969, he started working for the Municipality of Kuwait as an architect and planner. Poland's Szczecin Technical University awarded Al-Jihayem a master's degree in urban and regional planning in 1971. A graduate of the Kuwait Institute of Economic and Social Planning, he holds a certificate in physical and regional planning from that year. At the Kuwait Municipality, Al-Jihayem eventually rose to the position of managing director of the construction division. He worked at Middle East Consultants in Kuwait as a director and partner from 1976 to 1978. Established in 1978, Al-Al-Jazera Jihayem's Consultants is a testament to his foresight.

Dr Hasan Kamal

Chairman for the Capital Governorate committee
Member of Municipal Council of Kuwait

Since 2013, Dr Hasan Kamal has served on the Municipal Council of Kuwait as an elected official. He was interviewed because of his position on the Municipal Council, which is responsible for formulating policies and plans, as well as evaluating projects, concerning the urban, environmental, and health aspects of the municipality, including the building of cities, roads, streets, squares, markets, slaughterhouses, and burial grounds. He also heads up a committee for the Capital Governorate. Kamal is a research scientist and former Program Manager for the Infrastructure Risk and Reliability research programme (KISR). From 1990 until 1993, he also served in the government's Ministry of Public Works, where he accomplished researcher with several publications in peer-reviewed international journals and presentations at prestigious scientific meetings. Kamal has

served as president of the ACI-Kuwait Chapter and is a member of the Kuwait Society of Engineers, the American Society of Civil Engineers, and the American Concrete Institute.

Arch. Jaber Abulhasan

Chairman for the Capital Governorate committee
Municipal Council of Kuwait

Jaber Abulhasan completed his studies in architecture at the University of Oregon in March of 1973. Before joining the 'Construction and Design' team at MPW, architect Abulhasan worked there from September 1973 to January 1981 as the Head of the 'Programming and Following Up' Department. After that, in May of 1981, Architect Abulhasan opened up his own architectural practise called Bonyan Design Consulting Office. Bonyan Design is now one of Kuwait's leading boutique design firms because to its years of expertise and its commitment to a distinct, original design aesthetic. Arch. Abulhasan's firm became instantly recognisable as the go-to for classic design in monumental public and private commissions as it nurtured new talent and took on larger and larger projects.

Dr Khaled Mahdi

Secretary-General of the General Secretariat of the Supreme Council for Planning and Development
The Supreme Council for Planning and Development (GSSCPD)

Secretary-General of Kuwait's Supreme Council for Planning and Development and head of the UNDP's Country Plan Action Program in Kuwait, Dr Khaled Mahdi is an important figure in the country's government. He sits on a wide range of government panels, including the Public Authority for Industries, the Kuwait Institute for Scientific Research, the Public Housing Authority, the Economic and Fiscal Reform, and the Kuwait Masterplan 2040. His Highness the late Emir of Kuwait, Sabah Al-Ahmad Al-Jaber Al-Sabah, has envisioned a New Kuwait, and it is the responsibility of the GSSCPD to steer the Kuwait National Development Plan (KNDP), a long-term strategy that will mobilise development efforts across seven pillars to make Kuwait a regional leader in finance, culture, and institutions by 2035. In Mahdi's tenure as director, the Secretariat has been "quite focused on achieving the Sustainable Development Goals (SDGs), or the 2030 Agenda, adopted by

the United Nations in September 2015," and has "already accomplished a major part of the Sustainable Development Goals" for Post-2015. As part of the Oxford Business Group's Kuwait 2017 report, Mahdi discussed the government's stated intentions to shift its role in the economy from an operator to a regulator, from wealth distribution to wealth creation, and to entrust the economy to the private sector, all of which are central goals of the Kuwait National Development Plan (KNDP). Mahdi is also in charge of the GSSCPD's involvement in development programming and its backing of the national development plan, which involves collaborating with many different groups and industries.

Arch. Nasser Kharaibut

Deputy Director General for Planning and Design
Public Authority for Housing Welfare (PAHW)

He is a key figure in the transformation of new city projects in Kuwait into smart, sustainable, and lively communities with solid economic foundations and many chances for new employment based on a well-defined strategic plan. In order to give qualified residents a variety of housing aid options, the Public Authority for Housing Welfare ("PAHW") was set up by Law (47) of 1993. Housing policies are implemented by the Authority, and the State of Kuwait's economic and social infrastructure is shaped by the Authority's directives. PAHW's strategy and projects bring a higher degree of public-private engagement and cooperation, encouraging real estate developers to further interact with its plans and projects in response to the growing urgency with which they must be implemented. For the Public Authority for Housing and Welfare, Kharaibut have developed and managed a large number of new urban and suburban neighbourhoods. He was also a driving force behind the new international governmental collaboration between Kuwait and South Korea that is being implemented to build the city of South Saad Al-Abdulla. In keeping with Kuwait's National Development Plan, which in turn stems from His Highness the Amir's Vision 2035′, they have undertaken the design endeavour known as Future Schools of Kuwait. The "Future Schools of Kuwait" project's design has been shortlisted for the World Architecture News (WAN) Award 2020 in the "Future Projects - Education" category, it was announced by the Public Authority for Housing Welfare (PAHW). This is the second major international award given to the project for its innovative and flexible design.

Eng. Sabah Al-Rayes

Pioneer Architect and Co-founder
Pan Arab Engineering Office

Sabah Al Rayes established Pan Arab Consulting Engineers in Kuwait in 1968 and has served as its senior partner and managing director ever since. He oversees the majority of high-rise projects. Also, he served as vice chairman of the CTBUH, member of the Global Advancement Council at Lehigh University, and fellow of The American Society of Civil Engineers. Among his journey, Al-Rayes also served as head of the Education Committee of the Union of Arab Engineers in Cairo, Egypt (1967–1984). He wrote the Kuwait Society of Engineers' Code of Ethics and Code of Practice, among other works. From 1973 until 1986, he presided over a number of public enterprises in Kuwait and the Gulf region as chairman. His time spent working for the Ministry of Public Works (MPW) between 1965 and 1968 was singled out as particularly instructive, and he was questioned as a result.

Dr Saleh Yaseen

Faculty Member of Engineering and Petroleum College
Kuwait University
Former Assistant Undersecretary for Educational Facilities
Kuwait Ministry of education

Saleh Yassin, Ph.D., is a professor in the Civil Engineering Department of Kuwait University. He also took charge of the Dubai culture office. Yaseen served from 2001 to 2006 as Assistant Undersecretary for Educational Facilities in the Ministry of Education, during which time he oversaw the evaluation of school plans for compliance with Ministry requirements. Extensive research was carried on planning for the reconstruction and replacement of the existing schools. Mr Yaseen performed many tasks and efforts in this field to achieve the desired goal of the best educational environment.

This section provides the list of schools considered for this research, as well as the schools visited as part of the fieldwork for this study.

APPENDIX D. SCHOOLS LIST

Visited Schools in Kuwait

***Al-Tamayouz Kindergarten* (1972)**
Block 1, Street 13
Al-Mansouriyah
Al-Asimah Governance

Al-Neil Kindergarten (1968)
Block 7, Hara'a Street
Al-Rumaithiyah
Hawalli Governance

Al-Asafeer Kindergarten (1971)
Block 1, Street 103
Al-Sulaibikhat
Al-Asimah Governance

Al-Murouj Kindergarten (1982)
Block 9, Street 3
Al-Adan
Mubarak Al-Kabeer Governance

Ibn Majed Primary School (1963)
Block 5, Al-Madares Street
Al-Ahmadi
Al-Ahmadi Governance

Omair Bin Sa'ad Primary School (1974)
Block 1, Al-Nizha Street
Al-Nizha
Al-Asimah Governance

Al-Muzdalifah Primary School (1981)
Block 7, Al-Sha'abi Street
Al-Sulaibiyah
Al-Jahra'a Governance

Al-Qayrawan Intermediate School (1970)
Block 7, Hassan Al-Banna Street
Al-Rumaithiyah
Hawalli Governance

Mos'ab Bin Omair Intermediate School (1973)
Block 5, Al-Madares Street
Al-Ahmadi
Al-Ahmadi Governance

Ma'an Bin Zae'dah Intermediate School (1974)
Block 3, Ahmad Al-Ghanim Street
Abdullah Al-Salem
Al-Asimah Governance

Abdulrahman Bin Abi Baker (1985)
Block 1, Al-Hamlan Street
Al-Hadiyah
Al-Ahmadi Governance

Abdullah Al-Otaibi Secondary School (1974)
Block 2, Al-Oroubah Street
Al-Khaldiyah
Al-Asimah Governance

Salem Al-Mubarak Al-Sabah Secondary School (1979)
Block 5, Al-Ghaws Street
Al-Riqqa
Al-Ahmadi Governance

Kuwait's Public Schools List

School Name	School Level	Gender	Governate	District	Block area	Street	Constructed Date
Al-Fahaheel	Primary/Elementary	Girls	Al-Ahmedi	Al-Fahaheel	10	4	-
Zainab Bint Abi Talib	Primary/Elementary	Girls	Hawali	Mishref	2	5	-
Khaitan Al-Namouthajiyah	Primary/Elementary	Boys	Al-Farwaniyah	South Khaitan	4	98	-
Al-Jahra	Kindergarten/Nursery	Boys/Girls	Al-Jahra				50s
Al-Amal	Kindergarten/Nursery	Boys/Girls	Al-Ahmedi	Al-fahaheel	3	4	50s
Al-Khulood	Kindergarten/Nursery	Boys/Girls	Hawali	Al-Salmiyah	5	4	50s
Osamah Bin Zaid	Kindergarten/Nursery	Boys/Girls	Hawali	Al-Shieb	1	18	50s
Meqwah	Kindergarten/Nursery	Boys/Girls					50s
Muhalab	Kindergarten/Nursery	Boys/Girls		Sharq			1954
Tareq	Kindergarten/Nursery	Boys/Girls		Giblah			1954
Abdulaziz Hussain	Intermediate	Boys	Al-Asemah	Al-Shuwaikh	5	Nasser Al-Khurafi	1957
Al-Furat	Kindergarten/Nursery	Boys/Girls	Al-Asemah	Al-Dasmah	6	Al-Furat	1958
Abdulmalek Al-Saleh	Kindergarten/Nursery	Boys/Girls	Hawali	Hawali	10	Musa bin Naseir	1959
Khawlah Bint Al-Azwar	Primary/Elementary	Girls	Al-Asimah	Al-Shuwaikh	4	Khawlah	1959
Khawlah Bint Al-Azwar	Intermediate	Girls	Al-Asemah	Al-Shuwaikh	3	Khawlah	1959
Al-Jaza'er	Secondary	Girls	Al-Asemah	Al-Shamiyah	5	Wahran	1959
Al-Dieyah	Kindergarten/Nursery	Boys/Girls	Al-Asemah	Al-Dieyah	1	12	1960
Omar Bin Abdulaziz	Kindergarten/Nursery	Boys/Girls	Al-Asemah	Al-Qadsiyah	7	74	1960
Mislon	Primary/Elementary	Girls	Al-Asimah	Al-Qadsiyah	3	Bader	1960
Ibn Sina	Primary/Elementary	Boys	Al-Asimah	Al-Daeyah	4	Ibn Sina	1960
Ibn Rushd	Primary/Elementary	Boys	Al-Asimah	Al-Faiha'a	5	Abdulaziz Al-Muzaini	1960
Al-Ma'amoun	Primary/Elementary	Boys	Al-Asimah	Kaifan	1	Ishbiliyyah	1960
Saif Al-Dawlah	Intermediate	Boys	Al-Asemah	Al-Qadsiyah	9	92	1960
Al-Khaleel Bin Ahmed	Intermediate	Boys	Al-Asemah	Kayfan	5	Al-Khaleel Bin Ahmed	1960
Al-Dasmah	Intermediate	Girls	Al-Asemah	Al-Dasmah	1	Al-Hussain Bin Ali	1960
Al-Rabei'e	Kindergarten/Nursery	Boys/Girls	Al-Farwaniyah	Abraq Khaitan	7	73	1961
Al-Qadsiyah	Intermediate	Girls	Al-Asemah	Al-Qadsiyah	1	Bader	1961
Ghirnattah	Intermediate	Girls	Al-Asemah	Al-Ade'iliyah	3	34	1961
Hamad Eissa Al-Rajeib	Secondary	Boys	Al-Asemah	Kayfan	1	10	1961
Al-Mansour	Kindergarten/Nursery	Boys/Girls	Al-Asemah	Al-Shuwaikh	4	Al-Neil	1962
Om Ayman	Primary/Elementary	Girls	Al-Ahmedi	Al-Fahaheel	7	Ali Ghanim Al-Dabous	1962
Amrah Bint Hazm	Primary/Elementary	Girls	Al-Asimah	Al-Faiha'a	9	90	1962
Al-Kandi	Secondary	Boys	Al-Ahmedi	Al-Fahaheel	9	Ibn Tameemah	1962
Haneen	Kindergarten/Nursery	Boys/Girls	Al-Farwaniyah	Al-Farwaniyah	4	5	1963
Al-Shamiyah	Kindergarten/Nursery	Boys/Girls	Al-Asemah	Al-Shamiyah	5	Sulaiman Al-Misa'an	1963
Ibn Majed	Primary/Elementary	Boys	Al-Ahmedi	Al-Ahmedi	5	Al-Madares	1963
Fatima Ali Mahmoud Al-Misbah	Primary/Elementary	Girls	Hawali	Al-Shieb	3	37	1963
Saqer Al-Shabeeb	Primary/Elementary	Boys	Al-Asimah	Al-Qadsiyah	5	Bader	1963
Fahad Al-Askar	Primary/Elementary	Boys	Al-Asimah	Kaifan	7	70	1963
Al-Farwaniyah	Primary/Elementary	Girls	Al-Farwaniyah	Al-Farwaniyah	1	76	1963
Al-Muthanna	Primary/Elementary	Boys	Al-Farwaniyah	Al-Farwaniyah	1	122	1963
Fatimah Ali Al-Misbah	Intermediate	Girls	Hawalli	Al-She'eb	3	37	1963
Ahmed Al-Bisher Al-Roumi	Secondary	Boys	Al-Asemah	Al-De'eyah	1	68	1963
Ya'aqoub Yousef Al-Ghunaim	Secondary	Boys	Al-Asemah	Al-Sulaibikhat	5	Shaye'e Abu Shaybah	1963
Ali Bin Abi Talib	Primary/Elementary	Boys	Hawali	Al-Shieb	6	Mosa'ab Bin Al-Zubair	1964
Muhalhal Mohammed Al-Mudhef	Intermediate	Boys	Hawalli	Al-She'eb	6	Al-Zubair Bin Al-Awam	1964
Abdullah Hassan Al-Jarallah	Intermediate	Boys	Al-Asemah	Al-Faiha'a	5	Abdulaziz Al-Muzaini	1964
Al-Faiha'a	Intermediate	Girls	Al-Asemah	Al-Faiha'a	5	Al-Zahra'a	1964

Shamlan Bin Ali	Intermediate	Boys	Al-Farwaniyah	Al-Amariyah	5	Al-Makhfar	1964
Al-Farwaniyah	Intermediate	Girls	Al-Farwaniyah	Al-Farwaniyah	3	109	1964
Eissa Ahmed Al-Hamad	Secondary	Boys	Al-Asemah	Al-Qadsiyah	5	Bader	1964
Al-Mubarikiyah	Secondary	Boys	Al-Farwaniyah	Al-Farwaniyah	6	107	1964
Mulla Sulaiman Al-Khunaini	Primary/Elementary	Boys	Al-Asimah	Al-Khaldiyah	3	Awras	1965
Salem Al-Husainan	Intermediate	Boys	Al-Asemah	Al-Khaldiyah	3	Owras	1965
Fahad Buresli	Kindergarten/Nursery	Boys/Girls	Al-Asemah	Al-Fayha'a	3	37	1966
Ahmed Sultan batti Bu Taiban	Primary/Elementary	Boys	Al-Asimah	Al-Dasmah	3	Al-Rasheed	1966
Al-Bohturi	Kindergarten/Nursery	Boys/Girls	Al-Asemah	Al-Qayrawan	1	143	1967
Om Amarah	Primary/Elementary	Girls	Al-Ahmedi	Al-Ahmedi	3	Al-Madares	1967
Aminah	Primary/Elementary	Girls	Al-Asimah	Al-Dasmah	1	Marakish	1967
Ruqayyah Bint Mohammed Bin Abdullah	Intermediate	Girls	Al-Farwaniyah	Al-Amariyah	4	Al-Ra'esi	1967
Ibn Al-Ameed	Secondary	Boys	Al-Farwaniyah	Al-Omairiyah	5	106	1967
Al-Neil	Kindergarten/Nursery	Boys/Girls	Hawali	Al-Rumaithiyah	7	Hara'a	1968
Amr Bin Al-Aass	Primary/Elementary	Boys	Al-Asimah	Al-Rawdhah	1	1	1968
Abu Ayoub Al-Ansari	Intermediate	Boys	Hawalli	Al-Salmiyah	12	Abu Hurairah	1968
Anwar Abdullah Al-Nouri	Intermediate	Boys	Al-Asemah	Al-Sulaibikhat	4	105	1968
Al-Nahdhah	Secondary	Girls	Al-Farwaniyah	Abraq Khaitan	9	Ibn Al-Zuhair	1968
Om Al-Qura	Primary/Elementary	Girls	Hawali	Al-Rumaithiyah	9	Jama'an Al-Hritie	1969
Nasser Soud Al-Sabah	Primary/Elementary	Boys	Hawali	Al-Salmiyah	12	Abu Hurairah	1969
Abdulaziz Al-Ateeji	Primary/Elementary	Boys	Al-Asimah	Al-Sulaibikhat	1	104	1969
Om Salmah	Intermediate	Girls	Hawalli	Al-Rumaithiyah	4	Jama'an Al-Huraiti	1969
Lateefah Al-Faris	Secondary	Girls	Al-Ahmedi	Al-Fahaheel	8	Makkah	1969
Suad Mohammed Al-Sabah	Secondary	Girls	Al-Asemah	Al-Mansouriyah	2	Ibn Al-Arqam	1969
Al-Sabahiyah	Primary/Elementary	Boys	Al-Ahmedi	Al-Sabahiyah	1	7	1970
Ishbiliyah	Primary/Elementary	Girls	Al-Asimah	Kaifan	7	Abdulhameed Al-Sane'a	1970
Aneesah Bint Khabeeb	Intermediate	Girls	Al-Ahmedi	Al-Fintas	2	19	1970
Na'elah	Intermediate	Girls	Al-Asemah	Kayfan	1	Ishbiliyah 15	1970
Safiyah	Intermediate	Girls	Al-Asemah	Al-Sulaibikhat	3	Dhuwaihi Bin Rumaih	1970
Anisah Bint Khabeeb	Secondary	Girls	Al-Ahmedi	Al-Fintas	2	19	1970
Al-Asafeer	Kindergarten/Nursery	Boys/Girls	Al-Asemah	Al-Sulaibikhat	1	103	1971
Al-Masuodi	Kindergarten/Nursery	Boys/Girls	Hawali	Al-Rumaithiyah	12	Al-Shafiei	1971
Sumayah	Primary/Elementary	Girls	Al-Asimah	Al-Rawdhah	4	Al-Rawdhah	1971
Al-Sulaibikhat	Primary/Elementary	Girls	Al-Asimah	Al-Sulaibikhat	2	105	1971
Al-Omairiyah	Primary/Elementary	Girls	Al-Farwaniyah	Al-Omairiyah	3	104	1971
Abdulrahman Bin Ouf	Primary/Elementary	Boys	Al-Farwaniyah	Abaq Khaitan	5	50	1971
Al-Sabahiyah	Intermediate	Girls	Al-Ahmedi	Al-Sabahiyah	5	Al-Madares	1971
Al-Qayrawan	Intermediate	Girls	Hawalli	Al-Rumaithiyah	7	Hassan Al-Banna	1971
Sa'adi Bint Ouf	Intermediate	Girls	Al-Asemah	Al-Nizhah	3	Abdulrahman Al-Faris	1971
Nusaibah Bint Ka'ab	Intermediate	Girls	Al-Asemah	Al-Rawdhah	3	Yousef Al-Sibeeh	1971
Ma'ath Bin Jabal	Intermediate	Boys	Al-Farwaniyah	Abraq Khaitan	5	Nasser Al-Jabri	1971
Al-Naser	Secondary	Boys	Al-Ahmedi	Al-Sabahiyah	1	Khalaf Al-Mahakem	1971
Jassim Al-Khurafi	Secondary	Boys	Al-Asemah	Qurtobah	4	Al-Malik Faisal	1971
Abu Hulaifah	Kindergarten/Nursery	Boys/Girls	Al-Ahmedi	Abu Hulaifah	1	Dubai	1972
Al-Tamayoz	Kindergarten/Nursery	Boys/Girls	Al-Asemah	Al-Masouriyah	1	13	1972
Al-Sabahiya	Kindergarten/Nursery	Boys/Girls	Al-Ahmedi	Al-Sabahiyah	1	15	1972
Arwa Bint Al-Hareth	Primary/Elementary	Girls	Hawali	Al-Rumaithiyah	11	Abdullah Bin Zubair	1972
Mohammed Al-Shayiji	Primary/Elementary	Boys	Hawali	Al-Rumaithiyah	12	Abdullah Bin Zubair	1972
Al-Dowhah	Primary/Elementary	Girls	Al-Asimah	Al-Dowhah	2	5	1972

Sa'ad Bin Ebadah	Primary/Elementary	Boys	Al-Asimah	Al-Adeiliyah	3	Sultan Al-Kaleeb	1972
Mershed Mohammed Al-Sulaiman	Primary/Elementary	Boys	Al-Asimah	Al-Dowhah	3	Ibn Katheer	1972
Zaid Al-Harb	Primary/Elementary	Boys	Al-Farwaniyah	Al-Rabiyah	4	9	1972
Abdulrahman Al-Duaij	Intermediate	Boys	Al-Ahmedi	Al-Sabahiyah	5	Al-Madares	1972
Om Hakeem	Intermediate	Girls	Al-Ahmedi	Al-Fahaheel	2	1	1972
Al-Miqdad Bin Al-Aswad	Intermediate	Boys	Al-Jahra'a	Al-Jahra'a	4	1	1972
Om Ma'abad	Intermediate	Girls	Al-Jahra'a	Al-Qasr	3	Ibn Hajr	1972
Ma'an Bin Za'edah	Intermediate	Boys	Al-Asemah	Abdullah Al-Salem	3	Ahmed Al-Ghanim	1972
Abdullah Bin Om Maktoum	Intermediate	Boys	Al-Farwaniyah	Al-Rabiyah	1	40	1972
Al-Jabriyah	Secondary	Girls	Hawalli	Al-Jabriyah	3A	Tonis	1972
Bibi Salem Al-Sabah	Secondary	Girls	Al-Asemah	Al-Dasmah	4	Failaka	1972
Ahmed Mishari Al-Adwani	Secondary	Boys	Al-Asemah	Al-Adeiliyah	4	Sami Al-Meshri	1972
Omaymah Bint Rabeiah	Secondary	Girls	Al-Farwaniyah	Al-Omairiyah	4	4	1972
Al-Rabiyah	Secondary	Girls	Al-Farwaniyah	Al-Rabiyah	4	141	1972
Ohod	Kindergarten/Nursery	Boys/Girls	Al-Asemah	Al-Adayleiah	3	Al-Etihad	1973
Al-Nizhah	Kindergarten/Nursery	Boys/Girls	Al-Asemah	Al-Nizhah	3	38	1973
Abraq Khaitan	Kindergarten/Nursery	Boys/Girls	Al-Farwaniyah	Abraq Khaitan	10	2	1973
Al-Abrar	Kindergarten/Nursery	Boys/Girls	Hawali	Al-Salmiyah	12	Abu Hurairah	1973
Abu Hulaifah	Primary/Elementary	Girls	Al-Ahmedi	Abu hulaifah	1	Ka'ab Bin Zuhair	1973
Al-Mulla Nasser Haneef Al-Muzai'el	Primary/Elementary	Boys	Al-Ahmedi	Al-Fintas	2	5	1973
Khadijah Bint Khuwaylid	Primary/Elementary	Girls	Hawali	Al-Salmiyah	11	Yathreb	1973
Latifah Al-Barrak	Primary/Elementary	Girls	Al-Asimah	Al-Nizhah	2	Siboyah	1973
Al-Ahmadiyah	Primary/Elementary	Boys	Al-Asimah	Al-Mansouriyah	2	Ibn Al-Arqam	1973
Abdullateef Al-Dayeen	Primary/Elementary	Boys	Al-Asimah	Abdullah Al-Salem	3	Jamal Al-Dein Al-Afghani	1973
Mos'ab Bin Omair	Intermediate	Boys	Al-Ahmedi	Al-Ahmedi	5	Al-Madares	1973
Ahmed Al-Farisi	Intermediate	Boys	Al-Ahmedi	Al-Fintas	3	5	1973
Khalid Ahmed Al-Mudhaf	Intermediate	Boys	Hawalli	Al-Rawdhah	5	Al-Rawdah	1973
Sayed Sulaiman Al-Mousawi	Intermediate	Boys	Al-Asemah	Al-Da'eyah	5	60	1973
Khalid Ahmed Al-Mudhaf	Intermediate	Boys	Al-Asemah	Al-Rawdhah	5	behind Co-Op	1973
Abdullah Bin Masoud	Intermediate	Boys	Al-Asemah	Al-Dowhah	5	Qusai Bin Kallab	1973
Al-Jahra'a	Secondary	Girls	Al-Jahra'a	Al-Qasr	3	1	1973
Ahmed Shihab Al-Dein	Secondary	Boys	Al-Asemah	Al-Dowhah	4	Al-Marqash	1973
Abraq Khaytan	Secondary	Girls	Al-Farwaniyah	Abraq Khaitan	10	Nasser Al-Jabri	1973
Mershed Sa'ad Al-Bathal	Secondary	Boys	Al-Farwaniyah	Al-Rihab	2	Al-Ordon	1973
Al-Lo'elo'e	Kindergarten/Nursery	Boys/Girls	Al-Asemah	Al-Sulaibikhat	2	101	1974
Fatima Bint Al-Khattab	Primary/Elementary	Girls	Al-Ahmedi	Al-Sabahiyah	5	Al-Madares	1974
Al-Bukhari	Primary/Elementary	Boys	Al-Ahmedi	Al-Sabahiyah	4	Al-Ra'esi	1974
Al-Shuhada'a	Primary/Elementary	Boys	Hawali	Al-Rumaithiyah	7	Hara'a	1974
Om Atiyah Al-Ansariyah	Primary/Elementary	Girls	Al-Asimah	Abdullah Al-Salem	1	Sana'a	1974
Omair Bin Sa'ad	Primary/Elementary	Boys	Al-Asimah	Al-Nizhah	1	Al-Nizhah	1974
Ajnadeen	Primary/Elementary	Girls	Al-Farwaniyah	Al-Rabiyah	2	1	1974
Ka'ab Bin Zuhair	Primary/Elementary	Boys	Al-Farwaniyah	Abaq Khaitan	10	4	1974
Mohammed Abdullah Ali Al-Sane'a	Intermediate	Boys	Al-Ahmedi	Al-Riqah	7	5	1974
Abdulhameed Saleh Al-Faras	Intermediate	Boys	Al-Ahmedi	Al-Sabahiyah	4	Al-Ra'esi	1974
Barakah Bint Al-No'aman	Intermediate	Girls	Al-Ahmedi	Al-Fahaheel	7	Abu Mihjen Al-Thaqafi	1974
Sayed Mohammed Hassan Al-Mousawi	Intermediate	Boys	Hawalli	Al-Rumaithiyah	7	Harra'a	1974
Al-Bibrouni	Intermediate	Boys	Al-Asemah	Qurtobah	1	Abu Ayoub Al-Ansari	1974
Abraq Khaittan	Intermediate	Girls	Al-Farwaniyah	Abraq Khaitan	10	Soud Bin Abdulaziz	1974
Al-Sabahiyah	Secondary	Girls	Al-Ahmedi	Al-Sabahiyah	5	Al-Madares	1974

Al-Sheikh Yousef Al-Athbi Al-Sabah	Secondary	Boys	Al-Jahra'a	Al-Qasr	3	Al-Matafi	1974
Omamah Bint Bisher	Secondary	Girls	Hawalli	Al-Rumaithiyah	4	Ahmed Bin Hanbal	1974
Al-Asma'a Bint Al-Hareth	Secondary	Girls	Al-Asemah	Al-Nizhah	1	First	1974
Al-Rawdhah	Secondary	Girls	Al-Asemah	Al-Rawdhah	4	Abu Mousa Al-Ash'ari	1974
Yousef Bin Eissa	Secondary	Boys	Al-Asemah	Abdullah Al-Salem	4	Sayed Sulaiman Ali	1974
Abdullah Al-Otaibi	Secondary	Boys	Al-Asemah	Al-Khaldiyah	2	Al-Oroubah	1974
Afra'a Bint Obaid	Primary/Elementary	Girls	Al-Ahmedi	Al-Sabahiyah	5	Al-Madares	1975
Umayya Al-Ghafariyah	Primary/Elementary	Girls	Al-Jahra'a	Al-Na'em	-	Al-Bibiruni	1975
Al-Laith Bin Sa'ad	Primary/Elementary	Boys	Al-Jahra'a	Al-Na'em	1	14	1975
A'atika Bint Zaid	Primary/Elementary	Girls	Hawali	Al-Jabriyah	7	103	1975
Khabab Bin Al-Art	Primary/Elementary	Boys	Hawali	Al-Jabriyah	8	103	1975
That Al-Sawari	Primary/Elementary	Girls	Al-Asimah	Al-Dowhah	4	6	1975
Bader	Intermediate	Girls	Al-Ahmedi	Al-Riqah	2	22	1975
Al-Riqqah	Intermediate	Girls	Al-Ahmedi	Al-Riqah	7	12	1975
Ibn Tufail	Intermediate	Boys	Al-Jahra'a	Al-Na'eem	3	103	1975
Al-Na'eem	Intermediate	Girls	Al-Jahra'a	Al-Na'eem	4	Al-Bibrouni	1975
Hind	Intermediate	Girls	Hawalli	Al-Jabriyah	7	1	1975
Huthafah Bint Al-Hareth	Intermediate	Girls	Al-Farwaniyah	Jaleeb Al-Shuyoukh	4	Al-Makhfar	1975
Al-rabiyah	Kindergarten/Nursery	Boys/Girls	Al-Farwaniyah	Al-Rabiyah	1	36	1976
Ibn Batotah	Kindergarten/Nursery	Boys/Girls	Al-Jahra	Al-Qasr	2	3	1976
Saqar Quraish	Kindergarten/Nursery	Boys/Girls	Al-Asemah	Abdullah Al-Salem	4	Nasaf Al-Yousef	1976
Rayhanah Bint Zaid	Primary/Elementary	Girls	Al-Ahmedi	Al-Riqah	1	11	1976
Suhaib Bin Sinan	Primary/Elementary	Boys	Al-Ahmedi	Al-Riqah	7	12	1976
Om Waraqah	Primary/Elementary	Girls	Al-Jahra'a	Al-Qasr	4	Ibn Abd Rabbah	1976
Huthaifah Bin Al-Yaman	Primary/Elementary	Boys	Al-Jahra'a	Al-Na'em	3	Al-Bibiruni	1976
Juwaireyah Bint Al-Hareth	Primary/Elementary	Girls	Hawali	Hawali	11	Al-Yarmouk	1976
Ain Jalout	Primary/Elementary	Girls	Al-Asimah	Qurtobah	5	Qurtobah	1976
Durrah Bint Abi Salamah	Primary/Elementary	Girls	Al-Asimah	Al-Sulaibikhat	4	103	1976
Om Al-Monther	Primary/Elementary	Girls	Al-Farwaniyah	Abaq Khaitan	5	Nasser Al-Jabri	1976
Rofaydah Al-Aslamiyah	Primary/Elementary	Girls	Al-Farwaniyah	Jaleeb Al-Shuyoukh	4	Al-Madares	1976
Na'eem Bin Masoud	Primary/Elementary	Boys	Al-Farwaniyah	Jaleeb Al-Shuyoukh	3	1	1976
Othman Bin Madhu'on	Intermediate	Boys	Al-Ahmedi	Al-Sabahiyah	3	Hazzam Al-Maye'a	1976
Harra'a	Intermediate	Girls	Al-Ahmedi	Al-Ahmedi	3	Al-Mattafi	1976
Al-Magherah Bin Noufel	Intermediate	Boys	Hawalli	Salwa	5	police station	1976
Ghazi Abdulrahman Al-Qasaibi	Intermediate	Boys	Al-Farwaniyah	Abraq Khaitan	3	92	1976
Mohammed Nahedh Al-Otaibi	Intermediate	Boys	Al-Farwaniyah	Al-Rihab	2	Qshiya'an Al-Mutairi	1976
Mohammed Al-Nashmi	Secondary	Boys	Al-Ahmedi	Al-Amedi	4	Al-Matafi	1976
Al-Salmiyah	Secondary	Girls	Hawalli	Al-Salmiyah	5	Al-Bahrain	1976
Qurtobah	Secondary	Girls	Al-Asemah	Qurtobah	5	Ayoub Al-Ansari	1976
Fatimah Bint Al-Waleed	Secondary	Girls	Al-Asemah	Al-Sulaibikhat	4	117	1976
Anas Bin Malik	Secondary	Boys	Al-Farwaniyah	Khaittan	8	Al-Makhfar	1976
Al-Khaleej Al-Arabi	Kindergarten/Nursery	Boys/Girls	Hawali	Al-Rumaithiyah	3	Taher Al-Baghli	1977
Abdulrahman Bin Katheer	Primary/Elementary	Boys	Hawali	Salwa	2	101	1977
Sufian Al-Thawri	Primary/Elementary	Boys	Al-Farwaniyah	South Khaitan	3	92	1977
Bobyan	Intermediate	Girls	Al-Asemah	Al-Dowhah	4	Al-Marqash	1977
Ibn Taymiyyah	Intermediate	Boys	Al-Farwaniyah	Jaleeb Al-Shuyoukh	2	Al-Madares	1977
Jumanah Bint Abi Talib	Secondary	Girls	Al-Asemah	Abdullah Al-Salem	4	Sayed Ali Sulaiman	1977
Jaber Al-Mubarak Al-Sabah	Secondary	Boys	Al-Asemah	Al-Surrah	6	Tarq Bin Ziyad	1977
Jaleeb Al-Shuyoukh	Secondary	Boys	Al-Farwaniyah	Jaleeb Al-Shuyoukh	4	Al-Madares	1977

Al-Riqah	Kindergarten/Nursery	Boys/Girls	Al-Ahmedi	Al-Riqah	1	13	1978
26 February	Primary/Elementary	Girls	Al-Ahmedi	Ali Sabah Al-Salem	3	33	1978
Al-Arqam	Primary/Elementary	Boys	Al-Ahmedi	Ali Sabah Al-Salem	3	109	1978
Aysha	Primary/Elementary	Girls	Al-Jahra'a	Al-Qasr	2	Amr Bin Kulthoom	1978
Mohammed Saleh Al-Adsani	Primary/Elementary	Boys	Al-Jahra'a	Al-Jahra'a	2	2	1978
Al-Adeiliyah	Primary/Elementary	Girls	Al-Asimah	Al-Adeiliyah	3	Sultan Al-Kaleeb	1978
Abdulaziz Qasem Hamadah	Primary/Elementary	Boys	Al-Farwaniyah	Al-Ardheyah	2	54	1978
Ibn Al-Nafees	Intermediate	Boys	Hawalli	Al-Salmiyah	10	Abdulkareem Al-Khattabi	1978
Mohammed Abdullah Al-Wuhaib	Intermediate	Boys	Hawalli	Al-Jabriyah	6	101	1978
Om Saleem Al-Ansariyah	Intermediate	Girls	Hawalli	Salwa	3	Al-Masjed Al-Aqsa	1978
Abdullateef Ebraheem Al-Nasef	Intermediate	Boys	Al-Asemah	Al-Yarmouk	3	Ahmed Al-Thaqib	1978
Al-Surrah	Intermediate	Girls	Al-Asemah	Al-Surrah	2	Tareq Bin Ziyad	1978
Laila Al-Qarashiyah	Intermediate	Girls	Al-Asemah	Al-Yarmouk	1	Mohammed Abdulaziz Al-Wazzan	1978
Salma Bint Hamzah	Intermediate	Girls	Al-Farwaniyah	Jaleeb Al-Shuyoukh	4	300	1978
Khalidah Bint Al-Aswad	Secondary	Girls	Hawalli	Salwa	4	2	1978
Fahad Al-Salem	Secondary	Boys	Hawalli	Salwa	6	8	1978
Jaber Al-Ahmed Al-Sabah	Secondary	Boys	Hawalli	Al-Jabriyah	8	First	1978
Shareefah Al-Awadhi	Secondary	Girls	Al-Asemah	Al-Adeiliyah	1	Abdulaziz Al-Rashed	1978
Al-Isra'a	Secondary	Girls	Al-Asemah	Al-Surrah	3	12	1978
Khadijah Bint Al-Zubair	Secondary	Girls	Al-Farwaniyah	Jaleeb Al-Shuyoukh	4	Al-Madares	1978
Al-Dohah	Kindergarten/Nursery	Boys/Girls	Al-Asemah	Al-Dowhah	2	Fifth	1979
Saqar AlRoshood	Kindergarten/Nursery	Boys/Girls	Al-Asemah	Al-Rawdhah	3	Shehab Al-Bahar	1979
Qurtobah	Kindergarten/Nursery	Boys/Girls	Al-Asemah	Qurtobah	2	First	1979
Al-Omariyah	Kindergarten/Nursery	Boys/Girls	Al-Farwaniyah	Al-Omaireyah	2	1	1979
Om Al-Fadhel	Primary/Elementary	Girls	Al-Ahmedi	Al-Fahaheel	9	Abu Firas Al-Hamadani	1979
Al-Riqah	Primary/Elementary	Girls	Al-Ahmedi	Al-Riqah	2	16	1979
Al-Rabab Bint Ka'ab	Primary/Elementary	Girls	Al-Ahmedi	Al-Sabahiyah	2	12	1979
Al-Manqaf	Primary/Elementary	Girls	Al-Ahmedi	Al-Manqaf	3	Al-Madares	1979
Ibn Hajr Al-Saqlani	Primary/Elementary	Boys	Al-Ahmedi	Al-Riqah	3	9	1979
Hamdan Ahmed Al-Hamdan	Primary/Elementary	Boys	Al-Ahmedi	Al-Manqaf	3	7	1979
Al-Ommah	Primary/Elementary	Girls	Hawali	Salwa	11	Mohammed Al-Wasmi	1979
Anjifah	Primary/Elementary	Boys	Hawali	Al-Salmiyah	6	Al-Bahrain	1979
Abdulrahman Al-Ghafiqi	Primary/Elementary	Boys	Hawali	Al-Rumaithiyah	6	Shaheen Al-Ghanim	1979
Zakariyah Al-Ansari	Primary/Elementary	Boys	Hawali	Bayan	8	10	1979
Al-Mansouriyah	Primary/Elementary	Girls	Al-Asimah	Al-Mansouriyah	2	Al-Mansouriyah	1979
Bahrah	Primary/Elementary	Girls	Al-Asimah	Al-Yarmouk	3	Second	1979
Abdulaziz Yaseen Al-Gharaballi	Primary/Elementary	Boys	Al-Asimah	Qurtobah	3	Fifth	1979
Bader Al-Sayed Rajab Al-Refaie	Primary/Elementary	Boys	Al-Asimah	Al-Yarmouk	3	Ahmed Al-Thaqib	1979
Zainab Bint Abi Salamah	Primary/Elementary	Girls	Al-Farwaniyah	Jaleeb Al-Shuyoukh	4	Al-Madares 5	1979
Ahmed Bin Khalid Al-Mehsari	Intermediate	Boys	Al-Ahmedi	Jaber Al-Ali	6	Al-Ra'esi	1979
Ibn Qayyem	Intermediate	Boys	Al-Ahmedi	Ali Sabah Al-Salem	7	104	1979
Ali Al-Salem Al-Sabah	Intermediate	Boys	Al-Jahra'a	Al-Qasr	3	Hajib Bin Zararah	1979
Al-Shifa'a Bint Ouf	Intermediate	Girls	Hawalli	Salwa	11	Ali Thunayyan Al-Athenah	1979
Al-Mulla Abdulaziz Nasser Al-Anjari	Intermediate	Boys	Al-Farwaniyah	Al-Farwaniyah	1	112	1979
Omaymah Bint Al-Ni'eman	Intermediate	Girls	Al-Farwaniyah	Al-Rihab	1	Qshiya'an Al-Mutairi	1979
Salem Al-Mubarak Al-Sabah	Secondary	Boys	Al-Ahmedi	Al-Riqqah	5	Al-Ghaws	1979
Abdullah Al-Jaber Al-Sabah	Secondary	Boys	Al-Asemah	Al-Rawdhah	5	Al-Rawdhah	1979
Mahmoud Shawqi Al-Ayoubi	Primary/Elementary	Boys	Al-Ahmedi	Al-Sabahiyah	3	16	1980
Al-Sulaibiyah	Primary/Elementary	Girls	Al-Jahra'a	Al-Sulaibiyah	2	Al-Hajjaj Bin Yousef Al-Thaqafi	1980

Yousef Saleh Al-Omar	Primary/Elementary	Boys	Al-Jahra'a	Al-Sulaibiyah	3	9	1980
Bayan	Primary/Elementary	Girls	Hawali	Bayan	11	1	1980
Mishref	Primary/Elementary	Girls	Hawali	Mishref	5	57	1980
Abdullah Al-Omar	Primary/Elementary	Boys	Hawali	Mishref	2	50	1980
Abdulmehsen Al-Bahar	Primary/Elementary	Boys	Al-Asimah	Al-Surrah	4	Tareq bin Ziyad	1980
Al-Omairiyah	Primary/Elementary	Boys	Al-Farwaniyah	Al-Omairiyah	5	First	1980
Zubaidah	Intermediate	Girls	Al-Ahmedi	Al-Sabahiyah	1	Al-Sabahiyah	1980
Om Al-Hayman	Intermediate	Girls	Al-Ahmedi	Ali Sabah Al-Salem	5	107	1980
Abdullah Ali Al-Sane'a	Intermediate	Boys	Al-Jahra'a	Al-Sulaibiyah	10	1	1980
Abdullah Bin Suhail	Intermediate	Boys	Al-Jahra'a	Tayma'a	8	Al-Nijashi	1980
Mullah Eissa Mattar Hassan Al-Mattar	Intermediate	Boys	Al-Jahra'a	Tayma'a	6	Al-Nijashi	1980
Al-Mutanabi	Intermediate	Boys	Al-Jahra'a	Tayma'a	2	Al-Nijashi	1980
Misha'an Al-Khudhair	Intermediate	Boys	Hawalli	Mishref	2	Al-Madares	1980
Al-Salmiyah	Intermediate	Girls	Hawalli	Al-Salmiyah	5	Hamad Al-Khaled	1980
Mishref	Intermediate	Girls	Hawalli	Mishref	5	Al-Madares	1980
Om Al-Hayman	Secondary	Girls	Al-Ahmedi	Ali Sabah Al-Salem	1	107	1980
Mishref	Secondary	Girls	Hawalli	Mishref	5	57	1980
Al-Tahreer	Kindergarten/Nursery	Boys/Girls	Al-Ahmedi	Al-Riqah	3	9	1981
Al-Jadawel	Kindergarten/Nursery	Boys/Girls	Al-Asemah	Al-Sulaibikhat	4	116	1981
Al-Jaleeb	Kindergarten/Nursery	Boys/Girls	Al-Farwaniyah	Jaleeb Al-Shuyoukh	1	115	1981
Al-Azhar	Kindergarten/Nursery	Boys/Girls	Al-Farwaniyah	South Khaitan	3	92	1981
Al-Jahra	Kindergarten/Nursery	Boys/Girls	Al-Jahra	Al-Qasr	A4	Bin Abd Rabah	1981
Al-Wafa'a	Kindergarten/Nursery	Boys/Girls	Hawali	Al-Rumaithiyah	5	Shaheen Al-Ghanim	1981
Al-Khayrat	Kindergarten/Nursery	Boys/Girls	Hawali	Bayan	11	First	1981
Al-Shurooq	Kindergarten/Nursery	Boys/Girls	Hawali	Bayan	4	First	1981
Al-Marwah	Kindergarten/Nursery	Boys/Girls	Al-Jahra	Al-Wahah	2	Al-Madares	1981
Al-Safa	Kindergarten/Nursery	Boys/Girls	Al-Jahra	Al-Wahah	3	Al-Ka'aburi	1981
Al-Dheya'a	Kindergarten/Nursery	Boys/Girls	Hawali	Mishref	3	2	1981
Mize'l Hazza'a Al-Sallal	Primary/Elementary	Boys	Al-Ahmedi	Abu hulaifah	1	Ka'ab Bin Zuhair	1981
Basheerah Bint Al-Nu'aman	Primary/Elementary	Girls	Al-Jahra'a	Al-Wahah	3	Al-Madares	1981
Al-Muzdalifah	Primary/Elementary	Girls	Al-Jahra'a	Al-Sulaibiyah	7	Al-Sha'abi	1981
Sayed Hashim Al-Hnayan	Primary/Elementary	Boys	Al-Jahra'a	Al-Qasr	4B	Hajib Bin Zararah	1981
Mohammed Saleh Al-Ojairi	Primary/Elementary	Boys	Al-Jahra'a	Al-Wahah	2	Al-Madares	1981
Meshari Hilal Al-Shemiri	Primary/Elementary	Boys	Al-Jahra'a	Al-Sulaibiyah	6	1	1981
Abdullah Al-Nouri	Primary/Elementary	Boys	Al-Jahra'a	Al-Sulaibiyah	10	First	1981
Omrah Bint Masoud	Primary/Elementary	Girls	Hawali	Al-Salmiyah	5	Hamad Al-Khaled	1981
Mohammed Ismail Al-Ghanim	Primary/Elementary	Boys	Hawali	Al-Jabriyah	3B	First	1981
Nafeesah Bint Omayyah	Primary/Elementary	Girls	Al-Farwaniyah	Al-Firdous	6	1	1981
Ahmed Al-Khamees	Primary/Elementary	Boys	Al-Farwaniyah	Al-Firdous	8	1	1981
Nawfel Bin Al-Hareth	Intermediate	Boys	Al-Ahmedi	Al-Riqah	2	9	1981
Abdulateef Sa'ad Al-Shamlan	Intermediate	Boys	Al-Jahra'a	Al-Wahah	2	Al-Madares	1981
Halah Bint Khuwailed	Intermediate	Girls	Al-Jahra'a	Al-Wahah	3	Al-Madares	1981
Abdulmehsen Al-Khurafi	Intermediate	Boys	Hawalli	Bayan	5	1	1981
Bayan	Intermediate	Girls	Hawalli	Bayan	8	First	1981
Al-Riqqah	Secondary	Girls	Al-Ahmedi	Al-Riqqah	7	8	1981
Farhan Al-Khaled	Secondary	Boys	Hawalli	Bayan	11	10	1981
Al-Huda	Kindergarten/Nursery	Boys/Girls	Al-Ahmedi	Al-Sabahiyah	4	14	1982
Al-Kawther	Kindergarten/Nursery	Boys/Girls	Mubarak Al-Kabeer	Subah Al-Salem	13	2	1982
Al-Morouj	Kindergarten/Nursery	Boys/Girls	Mubarak Al-Kabeer	Subah Al-Salem	9	3	1982

Al-Sanabel	Kindergarten/Nursery	Boys/Girls	Mubarak Al-Kabeer	Subah Al-Salem	11	1	1982
Al-Yasameen	Kindergarten/Nursery	Boys/Girls	Al-Farwaniyah	Al-Fardous	5	1	1982
Al-Fardous	Kindergarten/Nursery	Boys/Girls	Al-Farwaniyah	Al-Fardous	7	First	1982
Al-Nawar Bint Malik	Secondary	Girls	Al-Jahra'a	Al-Wahah	1	Al-Mustawsaf	1982
Hadiya	Kindergarten/Nursery	Boys/Girls	Al-Ahmedi	Hadiyah	3	Andulhadi Al-Hamlan	1983
Fatimah Bint Qais	Primary/Elementary	Girls	Al-Farwaniyah	Al-Ardheyah	3	1	1983
Ahmed Attiyah Al-Athari	Primary/Elementary	Boys	Al-Farwaniyah	Al-Firdous	4	1	1983
Om Qais Al-Asadiyah	Intermediate	Girls	Al-Jahra'a	Al-Sulaibiyah	2	Al-Hajjaj Bin Yousef Al-Thaqafi	1983
Tayma'a	Intermediate	Girls	Al-Jahra'a	Tayma'a	7	Al-Nijashi	1983
Hmoud Barqash Al-Se'edoun	Intermediate	Boys	Al-Asemah	Al-Surrah	3	3	1983
Ebraheem Muhanna Al-Muhanna	Intermediate	Boys	Al-Farwaniyah	Al-Firdous	4	Ebraheem Ibn Al-Aghlab	1983
Al-Hassan Bin Al-Haytham	Intermediate	Boys	Mubarak Al-Kabeer	Sabah Al-Salem	7	1	1983
Al-Zahra'a	Intermediate	Girls	Mubarak Al-Kabeer	Sabah Al-Salem	11	1	1983
Om Al-Hareth Al-Ansariyah	Secondary	Girls	Al-Jahra'a	Al-Sulaibiyah	7	Al-Madares	1983
Thabit Bin Qais	Secondary	Boys	Al-Jahra'a	Al-Sulaibiyah	6	Ibn Bassam	1983
Khalid Bin Sa'ed	Secondary	Boys	Al-Jahra'a	Tayma'a	6	Al-Najashi	1983
Abdullah Abdulateef Al-Rujaib	Secondary	Boys	Hawalli	Bayan	7	10	1983
Sabah Al-Salem	Secondary	Girls	Mubarak Al-Kabeer	Sabah Al-Salem	12	First	1983
Sabah Al-Salem Al-Sabah	Secondary	Boys	Mubarak Al-Kabeer	Sabah Al-Salem	5	First	1983
Al-Narjes	Kindergarten/Nursery	Boys/Girls	Al-Ahmedi	Al-Thahar	1	First	1984
Al-Jawharah	Kindergarten/Nursery	Boys/Girls	Al-Ahmedi	Al-Thahar	6	First	1984
Al-Khama'el	Kindergarten/Nursery	Boys/Girls	Mubarak Al-Kabeer	Subah Al-Salem	6	1	1984
Ghazyah Bint Jaber	Primary/Elementary	Girls	Al-Ahmedi	Al-Riqah	6	8	1984
Al-Dhahar	Primary/Elementary	Girls	Al-Ahmedi	Al-Dhahar	1	25	1984
Ahmed Eissa Al-Sa'ad	Primary/Elementary	Boys	Al-Ahmedi	Al-Fahaheel	3	First	1984
Othman Bin Affan	Primary/Elementary	Boys	Al-Ahmedi	Al-Fahaheel	7	Abu Mihjin Al-Thaqafi	1984
Abu Thar Al-Ghafari	Primary/Elementary	Boys	Al-Ahmedi	Al-Riqah	2	4	1984
Abdullah Ali Al-Asfour	Primary/Elementary	Boys	Al-Ahmedi	Al-Dhahar	6	1	1984
Mariam Abdulmalek Al-Saleh	Primary/Elementary	Girls	Al-Asimah	Al-Khaldiyah	1	Ghazzah	1984
Om Roman	Primary/Elementary	Girls	Al-Farwaniyah	South Khaitan	4	Ebraheem Al-Adham	1984
Al-Firdous	Primary/Elementary	Girls	Al-Farwaniyah	Al-Firdous	3	1	1984
Amoriyah	Primary/Elementary	Girls	Mubarak Al-Kabeer	Sabah Al-Salem	11	2	1984
Abdulwahhab Abdulrahman Al-Faris Al-W	Primary/Elementary	Boys	Mubarak Al-Kabeer	Sabah Al-Salem	9	Third	1984
Al-Ma'ari	Intermediate	Boys	Al-Ahmedi	Al-Fahaheel	7	Ghanim Al-Dabous	1984
Abdullah Sinan	Intermediate	Boys	Al-Ahmedi	Al-Dhahar	6	Al-Ra'esi	1984
Zainab Bint Khuzaimah	Intermediate	Girls	Al-Ahmedi	Hadiyah	4	Ebraheem Al-Mosali	1984
Al-Dhahar	Intermediate	Girls	Al-Ahmedi	Al-Dhahar	1	1	1984
Salma Bint Qais	Intermediate	Girls	Al-Jahra'a	Al-Oyoon	1	1	1984
Abdullah Bin Huthafah	Intermediate	Boys	Al-Farwaniyah	Al-Firdous	6	1	1984
Hajar	Intermediate	Girls	Al-Farwaniyah	Khaitan	4	97	1984
Al-Shayma'a Bint Al-Hareth	Intermediate	Girls	Al-Farwaniyah	Al-Ardeyah	4	infront of police station	1984
Al-Firdous	Intermediate	Girls	Al-Farwaniyah	Al-Firdous	7	1	1984
Sa'ed Bin Aamer	Secondary	Boys	Al-Ahmedi	Hadiyah	2	Ibn Malik	1984
Om Mubasher Al-Ansari	Secondary	Girls	Al-Jahra'a	Tayma'a	7	Al-Nijashi	1984
Fahad Al-Duwairi	Secondary	Boys	Hawalli	Al-Jabriyah	2	10	1984
Al-Farwaniyah	Secondary	Girls	Al-Farwaniyah	Al-Farwaniyah	2	141	1984
Al-Hana'a	Kindergarten/Nursery	Boys/Girls	Al-Ahmedi	Ali Sabah Al-Salem	3	33	1985
Al-Manqaf	Kindergarten/Nursery	Boys/Girls	Al-Ahmedi	Al-Manqaf	3	First	1985
Sa'ad Bin Mua'ath	Kindergarten/Nursery	Boys/Girls	Al-Ahmedi	Al-Sabahiyah	3	4	1985

Al-Surrah	Kindergarten/Nursery	Boys/Girls	Al-Asemah	Al-Surrah	6	12	1985
Al-Yarmouk	Kindergarten/Nursery	Boys/Girls	Al-Asemah	Al-Yarmouk	4	2	1985
Al-Jabriya	Kindergarten/Nursery	Boys/Girls	Hawali	Al-Jabriyah	8	7	1985
Salwa	Kindergarten/Nursery	Boys/Girls	Hawali	Salwa	1	6	1985
Al-Danah	Kindergarten/Nursery	Boys/Girls	Mubarak Al-Kabeer	Subah Al-Salem	10	7	1985
Al-Balabel	Kindergarten/Nursery	Boys/Girls	Mubarak Al-Kabeer	Subah Al-Salem	8	1	1985
Fatimah Abdullah Al-Haqqan	Primary/Elementary	Girls	Al-Ahmedi	Al-Fintas	3	15	1985
Abdulrahman Al-Dakhel	Primary/Elementary	Boys	Al-Ahmedi	Ali Sabah Al-Salem	1	152	1985
Al-Wahah	Primary/Elementary	Boys	Al-Jahra'a	Al-Wahah	4	Al-Madares	1985
Jameelah Bint Ebad	Primary/Elementary	Girls	Hawali	Bayan	3	1	1985
Jasim Mohammed Al-Ebraheem	Primary/Elementary	Boys	Hawali	Hawali	1	Bairout	1985
Othman Abullateef Al-Othman	Primary/Elementary	Boys	Hawali	Bayan	5	First	1985
Al-Andalous	Primary/Elementary	Girls	Al-Farwaniyah	Al-Andalous	8	108	1985
Moa'athah Al-Adwiyah	Primary/Elementary	Girls	Mubarak Al-Kabeer	Sabah Al-Salem	5	1	1985
Abdulrahman Faris Al-Woqayyan	Primary/Elementary	Boys	Mubarak Al-Kabeer	Sabah Al-Salem	6	First	1985
Abdulrahman Bin Abi Baker	Intermediate	Boys	Al-Ahmedi	Hadiyah	1	Al-Hamlan	1985
Ebad Bin Bashir	Intermediate	Boys	Al-Ahmedi	Abu Hulaifah	2	Faisal Al-Malik	1985
Hawalli	Intermediate	Girls	Hawalli	Al-Salmiyah	11	Ohod	1985
Omaymah Bint Abdullah	Intermediate	Girls	Al-Asemah	Al-Dowhah	3	Ibn Katheer	1985
Sa'ad Bin Abi Waqqas	Intermediate	Boys	Mubarak Al-Kabeer	Sabah Al-Salem	9	1	1985
Fatimah Bint Abdulmalik	Intermediate	Girls	Mubarak Al-Kabeer	Sabah Al-Salem	6	1	1985
Fatimah Bint Asad	Secondary	Girls	Al-Ahmedi	Al-Ahmedi	3	Al-Matafi	1985
Om Al-Ala'a Al-Ansariyah	Secondary	Girls	Al-Ahmedi	Hadiyah	2	Abdulhadi Saif Al-Hamlan	1985
Hadiyah	Secondary	Girls	Al-Ahmedi	Hadiyah	3	Al-Kasani	1985
Ma'atha Al-Ghafariyah	Secondary	Girls	Al-Ahmedi	Al-Dhahar	2	2	1985
Omar Bin Al-Khattab	Secondary	Boys	Al-Ahmedi	Ali Sabah Al-Salem	6	105	1985
Al-Wahah	Secondary	Boys	Al-Jahra'a	Al-Wahah	4	Al-Madares	1985
Saleh Al-Shehab	Secondary	Boys	Hawalli	Mishref	9	53	1985
Al-Yarmouk	Secondary	Girls	Al-Asemah	Al-Yarmouk	1	Jameel Bin Ma'amar	1985
Hawa'a Bint Yazeed	Secondary	Girls	Al-Farwaniyah	Al-Andalous	9	1	1985
Al-Sour	Kindergarten/Nursery	Boys/Girls	Al-Ahmedi	Al-Riqah	7	12	1986
Al-Anwar	Kindergarten/Nursery	Boys/Girls	Al-Farwaniyah	Al-Ardheyah	6	1	1986
Al-Byader	Kindergarten/Nursery	Boys/Girls	Al-Farwaniyah	Al-Ardheyah	10	1	1986
Al-Wahah	Kindergarten/Nursery	Boys/Girls	Al-Jahra	Al-Wahah	1	Madares Al-Wahah	1986
Al-Nowayer	Kindergarten/Nursery	Boys/Girls	Hawali	Bayan	3	First	1986
Al-Andalos	Kindergarten/Nursery	Boys/Girls	Al-Farwaniyah	Al-Andalous	9	6	1986
Al-Sulaibiyah	Kindergarten/Nursery	Boys/Girls	Al-Jahra	Al-Sulaibiyah	10	First	1986
Al-Bustan	Kindergarten/Nursery	Boys/Girls	Al-Ahmedi	Al-Thahar	3	3	1986
Al-Ardheyah	Kindergarten/Nursery	Boys/Girls	Al-Farwaniyah	Al-Ardheyah	3	56	1986
Al-Eiman	Kindergarten/Nursery	Boys/Girls	Al-Farwaniyah	Al-Ardheyah	7	2	1986
Al-Fajer	Kindergarten/Nursery	Boys/Girls	Al-Farwaniyah	Al-Fardous	1	1	1986
Al-Fayrouz	Kindergarten/Nursery	Boys/Girls	Al-Farwaniyah	Al-Fardous	3	1	1986
Al-Nada	Kindergarten/Nursery	Boys/Girls	Mubarak Al-Kabeer	Subah Al-Salem	7	2	1986
Al-Salam	Kindergarten/Nursery	Boys/Girls	Al-Farwaniyah	Al-Ardheyah	8	7	1986
Laila Bint Al-Khateem	Primary/Elementary	Girls	Al-Ahmedi	Al-Dhahar	3	9	1986
Ziyad Bin Lubaid	Primary/Elementary	Boys	Al-Ahmedi	Al-Sabahiyah	2	9	1986
Abu Huthaifah Bin Atbah	Primary/Elementary	Boys	Al-Ahmedi	Al-Dhahar	4	Al-Ra'esi	1986
Al-Wahah	Primary/Elementary	Girls	Al-Jahra'a	Al-Wahah	1	Al-Madares	1986
Safanah Bint Hatim Al-Ta'ei	Primary/Elementary	Girls	Al-Jahra'a	Al-Sulaibiyah	5	1	1986

Om Jameel Al-Amiriyah	Primary/Elementary	Girls	Al-Jahra'a	Tayma'a	7	Al-Najashi	1986
Tayma'a	Primary/Elementary	Girls	Al-Jahra'a	Tayma'a	5	Al-Najashi	1986
Sabeekah Al-Khaled	Primary/Elementary	Girls	Al-Farwaniyah	Al-Ardheyah	7	1	1986
Om Al-Khair	Primary/Elementary	Girls	Al-Farwaniyah	Al-Ardheyah	10	1	1986
Qais Bin Aasem	Primary/Elementary	Boys	Al-Farwaniyah	Al-Ardheyah	6	First	1986
Abdullah Bin Rawahah	Primary/Elementary	Boys	Al-Farwaniyah	Al-Ardheyah	11	4	1986
Thabit Bin Zaid	Primary/Elementary	Boys	Mubarak Al-Kabeer	Sabah Al-Salem	7	First	1986
Abdulmehsen Ebraheem Al-Babteen	Intermediate	Boys	Al-Ahmedi	Al-Dhahar	4	Al-Ra'esi	1986
Omayyah Bint Qais	Intermediate	Girls	Al-Ahmedi	Al-Dhahar	3	First	1986
Al-Wahah	Intermediate	Boys	Al-Jahra'a	Al-Wahah	4	Al-Madares	1986
Al-Sulaibiyah	Intermediate	Boys	Al-Jahra'a	Al-Sulaibiyah	6	Al-Sha'abi	1986
Al-Sulaibiyah	Intermediate	Girls	Al-Jahra'a	Al-Sulaibiyah	9	First	1986
Asma'a Bint Abi Baker	Intermediate	Girls	Hawalli	Bayan	4	Al-Fahaheel	1986
Soud Abdulrazzaq	Intermediate	Boys	Al-Farwaniyah	Al-Ardeyah	6	1	1986
Al-Ardheyyah	Intermediate	Girls	Al-Farwaniyah	Al-Ardeyah	7	1	1986
Al-Sabahiyah	Secondary	Boys	Al-Ahmedi	Al-Sabahiyah	5	Al-Madares	1986
Hisham Bin Al-Aass	Secondary	Boys	Al-Ahmedi	Al-Manqaf	2	8	1986
Haroon Al-Rasheed	Secondary	Boys	Al-Ahmedi	Al-Dhahar	5	Al-Madares	1986
Tayma'a	Secondary	Girls	Al-Jahra'a	Tayma'a	3	Al-Nijashi	1986
25 February	Secondary	Girls	Hawalli	Al-Rumaithiyah	11	Nasser Al-Mubarak	1986
Salwa	Secondary	Girls	Hawalli	Salwa	10	1	1986
Bayan	Secondary	Girls	Hawalli	Bayan	6	22	1986
Abdullah Al-Asousi	Secondary	Boys	Hawalli	Al-Salmiyah	8	Al-Khansa'a	1986
Om Amer Al-Ansariyah	Secondary	Girls	Al-Farwaniyah	Al-Rihab	1	Al-Ordon	1986
Al-Firdous	Secondary	Girls	Al-Farwaniyah	Al-Firdous	7	Al-Ala Bin Al-Jarood	1986
Abdulateef Thnayan Al-Ghanim	Secondary	Boys	Al-Farwaniyah	Al-Ardheyah	6	1	1986
Ahmad Bin Hanbil	Kindergarten/Nursery	Boys/Girls	Al-Asemah	Al-Dowhah	3	Al-Amadi	1987
Al-Rayhan	Kindergarten/Nursery	Boys/Girls	Al-Farwaniyah	Al-Ardheyah	11	6	1987
Al-Worood	Kindergarten/Nursery	Boys/Girls	Al-Farwaniyah	Al-Rabiyah	4	9	1987
Al-Qasr Al-Ahmar	Kindergarten/Nursery	Boys/Girls	Al-Jahra	Al-Qasr	3	Haif Al-Hajraf	1987
Al-Yamamah	Kindergarten/Nursery	Boys/Girls	Al-Jahra	Al-Oyon	1	First	1987
Ali Bin Shamlan	Kindergarten/Nursery	Boys/Girls	Al-Jahra	Al-Oyon	4	104	1987
Hussain Bin Ali Saif	Kindergarten/Nursery	Boys/Girls	Al-Jahra	Al-Oyon	1	Al-Karibi	1987
Al-Salamah	Kindergarten/Nursery	Boys/Girls	Al-Ahmedi	Al-Fahaheel	1	First	1987
Al-Misk	Kindergarten/Nursery	Boys/Girls	Al-Ahmedi	Al-Manqaf	4	First	1987
Al-Istiqlal	Kindergarten/Nursery	Boys/Girls	Al-Ahmedi	Al-Sabahiyah	2	2	1987
Al-Jinan	Kindergarten/Nursery	Boys/Girls	Al-Ahmedi	Al-Fintas	2	12	1987
Om Al-Bara'a Bint Safwan	Primary/Elementary	Girls	Al-Jahra'a	Al-Qasr	3	Haif Sa'ad Al-Hajraf	1987
Omaimah Bint Al-Najjar	Primary/Elementary	Girls	Al-Jahra'a	Al-Oyoon	1	Al-Karibi	1987
Ahmed Mohammed Al-Humaidhi	Primary/Elementary	Boys	Al-Jahra'a	Al-Oyoon	1	3	1987
Sayed Khalaf Al-Nakib	Primary/Elementary	Boys	Al-Jahra'a	Al-Oyoon	4	Bishr Bin Awanah	1987
Al-Dowhah	Primary/Elementary	Boys	Al-Asimah	Al-Dowhah	1	Al-Kameet	1987
Abdulaziz Al-Rasheed	Primary/Elementary	Boys	Al-Farwaniyah	Al-Andalous	4	20	1987
Al-Imam Al-Shafe'ei	Primary/Elementary	Boys	Mubarak Al-Kabeer	Sabah Al-Salem	5	1	1987
Sayed Yaseen Al-Tabtabae'i	Intermediate	Boys	Al-Ahmedi	Al-Manqaf	3	101	1987
Ali Khaleefah Al-Sabah	Intermediate	Boys	Al-Jahra'a	Al-Oyoon	4	Al-Madares	1987
Al-Mutawa'ah Shareefah Al-Omar	Intermediate	Girls	Al-Jahra'a	Al-Oyoon	4	behanid the clinic	1987
Saleh Al-Ruwaieh	Intermediate	Boys	Al-Farwaniyah	Al-Ardeyah	5	Central	1987
Arwa Bint Abdulmutalib	Intermediate	Girls	Al-Farwaniyah	Al-Andalous	9	101	1987

Al-Qurtobi	Secondary	Boys	Al-Ahmedi	Al-Sabahiyah	3	14	1987
Hmoud Al-Jaber Al-Sabah	Secondary	Boys	Al-Farwaniyah	South Khaitan	1	Ebraheem Al-Adham	1987
Al-Sabah	Secondary	Boys	Al-Farwaniyah	Al-Firdous	5	1	1987
Al-Watan	Kindergarten/Nursery	Boys/Girls	Al-Ahmedi	Jaber Al-Ali	1	First	1988
Al-Bahjah	Kindergarten/Nursery	Boys/Girls	Al-Ahmedi	Jaber Al-Ali	4	First	1988
Al-Naeem	Kindergarten/Nursery	Boys/Girls	Al-Jahra	Al-Naeem	2	101	1988
Sayed Rajab Al-Refa'ei	Primary/Elementary	Boys	Al-Ahmedi	Jaber Al-Ali	1	1	1988
Al-Shamiyah	Primary/Elementary	Girls	Al-Asimah	Al-Shamiyah	3	next to research centre	1988
Mubarak Abdullah Al-Jaber	Intermediate	Boys	Al-Ahmedi	Jaber Al-Ali	1	Al-Ra'esi	1988
Suad Al-Sayegh	Intermediate	Girls	Al-Ahmedi	Jaber Al-Ali	1	First	1988
Al-Manqaf	Intermediate	Girls	Al-Ahmedi	Al-Manqaf	3	Al-Madares	1988
Al-Shamiyah	Intermediate	Girls	Al-Asemah	Al-Shamiyah	3	Al-Shamiyah	1988
Ammar Bin Yasser	Intermediate	Boys	Al-Farwaniyah	Al-Ardeyah	11	4	1988
Sabah Al-Nasser Al-Sabah	Secondary	Boys	Al-Jahra'a	Al-Oyoon	1	102	1988
Al-Karamah	Kindergarten/Nursery	Boys/Girls	Al-Farwaniyah	Al-Rehab	1	1	1989
Nafe'e Bin Abdulrahman Al-Laithi	Kindergarten/Nursery	Boys/Girls	Al-Jahra	Al-Naseem	2	21	1989
Al-Naseem	Kindergarten/Nursery	Boys/Girls	Al-Jahra	Al-Naseem	1	First	1989
Al-Shumoos	Kindergarten/Nursery	Boys/Girls	Al-Jahra	Al-Oyon	4	103	1989
Mo'tah	Kindergarten/Nursery	Boys/Girls	Hawali	Al-Rumaithiyah	1	Al-Shafiei	1989
Abdulaziz Al-Shaheen	Kindergarten/Nursery	Boys/Girls	Hawali	Mishref	5	1	1989
Hamad Al-Khaled	Primary/Elementary	Boys	Al-Ahmedi	Jaber Al-Ali	3	9	1989
Sukainah Bint Al-Hussain	Primary/Elementary	Girls	Al-Jahra'a	Al-Oyoon	4	103	1989
Al-Khansa'a	Primary/Elementary	Girls	Al-Jahra'a	Al-Naseem	1	Al-Najashi	1989
Mulla Rashid Al-Saif	Primary/Elementary	Boys	Al-Jahra'a	Al-Naseem	1	-	1989
Thi Qar	Primary/Elementary	Girls	Al-Farwaniyah	Al-Rihab	1	1	1989
Khaled Yousef Nasrallah	Primary/Elementary	Boys	Al-Farwaniyah	Al-Rihab	1	First	1989
Sabee'ah Bint Al-Hareth	Intermediate	Girls	Al-Ahmedi	Jaber Al-Ali	4	1	1989
Haleemah Al-Sa'adiyah	Intermediate	Girls	Al-Jahra'a	Al-Naseem	1	near health centre	1989
Awatef Al-Athbi Al-Sabah	Secondary	Girls	Al-Ahmedi	Jaber Al-Ali	4	First	1989
Abdullah Al-Amed Al-Sabah	Secondary	Boys	Al-Ahmedi	Jaber Al-Ali	3	Al-Ra'esi	1989
Zainab Bint Mohammed	Secondary	Girls	Al-Jahra'a	Al-Oyoon	4	104	1989
Om Al-Hakam Bint Abi Sufyan	Secondary	Girls	Al-Farwaniyah	Al-Ardheyah	10	1	1989

Kuwait's Public Education Study at 4KMP

Table 3.1: Number of Students in Public Education

Education Stage	2002	2005	2010	2015	2017	2020	2025	2030
Kindergarten	42,375	40,522	42,305	42,866	42,946	54,054	55,487	67,655
Primary	106,317	132,804	129,994	151,487	152,433	135,970	143,800	165,675
Intermediate	95,894	100,114	109,579	110,417	114,793	99,265	105,754	120,801
Secondary	78,954	61,448	65,544	70,915	72,645	75,769	84,001	87,823

Table 3.3: Number of Schools in Public Education

Education Stage	Classrooms/ New School	Classrooms/ Existing School	2002	2005	2010	2015	2017	2020	2025	2030
Kindergarten	12	9	159	176	197	194	196	180	191	226
Primary	30	24	193	211	248	259	265	181	192	221
Intermediate	24	22	166	163	201	208	214	138	147	168
Secondary	30	22	120	114	133	139	143	105	117	122

Table 3.5: Number of Students in Private Education

Education Stage	2002	2005	2010	2015	2017	2020	2025	2030
Kindergarten	20,349	26,511	31,327	39,116	38,151	52,576	62,832	67,109
Primary	47,739	69,976	83,756	113,333	115,896	77,712	87,181	78,428
Intermediate	38,848	40,835	53,424	67,220	67,467	63,385	71,776	80,099
Secondary	31,087	28,228	29,673	39,081	41,915	42,279	49,264	51,864

Table 3.7: Number of Schools in Private Education

Education Stage	Classrooms/ New School	Classrooms/ Existing School	2002	2005	2010	2015	2017	2020	2025	2030
Kindergarten	12	11	86	102	108	113	114	175	201	224
Primary	30	27	121	129	134	142	144	115	129	144
Intermediate	24	15	115	124	133	144	147	88	100	111
Secondary	30	12	95	98	99	118	122	59	68	72

A concise overview of all Kuwait master plans and reviews can be found in this appendix.

APPENDIX E. KUWAIT MASTER PLANS SUMMARY

1st KMP (1952): The First Master Plan by Minoprio, Spencely and Macfarlane

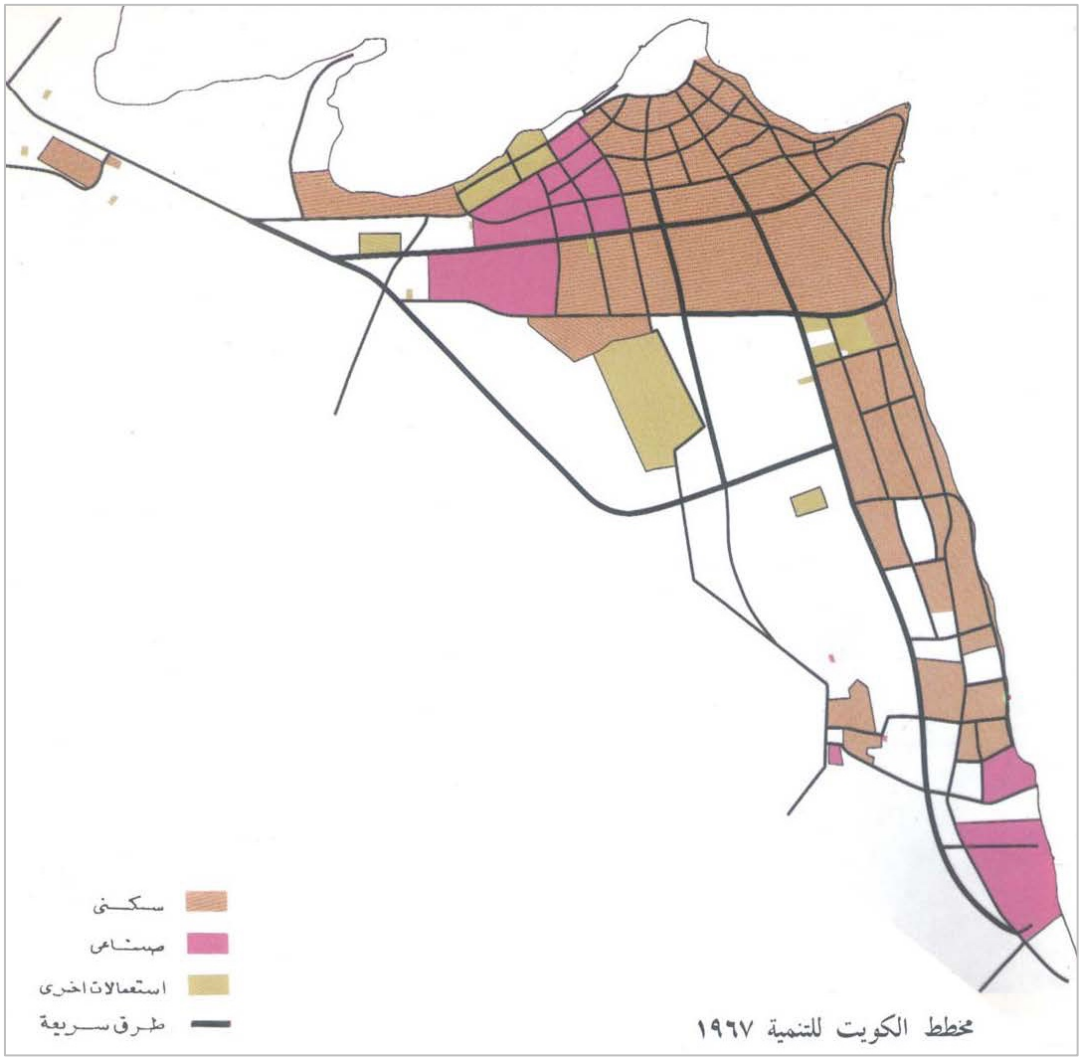
Brief:

In April of 1951, the government of Kuwait hired the consulting firm of Minobrio, Spensley, and McFarren to create the country's first comprehensive urban plan. Primary objectives of the plan included the allocation of land for government buildings, industry, commercial hubs, schools, and other purposes; the determination of new housing and service sites both inside and outside the wall; the selection of locations for gardens, public sports fields, school playgrounds, and other open areas; the development of the core business district; and erecting the wall.

The master plan was a tangible representation of the goals that were set for it; it encompassed the entirety of Kuwait City (755 ha inside the wall) and its surrounding neighbourhoods up to the Third Ring Road (approximately 1450 ha), with provision for residential, industrial, commercial, administrative, service, public, and recreational uses. For the first time ever, scientific criteria were used to the planning process. They pioneered the system of residential suburbs and their centres, which, after his experience, proved to

be a huge success, and his structural design also laid the framework for today's circular and radial roadways. It established a green belt that separated the suburbs from the old city and acted as a traffic buffer by channelling vehicles away from the city and onto new work sites such as the industrial district of Shuwaikh, the hospital district, and the new airport. ***(Source: Kuwait Municipality Archives)***

Development Study (1967): The Municipal Development Plan



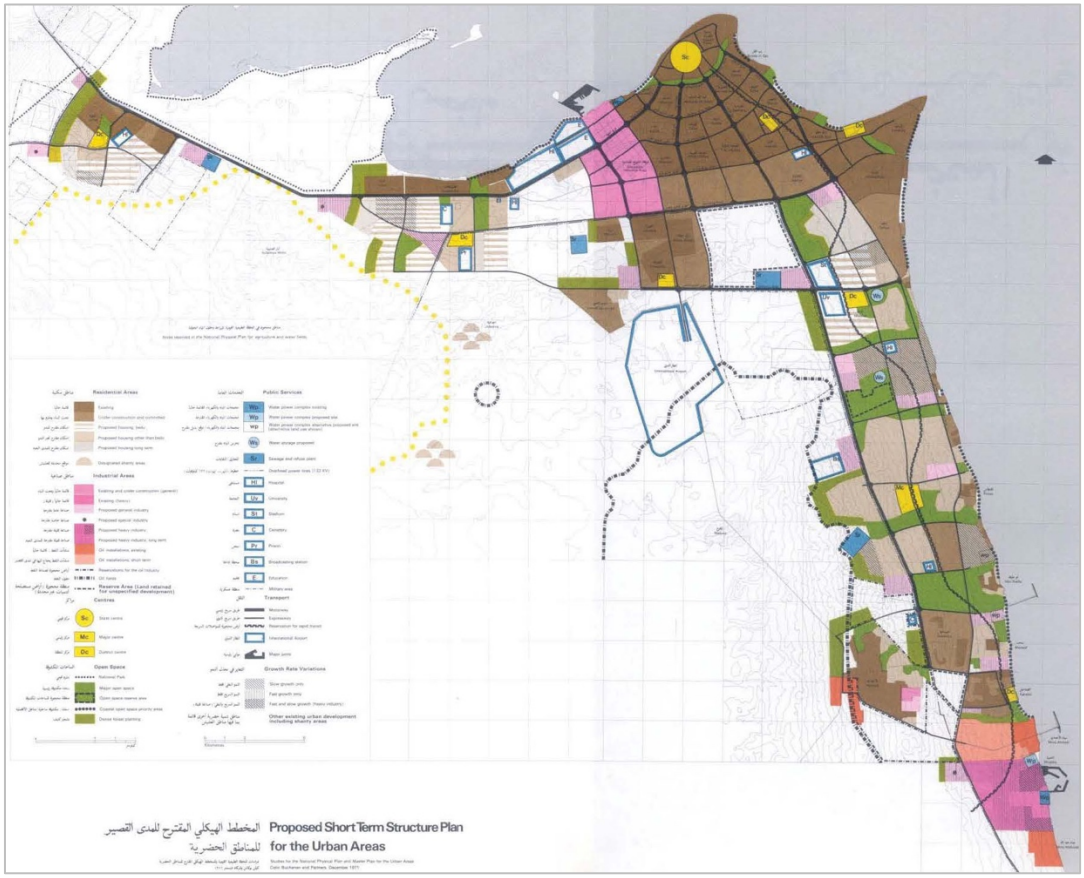
Brief:

The population grew as a consequence of both natural rise and increased immigration to Kuwait, contributing to the country's booming economy. The total number of residents by 1957 was 206,473. In 1961, it was at 321 621, and by 1965, it had risen to 467 339. Rapid urbanisation spread until it enveloped all of the land designated for development in the

first structural plan (1952), at which point a pressing demand arose for better mapped out building lots.

Many residential, commercial, and industrial areas were organised during this time (1952–1967) by various foreign firms, such as George Candilis, Reima Pietila, Alison and Peter Smithson in association with Ove Arup and Partners, and Architetti BBPR. The Planning Department, which was part of the Ministry of Public Works until 1961 and later joined the Municipality, played a crucial role in this. These studies, together with the results of earlier studies (the first structural plan, completed in 1952), were compiled into a master plan in 1967; this plan would subsequently be renamed the Municipal Development Plan. No demographic or other integrated analyses were conducted alongside the implementation of this plan. ***(Source: Kuwait Municipality Archives)***

2nd MKP (1970): The Second Master Plan by Colin Buchanan and Partners

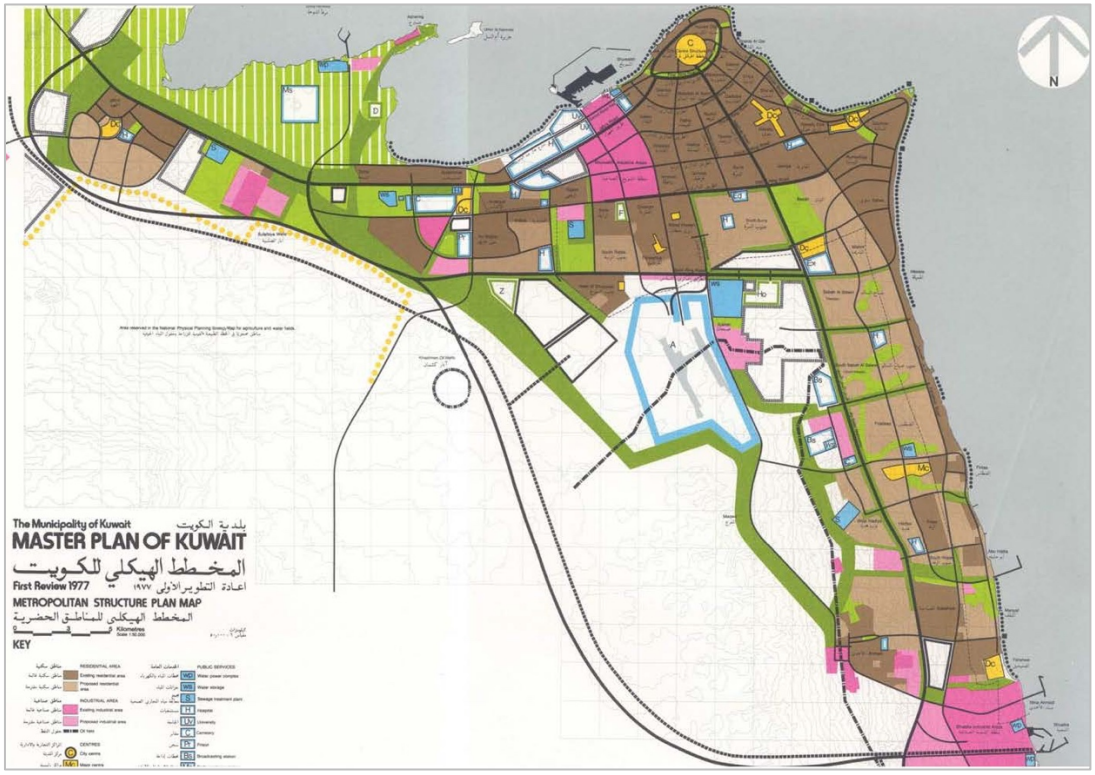


Brief:

As the municipality sought the advice of a United Nations expert (Dr. Jacob Taisi), who made several trips to Kuwait in the early 1960s and provided some opinions and suggestions, a review of the stages of development and planning that the country went through until 1967 revealed a great effort that was being made to pursue the rapid growth in the fields of development.

A tripartite committee made up of specialists Professor Jacob Taisi, Engineer Mahmoud Riyad, and Dr. Omar Azzam was established in response to the Government of Kuwait's desire to utilise the opinions of the United Nations more generally in this respect. till the end of this century, the nation and the state are developing structural strategies for development. Therefore, the municipality hired British consultant Colin Buchanan & Partners in late 1968. Additionally, it established a team of experts in the local government to monitor the situation and a tripartite council of prominent artists from across the world to share insights and offer technical guidance. Professors Franco Albini, Omar Azzam, and Sir Leslie Martin were members of it. ***(Source: Kuwait Municipality Archives)***

2nd KMP-R1 (1977): The First Review of the Master Plan by Shankland Cox and Partens



Brief:

Due to the unanticipated rise in population growth brought on by the economic, social, and demographic shifts that occurred between 1970 and 1977, significant adjustments had to be made in various aspects of the second masterplan (1970), as previously mentioned. During that time, adjustments were made to the permitted construction ratios. This is in addition to the fact that when a long enough time has passed with any given structural plan, it must be re-evaluated and refined to account for any new circumstances that may have arisen. Which is why early in 1977 the city hired British firm Shankland Cox and Partners as its consultant for the first round of rebuilding. Research was conducted and included the Strategy for Protecting Our Natural Resources in the United States, Urban framework design, City centre infrastructure design. ***(Source: Kuwait Municipality Archives)***

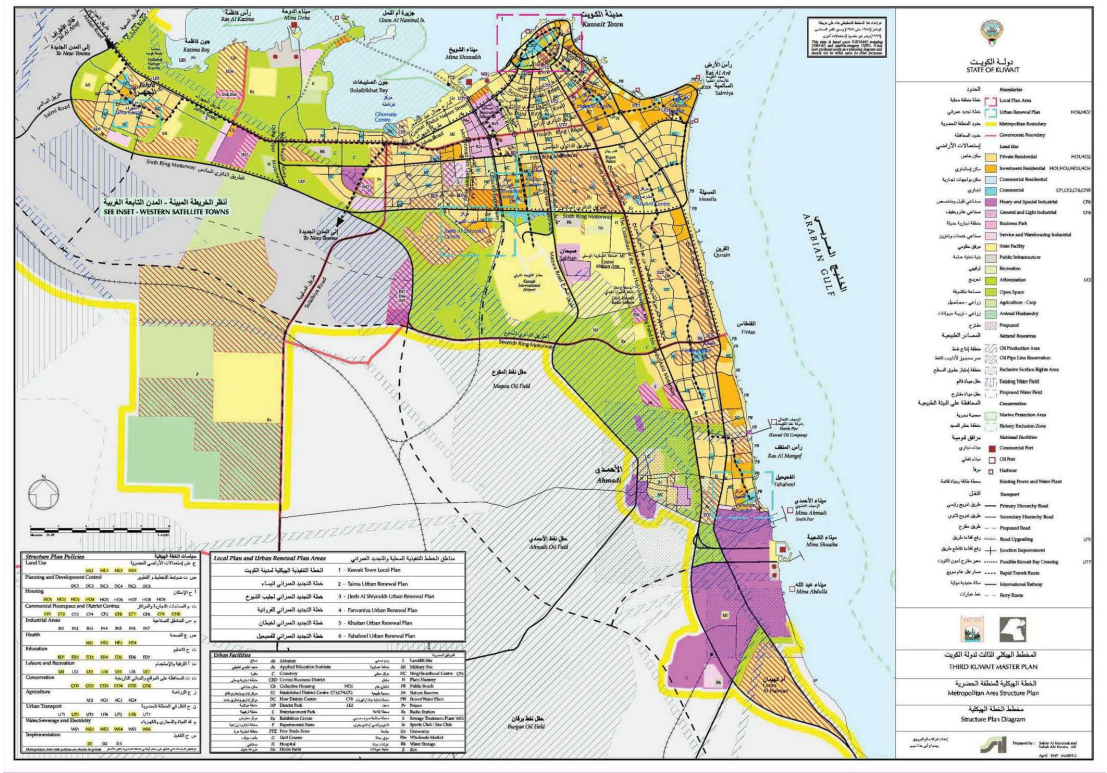
2nd KMP-R2 (1983): The Second Review of the Master Plan by Colin Buchanan and Partners

Brief:

Consultant Colin Buchanan and Partners has designed the reconstruction for the Municipality of Kuwait. In this city the research was first conducted, back in May of 1982. Up until 2005, it served as a guide for the State of Kuwait's development sector, based on study and analysis of various techniques for urban expansion and choices for planning. The report's contents and further discussion led to the finalised plan of action. Basic projections for the most important planning elements and variables were included, as was a description of the national natural plan, the master plan for urban areas, the master plan for the city centre, and a discussion of the strategy for putting the plan into action, including a prioritised list of next steps. The national natural plan is covered first, followed by the urban and central city master plans, a change from the preceding order in the original reconstruction. This circumstance is indicative of the growing significance of urban growth forecast beyond urban regions over the plan's time period and the necessity of a holistic perspective of urban growth on a nationwide basis, as opposed to limiting it to urban areas alone. Technical investigations were conducted to back up the redesign. All aspects of future population, economy, jobs, infrastructure, and public services were accounted for. Planning alternatives based on land-use analyses.

By referring to the master plan, each stakeholder may estimate the scope of their own projects and establish a schedule for their completion. This scheme's goal was not to offer particular specifics for each area, but rather to reflect the material on which the structural and detailed plans of the regions may be developed, so that it could serve its purpose of directing development. The redevelopment's plans and programmes aimed to do the following things: supply adequate housing that met technical and social standards; supply adequate land in appropriate locations and supply adequate services for it to meet the needs of labour; supply efficient means of transportation that allowed all residents to move to the areas of various activities, transporting goods efficiently and flexibly; and include all of these things. ***(Source: Kuwait Municipality Archives)***

3rd KMP (1997): The Third Master Plan by SSH



Brief:

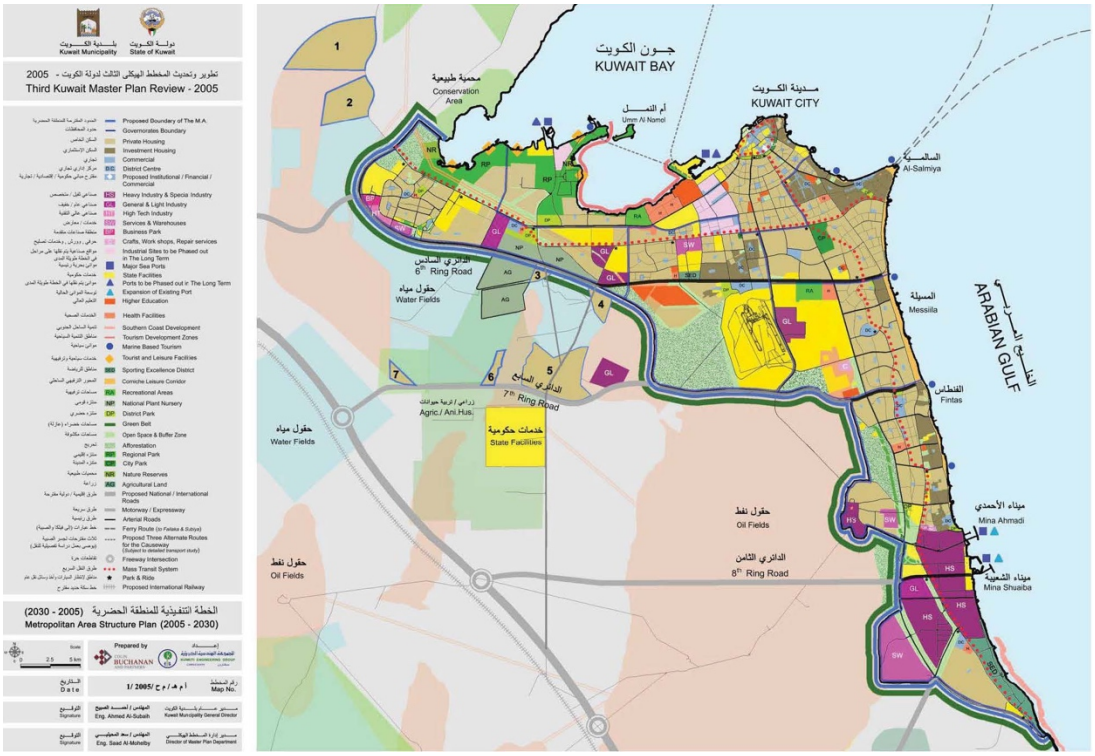
For the urban area's masterplan covering the years 1995–2015, the strategy of the natural national plan provided the defining planning framework. The goal of this plan was to accommodate the anticipated increase in population to 3.8 million by the year 2015, which was about double the number of residents in 1995. It was the goal of the New Communities Development Authority to create new cities by 2005 that can house 558,000 people in the short period (1995-2005). Planned urban areas were directly impacted by natural national plan strategy regulations pertaining to job locations, administrative and commercial hubs, transportation, and services.

Each of the three parts of the master plan utilised the community to regulate and steer growth in accordance with the new planning system created by the third master plan. This system consisted of policy papers and regulatory regulations. The master plan introduced the organisational laws as the primary mechanism for fine-grained control over development and as a tool for its execution. Each section of the city had its own set of regulations governing the construction and usage of structures on individual properties. The structure plan's organisational charts revealed the departments that would exercise

authority over the private development. The third master plan's principles and initiatives aimed to only do that, by giving the country's planners a unified and all-encompassing set of guidelines to work from. As well as the business sector, the municipality plans to use it in its interactions with government departments and other relevant agencies. Applications for land allocation and construction permits were processed and authorised in accordance with the applicable regulations.

The municipality was tasked with reviewing the complete planning directive as part of the modernization's administrative processes, keeping tabs on demographic and development data and the challenges of executing the third structural plan. Policies may undergo occasional, minor revisions, the approval of which will be published by the Municipal Council. If the municipality decides to make a real change based on the results of the special monitoring, they will discuss their plans with the relevant authorities and present an analytical report with suggestions. Detailed amendment suggestions will be forwarded to the City Council for final approval. After the third structural plan has been in place for five years, a formal and thorough evaluation will take place. ***(Source: Kuwait Municipality Archives)***

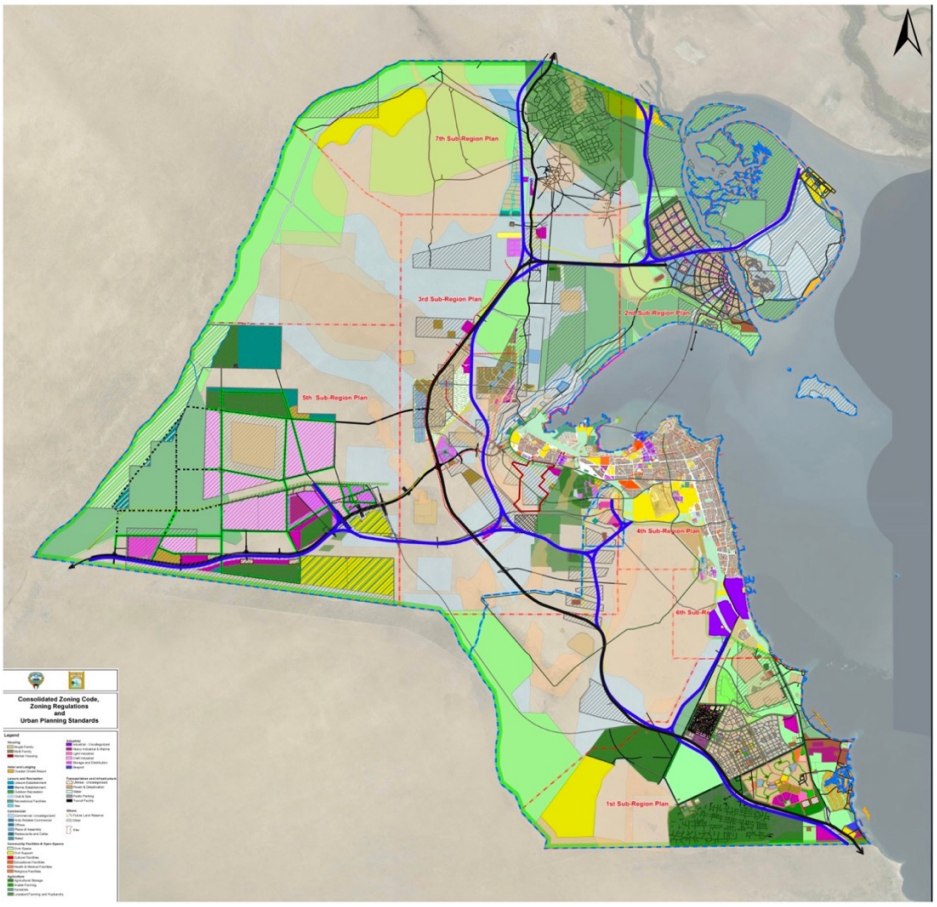
3rd KMP-R1 (2005): The First Review of Master Plan by Colin Buchanan and Partners



Brief:

In 2005, the Third Master Plan for Kuwait was evaluated. A plan for growth between 2020 and 2030 is proposed in this analysis. Construction of national/international highways and railways connect the central part of Kuwait with the northern and north-eastern part (North Al-Metla's, Al-Abdali, Al-Subiya, North Al-Subiya, and Umm Qasr) up to the Iraqi border, as well as the south-eastern part (Arifjan, Al-Zour, and Wafra) up to the Saudi border. Extending the highway from downtown Kuwait to Al-Naayim and as-Salmi, and then on to the Saudi Arabian border, is the goal of the western corridor. Through the development of railways and highways, this plan seeks to establish Kuwait as the economic and transportation crossroads of the Gulf region, serving both northern (Iraq, Iran, and other western Asian countries) and southern (Saudi Arabia, Bahrain, Qatar, Oman, and other southern) countries (see Maps 9 and 10). Amiri Decree N255 of 2008 formalised the modified Third Master Plan. The Fourth Kuwait Master Plan 2040 is presently being prepared. This plan's purpose is to ensure sustainable urban planning and design. ***(Source: Kuwait Municipality Archives)***

4th KMP (2040): The Fourth Master Plan by Perkins and Will



Brief:

The Kuwait Master Plan (KMP) 2040 will lay out comprehensive policies and land use planning guidelines for the whole physical development and land use of the State of Kuwait during the next planning era, which will expire in 2040. All efforts will be made to ensure that the Master Plan is consistent with the State of Kuwait's Development Plan, Kuwait Vision 2035, in terms of the kind of research or interest it promotes, the techniques it employs, and the land use needs and projects it necessitates. A comprehensive and holistic planning of land uses is essential for the demographic, social, economic, and environmental growth of Kuwait, and this alignment will bring this about. Transportation, Civil Infrastructure, Environmentally Sensitive Features, Coastal Marine Areas, Natural Resources, Biodiversity, Natural Heritage, and Cultural Features and Policies (KMP 2040) will all be identified, reviewed, and compared to the baseline of KMP 2040.

As a result of this analysis, a comprehensive, accurate, and up-to-date national database of existing, pledged, and projected urban and regional networks, infrastructure, and land resources will be delivered. The aforementioned will draw heavily from recently completed local development planning and updated local plans designed to cover regions and urban areas of high relevance to Kuwait and will aim to harmonise, balance, and prioritise the land use objectives of these plans into one incorporated future vision for the country. The master planning process will take into account the effects of projected demographic shifts and the realisation of economic development and diversification scenarios on national initiatives and land use requirements. In order to reconfirm a spatial strategy that satisfies future demand in a balanced manner, this master planning process will involve an in-depth analysis of national housing, social welfare policies and programmes, as well as the spatial consequences of the devoted public transportation programmes for the metropolitan area on population growth and economic development. KMP 2040 will suggest solutions that create sustainable and highly habitable urban settings capable of supporting population and job development during the planning period and beyond, taking into account historical places, trends, customs, perspectives, sensitivities, and the political context.

New land use planning administration tools and systems will be incorporated into KMP 2040 as well, with the goal of assisting relevant authorities in managing and monitoring

land use patterns, mass transit and infrastructure connectivity, economic activity, and population growth across the State. An Enterprise GIS is currently being developed by the Kuwait Municipality, and a new project is being developed to consolidate zoning plans and planning regulations; these databases serve as the current baseline for the KMP 2040 project, and they will be modified automatically based on the outcomes of this planning exercise. ***(Source: Kuwait Municipality Archives)***

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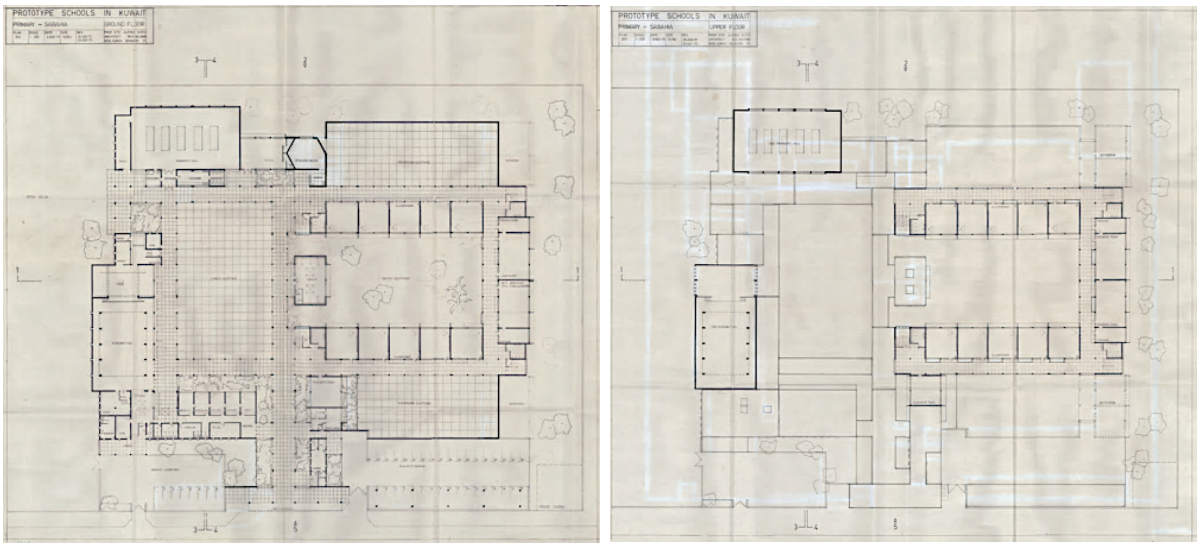
This section includes a supplementary school blueprint that pertains to the instances discussed in Chapter 6.

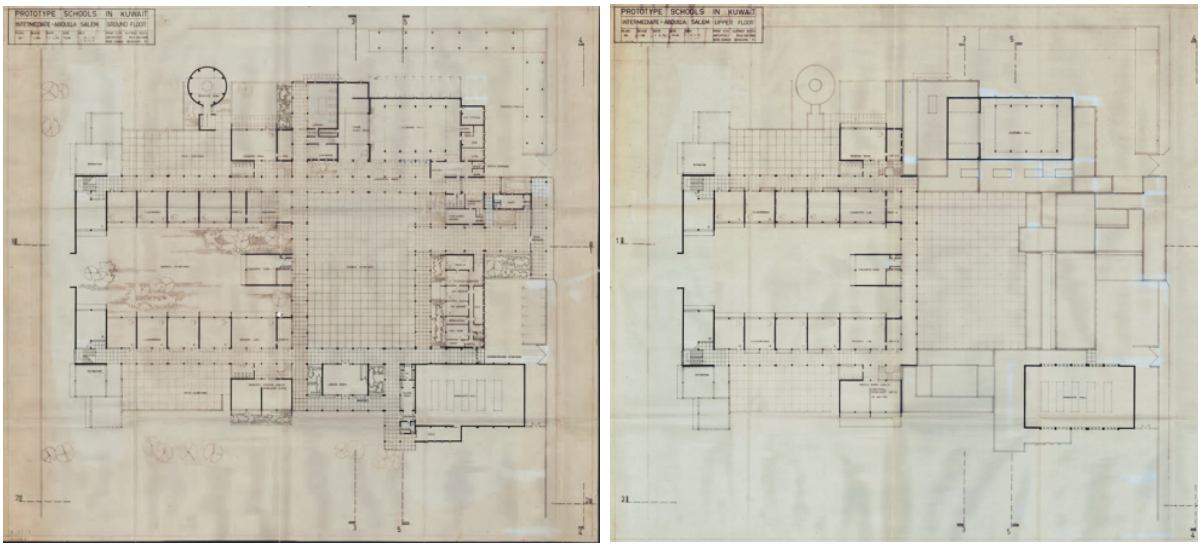
APPENDIX F. GALLERY

Figure 6.55 Sabahiya Primary School model, 1970



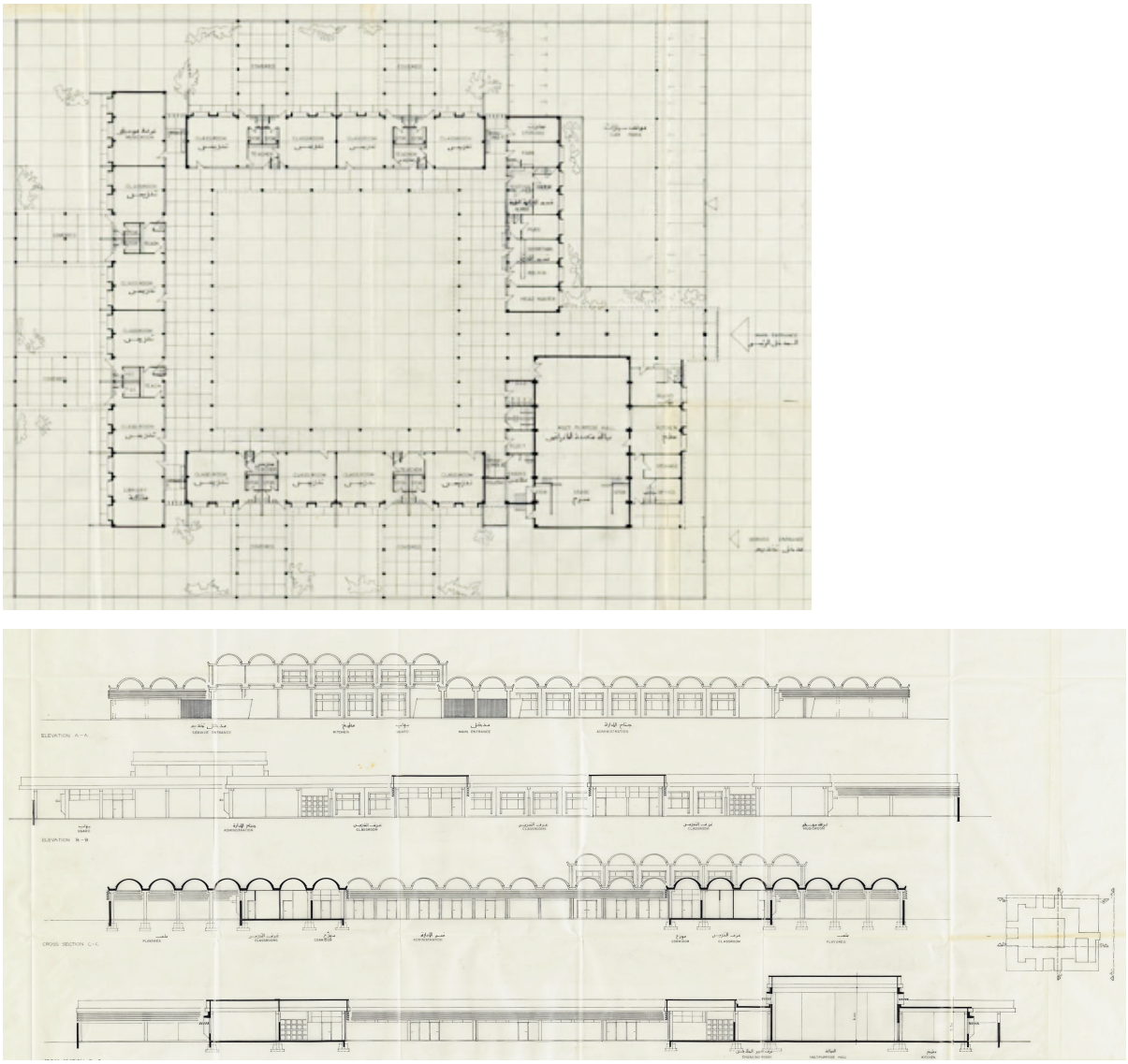
Source: *Al-Sabahiyah primary school* model, site layout, ground and first level plans, 1970 (Source: gta Archives / ETH Zurich, Alfred Roth, Ref. 131-0163,0164 (1/5), Ref. 131-0182/0188)

Figure 6.58 Abdullah Al-Salem Intermediate School, site layout, 1970



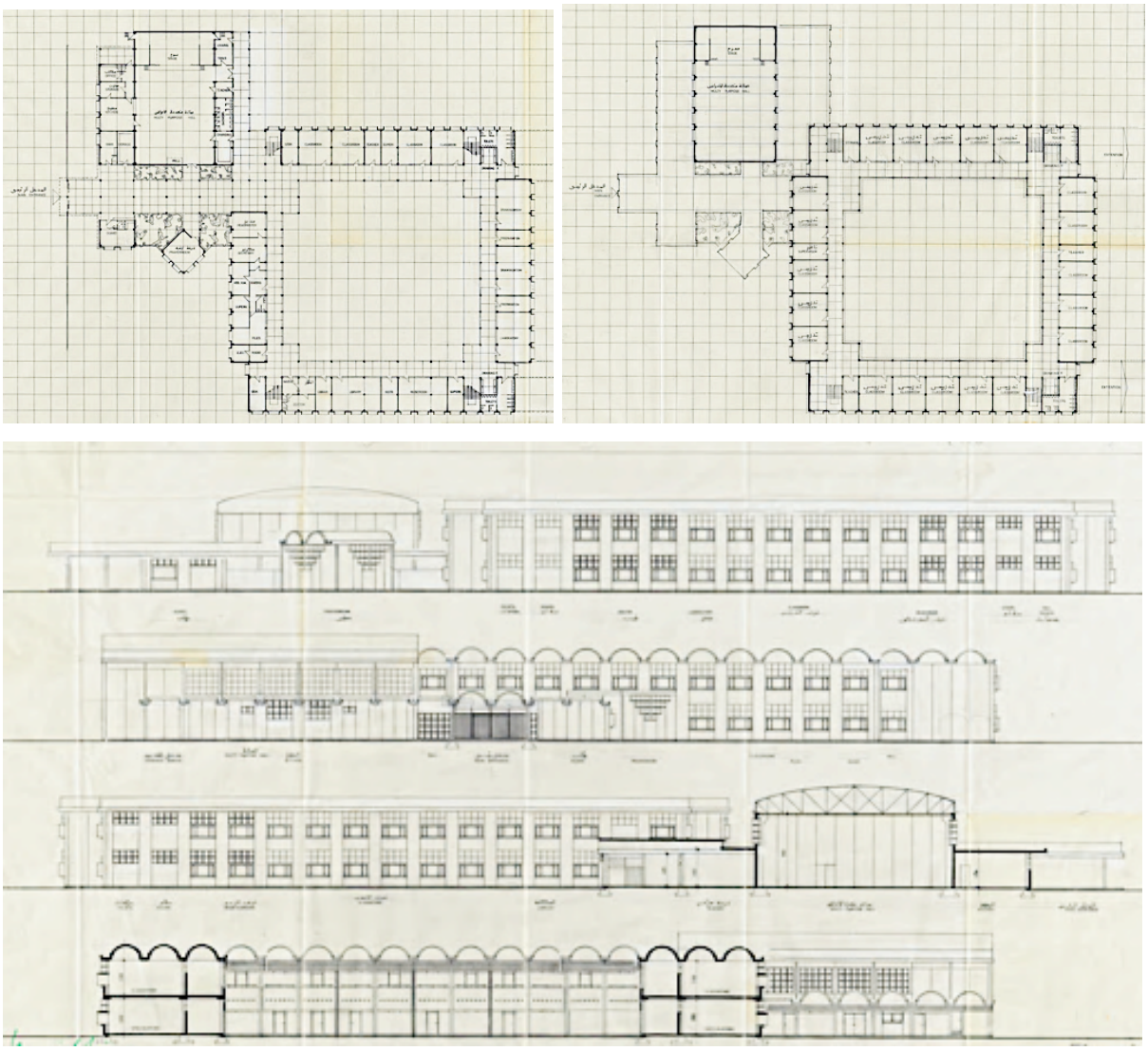
Source: *Abdullah Al-Salem intermediate school* model, site layout, ground and first level plans, 1970 (Source gta Archives / ETH Zurich, Alfred Roth, Ref. 131-0163,0164 (1/5), Ref. 131-0182/0188)

Figure 6.62 A new prototype kindergarten, 1975



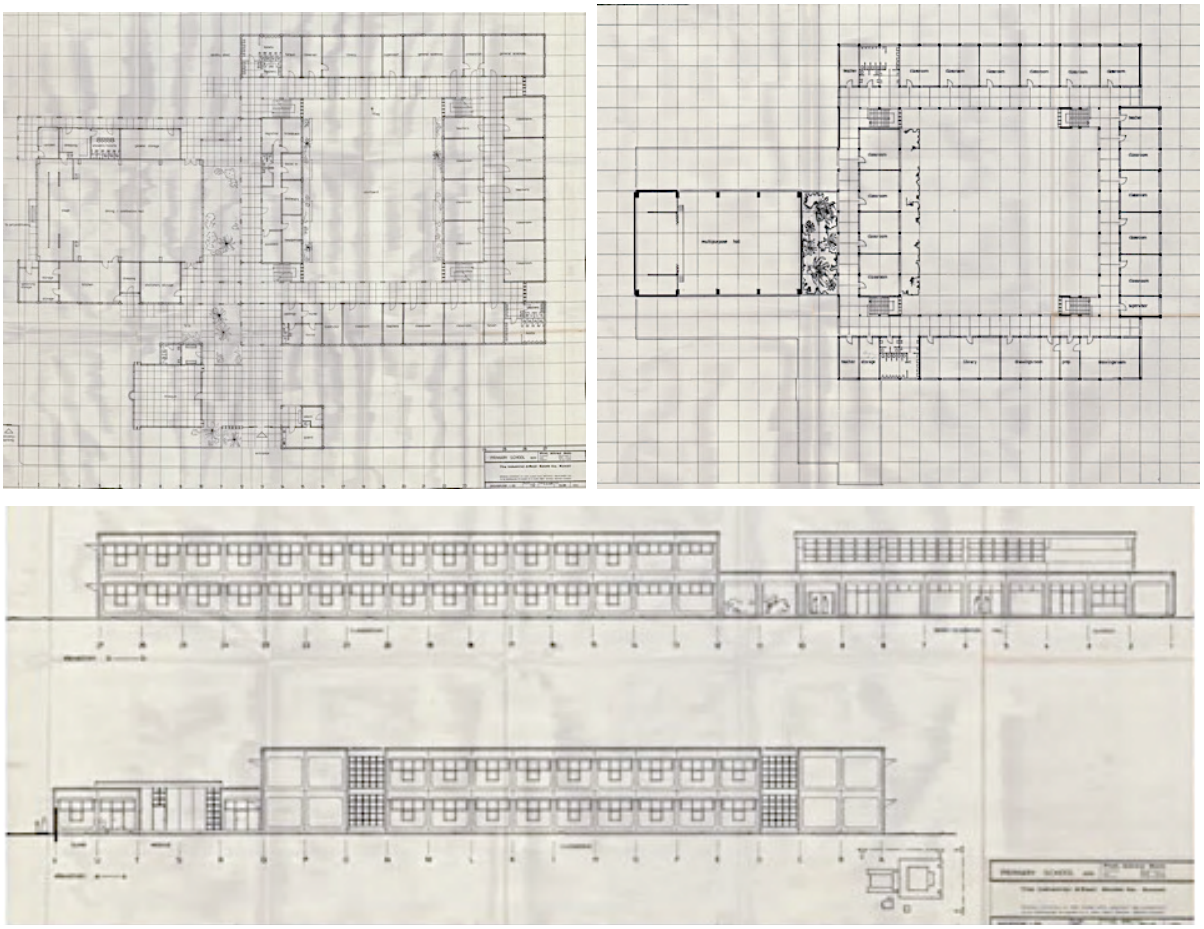
Source: A new prototyped kindergarten, model, ground floor, elevations and sections showing the barrel vault roofing, 1975 (Source: gta Archives / ETH Zurich, Alfred Roth, Ref. 131-0162 (5/5), Ref. 131-0163,0164(1/5))

Figure 6.63 A new prototype primary school, 1975



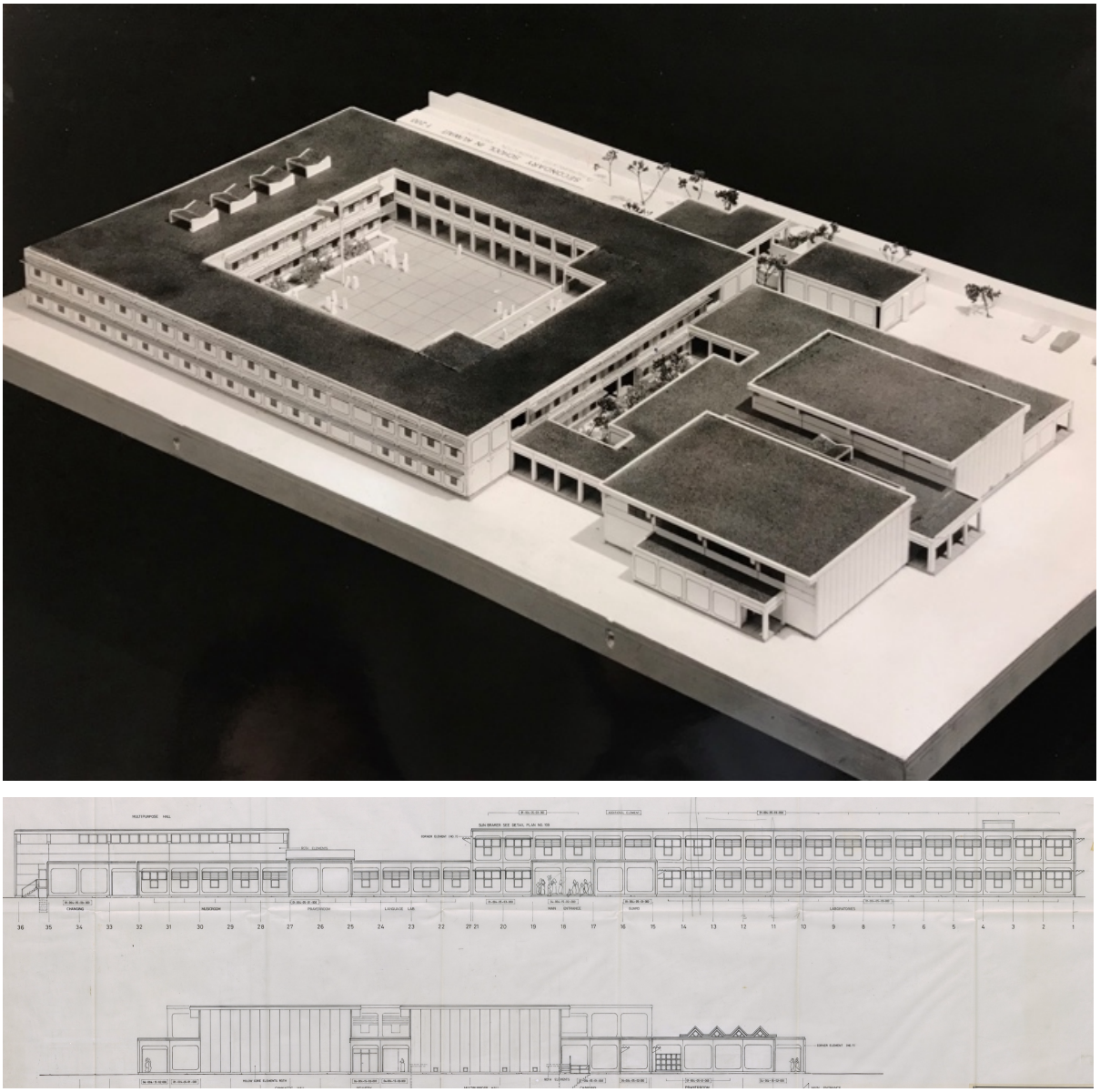
Source: A new prototyped primary school, model, ground and first floor plans with its elevations and section, 1975 (Source: gta Archives / ETH Zurich, Alfred Roth, Ref. 131-F-12-1-1-4 (5/5), Ref. 131-0163,0164(1/5))

Figure 6.64 A new prototype intermediate school, 1975



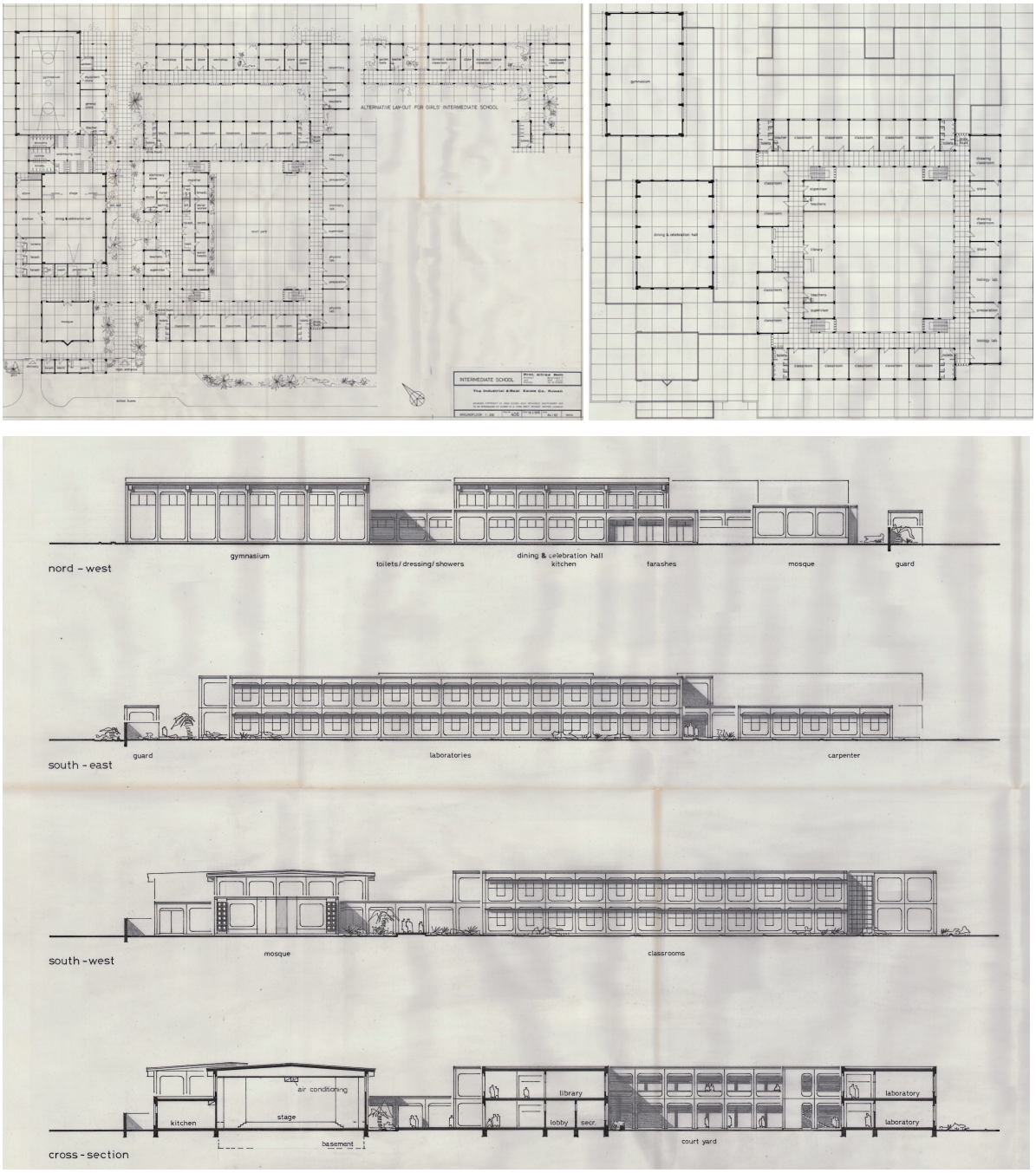
Source: A revised prototyped intermediate school using the prefabricated concrete structure by *IREC,* 1978 (Source: gta Archives / ETH Zurich, Alfred Roth, Ref. 131-0164/0165(5/5))

Figure 6.70 Secondary school prefabrication, a condensed design, c. 1978



Source: A revised prototyped secondary school using the prefabricated concrete structure by *IREC*, 1977 (Source: gta Archives / ETH Zurich, Alfred Roth, Ref. 131-0162 (5/5), Ref. 131-0164/0165(5/5))

Figure 6.74 The new prefabricated structure in production, c. 1978



Source: A revised prototyped intermediate school using the prefabricated concrete structure by *IREC*, 1979 (Source: gta Archives / ETH Zurich, Alfred Roth, Ref. 131-0164/0165 (5/5))

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