Governance of health professions education in Sudan:

Implications for appropriateness of graduates to population health needs

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Submitted in accordance with the requirements for the degree of

Master of Philosophy (MPhil)

The University of Leeds

School of Medicine

February 2023

The candidate confirms that the work submitted is his own and that appropriate credit has been given where reference has been made to the work of others.

Acknowledgment

I would like to express my thankfulness to all those people who gave so generously of their time and support for this study. Special thanks to the respondents for sharing their experiences, views, and perspectives. I also appreciate the cooperation of committee gatekeepers in allowing observation of meetings for the research purposes. My appreciation extends to colleagues who facilitated data collection and management through logistic support and communication. My employers, mainly the Federal Ministry of Health, were so kind in providing funding support for the study.

I am deeply grateful to my supervisors for guidance, advise, and unfailing support. Dr Ricky Van Kalliecharan has been supportive all through the study period as a principal supervisor, Professor Deborah Murdoch-Eaton has provided supervision for most of the research stages, and Professor Andrew Green and Dr Ehsanullah Tarin were of substantial help during the early phases of the study. Lately, Professor Anne-Marie Reid joint the supervision and provided outstanding guidance. The supervisors and the University of Leeds management showed understanding and cooperation during my repeated periods of study suspension for family and country related reasons.

My family, friends, and colleagues have provided moral support and encouragement in addition to logistical help that I needed to deal with the challenges of a part-time study amid family and country related challenges. My gratitude and appreciation to my small family for the sympathy, tolerance, and support.

Glossary of Terms[1]

Accreditation: the decision to grant an existing health professions education institution or programme a recognition for having met certain predefined standards and requirements

Appropriateness: Refers to the optimum quantity, quality, and relevance of health professions education graduates in relation to addressing population health needs

Approval: The decision for authorising a new health professions education institution or programme

Governance: The structures, relationships, and processes through which policies for health professions education are developed, implemented, and reviewed towards achieving intended goals (Based on OECD, 2008).

Health professions education: The formal undergraduate level of education that prepares learners to join a health profession e.g., medicine, nursing, or midwifery

Health workforce/human resources for health: the totality of health professionals serving through health systems to ensure health care provision and healthier population

Higher Education: Also termed tertiary education meaning the post-secondary education at a university or a higher education institution leading to award of an academic degree

Population health needs: the need of a certain population for variable health resources and interventions required to restore, maintain, and further improve the health of its members

Quality: the level of knowledge, skills, and attitude of the graduates of health professions education required for provision of safe and effective health care

Quantity: Numerical adequacy of the graduates of health professions education in relation to actual or perceived needs of the health services or a defined population

Relevance: the suitability of the graduates of health professions education for the needs of a defined population in terms of the disease pattern, sociocultural norms, service approach, and other contextual considerations

The state: the establishment or regime responsible for governing a country, denoting higher levels of government such as presidency or cabinet

[1] *This glossary delineates the main concepts and terms used in this thesis and is meant as an easy reference. It should however, be noted that the definitions are further elaborated inside the thesis based on the literature and the study findings.*

Abstract

Quantity, quality, and relevance challenges of the health workforce are widely recognised and represent a global concern. Educational governance as a strategy to tackle these challenges is under researched despite its obvious importance. The aim of this study was to explore governance for health professions education in Sudan in the context of graduate appropriateness to population health needs. I developed a conceptual framework to guide the study and employed a qualitative case study approach to investigate national governance using documentary review, observation, and interviews as data collection methods; and adopting reflexivity to enhance the study.

The study analysed the structures, relationships, and processes for health professions education governance in the light of applying good governance principles and examined their influence on the quantity, quality, and relevance (appropriateness) of graduates in context of health system realities and population health needs. Complex and multidimensional effects of governance are verified in the milieu of a state-controlled model of higher education. Structural, relational, and process related dynamics of governance in the context of Sudan resulted into both gains and limitations for the quantity, quality, and relevance of graduates of health professions education. Despite substantial quantitative gains, the quality and relevance aspects of graduate health workers are challenged by considerable imbalances and capacity issues. Gaps in conceptualisation, governance dichotomies, policy inconsistencies, sociocultural realities, and weak monitoring and evaluation explain the imbalances observed. These factors are either governance related or amenable to governance interventions.

The study provided for conceptual clarity around governance, established the significance of governance to graduate appropriateness, offered lessons for policy and practice, and delineated areas for future research. Methodological contributions of the study include a revised conceptual framework for analysing and strengthening educational governance for health, a conceptualisation around good governance principles, and considerations for using reflexivity in qualitative studies when researching own-field.

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Abbreviations

AHS	Academy of Health Sciences
AMEE	Association for Medical Education in Europe
ASU	Association of Sudanese Universities
CBME	Competency Based Medical Education
CPD	Continuing Professional Development
CQI	Continuous Quality Improvement
ECFMG	Educational Commission for Foreign Medical Graduates
EDCs	Educational Development Centres
EPHFs	Essential Public Health Functions
FGD	Focus Group Discussion
FMOH	Federal Ministry of Health
GCSA	Global Consensus on Social Accountability
GHWA	Global Health Workforce Alliance
HE	Higher Education
HEIs	Higher Education Institutions
HRH	Human Resources for Health
HPE	Health Professions Education
IAMRA	International association of Medical Regulatory Authorities
IT	Information Technology
LCME	Liaison Committee on Medical education
MDGs	Millennium Development Goals
MHSC	Medical and Health Sciences Committee
MOHE	Ministry of Higher Education
MOJ	Ministry of Justice
NCHCC	National Council for Health Care Coordination
NCHE	National Council for Higher Education

NCMHP	National Council for Medical and Health Professions
NCT	National Council for Training
NCTTE	National Council for Technical and Technological Education
NES	National Health Services Education for Scotland
NPM	New Public management
OECD	Organisation for Economic Cooperation and Development
PAHO	Pan American Health Organisation
PHC	Primary Health Care
PHI	Public Health Institute
QA	Quality Assurance
QAAC	Quality Assurance and Accreditation Corporation
RHE	Revolution of Higher Education
SAMSS	Sub-Saharan African Medical School study
SDGs	Sustainable Development Goals
SDU	Sudan Doctors Union
SMC	Sudan Medical Council
SMSB	Sudan Medical Specialisation Board
TVET	Technical and Vocational Education and Training
UHC	Universal Health Coverage
UNDP	United Nations Development Programme
UK	United Kingdom
USAID	United States Agency for International Development
WFME	World Federation for Medical Education
WHO	World Health Organisation

CHAPTER 1: SETTING THE STAGE FOR THE STUDY

1.1. Introduction

The study presented in this thesis explores the governance of health professions education (HPE) in Sudan and in the context of graduates' appropriateness to health system realities and population health needs. This introductory chapter outlines the study and presents its main objectives and outputs. First, the chapter introduces the significance of the health workforce, followed by a review of HPE's global landscape and challenges. It then briefly discusses the country context and study rationale, followed by the research questions and objectives. The chapter then states the main outputs of the study before closing with a summary.

1.2. Significance of the health workforce

The health care literature uses various terminologies to refer to the human component of the health system. In this thesis, the term "health workers" is used to denote to the totality of individuals from the different professional categories in health, including doctors, nurses, midwives, and other health personnel. "Health workforce," the plural of health worker, is used interchangeably with the term "Human Resources for Health (HRH)." Also, the words "physician" and "doctor" are used interchangeably throughout the thesis.

HRH are pivotal for health systems and health care. They are the most essential input for health systems and the central pillar for health care provision and health attainment (Joint Learning Initiative, 2004). Research has also demonstrated a positive correlation between health workforce density and population health outcomes (Anand and Barnighhausen, 2004), resulting in a global momentum and focus on HRH issues. In the context of universal health coverage (UHC), the health workforce is central to progress towards the health-related Sustainable Development Goals (SDGs), in particular goal 3: "ensure healthy lives and promote wellbeing for all at all ages" (Szabo et al., 2020). Any progress along the lines of SDGs, UHC, and population health improvement is considered unattainable without a productive health workforce. Also, the health workforce sector is considered a contributor to inclusive economic growth (WHO, 2017).

Education, a main domain of HRH, is the function through which health workers are created. Accordingly, HPE has become an area of major focus for countries and relevant entities worldwide.

1.3. Health professions education landscape

HPE is defined as encompassing education of all categories of the health workforce through the formal efforts to provide information and experience and develop new skills and competencies (Institue of Medicine, 2003). As implied by the definition, HPE is required to address capacity and the skills mix of health workers to meet the needs of health systems and health care. HPE is therefore a critical enterprise globally, and that is evidenced by the varied and dynamic landscape of institutions and processes pertaining to educating the health professions.

1.3.1. Challenges in health professions education

The global evidence reflects an increasing shortage in the number of health workers required to support health systems and population health. The WHO World Health Report (2006) estimated a global shortage of 4.3 million health workers, with some 57 countries witnessing a HRH crisis and levels of health workers (doctors, nurses and midwives) falling below a threshold of 23 health workers per 10,000 population (WHO, 2006b). Subsequent evidence projected a widening of that gap suggesting a global need for an additional 15 million health workers to meet the health workforce requirements of SDGs and UHC targets (Liu et al., 2017). Hence, scaling up health workforce education and production to ensure adequate health workforce supply has been identified as a vital strategy to improve health care and population wellbeing (Szabo et al., 2020).

The global shortage of health workers, though alarming, is not the only challenge in the context of health workforce development; issues concerning relevance and quality add enormously to the HPE agenda. As countries move towards the expansion of educational programmes for health workers, concerns are being raised around the growing mismatch between the graduates of these programmes on one hand, and health systems and population health needs on the other hand (Frenk et al., 2010). There is an increasing global realisation that the education of health professionals is failing to keep pace with the scientific, social, and economic changes that are transforming the health care environment (Zodpey et al., 2018). Also, Celletti et al. (2011) noted that many educational institutions are isolated from national health systems and from health service delivery. The dichotomy between education and health systems is a result of the planning and functioning of the two systems operating in isolation. Functioning in isolation limits the institutions' ability to prepare graduates to respond to evolving policies, epidemiology, and technologies that are relevant

to their eventual practice site, which puts the question of the relevance of HPE at the centre of the stage.

The quality of HPE is an additional concern that is closely linked to relevance. Even well educated, competent health professionals may find themselves ill-prepared to meet their job requirements when the mix of skills they have acquired is not well orientated to epidemiological patterns and the eventual workplace (Frenk et al., 2010). Concerns around health workforce quality are expressed by developed and developing countries alike. A special committee on education of health professionals in the United States reported that educational institutions are inadequately preparing the health workforce for quality practice that effectively responds to patients' needs (Institute of Medicine, 2001). Issues of health workforce quantity, quality, and relevance are therefore widely recognised and identified as challenges to health care.

This situation uncovers a chasm between health systems and health workforce realities and population health needs. Hence, matching medical education to population health needs is described as a major health issue in the 21st century that can be addressed by the health professions education machinery (Lueddeke, 2012).

The concepts of quantity, quality, and relevance refer to some understandings and connotations in the literature as shown above. However, a robust and precise definition for each of the terms is an area of less clarity. For quantity, there is no global consensus on defining a sufficient number of health workers although the WHO, as shown above, has tried to suggest a minimum threshold for certain professional categories. Quality is also described as relative and subjective and it can be seen as attaining certain defined standards for knowledge, skills, and other attributes (Joshi, 2012). Relevance is generally conceptualised around the fit of the health workforce to local epidemiological, sociocultural, and organisational realities. The context is essential for appreciation of the three terms that is why this study proposes certain definitions (see the Glossary of Terms) to be further elaborated based on the study findings.

Health workforce challenges of quantity, quality, and relevance are closely interrelated. Figure 1 below depicts this triad of challenges, which is fundamental to the rationale and analysis underpinning this study. Throughout this thesis, the word "appropriateness" is used to encompass

the three concepts (quantity, quality, and relevance) in terms of HPE responsiveness to population health needs.

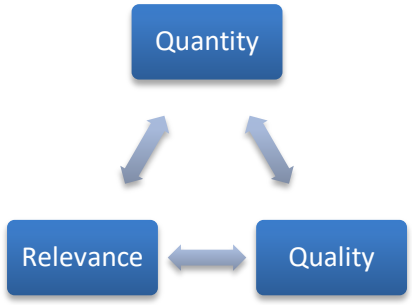

Figure 1: The three inter-related challenges of health professions education

HPE graduates' appropriateness continues to be a significant challenge for health systems and population health in the 21st century. Darzi and Evans (2016) referred to the quantity, quality, and relevance challenges of the HPE and the health workforce as major limitations on attaining universal health coverage. New projections of the global health workforce highlight a growing mismatch between supply, need, and demand, with international migration of health workers also increasing (Liu et al., 2017).

1.3.2. Response to the challenge

Due to the considerable global shortage of health workers, as evidenced by figures mentioned earlier, great attention has been devoted to scaling up the intake for HPE. Initiatives and programmes for scaling up the production of health workers have been established, proving successful in some countries (Global Health Workforce Alliance, 2008). Several other efforts to address the various aspects of the HPE appropriateness challenge were also introduced. Four major responses to the challenges highlighted by the literature are briefly discussed below.

The WHO, in partnership with the United States President's Emergency Plan for AIDS Relief, established a programme for the transformative education of health professions in 2009. This programme comprised an education and health system reform process that addresses the quantity, quality, and relevance of health workers and consequently contributes to achieving universal access and improving population health outcomes (WHO, 2013). The suggested reforms involved strengthening the coordination between education and health, mobilising funding for HPE, and

promoting social accountability among schools and health professionals. Moreover, educational infrastructure improvement, responsive student selection criteria, staff development, and updating curricula to reflect realities of local epidemiology and service delivery were all among the reform strategies proposed by this transformative initiative (WHO, 2013).

Parallel to the WHO initiative, the Global Commission on the Education of Health Professionals for the 21st century (the Lancet Commission), a network of leading personalities in education and health worldwide, released its report in 2010. The commission report called for a system-based, competency-driven transformative reform of HPE to respond to the changing context, content and conditions of health care and population health (Frenk et al., 2010). The educational interventions suggested included: joint planning between education and health; academic systems extending into primary health care (PHC) settings; global networks for collaborative learning; competency-based curricula; promotion of inter-professional and trans-professional education; exploration of the power of information technology (IT) for learning; global reach with local adaptability; and strengthening of educational resources (Frenk et al., 2010).

A global consensus for social accountability of medical schools (GCSA) also emerged involving over 130 worldwide organisations and individuals with responsibility for health, education, and professional regulation. The GCSA functions on the premise that the 21st century presents medical schools and HPE with quality, equity, and relevance challenges. The Global Consensus proposed ten strategic directions for medical schools to become socially accountable. The ten strategies are: anticipating society's health needs; partnering with the health system and other stakeholders; adapting to the evolving role of health professionals; fostering outcome-based education; creating responsive and responsible governance of medical schools; refining standards for education; supporting continuous quality improvement; establishing mandated mechanisms for accreditation; balancing global principles with context specificity; and defining the role of society in schools functioning (GCSA, 2010).

The Sub-Saharan African Medical Schools Survey (SAMSS), conducted in over 140 medical schools, identified issues related to quantity, quality, and relevance as the main challenges. It proposed recommendations to promote and improve medical education and population health in Sub-Saharan Africa (Mullan et al., 2011). The main suggestions included: improving educational infrastructure; strengthening staff development; promoting collaboration between education and

the health system; promoting community-oriented education; funding research and research training; developing and strengthening quality assurance (QA) and accreditation systems; increasing donor investment in medical education; and recognising the growing role of the private sector (Mullan et al., 2011). This study came in the wake of investment by the United States to scale up the health workforce and HPE in Africa. Through financial and technical support, medical and nursing education initiatives were implemented from 2011 to 2015, resulting in some successful reforms and tangible outcomes in the selected African institutions (Sewankambo and Donkor, 2018).

The four global initiatives, especially the Lancet Commission Report, enjoyed wide recognition and stimulated discussions and steps on HPE reforms. Yet, critique has been directed to the initiatives in terms of philosophical underpinnings, the content of proposed strategies, and the strength of evidence involved in the documents. Gordon and Karle (2012) questioned the proposition by the Lancet Commission Report that education is a follower of health care needs and suggested that the crisis is in health systems and not the HPE. Hawkins et al. (2015) referred to inconsistencies in the definitions and frameworks for competency-based medical education as representing a significant obstacle in appreciating this approach. Despite the appealing language, evidence on the impact of social accountability has been described as limited (Reeve et al., 2017). The four initiatives largely built on the opinions of experts, hence they emphasised a top-down approach for HPE reform (Bozorgmehr et al., 2011) and lacked rigour in evidence (Gordon and Karle, 2012). Subsequent analysis in Chapter 2 of this thesis will expand more on the critiques related to the initiatives and the proposed reforms.

The content of the four global initiatives discussed is, however, useful in relation to theorising for this research. The initiatives addressed both systemic and institutional arrangements pertinent to the graduate appropriateness challenge. They pointed out some important concepts and considerations relating to strengthening HPE and ensuring its linkage to the health agenda. However, the initiatives mainly focus on organisational reforms and interventions related to the educational process. The few suggested interventions at the system level included mobilisation of funding, QA systems, and coordination among stakeholders. National level (system) governance for HPE in its entirety does not figure clearly in the recommended solutions. This gap can be bridged by attending to system-level governance due to the crucial role it plays in directing,

planning, and ensuring implementation of all reform interventions aimed at improving the appropriateness of HPE. The WHO guidelines on transformative HPE, released in 2013, explicitly noted the need for case studies on governance structures and processes (WHO, 2013). The above initiatives highlighted a need for a partnership between education and health, but the question of how to attain this is left unanswered. The undertaking of this study was motivated by these gaps and the need for further exploration.

1.4. The country context

1.4.1. The general situation

Sudan is a diverse African country with a population of 40.7 million growing at a rate of 2.8 percent per annum (FMOH, 2017). The country depends on agricultural and livestock economy with some contribution from oil resources. With a per capita domestic product of $1,940 in 2014, Sudan is classified as lower middle-income country[2]. Politically, Sudan adopts a devolved system of governance with a federal level and 18 state governments, in addition to over 180 localities. A major political shift ensued in Sudan when a public uprising in April 2019 terminated a 30-year governance of the pro-Islamist El-Engaz regime. The country is currently under a transitional government preparing for general elections to be organised in 2024.

The main health challenges in Sudan include communicable diseases coupled with rising trends of non-communicable diseases, in addition to health emergencies. With an infant mortality rate of 57 per 1,000 live births, maternal mortality ratio of 216 per 100,000 live births and malaria as one of the main causes of death; progress of the country towards the Millennium Development Goals (MDGs) was judged to be below optimum (FMOH, 2017).

1.4.2. The health system context

The country's health system is decentralised, and the state mainly leads health care, although the private sector role is increasingly rising in service provision. According to official reports, population access to health care has improved from 87 percent in 2011 to 95 percent in 2016. However, disparities and quality gaps exist, and the services tend to focus on the curative dimension (PHI, 2016). The Federal Ministry of Health (FMOH) and state ministries of health spearhead the decentralised system with the former responsible for policy and strategic planning

2 https://data.worldbank.org/country/sudan

and the latter mandated with operational planning and implementation. Sudan spends almost 6.5 percent of its GDP on health, while total government health expenditure is 9 percent. However, 75 percent of total health expenditure is out of pocket (FMOH, 2017). A social health insurance scheme is evolving with an estimated coverage of 54 percent of the population (PHI, 2016).

Competent national bodies regulate pharmaceuticals, supplies, and equipment. However, challenges exist in availability, supply chains, and irrational prescription of drugs, in addition to the lack of an effective health technology assessment. The national health information system depends on facility reporting, supplemented with national surveys. There are, however, limitations in data coverage, quality, and analysis. A new strategy emphasising an integrated information system with an electronic interface has been recently adopted (FMOH, 2018).

The HRH sector in Sudan comprises over 150,000 health workers of various categories (FMOH, 2012). Most of the health workforce serves in the public sector, although dual practice with involvement in private sector work is rising and warranting concern. FMOH spearheads policy and planning for the health workforce. Other essential stakeholders exist, including the higher education (HE) sector, regulatory councils, syndicates, and professional associations. Problems of coordination and synergy among these stakeholders are not uncommon in the country. Main health workforce bottlenecks and challenges include numerical shortages, skill mix imbalances, inequitable geographic distribution, and massive emigration (Badr et al., 2013).

1.4.3. Health professions education in Sudan

HPE is deeply rooted in Sudan with nursing, midwifery and allied health personnel schools dating back to the early years of the last century (Bayoumi, 1979). The first medical school in Tropical Africa was established in Khartoum, the capital of Sudan, in 1924. It had the same rank as the second medical school, which had a comprehensive syllabus in Northern Africa (Haseeb, 1967). The subsequent evolution of HPE generated a two-tier education system. Medical education became embedded in the university model under the Ministry of Higher Education (MOHE). In contrast, nursing, midwifery, and allied health professions education mainly remained in vocational schools under the Ministry of Health, with the limited provision by universities. Based on this educational divergence, doctors, dentists, and pharmacists became regulated by the Sudan Medical Council (SMC). At the same time, nurses, midwives, and others fall under auspices of the National Council for Medical and Health Professions (NCMHP).

A major contextual factor for HPE was the advent of the 1990s educational expansion, which later came to be known as the Revolution of Higher Education (RHE), and the privatisation policy, both realised through political thrust. As a result, over 15 new universities were established in different states of the country. The total number of HPE institutions reached 319 in 2019 compared to 73 in 2001, with nearly 60 percent belonging to the private sector (Figure 2 below). The ramifications of the RHE on the HE sector (including HPE) have been since a topic of debate (Bishai, 2008). The RHE and privatisation have certainly impacted the quantity, quality, and relevance of HPE, and this is discussed later in the thesis.

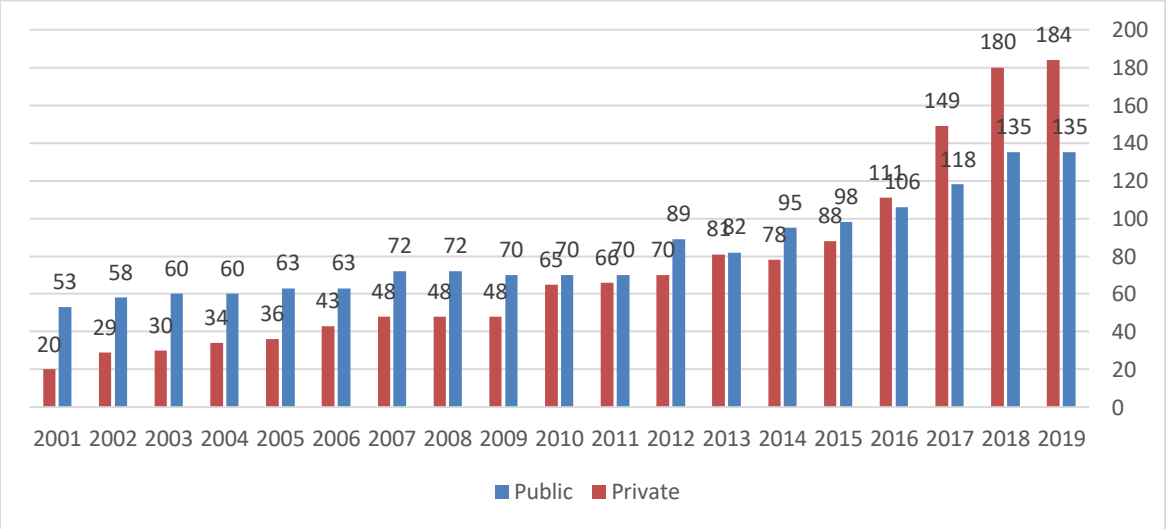

Figure 2: Trends in number and ownership of HPE institutions in Sudan ,2001-2019 (Source: MOHE records)

Medical education has received the most outstanding share of expansion compared to other types of HPE. The number of medical schools soared from five in 1990 to 69 in 2019, with nearly 45 percent belonging to the private sector (Figure 3). About 60 percent of the medical schools are in Khartoum, the reason being the private sector's tendency to invest in big urban settings. The decrease in the number of public medical schools in 2012, observed in Figure 3, is due to three medical schools being in Southern Sudan, which became an independent state following a referendum in 2011.

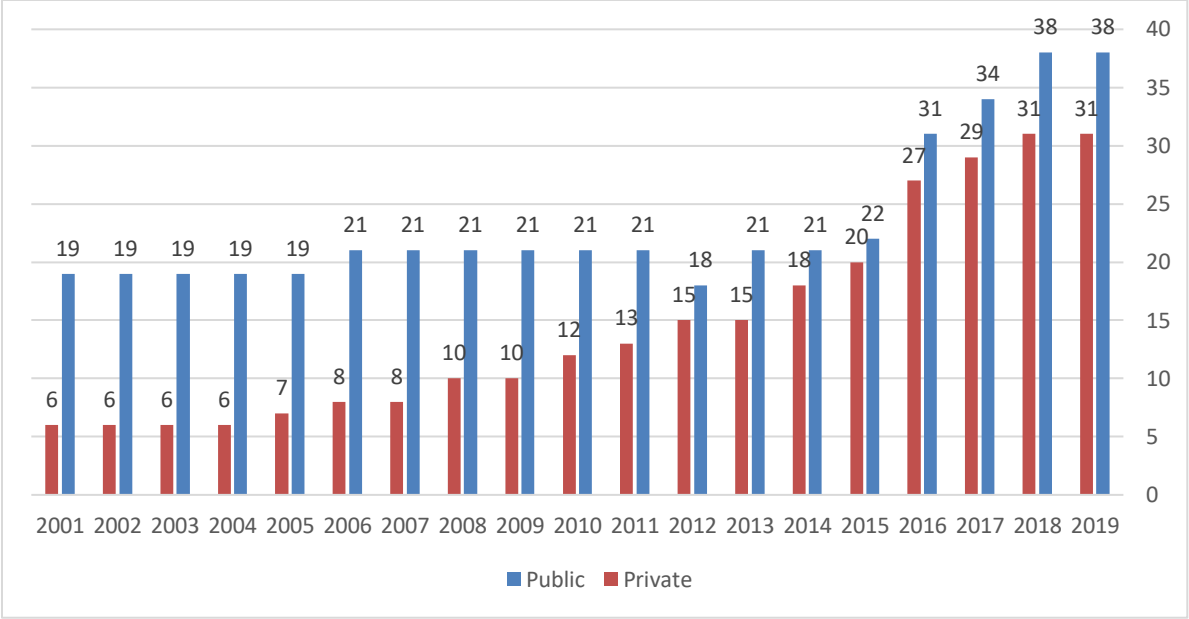

Figure 3: Trends in number and ownership of medical schools in Sudan, 2001-2019 (Source: MOHE records)

Figure 4 shows the same direction of a steady increase in nursing schools but, unlike medical schools, private sector contribution is much lower. However, a rapid rise took place from 2016 onwards. The overall number of nursing schools is also much lower than medical schools, explaining the increasingly observed skill mix imbalances in the health workforce.

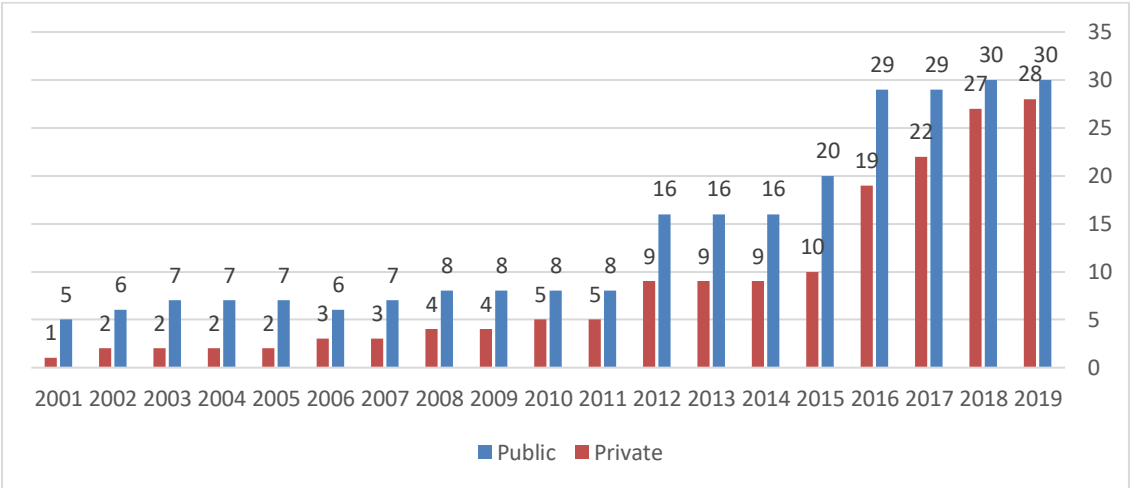

Figure 4: Trends in number and ownership of nursing schools in Sudan ,2001-2019 (Source: MOHE records)

With respect to graduates, the picture portrays an alarming skill mix imbalance: the number of graduated doctors (41,121) surpassed nursing graduates (9,621) by over four-fold during the period 2001-2018. Records reflected in Figure 5 below show the comparison between medical and nursing graduates over the past 18 years, and it is evident that the imbalance has remained over the years. A reversed ratio could prove healthier for a balanced mix of the health workforce in countries like Sudan, where medical doctors emigrate intensely, and nurses are most needed to provide PHC to the extensive rural population. This picture could well explain the challenges, discussed below, with health coverage and provision of a comprehensive service package at PHC level in Sudan.

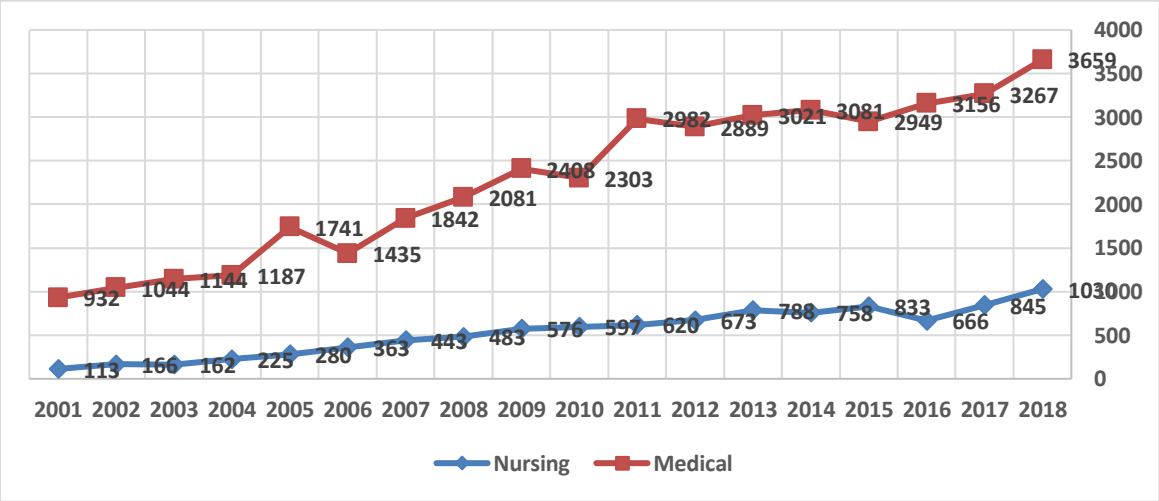

Figure 5: Comparative trends of medical and nursing graduates in Sudan for the period 2001-2018 (Source: MOHE records)

Another contextual factor for HPE is the endorsement of the "Sudan Declaration for the upgrading of Nursing, Midwifery and Allied Health Professions" in 2001, which called for transforming vocational education of nurses and allied health professions to university-level qualifications (FMOH, 2001). Eventually the FMOH, in agreement with MOHE, declared the abolition of vocational schools and shifted its responsibilities regarding HPE to the MOHE. However, a subsequent assessment in 2005 by the FMOH showed that uptake of nursing and allied health students in universities was only one-tenth of what it used to be in vocational schools, which gave rise to critical shortages (FMOH, 2005). In the same year and as a response to the crisis, the FMOH declared the establishment of the Academy of Health Sciences (AHS) as an educational institute

for nursing, midwifery, and allied health professions, a matter that created controversy between the two ministries. The AHS adopted a crash programme to address the numerical gap and skill mix imbalances.

Concerns around the health workforce and the appropriateness of HPE graduates have previously been raised in Sudan (Badr, 2011). In 2006 there was an evident HRH shortage, with a density of 13 health workers per 10,000 population that fell below the WHO threshold of 23 per 10,000 and placed Sudan among the 57 HRH crisis countries (FMOH, 2012). Concerns over the quality of medical graduates and the consistency of standards across medical schools led to the introduction of an initiative on curricular reform and educational change (Grant, 2011). Anecdotal evidence from hospitals reflects problems in bed-side skills among nurses. From the relevance perspective the skill mix imbalance, especially between doctors and nurses, is a notable observation, as shown in Figure 5. The relative scarcity and shortages of nurses and allied health personnel are compromising PHC services in such a vast country. As records display, 36 percent of outreach health facilities in the country are mostly non-functioning mainly due to lack of staff; and only 24 percent of the functioning facilities provide comprehensive care (Bushara and Badr, 2005; FMOH, 2010).

HPE curricula and programmes are perceived as not keeping pace with the new approaches and developments in health care models and strategies. The FMOH has made several attempts at aligning new content on prevention strategies and treatment protocols with health care needs and a health system approach, and accommodating it into medical school curricula (FMOH, 2010). A lack of coordination between health care needs and education has been noted to adversely affect quality, relevance, and resource availability for medical schools (Grant, 2011). A responsive health system that addresses population health needs requires an adequate, balanced, appropriately skilled, and equitably deployed health workforce.

1.5. Study Rationale

Challenges relating to quantity, quality, and relevance of HPE are widely recognised in the literature and represent a concern in Sudan. Responses to these challenges require system-level and organisational interventions that transform HPE to better align with population health needs and address the contextual and health system constraints undermining the required transformation. There is a paucity of published data to inform policy in this domain (Celletti et al., 2011) and the

existing literature mostly lacks methodological rigour (WHO, 2013). As pointed out earlier in this document, governance, as a prime function and strategy to realise several recommendations on transformative HPE, has mostly not been explored.

Governance is recognised as crucial for overall development in a country and a catalyst to achieving health care gaols (Siddiqi et al., 2009). Within the health professions, educational governance is seen as highly relevant to health care as governance interventions such as strategic planning are needed to ensure that HPE of today will meet the future requirements for health workers (MacVane Phipps, 2018). Scally and Donaldson (1998) conceived a strong causal relationship between targeted and well-designed education and training, service improvement and patient outcomes underscoring the importance of governance in this context. The causal link between educational governance and health care outcomes is however, challenged by noting the complex array of factors beyond HPE that have a bearing on population health improvement (Gordon and Karle, 2012). Yet, a well governed HPE is no doubt, a contributing factor to health care and health improvement through production of the health workforce required to operate the health system. Several literature sources support this last proposition of HPE influence on health improvement (Institue of Medicine, 2003; Joint Learning Initiative, 2004; Barbazza et al., 2015; Zodpey et al., 2018). That points to the importance of ensuring robust governance for HPE to generate the quality workforce. Despite this, concepts and approaches to educational governance for health are largely under-developed due to a dearth of research globally (Coward, 2010).

Although studies on HE governance in developed and developing countries exist, the researcher has found no specific research addressing the governance of HPE from a national perspective. In Sudan, the literature on educational governance is non-existent. This study attempts to bridge this gap by exploring and developing a conceptual framework for HPE governance and testing it in the context of Sudan. The study is expected to add to the knowledge on HPE governance and inform policy and decision making in Sudan and beyond.

Recent evidence continues to support the rationale for this research. Despite theoretical and practical advancements in governance in politics and public policy, there is still surprisingly little research that applies governance theory to health workforce issues (Kuhlmann, E. and Larsen, 2015). In the broader health context, Pyone et al. (2017) described governance as a neglected agenda in health system research. Within the field of HPE, Nurakynova (2018) noted the limited

information and research on medical education governance despite the increasing appreciation of the role governance can play in implementing change and innovation in this field. It has been noted that in the broader field of HE, many theoretical and conceptual gaps exist in the literature, and the use of frameworks to study HE governance is rare (Austin and Jones, 2016).

1.6. The research questions and objectives

The overarching question for this study is: how does HPE governance in Sudan influence graduates' appropriateness to population health needs? The corresponding aim is to explore HPE governance in Sudan in terms of its effects/implications on producing graduates appropriate to the country's health system and population health. The prime hypothesis underpinning this study is that good HPE governance is associated with securing "fit for purpose and fit to practice" graduates. There are other assumptions for this study:

- The focus of the study is on contemporary HPE governance in Sudan
- The main domain for analysis is undergraduate HPE, with an emphasis on medical and nursing graduates. Postgraduate HPE and continuing professional development (CPD) are out of the scope of this study
- The study addresses the national (system) level governance. Institutional (organisational) governance is beyond the scope of the study
- Graduates' appropriateness includes dimensions of quantity, quality, and relevance.
- Implications of governance on graduate appropriateness is explored from a process perspective. Contents of educational programmes and curricula are outside the scope of the study.

Three key research questions with a set of six corresponding specific objectives emanate from the study's main question and aim, as shown in Table 1 below.

Table 1: Research questions and corresponding objectives of the study on HPE governance in Sudan

Research questions	Corresponding specific objectives
What structures, relationships, and processes exist for HPE governance in Sudan and how do governance principles apply?	1. To identify and examine governance structures for HPE in Sudan
	2. To determine and investigate governance relationships for HPE in Sudan
	3. To identify and analyse governance processes for HPE in Sudan
	4. To verify application of good governance principles for HPE in Sudan
How do governance structures, relationships, and processes in context of applying governance principles, influence the appropriateness of HPE graduates to population health needs?	5. To assess the effects of HPE governance structures, relationships, and processes in addition to application of good governance principles on the quantity, quality, and relevance of graduates
How can HPE governance be improved to ensure appropriateness of graduates to population health needs?	6. To have insight and draw lessons and recommendations on good governance for HPE toward appropriateness to population health needs

1.7. Study outputs

1.7.1. Thesis structure

This thesis represents the primary academic output of the study. It is composed of nine chapters. Chapter 1 introduces the study, while Chapter 2 develops the study's conceptual framework by reviewing relevant literature. Chapter 3 is devoted to explaining the research methodology, including its strengths, limitations, and reflexivity. Chapters 4, 5, and 6 examine HPE governance structures, relationships, and processes successively while Chapter 7 discusses governance principles and practices. Chapter 8 synthesises the findings of the previous chapters (4-7) to determine the influence of governance on graduates' appropriateness in the context of Sudan. The final chapter of the thesis (Chapter 9) reviews the conceptual framework based on the study findings and presents the study conclusions, recommendations, and implications.

1.7.2. Science communication

The thesis' elements might represent useful material and resources for different audiences including state authorities, policymakers, academics, health system leaders, and researchers in Sudan and beyond. As the effective communication of the results is essential to ensure visibility of the research and its beneficial influence, various dissemination strategies will be pursued following the thesis defence. These include publications, delivery of seminars and talks on the study summary and outputs, printing and disseminating the study recommendations to decision-makers and presenting them at national and international conferences. Subject to availability of funds, translation of the thesis into Arabic will be considered.

1.8. Summary

This chapter introduced the significance of the health workforce and HPE for the strengthening of health systems and improving population health. It reviewed the Sudan context and appraised the quantity, quality, and relevance challenges (the appropriateness challenge) facing HPE globally and in Sudan and established the rationale for this study. The chapter summarised the study's focus and presented the research questions together with the corresponding aim and objectives. These are informed by the study's conceptual framework and underlying literature, discussed in Chapter Two.

CHAPTER 2: CONCEPTUALISING HPE GOVERNANCE

2.1. Introduction

This chapter aims to develop a conceptual framework for HPE governance and is based on international literature. It starts by an overview of the phenomenon of governance and its associated definitions and attributes. The chapter then explores governance in the terrains of health systems, health workforce, and HE by providing a discussion of the definitions, levels, typologies, theories, and frameworks for appreciating governance. Informed by this, the chapter then proceeds to examining governance for HPE culminating into a proposed conceptual framework for analysing and strengthening HPE governance to be tested in this research. A summary is provided at the end of the chapter.

2.2. Understanding governance concepts

The concept of governance is not a new one; it has been in the discourse for quite a long time. However, it is still a controversial term with no single agreed definition or consensus. Perhaps it is generally understood and appreciated more than precisely defined. The Merriam Webster Dictionary (www.merriamwebster.com) defines governance as "the way that a city, company, etc. is controlled by the people who run it". The dictionary also suggests synonyms for governance including administration, authority, rule, government, jurisdiction, and regime. Ranson (2008) described governance as a system of rule and power in relation to the diverse and competing social interests within a society. Another definition by Brinkerhoff and Bossert (2008) conceives governance as relating to the rules that distribute roles and responsibilities among government, providers and beneficiaries and that shape the interactions involved. In these two definitions governance encompasses authority, power, and decision-making. Bevir (2012) however, posited that governance differs from government both theoretically and empirically. He affirmed that, whereas government refers to political institutions, governance is broader and refers to processes of rule wherever they occur.

The United Nations Development Programme (UNDP) describes governance as the exercise of political, economic, and administrative authority in the management of a country's affairs at all levels. Governance comprises the complex mechanisms, processes and institutions through which citizens and groups articulate their interests, mediate their differences, and exercise their legal rights and obligations (UNDP, 1997). Governance is also viewed as comprising the traditions,

institutions, and processes that determine how power is exercised, how citizens are given a voice, and how decisions are made on issues of public concern (Institute on Governance, 2003). The definitions above focus on structures/actors, processes for governance, and accountability. Governance can occur at local, national, or global levels (Daun, 2007).

Based on these definitions, attributes or principles for good governance have been set. This direction was associated with the appearance of common values and descriptive terms for governance besides good governance, including prefixes such as democratic, smart, and responsible (Barbazza and Tello, 2014). The World Bank has set definitions of good and poor governance, with a particular focus on developing countries:

> *"Good governance is epitomized by predictable, open, and enlightened policymaking, a bureaucracy imbued with professional ethos acting in furtherance of the public good, the rule of law, transparent processes, and a strong civil society participating in public affairs. Poor governance (on the other hand) is characterized by arbitrary policy-making, unaccountable bureaucracies, unenforced or unjust legal systems, the abuse of executive power, a civil society unengaged in public life, and widespread corruption"* (World Bank, 1994, p. 7).

The World Bank employs worldwide governance indicators to rank countries on an annual basis, based on the following dimensions: voice and accountability, government effectiveness, regulatory quality, control of corruption, the rule of law, political stability and absence of violence (Kaufmann et al., 2009). Not far away from that, the Overseas Development Institute's proposed six governance principles include participation, accountability, fairness, transparency, decency, and efficiency (Baez-Camargo and Jacobs, 2011).

The UNDP principles of good governance are universally recognised (Institute on Governance, 2003). They include legitimacy and voice translating into participation and consensus orientation, direction, and strategic vision, performance involving effectiveness, efficiency, and responsiveness to serving all stakeholders, accountability and transparency, fairness translating into equity, ethics, and the rule of law (UNDP, 1997). These principles, displayed in Figure 6 below reflect an approach to exercising successful governance in different fields.

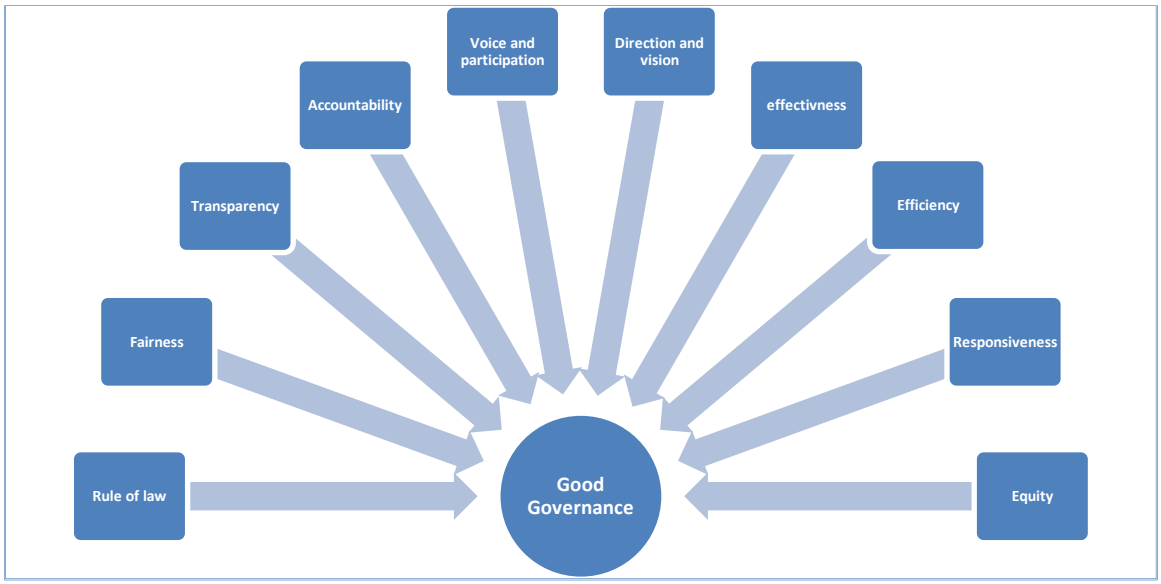

Figure 6: The UNDP good governance principles (based on UNDP, 1997)

The literature discussing governance in its general connotation has provided insight on the definitions and attributes. Different sources describe a set of overlapping principles for good governance as well as indicating instances of poor governance at political and managerial levels. The discussion of governance definitions and concepts, though useful, has generated notable remaining concerns, including:

- The lack of a universally agreed definition of governance leading to some confusion as to the precise appreciation of the phenomenon. This might arguably be attributed to the limited empirical research on the topic (Ruhanen et al., 2010) and the fact that governance crosscuts several disciplinary borders (van Doeveren, 2011). It should, however, be observed that there are considerable overlaps and nuances between different definitions of governance, allowing for the identification of some common attributes.
- The multidimensional and multifaceted nature of governance renders its study rather complex. Governance has roots in disciplines such as political sciences, economics, social sciences, development studies, and international relations and is informed by different theories emanating from several disciplines (Chhotray and Stoker, 2009).
- The prefixes that precede governance, especially the term “good”, are criticised of being unsettled in their meanings, obscuring, and overly ideal (Nanda, 2006; Grindle, 2017). The notion of good governance has traditionally focused on a laudable list of recommended

qualities that seems to ignore the context and the situational fit questioning the applicability and effectiveness. The notion moreover emphasises endpoints of performance with little understanding of how to get there and how to improve governance itself (Grindle, 2017).

The totality of the literature on governance, including the critique highlighted above, provides a basis for approaching the governance phenomenon in health and educational contexts. This pertains to supporting the development of a conceptual framework for this study. Informed by this general discussion, the rest of the chapter undertakes the endeavour of exploring governance in the terrains of a health system, health workforce, HE, and HPE.

2.3. Health system governance

The literature on health or health system governance mirrors the broader body of knowledge on governance in its general connotations. Several governance terms, definitions, and principles on health systems and health care have been developed.

The WHO World Health Report of the year 2000 introduced the concept of stewardship as a health system function (WHO, 2000), which was later used interchangeably with governance. The WHO conceives stewardship as the presence of a strategic policy framework combined with effective oversight. The core functions of stewardship (governance) are described to include policy formulation and strategic planning; generating intelligence; designing of regulation; collaboration and coalition; and ensuring accountability (WHO, 2014). Governance is envisioned as guiding the health system as a whole and not just being essential for health care delivery.

In 2002, the Pan American Health Organization (PAHO) proposed the concept of Essential Public Health Functions (EPHFs) as a governance tool to protect and improve people's health. EPHFs include monitoring and evaluation of population health, public health surveillance, health promotion, social participation in health, capacity for public health planning and management, strengthening capacity for regulation, promotion of equitable access to health care, health workforce development, QA of health services, research in public health, and emergency preparedness and response (PAHO, 2002).

Siddiqi et al. (2009) introduced a comprehensive work on health system governance, aiming at enhancing understanding and analysis. They suggested a framework to assess national health

system governance. Their framework built on the UNDP model (Figure 6) and extended the list of governance principles to include ten dimensions: strategic vision, participation and consensus orientation, rule of law, transparency, responsiveness, equity, effectiveness and efficiency, accountability, intelligence and information, and ethics (Siddiqi et al., 2009). These principles are disaggregated into broad and specific dimensions and questions to help test governance practices at national and sub-national levels.

The concept and principles of health governance have continued to evolve in the literature. Health system governance is also viewed as setting a strategic direction and objectives, making policies, laws, rules, regulations, or decisions and raising and deploying resources to accomplish the strategic goals and objectives (USAID, 2013). Collins and Green (2014) viewed health system governance as to how power, authority, and responsibilities are exercised and suggested that the way we interpret good governance depends on the values we uphold. They proposed the following eight key features for effective governance: proactive state; effective accountability; decentralisation of decision making; inter-sectoral action; inclusive involvement in decision making, ethical conduct, effective regulation, and transparency and democratising information (Collins and Green, 2014).

Similarly, Greer et al. (2016) viewed health system governance as the process and institutions through which decisions are made and how authority in a country is exercised. To add another perspective to the arena of good governance, Greer et al. (2016) proposed the TAPIC framework for analysing and improving health system governance, in terms of transparency, accountability, participation, integrity, and capacity. Governance is deemed essential for the functioning and development of health systems as it shapes their capacity to respond to demographic, epidemiologic, sociocultural, economic, and political challenges.

Despite the similarities in the governance principles described above, variations exist between them. Table 2 below portrays a matrix of health governance principles and attributes defined in some prominent publications that could be used to analyse the health system as a whole or its individual building blocks, such as the health workforce or financing (WHO, 2014). Some governance dimensions such as participation, accountability and regulation are emphasised by all the sources reviewed.

Table 2: Dimensions of good governance for health described by some prominent literature sources

Dimensions of governance	Authors chronologically			
	WHO 2007	**Siddiqi et al, 2009**	**Collins and Green, 2014**	**Greer et al, 2016**
Strategic vision	√	√	×	×
Participation	√	√	√	√
Regulation	√	√	√	×
Transparency	×	√	√	√
responsiveness	×	√	×	×
Equity	×	√	×	×
Effectiveness & efficiency	×	√	√	×
Accountability	√	√	√	√
Intelligence/information	×	√	√	×
Ethics	×	√	√	×
Integrity	×	×	×	√
Capacity	×	×	×	√
Proactive state	×	×	√	×
Decentralization	×	×	√	×
Inter-sectoral action	×	×	√	×
System design	√	×	×	×

Health system governance is described in many countries as transforming from a public state-controlled variant to more diffuse forms of decision making. Greer et al. (2016) described a market-oriented governance mode rooted in economics and the movement of new public management (NPM) and characterised by competition, contracts, and incentives. The other variant they alluded to is the emergent network governance rooted in sociology and favouring participation of a wide network of stakeholders. This last variant has also been described as collaborative governance denoting to streamlining stakeholders' efforts towards designing and implementing policies to generate public value (Bianchi et al., 2021).

Recent literature continues to underscore the importance of health governance. In the context of the thrust towards realising the SDGs, health system governance is considered a main change-maker for UHC and health security at the national and international levels, and is fundamental for improving the efficiency, resilience, and responsiveness of the health system (Wenham et al., 2019). With the emergence of the Coronavirus (COVID-19) pandemic in 2019, the importance of health systems governance is more felt and appreciated to address both the pandemic specific requirements and the continuity of other health services (Debie et al., 2022).

The conceptualisation around health governance, though useful, has been criticised for several limitations. While its importance is well recognised and the literature discussing it is expanding, health governance remains an elusive concept to define, assess, and operationalise (Barbazza and Tello, 2014). This probably reflects the inherent difficulty of dealing with governance as a concept and the lack of robust theoretical foundations, as explained in the previous section. The available frameworks for health system governance also lack a broader consensus on concepts, models, and measurement; and this is probably because they are developed independently, lacking a shared frame of reference (Bigdeli et al., 2020).

The lack of a tangible grasp of governance concepts and dimensions probably precludes the full operationalisation of the concept and its associated frameworks. Pyone et al. (2017) identified, in a systematic review, 16 frameworks for assessing health system governance, of which only five have been applied.

Further to the applicability of health governance, ascertaining its impact on population health improvement remains an area of limitation. Barbazza and Tello (2014) noted the challenge in assessing the impact of good governance on health outcomes, despite the compelling consensus and growing body of evidence on the importance of governance to improving health system performance. Fryatt et al. (2017) noted the lack of a standardised methodology in this respect. Methodological difficulties are however expected given the diffuse nature of governance and the need for composite measures to account for confounding factors. Batniji et al. (2014) posited that good governance strengthens the capacity of the state to deliver services and arguably contributes to improvements in mortality indicators. Finally, the available frameworks on health governance are described as missing some important aspects such as the dynamics around formal and informal

relations of accountability, power dynamics, and the expressing of people's voices (Bigdeli et al., 2020).

The debate in the context of health governance carries important implications for the study of health workforce governance. Health governance concepts and frameworks can be projected to the health workforce domain as a building block of the health system. Additionally, the literature on health governance approaches and practicalities can inform a health workforce specific theorising for governance. The next section dwells on these aspects through examining governance in the context of the health workforce.

2.4. Health workforce governance

Within the broader terrain of the health system, health workforce governance is an emergent field of study and analysis; it is increasingly recognised as a burning policy issue (Kuhlmann, E. and Larsen, 2015). Despite the evident importance of the health workforce in ensuring strong and functional health systems as well as effective health care, there has been inadequate attention to HRH issues in general. There is still surprisingly little research that applies governance theory to health workforce issues (Kuhlmann, E. and Larsen, 2015). Also, in the debate on HRH crisis, governance influence is undervalued, both at the global and local levels (Dieleman and Hilhorst, 2011)

Definitions of health workforce governance largely extrapolate from established definitions of health governance with little conceptualisation and adaptation to suit the peculiarities of the health workforce sector (Kuhlmann, Ellen et al., 2016). Contingent upon this, the literature on the health workforce defines governance in terms of attributes and characteristics for good governing taking either a process approach i.e., distribution of roles and responsibilities, or an outcome approach i.e., contribution of governance towards a desired health outcome (Dieleman et al., 2011; Kaplan et al., 2013; Gallagher and Eaton, 2015; Adeloye et al., 2017). While projecting concepts and applications from the health system to the health workforce area is possible and justifiable, there are specificities that warrant theorising for a health workforce governance; a point discussed later in this section.

Some attempts have been made to develop theoretical frameworks to acknowledge and analyse health workforce governance. One of these frameworks describes five governance areas for health workforce strengthening: development of a vision and policies for HRH, aid effectiveness,

regulatory mechanisms, participation and voice, and governance in competency development in HE for public health (Dieleman and Hilhorst, 2011).

Kaplan et al. (2013) introduced a more detailed account of health workforce governance. Their proposed framework takes a health system lens to HRH. It departs from the idea of considering governance and health workforce as two building blocks of the health system, i.e., applying health governance principles to the health workforce functions. Eight health governance principles are identified by the authors, including strategic vision, accountability, transparency, information generation, efficiency, equity and fairness, responsiveness, and citizen voice and participation (Kaplan et al., 2013). The authors aggregated the HRH functions under six categories: policy, leadership, partnership, education, finance, and human resource management systems benefiting from the HRH Action Framework developed by WHO, USAID and partners in 2009[3].

To illustrate this framework's applicability, they applied responsiveness as a health governance principle to the area of health workforce education. The results of the analysis are outlined below (Kaplan et al., 2013):

- Aligning pre-service education with the competencies needed to address population health enables the right numbers and cadres to enter the workforce with the right skills.
- An outdated curriculum is unresponsive to population health needs and is a source of poorly trained workers.
- In-service training should be linked to organisations' priorities/changes in the health sector. Ad-hoc in-service training that is unrelated to staff needs often results in low attendance rates.

The third perspective in HRH governance, which is very similar to the above, examines the relationship between health system governance and health workforce outcomes (Hastings et al., 2014). The authors identified six distinct health governance mechanisms to be assessed to determine health workforce outcomes, i.e., changes to health workforce attitudes, practice, and behaviour. Health governance mechanisms comprised shared governance, magnet accreditation, professional development and education, clinical governance, funding, and organisation of health care delivery. Barbazza et al. (2015) viewed health workforce governance from a conceptual angle

3 https://www.capacityproject.org/framework/

and proposed addressing the issue under two processes. The first is the strategic health system process that includes planning and forecasting, selecting applicants to initial education, evaluating students, certification and registration/accreditation, clinical decision support, and re-certification of health professionals. The second, which is more operational, is the health services process that includes recruitment and orientation, supporting practice environments, continuing professional development, improving performance, and mentoring.

As pointed out above, there is a need to extend the conceptualisation of governance to suit the peculiarities of the health workforce domain. Two considerations relating to this are discussed here. First, the tendency to project the health governance concepts to the domain of the health workforce reflected by the literature sources reviewed in this section might be considered as a limitation. It entails a reductionist approach viewing the health workforce as only a subset of the health system function while in essence the health workforce arena is complex and far reaching. As Fox (1996) noted, policy discussions within the health workforce domain are structurally entrenched across a web of various heterogeneous stakeholders within and outside the health sector. The influence of the stakeholders including those beyond health is significant and usually entails sovereignty issues and political manoeuvring (Witter et al., 2013). Creation and utilisation of the health workforce entails important roles for independent sectors including education, health, labour, and finance. In the context of health worker migration, entities beyond national jurisdiction also come into play. Such characteristics require governance to consider the power dynamics and the formal and informal relations that underpin the crowded stakeholder landscape of the health workforce sector at national and international spheres.

Second, the current frameworks for health workforce governance add little clarity especially when it comes to addressing the complexity of the sector and applicability considerations. These frameworks tend to overly rely on characterisation of governance i.e., good governance principles, at the expense of highlighting the structures, processes, and context for governance, i.e., the practicalities. The assessment of what good governance entails is precluded by the variety of definitions and characterisations offered by the literature (van Doeveren, 2011). Moreover, and as discussed in Section (2.2) the principles for good governance, such as participation, transparency, and accountability, are appealing but they entail an abstract and subjective nature, and their appreciation depends on various perspectives. There is a need to supplement the normative/ideal governance principles with the structures, relationships, and processes that contextualise these

governance principles and enable applicability and this represents an important consideration in this study.

The most recent literature continues to support the need for focusing on the health workforce governance and improving its conceptualisation. The COVID-19 crisis has exposed how dependent health systems are on a resilient and competent health workforce, which is itself dependent on strong oversight and governance (Lim and Lin, 2021). Given the intersectoral and interdisciplinary context of the health workforce, governance processes must challenge the traditional 'silo' approach (Hazarika, 2021). A robust conceptualisation for governance in the health workforce domain would need to consider the complexities involved. Lim and Lin (2021) conceived the need for a stakeholder-driven network governance model with the state acting as a strong steward against vested stakeholder interests. The strengthening of health workforce governance is also noted to require mechanisms and actions to coordinate an intersectoral health workforce agenda and structures to develop and monitor relevant policies and plans (Martineau et al., 2022).

The review of health system and health workforce governance in the previous sections can support conceptualisation for HPE governance as HPE is essentially a health workforce function largely occurring within a health system context. To illuminate the whole contextual milieu for approaching governance for HPE, the next section discusses governance for HE, the father discipline for HPE pedagogy.

2.5. Higher education governance

2.5.1. Overview of concepts

Governance in HE has been an area of increasing focus and interest. Various definitions of governance in the context of HE appear in the literature as a thrust to address the complex concept, albeit with little consensus (Austin and Jones, 2016). These range from simple conceptualisations to more mid-range and multidimensional explanations. According to Neave (2006), tertiary education governance is a conceptual shorthand for the way HE systems and institutions are organised and managed. Toma (2007) defined educational governance as being both as simple and as complicated as responding to the question: who makes what decisions? Going further along

complexity lines, university governance was described by Marginson and Considine (2000 ,p 7) as:

> *"Concerned with determination of values inside universities, their systems of decision-making and resource allocation, their mission and purposes, the pattern of authority and hierarchy, and the relationship of universities as institutions to the different academic worlds within and the worlds of government, business and community without."*

A more comprehensive definition is HE governance conceptualised as encompassing the structures, relationships, and processes through which, at both national and institutional levels, policies for tertiary education are developed, implemented, and reviewed (OECD, 2008). This last definition, widely advocated by the Organisation for Economic Cooperation and Development (OECD), is useful for this study. These definitions for educational governance, though useful, need to be supplemented with further delineation of frameworks and specificities to provide an insight into how good governance comes about (Goedegebuure and Hayden, 2007). The next subsections attempt to approach this by addressing some educational governance components.

2.5.2. Classification and levels of educational governance

Three levels of exercising governance in the HE arena are described in the literature. Micro-level governance is confined to a unit or departmental sphere. Meso-level governance happens at the organisational (school or university) boundaries, and macro-level governance is concerned with governance arrangements at the national sphere or HE system (Austin and Jones, 2016). Micro and meso-level governance are internal to universities or higher education institutions (HEIs). On the other hand, governance is seen as external to universities and denoting the role that the government and other external stakeholders play in governing HE in their jurisdiction. With the advent of globalisation and international interconnectedness, a fourth level of global or transnational governance was identified (Daun, 2007; Huisman, 2009). Evidence points to increasing interactions between domestic and supranational policies and a steering approach in HE (Huisman, 2009).

Based on this cascade, the nature of governance moves from more practical and operational interventions to more policy and strategic functions; and from local to national to supranational levels (Figure 7). This differentiation of governance levels is not confined to HE; it is likewise seen in other governance spheres, including politics and health systems.

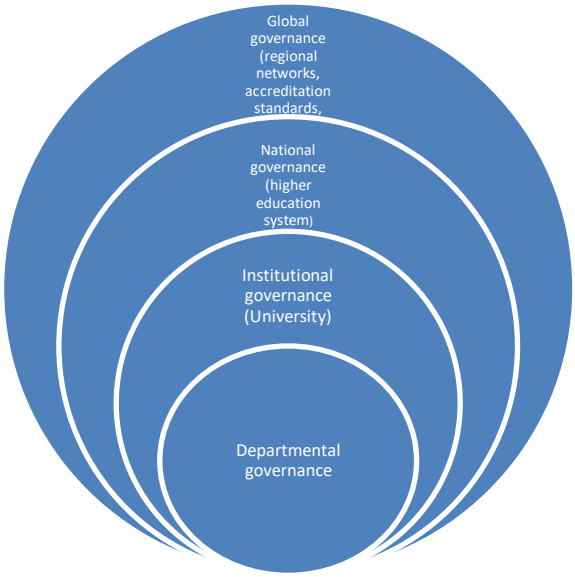

Figure 7: Layers of governance in the context of higher education

2.5.3. Governance typologies

Governance in HE also takes different shapes and variants in terms of its underlying principles and state-HE relationship. Among the early typologies in this regard is that proposed by Clark (1983) in his landmark book. He suggested that governance in HE is organised in a triangular space consisting of the influences of government, market, and academia (collegiality). Van Vaught (1889) reduced Clark's triangle to a two-dimensional relationship between the state and HE giving rise to the "State control" and "State supervising" models. In the former model, the government directly controls HE through policies, legislation, and management arrangements, while in the latter, it plays a regulatory role in the context of institutional autonomy for HEIs. The general trend in recent years reflects a move away from the traditional connotation of governance with the state to a more complicated variant, with a multitude of stakeholders, new steering principles and governance models (Huisman, 2009).

The changing global landscape complicates and puts additional demands on HE governance. Universities are now more than ever required to support a knowledge economy and respond to the state's developmental needs. Taylor (2013) described seven pressure factors or drivers for change affecting governance arrangements and relationships, especially between the state and the HE sector. The seven pressure factors are:

1. A massive increase in student numbers,
2. Government funding constraints,
3. Accreditation and quality issues.
4. Marketisation,
5. Globalisation and internationalism,
6. The introduction of new technology,
7. Politicisation of HE.

Given the effects of these pressure factors, traditional attempts to understand the relationship between the state and HE based upon control or steering models are too simple to explain such evident complexity. Further theorisation is warranted in this respect.

Neoliberal globalisation and principles of New Public Management (NPM) have greatly influenced the public arena resulting in a variant of pro-market governance in HE (Broucker and De Wit, 2015). From an economic perspective, globalisation has created a world market in which universities or HEIs are among the participants, based on the principle that education is a tradeable service (Austin and Jones, 2016). This notion departs from the traditional connotation of universities as social institutions working in a relaxed environment with considerable autonomy and academic freedom. The NPM approach, which gained momentum in several countries during the 1980s, introduced the concepts and practices of performance measurement, customer-orientation, deregulation, contracts, outsourcing, and privatisation (Kersbergen and Waarden, 2004). The state is now viewed as an evaluative mechanism, steering from a distance, and facilitating the rise of markets and quasi-markets in HE (Huisman, 2009).

With the rising complexity and multitude of stakeholders in HE arena, the concept of network governance emerged. Austin and Jones (2016) defined network governance as the strategic use of networks of multiple related entities as a governance mechanism, an alternative approach to traditional public-sector governance. Network governance is characterised by lateral management and roles for different stakeholders including government, market forces, academe, student groups, and the public at large (Ferlie et al., 2008). As such, network governance could be a further step of market-oriented governance in terms of widening stakeholder involvement.

Although governance typologies evolved in a chronological nature from public to private to network models, evidence shows that the trend is rather cyclic. Austin and Jones (2016) described

recent trends of moving back from lax types of educational governance (market and network) to more power for the state representing the public interest. Bevir (2012) suggested that the spread of markets and networks has led some theorists to worry about factionalism and vested interests; hence, the benefits of public governance and hierarchy are becoming clear once more. Rather than sequencing the three typologies of governance in a linear, chronological trend, they can be presented in a cyclic form (Figure 8) to better reflect the realities of governance complexity and dynamicity.

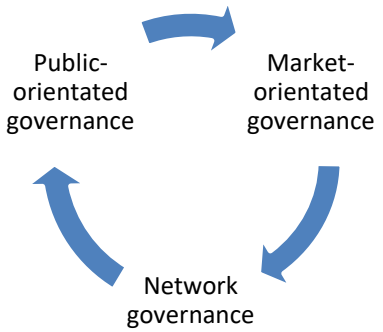

Figure 8: The three inter-related types of governance in higher education

Historically, there are three main traditions of HE governance: the Continental European, British, and American (Clark, 1983). The Continental European model is system-based, strongly hierarchical with state centred-policy, and no institutional autonomy. The British model is characterised by substantial institutional autonomy, academic collegiality, and limited state involvement. The American tradition is based on strong procedural autonomy of universities, which is matched by substantial public monitoring and external stakeholder involvement (Capano, 2011). These three traditions influenced HE systems elsewhere and especially in Africa and the Caribbean, to varying degrees through colonisation or international influence (Austin and Jones, 2016). However, the three models have been described as converging over recent decades due to the global uptake of the NPM approach, market forces, and economic realities (Goodman, 2013).

2.5.4. Governance theories and higher education

HE governance remains relatively under-theorised, particularly when compared to corporate governance. The literature on HE governance as compared to corporate governance is regarded as descriptive, normative, and short on explicit theoretical frameworks (Huisman, 2009). There is no

grand theory for HE governance. Still, there are some leading theories in fields such as politics, sociology, psychology, corporate, and public management that can help to interrogate governance from different conceptual angles. In their comprehensive book on higher education governance, Austin and Jones (2016) referred to five theoretical perspectives: institutional theory, resource dependence theory, agency theory, stewardship theory, and stakeholder theory. Each of these theoretical perspectives offers some explanation of the changes transforming HE systems worldwide:

- The institutional theory focusses on the effects of the social environment on organisations in terms of social rules, norms, and expectations. It explains the tendency of universities to seek ways to adopt governance structures and practices that fit with societal demands and expectations
- Resource dependency theory asserts that organisations are not self-sufficient and must engage in exchanges with their external environment to survive. This perspective might explain the state's use of funding to leverage changes in university governance towards achieving national objectives.
- Agency theory, mainly applied in the private sector in the form of principal-agent relationships, is gaining popularity in explaining HE governance in the context of NPM and market-oriented reforms
- Stewardship theory has been useful in analysing governance in HE. It explains the autonomy granted to universities by the state in the assumption that universities as a reservoir of knowledge are good stewards of government resources and would act in favour of the public cause.
- The stakeholder theory is gaining more application in explaining current trends in HE with the increasingly expanding role of stakeholders in university governance. Counter to the traditional view of universities as detached from their social environment, this theoretical perspective is suitable for explaining the current tendency of universities to adopt multi-stakeholder engagement and more collaborative governance (Neave, 1995).

Given the variety of theoretical approaches, it is essential to realise that no single theory would suffice to explain governance in HE entirely. As Lynall et al. (2003) noted, it is not a matter of choosing one perspective over another, but it is essential to identify the conditions under which

each is applicable. A multi-theoretical approach is, therefore, pertinent in the context of HE governance.

Some theoretical approaches known in other fields have also been proposed to explain trends in university governance. These include structural theory, human relation theory, cultural theory, and open systems theory. The structural perspective has been used extensively to analyse university governance as it highlights authority, rules, procedures, and decision-making bodies such as boards and committees (Kezar and Eckel, 2004). It is noted that the effect of people and interpersonal dynamics on governance is obvious; that is why the human relations perspective is deemed essential to explain governance relationships in HE (Austin and Jones, 2016). Politics come in as well, and the political perspective is viewed as crucial for understanding governance in HE (Hearn and McLendon, 2012). Factions, institutional subgroups, interests, coalitional networks, and lobbying often play a critical role in governance dynamics and outcomes. The cultural and open systems theories offer promising explanatory tools, given the transformation of HE governance towards more socially participative forms.

2.5.5. Frameworks for educational governance

Based on the classifications, typologies, and theories postulated to explain and analyse governance in HE; some attempts of applying frameworks to study HE systems are described (Huisman, 2009). Their point of departure is Clark's seminal model in which he distinguished three levels of HE governance: the state, the market, and academia, in addition to the conceptualisation by Van Vaught on the state control and state supervisory governance approaches (Section 2.5.3.). Four perspectives on the frameworks for HE governance are described below:

- Dietmar Braun's attempt at integrating the NPM approach into HE governance resulted in a framework inclusive of the concepts of substantive and procedural autonomy (Braun, 1999). Centred around the self-steering capacity of universities, Braun's model describes a continuum of substantive autonomy for HEIs ranging from collegiality/academic power to the NPM practices, and a procedural autonomy occurring along a continuum of collegiality and bureaucracy in managing universities and HEIs. This approach to HE governance builds on the balance between the social and utilitarian role of universities (Section 2.5.3.).

- The four-pronged Peter's approach to analysis of HE governance is applied in the context of Germany. The model describes governance or government in four variants: market government, participative government, flexible government, and de-regulated government (Orr and Jaeger, 2009). The analysis shows that application of these four orientations to study HE governance has yielded useful insights to explain changes and trends.
- Rebora and Turri (2009) developed a framework using Olsen's theory of the institutional and instrumental perspectives to HE. Their framework is based on the two concepts of locus and focus of governance. According to the authors, the locus of governance could be inside university (internal) or at the national level (external); and the focus of governance could be operational (negotiated) or strategic. Consequently, the framework has four perspectives: internal strategic governance, internal negotiation-based governance, external strategic governance, and external negotiation-based governance (Rebora and Turri, 2009).
- A systemic governance framework for HE policy was proposed by Giliberto Capano. The model emphasises the role of the state and describes four types for its engagement in steering HE: the first is a hierarchal mode based on direct control, the second is a form of procedural autonomy, the third is steering from distance, and the fourth is allowing self-governance for HEIs with the government acting as a stakeholder among others (Capano, 2011).

Thus, the landscape for governance in HE is highly dynamic. It is characterised by waves of changes affecting practices and relationships, especially concerning the role of the nation state. HE in the 21st century looks quite different from a few decades ago, with new issues and challenges reshaping the sector and its governance at both the institutional and system level (Austin and Jones, 2016). The typologies and frameworks for governance are not mutually exclusive but rather interactive. Governments in many countries are trying to exercise their influence through policy instruments rather than interfere in controlling HEIs. Policy instruments include funding, legislations, oversight QA bodies, and structural representation of government in governing boards of universities (Goodman, 2013).

QA approaches and tools are gaining considerable popularity in the governance of the HE. In the move to realise efficiency and effectiveness, governance is seen, as Olssen and Peters (2005)

posited, as a process to emphasise compliance of HEIs through mechanisms that are externally imposed and internally reinforced. Hence the rise of the QA culture and practices in the HE arena. Nearly half of the countries in the world possess QA systems or regulatory bodies to oversee and ensure quality in HE (Jarvis, 2014). Accreditation systems and ranking practices are rapidly gaining momentum in the HE context. Governments of variable ideological walks use QA mechanisms to enhance accountability and compliance of universities with the respective country's policy directions (Harvey and Newton, 2007).

Similar to the context of health and the health workforce, governance definitions in HE are varied reflecting the contested nature of the concept. Added to this, the literature shows the absence of a unique theoretical perspective for HE governance, opening the door for several theories originating in other fields to exert influence on the way HE is governed. While this could bring in richness and elaboration, it could also lead to confusion and inconsistency in approaching HE governance.

Two considerations warrant attention amid the discussion of HE governance. The first is related to the state role and its relationship to the HE sector, and the second is around the changing context for HE with an ever-emerging pressure factors (Section 2.5.3.). Whether controlling or supervising, the state's role in HE governance is indispensable and carries implications for any governance framework. Being responsible for the welfare of populations, the state is entrusted with providing the overall direction and safeguarding against vested interests of stakeholders in governance (Kuhlmann, E. and Larsen, 2015).

The second consideration on the context is also vital to governance as the application of good governance principles is largely dependent on the local circumstances. Stakeholder positions may be similar across countries, but their role and power take different shapes based on the context (Mitchell and Bossert, 2013). The role of governance stakeholders including the state in the context of a changing world with increasingly observed pressures and a quest for quality and accountability is a subject of an evolving debate. One of the deficiencies of the HE governance literature that future research should address is the inclusion of regional and global governance levels into the analytical frameworks (Fındıklı, 2017).

Recent literature continues to emphasise the importance of governance in the context of HE (Abrantes, 2020; Muyters et al., 2022). The literature however, notes the lack of empirical evidence on the concepts and application of governance in this context. Pillai et al. (2021) suggested that

investigating HE governance still lies in the periphery of HE research body and there is need to galvanise efforts in this respect.

The theoretical underpinnings and the changes traversing HE governance carries implications for approaching governance in the realms of HPE, which essentially functions under the rules of HE. The next section discusses HPE governance building up the case to construct a conceptual framework to encapsulate the analysis and argument in this study.

2.6. HPE governance

2.6.1. Positioning HPE governance

Despite being structurally a sub-set of HE, HPE occupies a special position due to its symbiotic relationship with the health services sector. The application of educational theory in the context of a busy health care/clinical environment ill-suited to deliberate teaching and differently regulated brings in challenges and specificities to HPE (Hays et al., 2020). Consequent upon this, governance in the domain of HPE is not only bound by HE governance scope. This fact carries important implications to the development of an appropriate framework for HPE governance. Such a framework should be derived from concepts and applications traversing educational and health governance.

The system-level or national governance for HPE could be conceptualised as relating to the three domains discussed earlier in this chapter: health system governance, health workforce governance, and HE governance. According to the HRH Action Framework (2009), education is one of six functions of the health workforce field. In that sense, HPE governance should be integral to health workforce governance. Processes of HPE happen within the context and settings of the health system, and the purpose of educational products (graduates) is to serve the health system and health care needs. A recurring theme in the governance literature is integrating education with health care governance to ensure learning is based on validated needs (Coward, 2010). From that standpoint, HPE governance should synergise with health system governance. For HE governance, HPE governance is a sub-domain or sub-set as HPE schools are usually formed as part of universities or HEIs and are governed accordingly. Figure 9 below depicts the position of HPE governance in relation to the three main domains of governance: health system, health workforce, and HE.

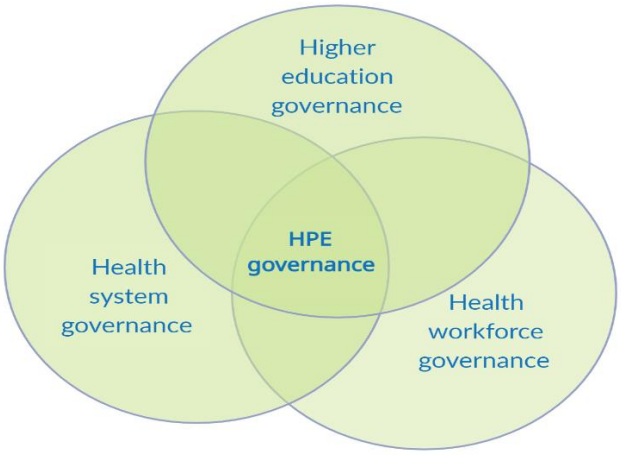

Figure 9: HPE governance as interface between health workforce, health systems, and higher education governance

2.6.2. Conceptualising HPE governance

Within the health profession, educational governance is concerned with ensuring that health workers are appropriately educated and qualified for the work they undertake. The NHS Education for Scotland (NES) defines educational governance as the systems and standards through which organisations control their educational activities and demonstrate accountability for the continuous improvement of educational quality and performance (NES, 2009). Despite the abundance of knowledge on governance aspects in the inventory of reforms, mainstream literature on HPE has not yet delineated concepts and areas on educational governance for health that need to be explored (Coward, 2010). This gap is reflected in the paucity of results on HPE governance obtained through the systematic literature search conducted earlier for this research (see Appendix 1).

The literature discussing HPE reforms falls short of providing frameworks or an adequate conceptualisation for governance at the system (national) level. This is compared to existence of some guidance and standards for governance at organizational level e.g., for medical schools (General Medical Council, 2015; WFME, 2015). Strengthening governance at system level is often listed as a recommendation to be addressed without getting into its tenets or ways of approaching it. This is mirrored by the generally inadequate conceptualisation of governance in the health workforce domain and might also be attributed to the recency and dearth of research on HPE reforms in general.

Notwithstanding the lack of a comprehensive framework, literature sources discuss dimensions and components of reform that pertain to the notion of HPE governance. These include an effective

relationship between education and health sectors, competency-based approaches to education, social accountability of HPE, accreditation of educational institutions and programmes, and responsive student admission policies. The following paragraphs further delineate these dimensions to support the intended conceptualisation for HPE governance.

The relationship between education and health

The coordination in the context of educational and health systems is referred to repeatedly in the literature and, as Celletti et al. (2011) noted, insufficient collaboration between the health and education sectors has been creating a crippling mismatch between professional education and the realities of health service delivery. Academe in most places is largely detached from health services and, as a result, health workforce planning is deficient. The WHO has recently advocated that policy, planning, and funding decisions for both the education and health labour market should align with the evolving needs of health care (WHO, 2016). In their Lancet Commission Report on the transformative education of health professionals, Frenk et al. (2010) postulated that professional education has failed to keep pace with the health care realities and challenges with the production of graduates that are ill-equipped with competencies not matching to patient and population needs.

The literature discussing the education-health relationship from a public health perspective has mainly viewed HPE reforms as responding to health system realities and thus pointed out the limitations in educational approaches and practices. This view is, however, challenged in both philosophical and practical terms. In their critique of the Lancet Commission Report, Gordon and Karle (2012) raised the point that problems in HPE should not be viewed as the primary cause of health system weaknesses. This view might be realistic as there are a multitude of factors affecting health care, including funding, political decisions, and other health system inputs. Therefore, education is not the only determinant of a functioning health system although it plays a crucial part as it prepares the health workforce, an important pillar for the health system.

Gordon and Karle (2012) also rejected the idea of viewing education as a follower to the health system in terms of the health reform agenda; HPE often leads in the enhancement of health workforce quality enabling better health care. For instance, accreditation in the context of HPE can enhance health care outcomes because of its ability to influence and standardise not only the

training programme but also the learning setting i.e., the health services institution (Braithwaite et al., 2010; Frank et al., 2020).

This brings in the question of balance in viewing the relationship between education and health amid the current debate. While positions are debatable, the quest for education and health sectors to collaborate on preparing the appropriate health workforce is widely agreed. The path should be a synergistic approach between the two sectors towards the goal of serving communities and improving population health and this should have a bearing on approaches to HPE governance.

Competency-based education

As an outcome-orientated approach to education, competency-based medical education (CBME) is widely embraced and has evolved from an educational concept into regulations and legislations (Touchie and ten Cate, 2016). CBME was defined by Frank et al. (2010, p.641) as *"an outcomes-based approach to the design, implementation, assessment, and evaluation of medical education programmes, using an organizing framework of competencies."*

The competency-based approach appeals to the concept of HPE appropriateness as the focus is on the end-product. Once you know what the end-product (graduate) should be able to do, you can systematically look at your educational programme and deliberately cater your education to these end objectives (van der Vleuten, 2015). In that way, the competency-based model has the potential to align educational programmes with health system priorities (Gruppen et al., 2012). This contrasts with the traditional educational approach which is time-based and focused on the educational process as opposed to outcomes.

In supporting a competency-based orientation, many countries worked to develop competency frameworks for HPE at both undergraduate and postgraduate levels. A competency is defined as the observable ability of a health professional, integrating multiple components such as knowledge, skills, values, and attitudes (Frank et al., 2010). Since competencies are observable, they can be measured and assessed to ensure their acquisition.

Literature sources refer to the contribution of the competency-based approach to transforming HPE and improving its structure, processes, and outcomes. The perceived advantages of CBME include: a focus on learner achievement; support for flexible learning, time-independent trajectory, increased transparency and accountability, and a common language for education and regulation

(Bogo et al., 2011; Hawkins et al., 2015; Touchie and ten Cate, 2016). In their Lancet Commission Report, Frenk et al. (2010) strongly advocated for a competency-based approach to HPE as part of a transformative agenda to align HPE with health system objectives.

Despite widespread enthusiasm for CBME and the noted advantages, conceptual and practical concerns have been raised. Fernandez et al. (2012) noted the conceptual ambiguities with the multiplicity of terms and the abstract nature of some competencies, leading to confusion among HPE community. Additionally, the competency-based approach is described as a reductionist model that analyses professional practice in terms of discrete, isolated tasks while the practice is holistic (Bogo et al., 2011; Hawkins et al., 2015). The concept of competency-based training as advocated is inadequate to describe the higher cognitive skills and the integrated application of complex knowledge, skills, and problem solving in the context of professional practice (Brightwell and Grant, 2013).

The conceptual limitations highlighted above might explain the struggle with the full adoption of competency-based approaches in the context of HPE. Emerging concepts such as milestones and Entrustable Professional Activities are proposed to operationalise CBME (Touchie and ten Cate, 2016). Notwithstanding the debate around the approach, CBME has no doubt helped to enhance the momentum towards curricular reforms, stakeholder engagement and accountability, and linking education to professional role expectations; all with important implications for HPE governance.

Social accountability of HPE

Social accountability is gaining momentum as one important agenda for addressing the transformation of education in the context of health care and population health improvement. The notion of social accountability of HPE and medical schools has been defined as (Boelen and Heck, 1995, p.3):

> *"The obligation of schools to direct their education, research, and service activities towards addressing the priority health concerns of the community, region or nation they have a mandate to serve. The priority health concerns are to be identified jointly by governments, health care organizations, health professionals, and the public"*

Subsequently, the Global Consensus for Social Accountability of Medical Schools (GCSA, 2010, p.1) described a socially accountable medical school as one that:

> *"Responds to current and future health needs and challenges in society, re-orientates its education, research, and service priorities accordingly, strengthens governance and partnerships with other stakeholders, and uses evaluation and accreditation to assess their performance and impact."*

To promote the concept of social accountability and its applications, HPE institutions are required to be more strategic and proactive in extending their roles to ensure a positive impact of their graduates on population health outcomes. Boelen (2016) declared that, for social accountability to be a strong marker in medical education, the medical school has to be aware of health system challenges, position itself as an important actor to influence health policy, and commit to making a measurable impact on health in society. Social accountability calls for the HE system and HPE institutions to shift from a passive to a proactive attitude of engagement regarding health systems.

Social accountability is gaining momentum with the appearance of initiatives, networks, and emerging frameworks (Preston et al., 2016; Rourke, 2018). One such framework is provided by the Association for Medical Education in Europe (AMEE) through its programme ASPIRE-to-Excellence Award for Social Accountability. According to this programme, schools are expected to integrate and document social accountability into their plans, actions, and impact assessments (Rourke, 2018).

With its focus on aligning education outcomes to population health needs, the social accountability movement carries the promise of leading the transformation of HPE in the right path as advocated by proponents of the concept. Socially accountable HPE schools engage with, partner, and respond to the needs of their communities, regions, and nations (Rourke, 2018). Woolley et al. (2018) demonstrated that socially accountable graduates in the Philippines were key to improving services and outcomes for maternal and child health. The theory of social accountability of HPE is practically shaping out through coalitions of socially accountable institutions creating a community of learning and legitimising practice (Preston et al., 2016). Calls to consider social accountability dimensions when assessing the quality of medical education have been voiced since the emergence of the concept (Boelen and Heck, 1995). Furthermore, some efforts to incorporate

social accountability into accreditation standards for HPE are emerging and are starting to influence the design and content of accreditation programmes.

Despite the understandably noble quest for the social accountability concept, critique is directed to its rather broad and diffuse nature, its applicability, and the means to verify its impact. While there is no dispute about the value of citizens' engagement and about ensuring accountable actions to their benefit, concepts around social accountability need to be further delineated (Camargo and Jacobs, 2013). Like the idealistic language of good governance principles, social accountability has been linked to a myriad of desired attributes associated with implementation challenges due to inadequate consideration for contextual realities. Gibbs and McLean (2011) noted the major undertaking of changing the concept of social responsibility from mere words into tangible actions of becoming socially accountable. Also, the broadness and complexity of the concept render assessment of its impact a difficult task. Despite the move towards social accountability in HPE, there has been limited evidence of effectiveness (Reeve et al., 2017).

Social accountability remains a desired concept in the arena of HPE due to its appeal to ensuring appropriateness of the graduates of educational programmes. The conceptualisation around HPE governance, however, needs to consider the usefulness of the concept together with the conceptual and practical challenges of its implementation and impact.

Accreditation of HPE institutions

Regulation and QA mechanisms are increasingly appreciated in the context of HPE with accreditation regarded as an important tool and leverage for change. Accreditation in the health professions is the process of formal evaluation of an educational programme, institution, or system against defined standards by an external body for the purposes of quality assurance and continuous enhancement (Frank et al., 2020). Despite its early foundations in the United States in 1847 (Johnson, 1962), accreditation of medical education has only taken a more organised shape during the first half of the 20th century for the United States and probably the second half worldwide (JR et al., 2006). The experience of accreditation in developing countries is more recent but gaining escalating momentum in response to internal and external factors including increasing privatisation of HPE, the public demand for accountability, and the international mobility of the health workforce. A study by the WHO Regional Office for the Eastern Mediterranean found that 60 percent of medical schools in the region have some form of accreditation (WHO, 2015).

The Educational Commission for Foreign Medical Graduates (ECFMG) of the United States declared in 2010 that effective in 2023, physicians applying for ECFMG certification would be required to graduate from a medical school that has been appropriately accredited[4]. The Commission refers to appropriate accreditation as using a formal process that applies criteria comparable to those established for the United States or uses other globally accepted criteria such as those adopted by the World Federation for Medical Education (WFME). The ECFMG decision triggered a global momentum on accreditation of medical schools with the WFME introducing a special programme on recognition of national accrediting entities[5]. The International Association of Medical Regulatory Authorities (IAMRA) released a statement in 2016, encouraging countries to establish and operate accreditation systems for medical schools to ensure the production of competent and fit for purpose doctors (IAMRA, 2016).

The nature and scope of national bodies responsible for accrediting health professions education vary greatly across countries (van Zanten et al., 2008). The continuum ranges from governmental authorities to private agencies, to autonomous statutory or professional accrediting bodies. In some settings, such as in the Caribbean area, a regional authority is responsible for the accreditation of HPE, most probably due to efficiency considerations.

Accreditation standards are the most crucial milestone in the accreditation system, as they represent the guiding framework and yardstick to measure the quality attainment of HPE institutions. The standards developed for accreditation of medical education by the Liaison Committee on Medical Education (LCME) in the United States is a well-known example that is echoed at the country-level and by regional accreditation authorities. More recently, the trilogy of the WFME standards (for basic, postgraduate, and continuing medical education) developed in 2003 and updated subsequently represented a framework for guiding national standards across several countries (Karle, 2008; WFME, 2015).

The accreditation process involves three components: self-evaluation based on published standards, peer-review that includes a site visit by an assigned team, and a report/decision stating the outcome of accreditation (Leinster, 2014). The process ideally involves published guidelines, effective communication channels, and transparent application. There are cardinal signs for robust

4 https://www.ecfmg.org/accreditation/ {Accessed on 5 October 2019]
5 https://wfme.org/accreditation/recognition-programme/ [Accessed on 6 October 2019]

accreditation processes, including the involvement of professional/academic peers and safeguarding against conflict of interest. The following chart depicts the four pillars of national accreditation systems.

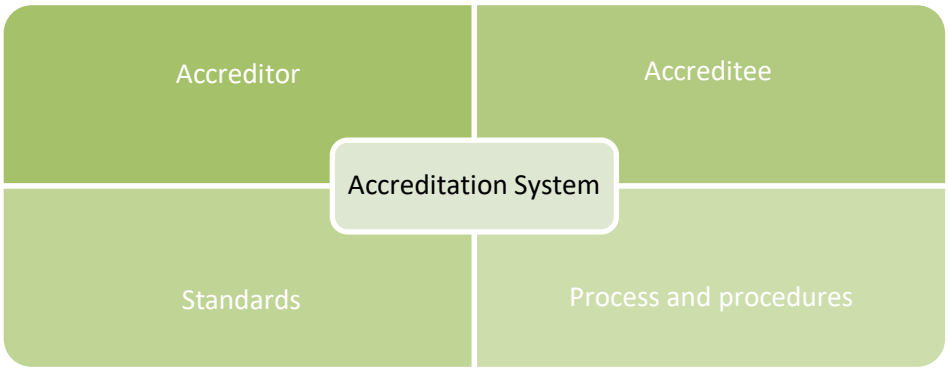

Figure 10: The four pillars for accreditation systems for health professions education

The accreditation endeavour is associated with challenges, including the shift from input to output measures, capacity limitations of accrediting agencies, and cost of implementation. Additionally, the evidence supporting the influence of accreditation on improving the quality of HPE and its outcomes is patchy and difficult to establish (van Zanten et al., 2008). The lack of evidence could be a result of measuring impact through parameters such as student outcomes, e.g., graduates' performance on national examinations, which faces data comparability and attribution challenges (Blouin and Tekian, 2018). Frameworks are emerging to determine the influence of accreditation on promoting Continuous Quality Improvement (CQI) within HPE programmes. The premise is that strong CQI culture and practice should lead to high-quality education attainment and would serve as a proxy marker for the quality of graduates and possibly for the quality of care they provide (Blouin and Tekian, 2018). Finally, accreditation systems, especially in developing countries, face an asymmetry challenge represented by the focus of accreditation programmes on medical schools to the detriment of nursing, midwifery, and other health professions schools. The literature on accreditation carries important implications for HPE governance and informs the conceptualisation and analysis in this research.

Admission policies for HPE students

The admission policy is used as a tool to ensure the relevance of HPE, especially in serving rural and marginalised populations. More equitable student selection criteria are associated with better

outcomes regarding the utility of graduates for health services, especially at the primary care level (Reeve et al., 2017). Good practices in admission policies include considering factors beyond academic achievements. Criteria such as selecting students based on a quota system for underserved populations, the rural background of candidates, personal attributes, and community involvement in the selection are used across institutions in some countries (Larkins et al., 2015; Puddey et al., 2014). Muñoz et al. (2015) also referred to the importance of non-cognitive skills in selecting students for HPE. These include communication skills, motivation, problem-solving, and readiness for professional service. Student selection criteria, beyond academic achievements, are more associated with social accountability which has recently become trendy in HPE discourse.

Responsive admission polices come in line with the rising agenda on equity in the context of HPE. Greater health care workforce diversity is an essential component of the changes needed to address racial and ethnic health inequities (Relf, 2016). This agenda represents one important consideration in approaching HPE governance.

Having discussed some important educational governance processes and tools, it is evident that HPE governance is an evolving domain with concepts and practices emerging and attention escalating due to social, economic, and political factors. Given the available highlights on HPE governance and its expected role in addressing the challenges of HPE and health workforce appropriateness, a framework for analysis and strengthening is pertinent: an endeavour to which attention now turns.

2.6.3. Towards a framework for HPE governance

The several definitions, concepts, and approaches to governance in health and educational context no doubt illuminate pathways to better conceptualise governance in the terrain of HPE. This includes the theories, typologies, and frameworks that apply to HPE and help to explain its dynamics.

One important lesson from the literature is the necessity of combining the idealistic perspective of the good governance principles with the practical approach of considering the structures and processes of governance as applied in a certain context. The implementation of good governance principles towards realising educational and health goals is enabled through the existence of structures, relationships, and processes for governance in a national context. The current study values this combination and reflects it in building up the proposed framework for HPE governance.

The study, in tandem, lives with the challenges of further conceptualising and extending ideas from health and educational spheres to the specific context of the health workforce and HPE, and the need for appreciating the specificities of HPE as a special type of educational subsystem.

Any proposed framework for HPE governance will need to be nested in a certain definition or understanding of governance and a philosophical background. In its attempt to develop a conceptual framework for HPE governance, this study mainly adopts the OECD definition of HE governance stated earlier in this chapter (Section 2.4.1). According to the OECD (2008, p. 68), "*Higher education governance is conceptualised as encompassing the structures, relationships, and processes through which, at both national and institutional levels, policies for tertiary education are developed, implemented, and reviewed*." The OECD definition is deemed suitable for two main reasons. One is that it links governance to an outcome, which is policy development, implementation, and review. Governance is not an end, but rather a means towards achieving desired outcomes (Austin and Jones, 2016). The other reason is that the three main governance domains stressed in the OECD definition (structures, relationships, and processes) are highlighted by several other accounts on governance (Institute on Governance, 2003; Brinkerhoff and Bossert, 2008; Siddiqi et al., 2009).

The three domains of HPE governance translate into an array of dimensions or functions. *Structures* for HPE national governance range from central governing ministries to buffer bodies and councils, and to autonomous entities or institutions. These structures commonly have a policy, legal, or managerial mandate to exercise their authority and responsibilities. They also have their characteristics, dynamics, and modus operandi. Some of the concepts and theoretical perspectives discussed in this chapter, such as institutional and structural theories, may offer insight for exploring governance structures in the context of HPE. *Relationships*, on the other hand, range from formal to informal types and exist at different levels, such as between the state and HE sector, between the HE and other sectors or stakeholders, especially the health sector, and among the players within the HE itself. The literature reviewed in this chapter elaborates on governance relationships, especially in the context of the state-HE dimension. The resultant typologies, traditions, and theories, such as Clark's tringle, the Van Vaught model, the human relations theory and the stakeholder theory, could be useful for investigating relationships in the context of HPE governance. The political perspective is also relevant here as it illustrates the importance of both

formal and informal relationships. Individuals and groups seek to further their interests through lobbying and the development of coalitions.

The third domain, i.e., HPE governance *processes*, involves different dimensions, including policies, workforce planning, QA measures, and funding. This study focuses on three of these processes: the policy for admission of students, workforce planning, and accreditation as a QA process. These are deemed suitable for reflecting the dynamics for ensuring the appropriateness of graduates for population health needs.

When HPE governance structures, relationships, and processes at the national level synergise in a supportive context and adopt good governance principles, they exert desired and effective oversight on HPE. This would then lead institutions and schools to produce the right quantity, quality, and relevance (appropriateness) of graduates to support the health system towards responding to population health needs. The above statement represents the hypothesis and logic behind the envisioned framework.

The context impinging on the proposed HPE governance framework is taken to represent the environment and factors with a bearing on HPE within national, regional, and global spheres. This could range from political, economic, and sociocultural factors to more educational and health system/health workforce related aspects. The framework proposed by this study to analyse HPE governance for population health appropriateness is depicted in the following chart.

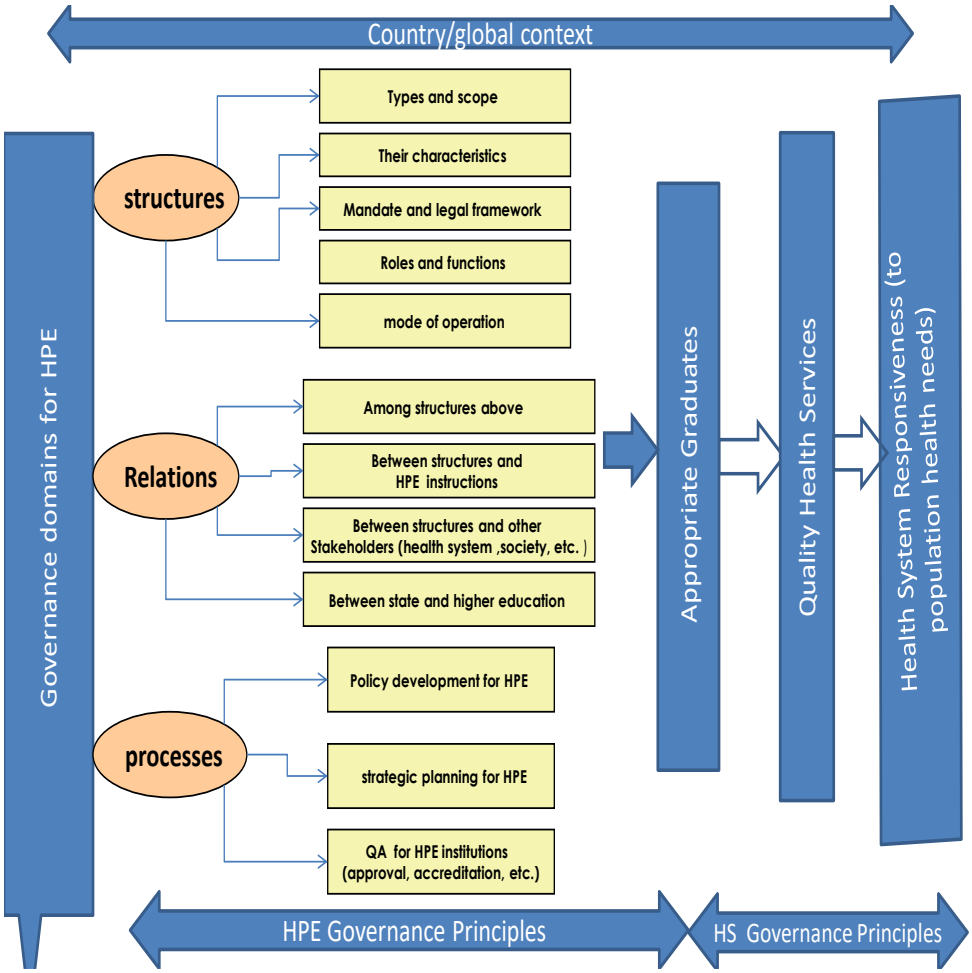

Figure 11: A preliminary conceptual framework for analysis of governance for health professions education

The three main domains of governance (structures, relationships, and processes) translate into an array of functions and interventions (as shown in Figure 11) that target the oversight and management of HPE institutions (the solid arrow). Oversight is expected to influence both graduates and the functioning of HPE institutions. Graduates, in turn, address population health needs through their position and assimilation within the health system. The process involved in this chain of input, output, and outcome is influenced by the country and external context and governance principles and practices at both HPE and the health system. It is assumed that, when good governance principles are applied to this process in a supportive context, HPE graduates are "fit for purpose" and "fit to practice" i.e., appropriate to evolving population health needs and capable of delivering a safe practice. Implied in this is the demand for HPE to synergise with the health system and ensure the involvement of the community and stakeholders in educational

alignment and decisions through effective social accountability. This study uses this innovative framework to explore HPE governance in Sudan.

In this framework, good governance principles are taken to cover both educational and health system domains to fit with the notion that HPE is embedded in health services and clinical contexts and not a matter of academic or class-based educational endeavours. Based on the governance principles and attributes covered by the literature reviewed in this chapter (Table 2), a three-dimensional conceptualisation and categorisation is developed to inform analysis in this study:

- The principles of strategic vision, proactive state, and effective regulation are considered to contribute towards *strong state oversight* for HPE
- The principles of participation, intersectoral action, and accountability are taken together to realise the *empowered stakeholders*
- The principles of responsiveness, equity, and ethics contribute to achieving the *effective HPE system*

Figure 12 below depicts the clustering of the proposed good governance principles in the context of HPE.

Figure 12: Good governance principles to support appropriateness of health profession education graduates

These nine governance principles add to explaining and enhancing the conceptual framework presented in Figure 11 and they will be further tested in this study.

2.7. Summary

This chapter reviewed the literature on governance in its general connotation and in the context of a health system, health workforce, and HE. The chapter discussed several governance definitions, principles, typologies, theories, and frameworks. The discussion reflected the dynamic debate on

the challenges of conceptualising and operationalising governance in a changing context for health and HE systems and the lessons involved. The analysis in the chapter informed the conceptualisation of HPE governance and supported the development of a conceptual framework for analysing national governance for health professions education. The proposed framework guides and inform the subsequent chapters of this thesis.

CHAPTER 3: METHODOLOGY

3.1. Introduction

In line with the research purpose, questions, and the proposed conceptual framework discussed and established in the previous two chapters, this chapter documents the methodology adopted for investigating HPE governance in Sudan. The chapter covers issues related to the paradigm and approach, study design, data collection methods, fieldwork, and data analysis. It also addresses specific methodological considerations, language/translation, quality and trustworthiness of the study, and ethical aspects. The chapter then goes on to discuss the practical issues of the study's part-time nature and its limitations before closing with a summary.

3.2. Study type

Research, a notion of investigating something systematically, is broadly classified into quantitative and qualitative methods. Keeping in mind that differences are not always rigid and clear cut, quantitative research is aimed at prediction, control, and hypothesis testing. It employs large random, representative sampling and uses inanimate instruments to generate numerical findings (Kumar, 2011). Qualitative research, on the other hand, is aimed at understanding, discovery, and hypothesis generation. Its design is flexible, often uses non-random sampling, and focuses on the human being as a primary instrument to generate comprehensive and richly descriptive findings (Merriam and Tisdell, 2016).

Quantitative and qualitative research types diverge in relation to ontology (the nature of reality) and epistemology (the nature of knowing). While the former assumes that reality exists and is observable, stable, and measurable; the latter conceives the existence of multiple realities or interpretations of a single event that are socially constructed and not governed by natural laws (Guba and Lincoln, 2005). Following from these ontological positions, the epistemology of quantitative research is described as positivist and that of qualitative research as interpretivist/constructivist. In positivist studies, the thrust is to investigate an independently existing and measurable reality assuming a priori constructs with fixed relationships that can be examined with structured instruments (Crotty, 1998). Objectivity is the mainstay with the researcher keeping an independent stance from the phenomenon under study. On the other hand,

interpretive/constructivist studies seek to develop varied and multiple meanings for the phenomenon under scrutiny through the eyes of the participants (Greener, 2008). The researcher here is interested in the relativist or subjective realities, the social context, the complexity of views, and the meaning making process (Creswell, 2013). The stance of the researcher could entail subjectivity and some form of immersion in the context of the study. Mixed methods studies capitalise on the characteristics of both quantitative and qualitative designs and thus combine positivist and constructivist epistemologies. Yet, the mixed methods research approach is increasingly described as adopting a distinct worldview such as a transformative framework, pragmatism, or realism (Hall, 2013; Ghiara, 2020).

The choice of a research type, whether quantitative, qualitative, or mixed methods, is based on the nature of the research problem or issue being addressed, the researcher's personal experiences, and the audience for the study (Creswell, 2013). The nature of the problem and research questions posed by this study on HPE governance conforms with an interpretivist/ constructivist epistemology. The research seeks to explore governance for HPE in Sudan in an in-depth approach from the perspectives of the people involved, warranting a qualitative research lens. The objectives of the study focus on disentangling governance and exploring its influence on HPE graduates' appropriateness in the context of Sudan, studying a complex phenomenon in its natural context to derive insights and meanings, and to reflect relativist and multiple explanations.

Van Maanen (1979, p. 520) described qualitative research as:

> *"An umbrella term covering an array of interpretive techniques which seek to describe, decode, translate, and otherwise come to terms with the meaning, not the frequency of certain more or less naturally occurring phenomena in the social world."*

This definition resonates well with the concept and aim of this study and its research questions. In contrast to a positivist approach of quantitative enquiry, qualitative research assumes that reality is socially constructed through interpretation of an event or through socially negotiated meanings based on complex experiences (Cresswell, 2007).

In qualitative research, the focus is on the processes, meanings, and understandings from the perspectives of the people involved. It has more of an inductive nature to the analysis i.e., generating meanings from data, and the researcher is the primary instrument of data collection and analysis (Merriam, 2009). A study of a rather vague and complex phenomenon such as HPE governance would undoubtedly benefit from the characteristics of qualitative research. National

governance of an educational system entails complexity, dynamicity, and evolution. A qualitative research paradigm is suited for this study because it also allows for in-depth investigation and provides for flexible, iterative, and innovative approaches, where knowledge about a certain phenomenon is lacking (Patton, 2002). The iterative and creative nature of qualitative techniques is also helpful in studying complex relationships, a significant aspect of this research. If the constructivist epistemology adopting qualitative research type is established for conducting this study, the analysis now turns to which approach is suitable within the qualitative research arsenal.

3.3. Research approach

Qualitative research embraces an array of philosophical orientations and approaches, including ethnography, grounded theory, critical research, narrative methods, case studies, and participatory research (Denzin and Lincoln, 2005). These approaches share common characteristics of the qualitative research paradigm. They are not mutually exclusive, and each has an added peculiar dimension. The phenomenon under investigation and the research questions posed mainly guide the choice among these approaches.

According to Yin (2009), the case study approach is relevant when research questions seek to investigate a contemporary phenomenon in-depth, within its real-life context, and when the investigator has little or no control over the events. Moreover, a case study is beneficial when exploring an area where little is known (Kumar, 2011). These characteristics have guided the selection of the case study approach for exploring HPE governance in Sudan.

Case study research has a level of flexibility that is not readily offered by other qualitative approaches (Hyett et al., 2014). Moreover, a case study can be combined with other qualitative research approaches e.g., an ethnographic case study. Stake (1995) described a qualitative case study approach as drawing together naturalistic, holistic, ethnographic, phenomenological, and biographic research approaches. Notwithstanding the comparison and contrast, the case study is largely seen as an approach rather than a peculiar research method. Simons (2009) suggested that the case study should not be seen as a method in and of itself; rather it is a design frame that may incorporate several methods. Stake (2005) agreed, seeing a case study as a choice of what is to be studied rather than a particular research method. Flyvbjerg (2011) conceived that if we decide to use a case study in our research, this does not mean the selection of a method, but rather a selection

of what will be explored. These conceptions allow for some flexibility in adopting a case study approach when the subject under investigation is a phenomenon or a bounded system and since the research would then employ multiple methods and borrow from other qualitative approaches.

In this research, the selection of a case study approach is primarily justified by the purpose and object of the investigation i.e., approaching governance as a phenomenon bound in time, place, and culture to generate in-depth description and analysis. A case study approach is further justified by the following:

- HPE governance as a topic of investigation represents a complex system of structures, relationships, and processes embedded in a natural context. As Yin (2009) suggested, the focus in such situations is on "how" and "why" questions, you cannot manipulate the behaviour of those involved, you want to cover contextual conditions, and a boundary is not clear between the phenomenon and context.
- A case study is taken as an approach that allows for employing multiple sources of evidence such as documentary review, interviews, and observation. This flexibility is a desired feature for building a thorough description and nuanced interpretation in investigating a complex phenomenon such as HPE governance.
- Adopting a case study approach doesn't exclude other qualitative orientations; for instance, this study borrows from principles and techniques of grounded theory (inductive analysis, coding) and ethnography (participant observation).
- The case study is a common approach for conducting research in applied fields of study such as education and health (Hoare, 2007; Merriam, 2009; Harrison, H. et al., 2017). Recent evidence continues to support a unique role for case study research in the advancement of HPE. Cleland et al. (2021) alluded to the complexity and the contextualised nature of HPE research and the value of employing a case study approach to examine and report locally based activities and innovations, which can be of general value.

However, the case study approach has certain limitations and is criticised by many. The greatest concern has been over the lack of rigour of case study research (Hamel et al., 1993; Yin, 2009). Case study investigation is mostly recognised not to follow systematic procedures adequately and allows equivocal evidence or biased views to influence the findings and conclusions. This

argument, however, overlooks the purpose of case study research as an appropriate method to study a system or a phenomenon in-depth and to acknowledge complexity, account for differences, and reflect paradoxes (Merriam, 2009). Critiques, as Yin (2009) noted, might have confused case study teaching, where materials are deliberately altered for educational purposes, with case study research, and might have forgotten that bias can also enter in the conduct of other types of research, including experiments.

Another criticism relates to the inability of case study research to offer scientific generalisation, which is one major benefit for conducting research in general. However, as Merriam (2009) posited much can be learned from a "particular case"; also narrative description in a case study can offer vicarious learning for readers (Stake, 2005). And since the general lies in the particular, learning from a single case can be transferred to similar situation (Erickson, 1986). This last argument resonates with Yin's (2009) proposition that it is the theoretical and not statistical generalisation that is desired in case study research. Case study research has grown in sophistication over the last 50 years, and it has been re-established as a credible and valid research design that facilitates the exploration of complex issues (Harrison, H. et al., 2017).

This research, guided by purpose, follows a structured qualitative case study approach adopting systematic procedures and is aimed at theoretical generalisability. This is enabled through generating an in-depth description and analysis that allows connection and association with the tacit knowledge and experience of the readers. A qualitative case study approach is defined as an investigation or analysis that helps in the exploration of a phenomenon within some particular context through various data sources, and through a variety of lenses to reveal multiple facets of the phenomenon (Baxter and Jack, 2008).

There are several classifications as to case studies; they are described as historical or observational, intrinsic or instrumental, and single or collective (Stake, 1995; Merriam, 2009). Taking another perspective, Yin (2009) identified three types of case studies including exploratory, explanatory, and descriptive. Based on the research purpose and questions, and since different variants of case studies overlap; this research is a single case study as the purpose is to investigate HPE governance as a bounded system, and exploratory in nature as it seeks to disentangle a rather vague phenomenon. It also carries a descriptive and explanatory element since it tries to delineate

governance in a specific country context and to ascertain a presumed causal relationship between the governance and appropriateness of HPE graduates.

Various philosophical underpinnings contributed to the development of case study research creating diversity in approaches used. Reference is made in this respect to the contribution of Yin, Stake, and Merriam (Stake, 1995; Yin, 2009; Merriam, 2009). While Yin demonstrated a postpositivist approach towards discovery and structure, Stake took a constructivist perspective, and Merriam advocated a pragmatic approach in the middle. This accommodation means case study research is versatile and can be tailored according to the research problem. What matters for a rigorous research process, as Stewart (2014) suggested, is consistency and alignment in terms of philosophy, planning, data collection and analysis, and evaluation. This research benefits from the principles of the various case study orientations but mainly takes the constructivist approach guided by the problem and purpose of investigation. The study design, discussed next, reflects the orientation and associated alignment.

3.4. Study design

Nachmias and Nachmias (1992) described the research design as a plan that guides the investigator in collecting, analysing, and interpreting observations. In every study, the research design represents the logic that connects data to research questions and, eventually, the study conclusions. The following chart depicts the research process for this study; the two-directional arrows reflect the iterative processes involved in qualitative research.

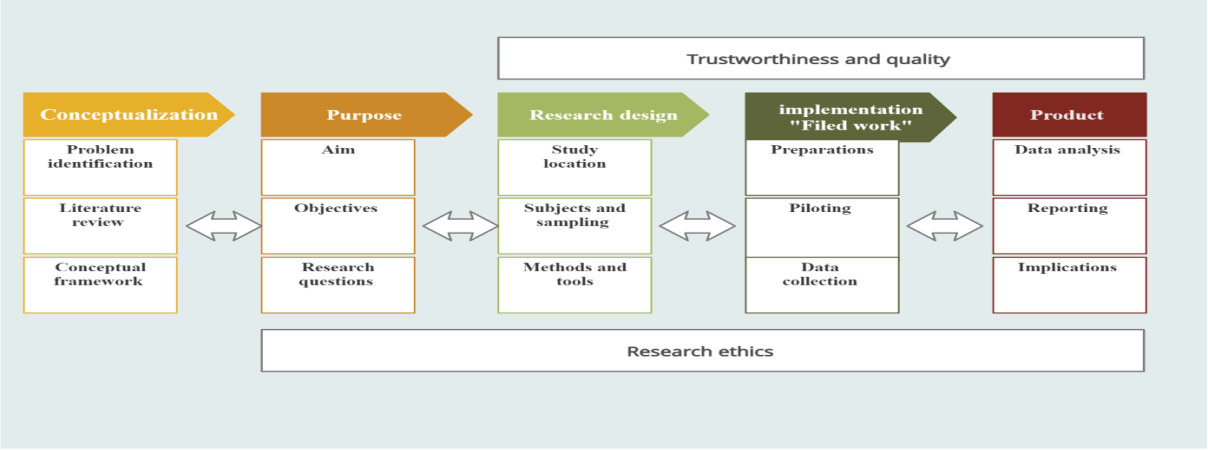

Figure 13: Diagrammatic representation of the research process for the study on HPE governance in Sudan

Conceptualisation and purpose phases were discussed and established by the previous chapters; in this chapter, the study design, in terms of study location, study subjects, sampling, methods, and tools are further discussed. The evolving and emergent nature of qualitative research is reflected across the design spectrum. The research timeline extended from finalising the design in 2013 to data collection and analysis through 2014-2016 with the writing process finalised by early 2020 and revised based on deferral through 2021-2022. The delayed schedule of the study is explained by the part-time nature of the research and the repeated suspensions of study for personal reasons (see Section 3.7.4.). The extension allowed for more sustained time in the context of the study, which is in favour of getting a more nuanced picture, but it also brought with it challenges related to the relevance of the findings. Due to the still unfolding debate on HPE and appropriateness of graduates and the gap in evidence, the study findings remain highly relevant in the context of Sudan and probably beyond.

3.4.1. Location of the study

This research is aimed at enquiring into national-level HPE governance in Sudan. It was mainly conducted in Khartoum, the capital of Sudan, where national structures mandated with HPE governance exist. However, some institutions in other states of the country, Gezira and North Kordofan, were also included, to obtain institutional/local perspectives on the HPE system's governance and to reach out to some key informants.

3.4.2. Subjects, sampling, and information sources

Case studies require an upper level of sampling, i.e., selecting the case itself (Merriam, 2009). The case, as noted earlier (Section 3.3.), is predetermined, as this study aims to explore HPE governance at the national level in Sudan as a phenomenon. Based on the conceptual framework developed for this study, governance structures, relationships, and processes represent units for analysis and sources of information within the case. As pointed out in Chapter 1 (Section 1.6.), the scope of the study is limited to HPE governance pertaining to undergraduate education, with the medical and nursing fields taken as illustrative governance examples. In this respect, the research is a single case study (HPE governance in Sudan) with embedded units of analysis (structures, relationships, and processes).

Sampling in qualitative research is neither statistical nor purely personal; it should be grounded in purpose or theory (Silverman, 2005). This study aims to target information-rich sources that can provide depth and diversity on HPE governance; hence, purposive sampling is suitable. Purposive or purposeful sampling assumes that the investigator wants to discover, understand, and gain insight, and therefore, a sample from which the most can be learned should be selected (Merriam, 2009). This approach guided the sampling strategy for interviews, observations, and documentary analysis.

For the interviews, key informants for this study were mainly leaders and senior staff of HPE governing structures and stakeholders ranging from governmental to academic, professional, and civil society leaders besides students. Criteria for selection of respondents included comprehensiveness and diversity, to provide for a wide range of views. Stakeholder mapping was conducted for this purpose leading to identifying 15 institutions with a direct or indirect stake in HPE governance, mostly within educational and health sectors. The 36 key informants interviewed for this study represented current and previous leaders in those 15 entities with background and expertise in academe, health services, regulation, research, and professional spheres. Table 3 below outlines the level, position, and institutional affiliation of the study respondents.

For the observation events and in line with the purposive sampling approach, meetings held by two high-level HPE governance committees were attended for observation. The Medical and Health Sciences Committee (MHSC) of the National Council for Higher Education (NCHE) and the Accreditation Committee of the SMC were purposively selected for their high relevance to the topic of investigating HPE governance (their role is explained later in the thesis). Both committees involve representation mainly from academe, health services, and regulatory councils. In consideration for the flexible and evolving nature of qualitative research, meetings held by two other committees were observed during the course of the study as they were deemed suitable. These included one meeting of the Sudanese Association of Universities (SAU) and an ad hoc meeting organised by a private university for the purpose of establishing a new medical school.

For the documentary sources, sample selection was guided by the purpose of the study and involved wide range of relevant documents, both published and unpublished. The coverage extended to include institutional reports and plans, conference papers, committee reports, and website content of relevant institutions.

Table 3: positions and institutional affiliation of the key informants interviewed for HPE governance study in Sudan

Domain	**Institutions**	**Interviewees/respondents**
Higher education	- National Council for Higher Education - Ministry of Higher Education, - Medical and Health Sciences Committee - Universities	16 persons including Ministers, undersecretaries, senior officials/ directors, committee members, vice chancellors/deputy vice chancellors, and deans of HPE schools
Health services	- Federal Ministry of Health - State ministries of health - Sudan Medical Specialization Board	11 persons including Ministers, undersecretaries, and senior officials/directors
Regulatory councils	- Sudan Medical Council - National Council for Medical and Health Professions	2 Senior officials
Professional associations	- Sudan Doctors Union - Association of Sudanese Universities - Association of Medical Schools Deans	3 Senior officers
National councils	- National Council for Training - National Council for Technical and Technological Education	2 Senior officials
Community	- Community-Based Organisations: Maharat Society and the Network for Higher Education Support	2 Senior representatives
Students	- Federation of Sudanese Medical Students Associations	FGD (8 student leaders). FGD deemed more appropriate than an individual interview

3.4.3. Data collection methods and tools

Several data collection methods may be employed in qualitative research. This study mainly used interviews, observation, and documentary review, which are popular and complementary (Yin, 2009). I have a personal connection to this research, that of being an insider as a previous director at the FMOH and subsequently leading a HPE institution and serving in some HE committees. Being an "insider" allows for easier access, the ability to ask more complex and sensitive questions, and understand non-verbal clues and thus develop more holistic and context-grounded findings (Merriam, 2009). However, insiders can be accused of being inherently biased as their "situated positions" would make them think and write from a particular point of view (Yanow, 1996). Reflexivity is introduced in this context as a tool to augment the three data collection methods, and to enhance the transparency and quality of the research (see below).

The following is a description of the three data collection methods for this study and an account on the use of reflexivity.

Documentary review

Documents, including published and unpublished materials, can serve a variety of purposes in a research undertaking. Bowen (2009) described important uses of documents in qualitative research, including providing background and context, generating questions, supplementing other data sources, tracking change, and verifying findings.

Documentary sources have particular strengths that are not captured in other qualitative research methods. They can provide information not present in other forms and may speak about characteristics of their producers and processes of production (Shaw et al., 2004). As Merriam (2009) suggested, documents represent a stable source of data since they are produced prior to, and independent from, the research. However, documents could be difficult to access and may involve biased selectivity (Yin, 2009). For this research, I enjoyed wide access to relevant documents based on my "insider" position.

Documentary sources can serve epistemological positions pertaining to both quantitative and qualitative approaches. In this study documents are mainly used in line with a constructivist paradigm to provide context for the research, delineate aspects of change and development, and suggest issues for further exploration through interviews and observation. In constructivist

epistemology, documents are seen as "social facts" that are created, consumed, shared, and utilised in socially organized ways (Atkinson and Coffey, 2004).

Guided by the research questions, I approached documents systematically to gauge relevant data and information observing criteria suggested by (Scott, 1990) including authenticity, credibility, representativeness, and meaning. To that end, I developed a grid to facilitate sorting out and analysis of the documents (Appendix 2).

Interviews

Interviewing is defined as a verbal interchange in which an interviewer tries to elicit information, beliefs, or opinions from another person (Burns, 1997). Research interviews are classified generally into three main categories: structured, semi-structured, and open-ended. This study employed semi-structured interviews to accommodate participant responses and emerging viewpoints while providing structure and direction to the interview (Merriam, 1998). Commonly required skills from the investigator/interviewer include asking the right questions and interpreting the answers, being a good listener, being adaptive and flexible, having a firm grasp of issues being discussed, and being unbiased by preconceived notions (Yin, 2009).

My background in the topic area, my prior experience with qualitative research, and the additional training I obtained equipped me with the necessary competence to conduct the interviews effectively. My research involved interviewing senior officials and experienced academics and health professionals. Elite respondents who hold positions of power and have privileged access to specialised knowledge can take control of the interview process (Richards, 1996). Having to deal with "elite interviews" in my case demanded skills in time management, maintaining focus, and dealing with interruptions at interviews.

Questions for the interviews were developed based on the research objectives and the conceptual framework of the study and were further informed by early analysis of some documentary and observational data that provided some lines of enquiry. The language and phrasing of the questions were tailored to suit the intellectual level of respondents (as mostly highly educated and technically informed people) and to incorporate common terms in the study context. The resultant broad interview guide is further tailored to suit respondents from different factions such as academe and health services and to ensure a manageable set of content. Appendices 3 and 4 successively contain the interview guides for higher education and health sector respondents. Pilot testing of the

interview guide with two respondents from health services and academe based on considering context-specific lines of enquiry further helped to ensure relevance, refine questions, and standardise the length of the interview.

Observation

Kumar (2011, p. 140) defined observation as *"the purposeful, systematic, and selective way of watching and listening to an interaction or phenomenon as it takes place."* In this sense, observation is a first-hand encounter in reflecting behaviour as opposed to interviews that report people's views and perceptions. As Furlong (2010) suggested, observation can reveal insights not accessible from other data collection methods such as processes, interactions, and behaviours. One useful aspect of observation as a research method is that it can provide context to understand data collected through other methods such as interviews and documents (Merriam, 2009). Moreover, observation notes can generate a line of enquiry and questions to be pursued through other methods such as interviews. Since this study deals with HPE governance as a contemporary phenomenon, observation is deemed relevant and useful as a data collection method (Yin, 2009). The purpose of observation in this research is to generate first-hand accounts and to support quality of the dataset through triangulating other data generated by interviews and documentary sources. The observation sessions were planned to gather data about decision-making structures and processes, relationships and interactions among governing entities, and the context for HPE governance. The sample is therefore purposive targeting governance mechanisms which are in this case committees entrusted with key roles in the HPE arena.

Observation includes participant observation and non-participant observation. For this study, I used both types to mainly cover meetings of two high-level governance structures: The MHSC, of which I am a member, and the Accreditation Committee within the SMC, to which I am external. Also, meetings of two other committees were considered useful during the evolution of the research and were thus attended for observation. I developed an observation guide to help with capturing and analysing the data (Appendix 5). The development of the guide is informed by the study purpose, the research questions, and the conceptual framework. Specific dimensions targeted by observing committee meetings included the structures and processes of decision making, atmosphere and interactions, topics and content, and informal clues.

Reflexivity

In terms of qualitative enquiry, the term "reflexivity" has increasingly been featured in academic consciousness and debate in recent years. Reflexivity is defined as thoughtful, self-aware analysis of the intersubjective dynamics between the researcher and the researched. It requires critical self-reflection of how the researchers' social background, assumptions, positioning, and behaviour impact on the research process (Finlay and Gough, 2003). Reflexivity relates to the dimension of the researcher being the primary instrument for data collection and analysis and to the researcher positionality.

Regarding the first aspect, the researcher's role in qualitative research is critical hence the need for special skills. Since understanding is the goal of qualitative research, the human instrument, which can be immediately responsive and adaptive, would seem to be the ideal means of collecting and analysing data (Merriam, 2009). Other advantages include the researcher's ability to enrich analysis through verbal and non-verbal interaction with respondents and to establish useful interaction between data collection and data analysis, a desired feature in qualitative research. Conducting good interviews and careful observation demand skills and experience in qualitative research. Training in qualitative methods is one good strategy to standardise the human instrument.

However, the human instrument also has shortcomings that need to be attended to, and top among those is bias and subjectivity that might impact the trustworthiness of the research (Merriam, 2009). One required practice is to be objective and responsive. Where subjectivity is inevitable, it is pertinent to appreciate it and monitor its impact on how it might shape the collection, analysis, and interpretation of data. As Peshkin (1988) conceived, subjectivity can be seen as virtuous, for it is the basis of researchers making a distinctive contribution, one that results from the unique configuration of their personal qualities joined to the data they have collected.

My prior experience with qualitative studies has proven valuable in research design and data collection, especially in conducting interviews for this research. I also benefited from additional training on research methods during my study period, which helped boost and refine my skills. While being aware of my prior assumptions and subjectivities and being open about them, I adopted objective strategies for data collection: being open and accommodative for opinion and being precise in recording informants' perspectives and other sources of data.

With regards to the second aspect, the researcher's positionality, I began working on this research at a time when I played a leadership role in governance arena as a senior official in health workforce development roles within the Sudan health system. I also had a history of managing educational institutions and serving in academic committees and functions. This internal position to the research was an advantage as well as a disadvantage, as it brought about challenges. The knowledge and experience I had of the research context and easy access to information sources, including senior informants, was a huge advantage. The established relationships with key persons in health and HE sectors helped me with conducting smooth and fruitful interviews. Challenges associated included the potential for bias due to my position and relationships with respondents, which may affect their responses and information they provide. As Etherington (2004) suggested, the researcher may hold strong views on the topic, distorting the interpretation of data, and hindering precise analysis. I, therefore, needed to declare my particular interests and values. I have a background of transformative leadership and commitment to change, the re-vitalisation of institutions, and action-orientation. I hold strong views of transforming the health professions' education and bringing in more synergy between education and health. Throughout my career, I have seen the adverse effects of the dichotomy between educational and health institutions. My grounding in the field of human resources for health has served both as an asset and a liability. There is clarity on the concepts and theoretical underpinnings of the research on one hand and the hazards of undervaluing the seemingly simplistic contribution of research sources on the other hand.

Given the nature of the research and the researcher's internal position, the role of reflexivity is deemed essential in this study. Reflexivity is introduced in this study to address the tension involved. Reflexivity entails sensitivity to how the researcher and the research process have shaped the collected data, including prior assumptions and experience (Mays and Pope, 2000).

I consider my reflexive notes to contribute to support interpretation and deeper understanding and contextualisation of data obtained through different methods. I also regard reflexivity as a contributor to enhancing the quality and rigour of this research. By providing information about the context in which data are located and by ensuring openness and ongoing scrutiny of ourselves, reflexivity adds validity and rigour to our research (Etherington, 2004). I have undoubtedly benefited from additional training and supervision as part of the study process, which encouraged a reflexive attitude and a more critical approach to data analysis and interpretation.

3.5. Field work

Preparing for data collection in qualitative research can be complicated and should be seen as a critical step in the whole research process. In the context of case study research, good preparation entails a competent investigator besides a case study protocol, screening candidate cases, and conducting a pilot study (Yin, 2009). Field work for this study was conducted in three main stages: preparations, piloting, and actual data collection.

3.5.1. Preparations

This phase mainly involved the following steps

- Mapping out the potential sources of information for the study. Supported by the research assistants, I refined the list of institutions, events, and individuals to be tapped as information sources.
- Contacting relevant authorities to gain access to information sources, including documents, key informants, and observation events. This included meeting the chairpersons of the two selected committees as gatekeepers to provide me with access to the committee meetings in my research role as opposed to my work role. The response rate was high due to the appreciation of the study's importance and the author's excellent working relationship with most of those in charge.
- Preparation of logistics such as office space, transport, and recording equipment also went well as I obtained funds from my employer sponsoring my research degree as part of staff development project. An office space including cupboard for storage was provided.
- Training in qualitative research, especially interviewing skills and data analysis. This was made possible through training courses, and sessions attended at the university and outside. The supervision support was also helpful in this respect.
- Selection and orientation of research assistants. I approached three colleagues qualified in public health and trained in research who agreed to support me in logistics, data collection, and transcription of interviews. I organised three orientation sessions with

those research assistants to introduce them to the study and the planned methodology. However, at the outset of the actual phase of data collection, I considered it more appropriate to conduct interviews and observation sessions by myself for reasons relating to the "elite" nature of interviews and sensitivities around attending meetings for observation. To get adequately immersed in the dataset, I also transcribed most of the interviews. The role of the three research assistants was confined to the following:

  - Assisting with refining the list of potential sources of information and data for the research
  - Developing the calendar for interviews and arranging appointments with some respondents through contacting their offices
  - Collecting some of the documents according to the indicated sources including scanning of institutional websites for relevant materials
  - Transcription of six interviews out of the 36 records of the interviews conducted for this study
  - Helping with moderation of the focus group discussion (FGD) decided to be included in the study
  - Supporting data management including organizing files according to the code list I developed

- Obtaining ethical approval for the study from the university and national authorities in Sudan (see Appendices 6 and 7)
- Contacting key informants to explain the study purpose, obtain consent to participate, and assure confidentiality. I sent out letters to all selected informants and followed up with phone calls and in-person meetings to confirm appointments, with the support of research assistants (Sample letter to key informants/respondents shown in Appendix 8).

3.5.2. Piloting

For the pilot, the following were carried out:

- Testing the developed interview guide to check for clarity, suitability, and validity. I conducted two pilot interviews with professional officials working for the FMOH and the MOHE. Particular attention was paid to:
    - Adequacy of questions in terms of addressing the study dimensions
    - Flow and clarity of questions
    - Sensitivity of the issues involved and the adequacy of response
    - Time taken to address the whole questions
    - Feedback from the person on the interview

  The pilot interviews with the two officials helped to refine the questions for subsequent interviews. One pilot interview was later added to the study dataset while the other was discarded as the second person interviewed in the pilot experience was not among the study participants.

- Testing of the grid developed to extract data from documentary sources
- Testing the observation guide through pilot observation of one of the MHSC meetings to check for comprehensiveness and suitability.
- Refining and finalising data collection tools based on the pilot. Some resultant improvements were introduced to the interview guide, the document analysis grid, and the observation guide.

3.5.3. Data collection

This stage involved the actual collection of data, and it went as follows:

Mining data from documents

A total of 108 documents were obtained, including published materials, reports, plans, meeting records, evaluations, working papers, and memos. Documents were chosen based on relevance to the research topic and objectives, and in some cases additional documents were identified through snowballing especially as indicated during interviews and observation sessions. Some of the documents were selected from among a collection (e.g., conference proceedings) based on

reviewing titles, abstracts, or skimming for relevance and suitability. Also, the websites of related ministries, governance structures, and other entities were browsed, and relevant material extracted.

To provide some further background from an insider perspective, I asked two experienced individuals to draft an account of the history and dynamics of some HPE governance aspects; both responded and produced two useful accounts. The table below summarises the classification of the documents obtained for analysis in this study.

Table 4: Classification of the documents obtained for analysis in the study on HPE governance in Sudan

Document type	Quantity	Sources
Institutional reports	22	Related sectors (higher education, health, etc.)
Legal documents	15	National bills, bylaws, and rules
Committee reports including evaluations	13	Mainly higher education and health sector
Conference proceedings/papers	13	Mainly, the 2015 National Conference on Higher Education
Published materials	12	books, journal articles, reports
Website extracts	12	MOHE, FMOH, SMC, WHO country office, other international agencies, Universities, and Sudan Health Observatory
Policies and plans	9	Health and higher education
Newspaper/magazine pieces	6	Local media sources
Memos and correspondences	4	Variable
Solicited accounts	2	Health and higher education leaders (Wali, 2014 and Elsheikh, 2015)
Total	108	

My strong relations and networking in the field tremendously helped with access to a wide range of relevant documents. One such example was obtaining the full version of papers presented at a national conference on HE organised in Khartoum in 2015. Those papers were vital in enriching the information sources for this study. The scarcity of published material on HPE governance in Sudan was a challenge I faced, but at the same time, it was reassuring to the need for conducting my research. Another challenge with information sources was that most reports were written in the spirit of reflecting the institutions' achievements, a source of bias. Given my knowledge of the context, I focused on areas that were less highlighted and double-checked with informants some aspects of those reports, to obtain a comprehensive and realistic account. An example is when a report from the MHSC indicated a smooth process of decision making by the committee whereas observation has shown a rather tedious way of taking decisions.

Conducting interviews

I conducted face-to-face interviews with 36 key informants (27 males and 9 females), having originally planned to interview 39 people. One person was unreachable, the second one passed away before the data collection stage, and the third was requested to participate in a group interview (FGD) instead, as this was deemed more suitable (See Table 3).

On deciding the adequacy of interviews for this research, I was minded of the issue of saturation in terms of the data coming out of the interview sessions. Grady (1998) described data saturation as the point at which new data tend to be redundant of data already collected, and in interviews this is reflected by the researcher beginning to hear the same comments again and again. Some empirical evidence attempts to indicate certain number of interviews in qualitative research. Guest et al. (2006) suggested six to 12 interviews when the domain of enquiry is specific and the sample is homogenous, while Dworkin (2012) referred to a wide range of articles and books suggesting a range of five to 50 respondents as adequate. Others, however, tend to value a saturation approach that decides the number based on certain factors such the study method, the nature of the topic, data quality, and the amount of useful information obtained from each participant in addition to practical considerations (Morse, 2000).

In this study, saturation and the number of interviews conducted was assessed and reached based on the following:

- The selection of the sample in the first place is based on covering the possible key informants rich in information related to the topic of investigation. Mapping the main stakeholder institutions relevant to the research helped in ensuring a comprehensive representation for interviews
- The data saturation stage reached through conducting the interviews. After interviewing 30 respondents, the rest provided no new data or codes. The rest of the interviews mainly confirmed the dataset and enhanced the already reached categories.
- My personal experience of the context and my cognitive judgement were both in line with the adequacy and usefulness of the data coming out of the 36 interviews
- The time and resources I had, given the scope of the study as a student research project would not allow for extending the number of interviews even if I wanted to do more to further boost the quality of the study

All interviews except three were conducted at institutional offices related to respondents. Interview sessions ranged from one hour to one hour and a half although some of them extended more due to challenges discussed below. At the outset of each interview, I performed the necessary introduction of the research and ensured consent and willingness for contribution in addition to assuring respondents about anonymity and confidentiality. Coverage of interview questions varied with the focus determined mainly based on whether the respondent came from an academic or health services background (Appendices 3 and 4). This is because the weight of analysis for this research lies in exploring issues from the HE and health services perspectives. A portion of a transcribed sample interview is included in appendix 9 with annotations based on the study thematic framework.

Throughout the interview sessions, I observed the following guiding protocol:

- Asking questions in a clear and specific language with one question asked at a time
- Ensuring the flow of questions in a logical manner except when a respondent got to mention a certain point and it was deemed suitable to allow for smooth flow of the conversation and subsequently get back to the order
- Avoiding phrasing questions in a leading format or a “Yes and No” pattern
- Abstaining from stating any judgmental remarks to avoid embarrassment for respondents and to conform to the constructivist approach where reality is socially constructed

- Keeping the discussion of sensitive questions towards the end of the session when deemed suitable
- Concluding the sessions with notes of thanks for the respondents and reassurance about confidentially and respect of their choices for data representation
- Being alert to observe any influence of my background and position on the responses and adjusting accordingly to ensure a fuller account

Interviews were mainly conducted in Arabic, but the conversation was mostly in a mixture of Arabic and English (common among elites in the country). The interviews were digitally recorded using a small electronic recorder. Three respondents had reservations about recording, which required the researcher to change to careful notetaking with prompt capturing of comprehensive interview records. Notes were also taken during all interviews to capture the context and non-verbal expressions or events. Probing questions were asked during interviews to further pursue points of interest. All respondents, except five, responded to follow-up clarifications and data congruency tests obtained.

Even though the interviews generally went well, I encountered some challenges as I was interviewing elites. Several interruptions occurred during some of the interviews, either someone would enter the office, or respondents, who were senior leaders and officials, would answer phone calls. These interruptions required pausing the recording, which wasted time and affected the flow of conversations. However, I managed to cover all the questions. Despite my excellent access to and familiarity with the respondents, which facilitated ease and transparency, I was concerned about taking for granted areas that needed exploration during interviews. To address this, I adopted a deliberate strategy of ensuring that meanings were probed. Other issues entailed staying focused and managing time when responses were irrelevant and lengthy. I had to be patient and polite to adhere to the cultural norms and managed to get all questions addressed despite ending up with somewhat lengthy interviews.

My reflexive attitude during and after the interviews helped explain and contextualise meanings and in relating and checking my prior understanding and assumptions. The transcription of a bilingual interview and the time and effort needed to draft the final transcripts in the English language were other challenges I faced.

Conducting observation sessions

Seven relevant events were attended for observation for this study including:

- Three meetings of the MHSC of the NCHE (Meeting No 2/2015, Meeting No 4/2015, Meeting No 1/2016) where I attended as participant observer
- Two meetings of the Accreditation Committee of the SMC (Meeting No 2/2015, Meeting No 4/2015) where I attended as non-participant observer.
- One meeting of the Supreme Committee of the Sudanese Association of Universities where I attended as participant observer.
- One meeting organised by a private university for the purpose of establishing a medical school where I attended as participant observer.

For all observation sessions, I obtained permission with ease from gatekeepers (chairpersons of committees), and my presence created no disturbance due to my familiarity with all these contexts.

The observation schedule (Appendix 5) was used to support the structure and focus of my observation experience. I used to take to the observed events printed versions of the schedule with adequate blank space to allow for writing down relevant notes. I adopted the following protocol during observation sessions:

- Easing myself in the observation context through normalising and being attentive to any reaction.
- Preparing to focus and use all senses and intuition to gather adequate and comprehensive observation data
- Being attentive to any difficulties or challenges that might arise during observation
- Capturing observation notes in an abbreviated manner and based on the observation schedule.
- Recording my impressions and personal reflections on the back of the paper

After each observation session, I adopted the habit of sitting at the office to review and expand my observation diary to fully capture the events. Appendix 10 includes a sample observation note of a committee meeting.

In my case, participant observation had been both an opportunity and a challenge. My knowledge of the context and the culture, in addition to easy access to events and the smooth fitting (not

disturbing the context), were indeed assets for useful observation outcomes. On the other hand, some challenges of participant observation ensued, including balancing the role of observing with that of participating, attaining objectivity given the inherently subjective nature of the method and researcher bias and effect on the behaviour of people observed, and dealing with ethical aspects of observation.

I adopted the following strategies to address those three challenges and to mitigate adverse effects and improve the quality and rigour of observation data:

- To minimise the tension between my roles as an observer and participant, I prepared a list of things to focus on during observation (see Appendix 5). However, this did not prevent me from observing other events taking place. For notetaking, I adopted a strategy of using abbreviations and short phrases to capture observation notes and expand those notes immediately after the end of the observation sessions.
- To address objectivity, I separated the description of what I observed from my comments and interpretations of the events by recording each on one side of the paper. Despite their subjective nature, reflections and interpretations of the researcher should form a useful part of the observation notes. As Patton (2002) suggested, observers must make some efforts to observe themselves observing, and record the effects of their observations on the people observed.
- To address ethical issues, I informed the gatekeepers (chairpersons of committees) and obtained their consent, looked out for any reactions from the respondents, but nothing major happened. I practised confidentiality, to protect the identity of those observed, by developing and keeping a code list to myself and entering the field notes anonymously into the computer. Since I did not obtain informed consent from people observed (committee members), I conducted no digital recording of observation sessions.

Conducting the focus group discussion

A focus group was not originally planned to be conducted in this study. However, as shown in Table 3, the individual interview with the student candidate (chairperson of the Sudanese Association of Medical Students) was changed to a group interview. It was deemed more appropriate that this method would capture the collective view of medical student leaders and add

more to the study dataset. I also reflected on the probability that my relationship as a senior person in a HPE context to a student candidate might disinhibit a meaningful individual interview due to the power dynamics involved. Student development theory suggests that students tend to feel insecure in expressing their opinions in individual interviews and are often more comfortable in group settings due to their developing sense of identity (Erikson, 1994).

Focus groups represent a form of group interview that capitalises on communication between research participants to generate data (Kitzinger, 1995). As a method for data collection, focus groups have been used for a long time and their popularity and application have grown across a range of disciplines including education and health (Gilflores and Alonso, 1995; Wilkinson, 1998). They can be used as stand-alone method or to augment other data collection methods such as individual interviews and observation.

There are several advantages to the FGD as a research method. It is an economical, fast, and efficient way for obtaining data from multiple participants (Krueger and Casey, 2015), and is a flexible technique that is adaptable at any stage of the research (Nyumba et al., 2018). The sense of belonging to a group can increase participants' cohesiveness and help them to feel safe and therefore share information and provide candid responses (Peters, 1993). Since the focus group involves several participants, it apparently helps to increase the size of the sample in qualitative studies.

On the other hand, FGDs are prone to some limitations including biases and control issues. Outspoken individuals can "hijack" or dominate the discussion (Leung and Savithiri, 2009), and participants are sometimes reluctant to deal with sensitive topics in a group setting compared to an individual interview (Nyumba et al., 2018). Another limitation relates to the composition of the focus group; Harrison, M. et al. (2015) noted that since FGD depends on participants' dynamics, the method should be avoided where participants are uneasy with each other. The focus group relies heavily on assisted discussion to produce results and hence the critical role of facilitation skills of the moderator (Leung and Savithiri, 2009).

While a FGD can be a cost-effective and a quick approach for data collection, its success requires proper planning and organisation (Kitzinger, 1995; Goss and Leinbach, 1996). Important dimensions prior to actual conduct of a FGD include defining the purpose, selecting participants,

size and characteristics, a suitable venue, and a list of guiding questions in addition to arranging effective moderation/facilitation (Morgan et al., 1998).

Guided by the literature and the study purpose and questions, I opted for conducting a single FGD with the members of the executive committee of the Sudanese Association of Medical Students. The objective of the focus group was built around exploring the students' perspectives on accreditation of medical education as one vital governance process in the HPE arena. Medical students in Sudan are involved through their networks in the SMC accreditation programme both from an institutional (medical schools) perspective and national representation as typified by their membership in the SMC Accreditation Committee, hence their engagement in this study was deemed essential.

The ten student officers of the association were invited to participate in a FGD for this study. Eight of them, including five males and three females, managed to attend representing a reasonable number for such a data collection method (Krueger and Casey, 2015). The student leaders were deemed suitable for contribution to the study based on their special knowledge and experience with accreditation. A quiet room at the Sudan Doctors Union (SDU) with a U shape seating setup was arranged for the FGD and refreshments were provided during the two-hour duration of the meeting. A moderator guide, which is essentially a list of questions the researcher uses to guide and facilitate the FGD (Morgan et al., 1998), was developed and discussed with one of the research assistants. I developed the discussion points based on the study's conceptual framework and the dimensions of the accreditation programme to solicit students' views on aspects related to:

- Introduction of the SMC accreditation programme,
- Students' representation in the SMC Accreditation Committee
- Accreditation standards
- Accreditation process and engagement of students with preparations inside their medical schools
- Adequacy of using the student views/potentials to support accreditation and medical education improvement.

Prior to conducting the FGD, I was carefully thinking on moderation and facilitation of the discussion in a manner that ensures an effective outcome. This involved reflecting on the relationship with students, skills for conducting FGDs, and the role of the research assistant.

Despite the status and age difference, I have maintained good relationships with the medical student association and groups through participating in their events and providing support from my institutional positions. That has helped to create trust and rapport which proved to be useful for easing their response and contribution to the discussion. As for the skills dimension, I personally had the experience of running focus groups, and I boosted this by the qualitative research training during my studies. My effective communication skills, the habit of good listening, flexibility, and sense of humour were all assets for conducting the discussion with students. Since the intensive and multidimensional nature of FGDs requires assistance for the moderator (Krueger and Casey, 2015), I asked one of the research assistants to support me in running the group and had an orientation session with her. The role of the assistant included supporting with preparing the venue, taking notes of the discussion, managing the recording of the session, and capturing non-verbal interactions.

On starting the FGD, I adopted the following protocol to ensure smooth running and effective outcomes:

- Welcoming the students, thanking them, and ensuring their consent and willingness to contribute to the study, and taking the permission to record the session
- Introducing the research assistant and familiarising with the group participants and assuring them of confidentiality and anonymity including for the use of the recording.
- Explaining the research purpose, expectations from the group, and basic rules of discussion. The broad questions and guiding points for the discussion were outlined
- Guiding the discussion based on the broad questions in an open manner allowing the group participants to speak up and establish a dialogue
- Creating an informal atmosphere to encourage contributions and interactions among the group participants
- Keeping receptive and neutral in relation to contributions of the group participants
- Tracking questions for completion and following up on the themes of discussion where needed
- Keeping alert for biases such as dominance or inertia and being prepared to gently intervene.

- Concluding the session by providing an overall summary, acknowledging participants, and showing appreciation to their contribution to the study

The discussion generally went smooth as participants were peers and spoken as leaders of student associations. Following the meeting, I sat with the research assistant to review and expand the notes and ensure all relevant aspects were captured. This has helped in completeness and precision of the focus group transcript, a portion of which is included in Appendix 11.

Using reflexivity

Reflexivity is used in this research to enhance data completeness and to ensure transparency and augment the quality of the study. To that purpose, I maintained a reflexive journal to capture my personal reflections and iterations throughout the research process. A research diary or journal in qualitative research documents the researcher's thoughts and experiences before, during, and after data collection and analysis (Banister, 2011). The reflexive journal helped me to relate to the study more appropriately, to know where I stood and how subjective I was. I used the journal's content as a means of ensuring openness and enhancing the trustworthiness of the research.

Reflexivity is mainly used in this research to augment the three main data collection methods: document review, interviews, and observation. Qualitative research involves the co-creation of knowledge between the researcher and the researched, with the researcher being part of the meaning-making process (Eisner, 1991). As such, my reflexive attitude and practice in this study helped to co-construct interviews and provided explanations of the positions taken by the informants. It was also helpful in appreciating the directions and views expressed in documents and the meetings observed.

3.6. Data analysis

Data analysis is a challenging step in qualitative enquiry, particularly in case study research (Yin, 2009). Thorne (2000) described data analysis as the most complex and mysterious of all the phases of a qualitative project. Compared to other stages of doing a qualitative study, methodological guidance for data analysis is limited (Houghton et al., 2015). Given the developing and iterative nature of qualitative research, data analysis work starts simultaneously with data collection. This overlap is considered essential as it helps in addressing data gaps and refining findings throughout the lifespan of the research (Merriam, 2009).

The need for an analytic strategy and effective data management are vital pre-requisites for case study analysis and, as Yin (2009) proposed, this starts with developing ”the case study database.” The purpose of the study and analytic strategy, as Patton (2002) suggested, should essentially determine the direction and approach for analysis. Generally, inductive and deductive reasoning are the two main approaches for qualitative analysis. The former uses data to generate ideas (grounded theory) while the latter begins with a priori framework and uses data to establish or negate the idea or the framework (Thorne, 2000). The two can be combined to allow for a more complete analysis (Boyatzis, 1998; Bird et al., 2007), an approach suitable for studies that have a priori framework but also seek to elicit new meanings. The framework approach (Ritchie and Spencer, 1994) corresponds to this combination because it involves sorting data around issues and themes arising from the research purpose and conceptual framework, and provides for an inductive generation of new data, meanings, and themes.

This enquiry, as case study research, is guided by purpose, strategy, and approach. As a primarily applied research carried out for academic purposes, this study should demonstrate rigour and contribute to theory building, and its product should be clear, relevant, and applicable. The choice of the strategy is a mix of inductive and deductive analysis; hence the framework approach is considered suitable. The framework approach, as described by Ritchie and Spencer (1994), involves five steps: familiarisation, thematic framework, indexing, charting, and mapping and interpretation. The framework approach belongs to the broad family of qualitative content analysis and is comparable to other approaches in this category (Gale, N.K. et al., 2013; Houghton et al., 2015). It is identified for use in this study based on the following merits:

- It provides clear and sequential steps to follow and produces structured outputs of summarised data
- Its defining feature is the matrix output which provides a structure into which data could be summarised and reduced to support analysis (Ritchie and Spencer, 1994)
- Its structure and process allow for comparing data which is a vital dimension to qualitative analysis (Gale, N.K. et al., 2013)
- Its suitability for analysing semi-structured interviews, which are integral to this study, in addition to its accommodation for analysis of other types of textual data including documents and field notes from observations (Pope et al., 2000)

- Its increasing use for qualitative studies in applied fields such as health and education (Gale, N.K. et al., 2013)

Before describing the intensive stages of data analysis, two significant issues are discussed briefly: data management and computer use for analysis.

3.6.1. Data management

Data collected in qualitative studies is often huge and extended warranting careful management and organisation. The absence of a system for labelling, sorting, and accessing the gathered data will jeopardise a researcher's ability to interpret the vast amount of information accumulated in a case study research project (Harrison, H. et al., 2017).

The dataset for this study is comprised of transcribed interviews, document reviews, and observation field notes in addition to the focus group transcript. This dataset was planned and organised according to the university protocol. Code lists were developed for each sub-set of data and stored in folders on my personal computer protected by password and on my M drive at the university. Code lists were entered in an encrypted computer location with limited access. The dataset was copied onto an external disc for backup and kept in a secure place. Hard copies of the dataset were labelled, sorted out, and filed in different folders with the code list applied, and kept in locked cupboards inside the office assigned for the researcher. As such, the case study database was made secure and accessible for the researcher to conduct the analysis.

3.6.2. Use of computer for analysis vs. manual approach

Computer-Assisted Qualitative Data Analysis Software refers to different software programmes that are increasingly used to help with qualitative data analysis. These programmes do not analyse data; they only help with organisation, categorisation, and retrieval (Merriam, 2009). These limitations verify the researcher's role as the main instrument for data collection and analysis in qualitative research. As Yin (2009, p. 128) explained,

> *"Unlike statistical analyses, you cannot use software's outputs themselves as if they were the end of your analysis; developing a rich and full explanation requires much post-computer thinking and analysis on your part."*

Given the training and background knowledge about NVivo software, I considered it appropriate for dataset storage, categorisation, organisation, and retrieval. However, I opted for a manual analysis of the data as it proved more practical. Although this approach required extra time, effort, and focus, I became more familiar and immersed in the data through the experience of manual analysis.

Before starting the data analysis phase, I began analysing pieces of data as they were being collected, which improved data completeness and quality. For instance, the initial analysis of some documentary data helped with shaping some questions and ideas for interviews and observation. Likewise, the analysis of some interviews led me to focus my attention on certain aspects of the observation sessions for verification.

3.6.3. Using the framework approach

The intensive data analysis phase used the framework approach explained earlier, comprising the following five steps:

Familiarisation

At this initial stage of intensive data analysis, I performed reading and re-reading through the dataset in its entirety to familiarise myself and get a grip of my data. This helped to organise the whole dataset and render it ready for subsequent phases of analysis:

- For the interviews: I read through all transcripts, refined the text, and removed duplications, and noted down some initial impressions including patterns and instances of sharp contrast/diverging views
- For the focus group: I thoroughly reviewed the transcript, performed refining, and underlined areas of text based on initial impressions about the data
- For the observations: I read through the observation notes in a chronological manner, refined them, and highlighted initial aspects related to trends and patterns in the data
- For the documents: I firstly skimmed through the document set and identified the content and portions of relevance to the study. That was followed by careful reading through the relevant sections.

The whole dataset was made ready for the subsequent phases of analysis. The documentary set of data was analysed together with data from interviews, FGD, and observation so that themes would emerge across all four sets of data.

Thematic framework

The identification of preliminary categories and themes, which contributed towards building the thematic framework, began in the early stages of the analysis when pieces of data were being collected and during the familiarisation phase. At this stage of building the thematic framework, I annotated provisional categories and themes on the margins of the hard copy of the dataset. This involved applying codes, which are descriptive or conceptual labels assigned to excerpts of raw data (Gale, N.K. et al., 2013) to the text of small subset of data including interview and focus group transcripts, observation notes, and documentary sources. Codes were identified based on the research questions and conceptual framework of the study, and the ideas emerging from the dataset. This corresponds to the strategy of combining inductive and deductive analysis adopted by this study. The process of coding at this stage helped with identifying subthemes within each category or major theme. I eventually extracted the thematic framework (shown in appendix 12) based on the headings and sub-headings of concepts, categories, and themes.

Indexing

At this stage of data analysis, I applied the developed thematic framework (Appendix 12) to the whole dataset to ensure comprehensive coverage and robustness. The process involved the following:

- Systematically reading through pieces of the dataset, highlighting meaningful passages, and attaching appropriate codes from the thematic framework
- Looking out for emerging categories and themes to ensure complete analysis. The process helped to validate the thematic framework and led to minor editing
- Applying different highlight colours to the text denoting specific codes; this process subsequently helped with identification of related text for charting (see the sample of the annotated interview transcript in appendix 9).
- Reading and re-reading through the dataset text to ensure theme saturation

Charting

At this stage, I took the data from its original context and re-arranged it around the index and the thematic framework in a separate file. I then critically read the dataset in its new organisation around the index and managed to refine and add a few more themes. Appendix 13 includes an extract of data charted for the theme of governance relationships. At this stage, charting the data enabled highlighting the important bits of data and allowed for identification and validation of quotes.

Mapping and interpretation

As described by Patton (2002), mapping and interpretation involve attaching significance to what was found, offering explanations, drawing conclusions, extrapolating lessons, making inferences, building linkages, and dealing with rival explanations.

At this stage, I carried out the mapping of the whole dataset of charted data around the thematic framework. That enabled me to extract quotes, identify associations, and capture some concepts. I continued with data interpretation, including identifying explanations, typologies, and phenomena, and deriving inferences and conclusions from the case study.

3.7. Specific methodological considerations

3.7.1. Language/translation

This study was conducted in English; however, it accommodated for contextual factors such as respondents preferring to speak in Arabic or a mix. Dealing with a mix of Arabic and English during interviews was a challenge. Following verbatim transcription of the interviews and the FGD, I translated the Arabic sections and eventually developed full transcripts in English. Extracts of data taken from the documentary review (for documents written in Arabic) were translated to obtain a consistent dataset in English. Since the observation and reflexive notes were captured and written by the researcher, no translation of the material was needed. The whole process was a bit tedious and time-consuming, but it helped with familiarisation and more immersion into the dataset.

3.7.2. Validity and reliability

There are challenges associated with ensuring validity and reliability in qualitative studies due to the flexible and evolving nature of methods and procedures (Kumar, 2011). The trustworthiness in a case study approach including both the validity and reliability dimensions, is a fundamental element for confirming that the case study can be credible, confirmable, transferable, and dependable (McGloin, 2008). Generally, standards for rigour in qualitative research differ from those in quantitative research. Lincoln and Guba (1986) suggested a four-indicator framework to reflect validity and reliability in qualitative studies. Components of the framework include:

- Credibility: establishing that results are valid and believable from the perspective of participants.
- Transferability: referring to the degree results can be transferred to other contexts.
- Dependability: referring to whether we would obtain the same result if we could observe the same thing twice.
- Confirmability: referring to the degree to which the results could be confirmed by others.

Merriam (2009) described several strategies that can enhance the validity and reliability of qualitative research studies. These include triangulation, respondent validation, audit trail, reflexivity, and thick description.

Informed by the literature and the framework above, I addressed the trustworthiness of this research through the following:

- Internal validity or credibility: to ensure that findings are credible given data presented, I adopted the following strategies:
    - Triangulation through using multiple data collection methods (interviews, observation, and documents) where results were compared and cross-checked. I also used triangulation within a single data collection method e.g., interviews to confirm certain information or opinion pieces.
    - Respondent validation to address biases and misunderstanding. In this aspect, I gauged feedback from respondents on the transcriptions of my conversations with

them to check on clarity and congruence. This step also helped in refining data interpretation and clarifying perspectives.

- Adequate engagement in data collection through conducting the interviews by myself to get as close as possible to respondents' perspectives and interpretations. This also applied to my review of documents and involvement with observation throughout the study.
- Adopting reflexivity in terms of being open about my biases, dispositions, and assumptions regarding the study. Such clarification later allows readers to understand better how I arrived at a particular interpretation of data.
- Peer examination and review through obtaining inputs from research assistants and other colleagues in addition to input from my supervisors. This came through inviting comments on data collection, analysis, interpretations, and other relevant aspects.

- Reliability, consistency, or dependability is denoting the extent to which research findings can be replicated. Reliability is problematic in social sciences as human behaviour is never static; that is why qualitative research usually refers to the phenomenon in terms of whether results are consistent with the data collected (Merriam, 2009). In this study, I adopted the following strategies to address reliability and dependability:
  - Triangulation as explained earlier.
  - Peer examination as explained earlier.
  - Reflexivity/investigator position as discussed earlier.
  - Audit trail referring to the detailed description of how data were collected, how categories were derived, and how decisions were made throughout the enquiry (Merriam, 2009). In this study, I developed a project history in the form of a research journal or diary on the process of conducting the research as it was undertaken to provide for an audit trail. The case study database that I created was in line with this and was meant to enhance the reliability of the whole study.

- External validity/transferability in terms of the extent to which findings can be applied to other situations. Generalisability in qualitative research is not statistical; rather, it is conceptual or theoretical and depends on readers to judge the applicability of the study in their context (Yin, 2009). The researcher, therefore, needs to provide enough description of data and context to enable transferability. To address transferability in this research, I opted for the following strategies:
    - The thick description involved details of the setting and respondents in this study, as well as a description of findings supported by evidence such as quotes, documents, and file notes.
    - Maximum variation in the study sample, making sure it represented a wide range of entities and informants related to the topic.

3.7.3. Ethical considerations

Researchers face ethical challenges across stages of designing, conducting, and reporting qualitative studies. Related aspects include anonymity, confidentiality, informed consent, and researchers' potential impact on the participants (Sanjari et al., 2014). The researcher-participant relationship in the context of qualitative research is a mainstay for ethical issues. Dilemmas involved include respect for privacy, establishment of honest and open interactions, and avoiding misrepresentations (Eide and Kahn, 2008).

At the design stage and prior to embarking on data collection, ethical approval for this study was obtained from both the University of Leeds, United Kingdom, and the Research Committee of the FMOH, Sudan (see Appendices 6 and 7). Conformity to ethical procedures of the University of Leeds was also observed during the research.

The following strategies were adopted to address the ethical considerations in conducting and reporting this study:

- Through initial contacts, I explained the research purpose to respondents and information providers seeking their volunteerism and informed consent and assuring them of privacy and confidentiality. This was supported by sending out a letter to respondents (Appendix 8).

- I obtained the consent of committee leaders (gatekeepers) to observe selected meetings for the purposes of this research, assuring them of the anonymity in reflecting members' expressions
- The careful data management strategies followed (Section 3.6.1.) allowed for anonymity and confidentiality for the whole dataset.
- I used respondent validation of the interview data to ensure satisfaction of respondents about the content of transcripts from ethical standpoint e.g., existence of uncomfortable or problematic data pieces
- I discussed with respondents the suitable ways of presenting their views and opinions to avoid any harm, which was taken into consideration in the thesis writing

As I was interviewing elites, I was mindful of balancing the quest for anonymity and confidentiality with the need for a complete and nuanced account of this research. Gaztambide-Fernández (2015) argued that a fundamental tenet in research ethics – those participants have a say in how they are portrayed and what information is publicly shared – does not apply to those in elite positions. However, no significant challenges are faced in adequately representing elites' accounts in this research and this is probably explained by the rather open atmosphere and the trustful researcher-participants relationship.

3.7.4. Part-time nature of study

The part-time nature of this study created some challenges for me. Carrying out this research concurrently with job responsibilities resulted in delays and distortions of plans and an inability to adapt to unexpected events. That is why I requested to suspend my studies when my father's health condition became critical on several occasions, and when my country witnessed major political change and instability. This situation adversely affected my progress, relationship with my supervisors, and study deadlines. The link with my supervisors was intermittent, which made it difficult for them to monitor my progress and keep the focus on the content. These interruptions transformed the student-supervisor relationship in my case in a backward direction, from a friendly positive connection to a rather tense relationship. I capitalised on the supervisors' understanding and cooperative attitude and had to be flexible to minimise the risks. The university management has also been understanding and supportive, as evidenced by the approval of repeated suspensions of the study.

3.7.5. Limitations and constraints

Researching a phenomenon such as HPE governance raises both theoretical and methodological challenges. The dearth of research and lack of conceptual frameworks in this domain represented a limiting factor. Still, at the same time, it established the case for the originality of the study. Despite obtaining a wide range of documentary sources, the lack of published data on HE and HPE in Sudan was also a constraint. However, this limitation further justified the significance of the study.

The researcher's inexperience with reflexivity usage and the relative ambiguity of the concept was a significant challenge. Efforts were made to read extensively around reflexivity and to strive at developing a reflexive attitude throughout the study duration.

Due to the time-lag between data collection and the thesis writing caused by the repeated suspensions, the university committee questioned the relevance of the data and the study. However, the study was deemed essential and beneficial as the area of HPE governance is unexplored in Sudan and the debate is still unfolding with no considerable changes in practice since the inception of the study. The literature for the thesis was reviewed to update the evidence where relevant.

As governance is multidimensional and multi-layered, a nuanced picture of the HPE governance discourse in Sudan would have been possible with a study covering both organisational and system-level governance and addressing undergraduate as well as postgraduate levels. However, for practical reasons and due to time and resource constraints, this research focused on system-level HPE governance for the undergraduate domain. Addressing the study limitations in this respect provides the basis for future research in the HPE governance arena.

3.8. Summary

This chapter established the methodology for conducting this research, i.e., the basis for data collection, analysis, and production of the written thesis. A qualitative design in the form of a case study was deemed suitable for investigating HPE governance in Sudan. Popular case study methods for data collection (documentary review, interviews, and observations) were adopted, and reflexivity as a novel method and tool was introduced given the nature of the study and the researcher's positionality. The chapter also discussed data analysis and some specific

methodological and practical considerations, including language/translation issues, trustworthiness, ethical dimensions, the part-time nature of the study, and the study's limitation and constraints. The next set of chapters mainly presents and discusses the data gathered based on the methodology stipulated in this chapter.

CHAPTER 4: GOVERNANCE STRUCTURES FOR HPE

4.1. Introduction

In line with the conceptual framework of the study, this chapter is the first of three consecutive chapters presenting and discussing the research findings on HPE governance structures, relationships, and processes. The chapter focuses on structures, addressing the first objective of the study, and begins by describing the evolution of HPE governance in Sudan. It goes on to delineate the governance landscape and examine the specific entities that have stakes in HE and HPE governance in Sudan. The chapter proceeds with discussing the implications and describing the locus and focus of HPE governance in the country, and it closes with a summary.

4.2. Evolution of HPE governance

According to the documentary sources reviewed in this study, the origins of modern HPE in Sudan date back to the beginning of the 20th century. Wali (2014) referred to the introduction of nursing training programmes in 1902 based on a vocational approach to education. Subsequently, a school for medical assistants was inaugurated in 1918 in Port Sudan, a coastal city east of Sudan; and this was followed by the establishment of a midwifery school in 1921 in Omdurman, part of Khartoum, the Capital of Sudan (Bayoumi, 1979). The Kitchener Medical School in Khartoum was established in 1924 as the first medical school in tropical Africa (Haseeb, 1967). The Sudan Medical Service, not a full-fledged ministry of health at the time, used to be the responsible body for training in terms of governance and provision, including supervision of the above-mentioned schools (Bayoumi, 1979).

Following Sudan's independence from British colonisation in 1956, the University of Khartoum was formally inaugurated and was later followed by the establishment of other universities and HEIs. Consequently, medical schools and later nursing and other health professions schools became under the university governance while the medical service (the post-independence Ministry of Health) continued to govern vocational schools for nursing, midwifery, and allied health professions (Bella, 2011). In the 1970s, a clear-cut two-tier system for education of health professionals emerged, with the MOHE responsible for university training and the FMOH for vocational training (Wali, 2014).

The FMOH continued to govern vocational training for nurses and allied health professions, including granting vocational qualification certificates, until the year 2000 when the Sudan Declaration for Upgrading of Nursing, Midwifery and Allied Health Professions (the Sudan Declaration) was signed and entered effect in 2001. The declaration was signed by the FMOH, the MOHE, and the WHO Regional Office for the Eastern Mediterranean and endorsed by the President of the Republic. The Sudan Declaration called for the upgrading of vocational training for health workers to university level degrees in order to harmonise professional qualifications and improve the quality of health services (FMOH, 2012).

Subsequently, vocational schools under the jurisdiction of the FMOH were abolished and student intake was shifted to universities and colleges under the MOHE. This step effected major implications on HPE, and in terms of governance it meant shifting away the authority from the health services to the HE sector.

Figure 13 below depicts the evolution of HPE governance structures over the last century and the outset of the current millennium in Sudan, beginning with a unified base under health services oversight, diverging into a two-tier system, and converging again under the university model this time. Implications of this governance evolution on HPE and its products will be further explored in this study.

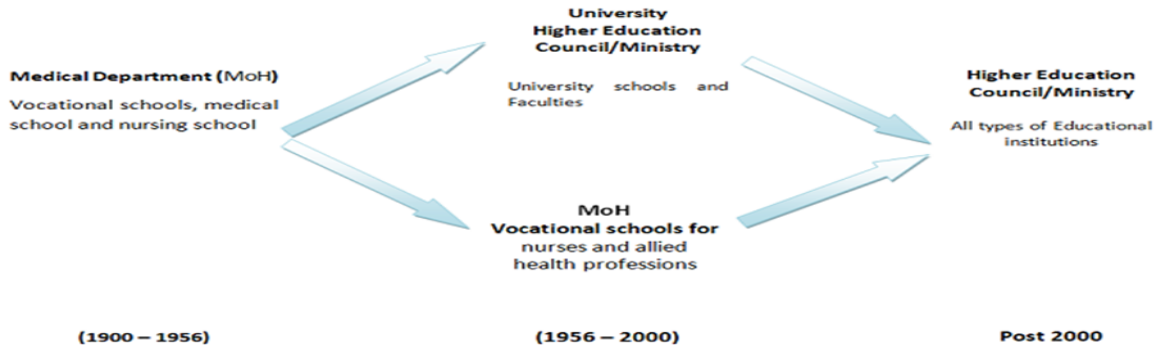

Figure 14: Evolution of health professions education governance in Sudan 1900-2022

4.3. HPE governance landscape

In line with the described historical evolution and policy changes that have taken place, and as indicated by records and documents; the HPE governance landscape in Sudan has witnessed considerable shifts. The following are the changes and milestones that shaped the current system of HE and HPE governance in the country:

- HE structures becoming responsible for governing the provision of all types of HPE offerings. The enrolment of students for different disciplines of HPE became the responsibility of universities and HEIs functioning under the NCHE and the MOHE. Thus, the structures composing the country's HE sector (the NCHE, the MOHE, and universities) assumed the direct governance role over HE inclusive of HPE.
- Some other entities functioning outside the jurisdiction of HE taking over some direct roles relating to HPE governance. This is represented by the SMC and the NCMHP assuming responsibility for the accreditation of medical and health professions schools. Other institutions with direct governance mandate include the National Council for Technical and Technological Education (NCTTE), a parastatal body entrusted with governing technical and vocational education for all sectors including health; and the National Council for Training (NCT), a civil service organ mandated to oversee in-service training for all civil service cadres. The third case is represented by the Sudan Medical Specialisation Board (SMSB) a statutory body with direct responsibility for governing the professional postgraduate education for health
- The health sector represented by the FMOH opting out of any direct role in governance and provision of HPE, retaining indirect influence through coordination and participation in mechanisms for governance under HE jurisdiction. The same applies to other stakeholders, including health providers such as Police and Army health services, professional associations, and arguably community-based organisations.

Based on the above stratification and taking a pragmatic approach to organise the argument in this chapter, the structures for governance in the context of HPE in Sudan are classified into two main categories: direct and indirect.

The first category includes structures within the HE sector (NCHE and its scientific committees, MOHE, and universities) in addition to structures beyond the HE sector including professional

regulatory councils (SMC and NCMHP), other councils (NCTTE and NCT), and the SMSB, all with direct governance role. The second category of indirect governance structures involves entities external to the HE sector including the FMOH, other health providers, professional associations, and community-based groups. Direct and indirect governance structures operate within an overall context of *State oversight* in terms of policy directions and guidance.

Figure 15 below illustrates the landscape for HE governance in Sudan showing the structures with direct and indirect influence on HPE. The first group is illustrated in the main part of the chart to the left with the shaded box demarcated with dotted margins depicting the structures existing within the HE sector and the outer four boxes on both sides showing structures external to the HE sector. The second group of the indirect governance structures is illustrated by the three outer boxes to the right and these entities influence governance through means such as sending representatives to sit on committees and taskforces within HE machinery. The oversight role of the State is also shown in relation to direct and indirect governing structures.

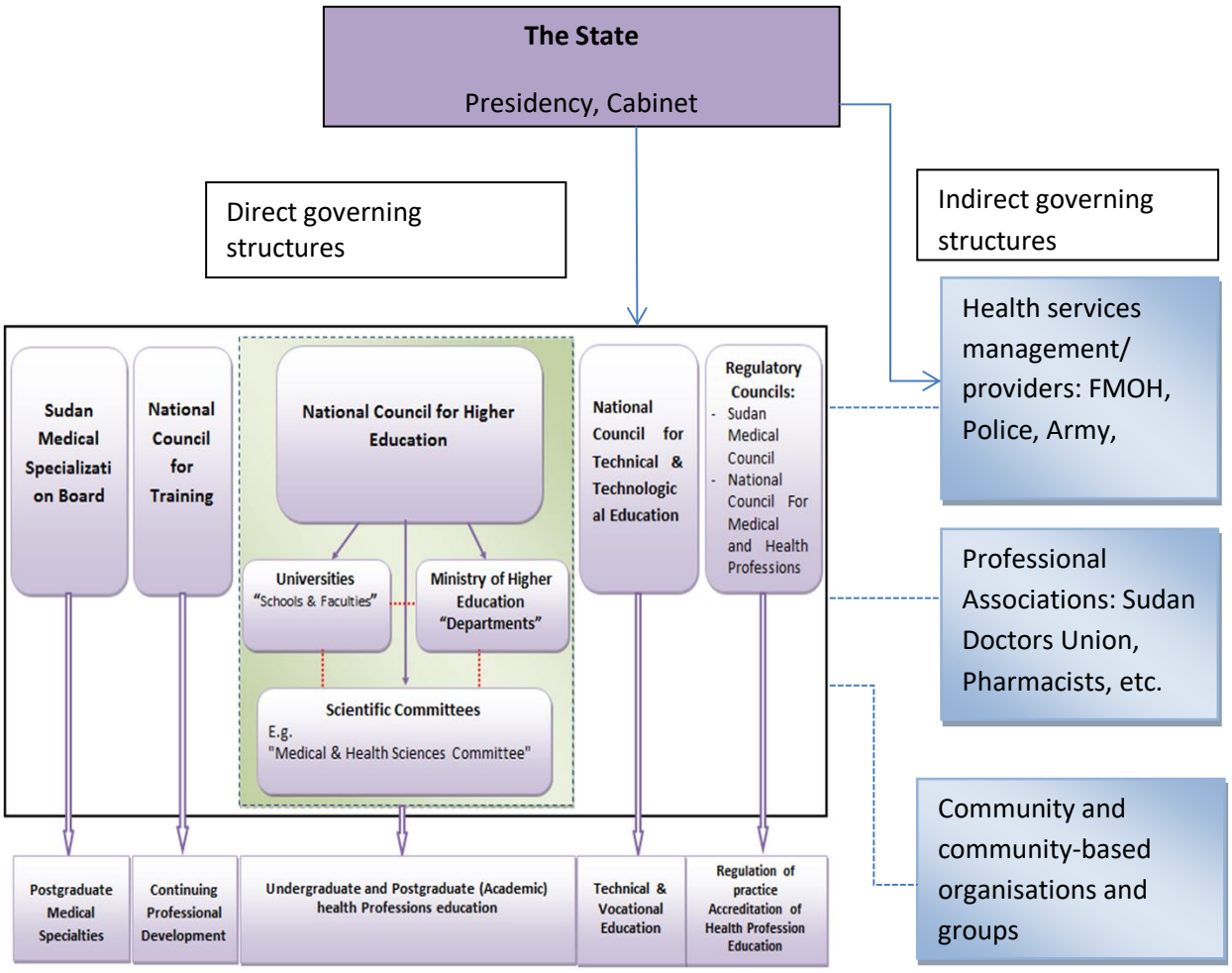

Figure 15: Governance structures and landscape for health profession education in Sudan

The thrust now turns to examining the direct and indirect HPE governance structures in Sudan based on data sources of this study. Guided by the conceptual framework of this study (Figure 11), each HPE governance structure will be described in terms of type and scope, legal mandate/framework, role and functions, mode of operation, and effectiveness (power and influence).

4.4. Direct governance structures for HPE

As shown in Figure 15, entities with direct influence and role in HPE governance include structures internal to the country's HE sector and structures beyond the jurisdiction of the HE sector. These direct governance structures are discussed below based on the research findings, starting with those internal to the HE sector.

4.4.1. National Council for Higher Education

Higher Education, including HPE, in Sudan is mainly governed by the NCHE, a nationally mandated public structure appointed by the President of the Republic to oversee the HE sector in Sudan. Historically, the NCHE was first introduced in 1973 and its legislation emerged in 1975 together with a dedicated Ministry for Higher Education (Nasr, 2011). Prior to that, HE governance and delivery were organised under the University of Khartoum, the first and premier HE institution in the country (Emubarak, 1985).

The NCHE is constituted based on the Higher Education Act which was first introduced in 1975. In 1990, a new legislation was passed (Higher Education Act 1990) which abolished the previous legislation and led to the restructuring of the NCHE. The new legislation dictated that the President of the Republic selects an academically qualified person to chair the council and act as its chief executive officer. Council membership was constituted to include representatives of HEIs, related ministries and government entities, and five members with expertise and interest in HE, to be appointed by the President of the Republic (MOJ, 1990). In 1993, another new legislation was issued, this time under the name of the Higher Education and Scientific Research Act and the council structure was reconstituted once more (MOJ, 1993). This time, the legislation dictated that the Minister of Higher Education chairs the NCHE. Membership of the council was specified to include heads of public university councils, vice chancellors of public universities, directors of public scientific research centres, representatives of related ministries, and five expert members. In 1995, additional amendments were introduced to the legislation, mainly enabling the inclusion of private universities and colleges in the NCHE structure (MOJ, 1995). Subsequently, chairs of university councils and vice chancellors in addition to three selected deans of colleges, all from the private sector, were granted membership to the council. The NCHE is reconstituted every four years and its membership size expands whenever a new university is approved in the public or private sector.

According to the legislation, the NCHE is entrusted with important roles, functions and responsibilities related to HE governance including (MOJ, 1993):

- Policy development and strategic planning for HE and the scientific research sector
- Approval of the establishment of HEIs in both public and private sectors
- Assignment of roles for HEIs and monitoring their performance
- Development of policies and standards for student intake including deciding on numbers

- Development of policies for staff employment and promotion
- Mobilisation of resources to support universities and HEIs

The NCHE is also granted the authority of constituting permanent or temporary committees from within or outside its membership to oversee and execute specific functions pertinent to HE governance. The legislation requires the NCHE to submit, through its chairperson, periodic reports to the President of the Republic on the status of HE.

The NCHE meets twice a year to discuss issues related to HE polices and processes. Additional meetings may be decided and organised based on the nature and urgency of matters under consideration. The decisions in the NCHE are usually taken by consensus or voting by all members and in most cases based on recommendations from committees or taskforces constituted by the Council. Records of the council meetings however, show that in most cases issues under discussion are entrusted to committees or institutions for further scrutiny and reporting back to the Council for the final decision. It is also a common occurrence for the NCHE to delegate its authority to the chairperson (the Minister of Higher Education) to take decisions in-between Council meetings. This was seen by academic respondents from universities as jeopardising the collective nature of decisions:

> *"While the council [NCHE] delegates its authority to the Minister [Minister of Higher Education] in between meetings to decide on urgent matters; this has been used inappropriately sometimes to expand the role of the ministry [MOHE] at the expense of the council and the universities; you know sometimes meetings of the council are delayed by one year or more."* Key informant interview, *Vice* Chancellor, public university.

An important mechanism of the NCHE work is represented by the permanent committees. There are 10 scientific committees covering the HE disciplines such as health sciences, engineering, agriculture, and humanities (MOJ, 1993). These committees are structured based on representation of relevant entities within the HE sector and beyond. The Minister of Higher Education (NCHE Chairperson) usually appoints chairpersons and members to those committees. The Medical and Health Sciences Committee (MHSC), which is the arm of the NCHE for HPE governance, is discussed in the next section.

Based on its legal mandate and composition, the NCHE is regarded as the supreme power in oversight and HE governance in Sudan. An Ex-Minister of Higher Education interviewed in this research illustrated this by stating:

> *"The council [NCHE] is no doubt the ultimate power and orchestrator of higher education in the country, it is the national reference body for higher education matters and in my opinion, it is well positioned and enabled to play its role."*

The high-level membership and representative nature are among the factors promoting the power and influence of the council. Yet, its large and expanding membership size has been associated with difficulties in effectiveness and decision making (Elmagli, 2015). With expansion in the number of universities in both the public and private sectors, the size of the NCHE membership has gradually become huge. There were up until 2018 some 49 universities in Sudan, including 17 in the private sector (MOHE, 2018). As the legislation (the 1995 Act) dictated representation of all universities with two persons and in view of other membership categories, the size of the NCHE has become enormous and prone to increase more with the establishment of new universities. This was seen by respondents from the MOHE as jeopardising the effectiveness and efficiency of the council in terms of reaching timely decisions. It was also interpreted by the same respondents as promoting the dominance of universities over the work of the council:

> *"The huge size of the council [NCHE], in addition to universities having the larger share in membership is a barrier to effective and timely decisions in relation to higher education matters…universities also you know, tend to perpetuate their special interests and thus hinder rational decisions."* Key informant interview, Senior director, MOHE

Power and influence of the NCHE also seems to be affected by contextual factors including top government interference. As will be explained later in this chapter, some political decisions and buffer mechanisms dictated by higher authorities represented a source of worry for the council members. Records of the minutes of the NCHE meetings reviewed in this study clearly reflect this by emphasising repeatedly that the council should be seen as the sole regulator of HE in the country.

The role of the NCHE as a governor seems to be complex and not straightforward, as suggested by the findings of this study. On one hand the council is well situated, legally empowered, and enjoys senior membership. On the other hand, it is too big in size for swift and effective decisions, and involves vested interests. The council is mandated to regulate the very universities that constitute its majority voting power. However, the experience of Sudan shows that the NCHE occupies an important space and enjoys respect as the national referral body for HE affairs.

4.4.2. Medical and Health Sciences Committee

The Medical and Health Sciences Committee (MHSC) is a permanent committee with a membership term of four years, constituted according to the Higher Education Act of 1993. It is the operational arm of the NCHE in the governance of HPE nationwide. The MHSC is a representative structure composed of selected deans of medical and other health professions schools, selected senior professors, and educational experts in addition to representatives of relevant entities beyond the HE sector. These entities include the SMC, the NCMHP, the SMSB, and the FMOH. Prior to 2009, the FMOH was not represented in this committee and two members from the ministry were included for the first time following a request from the Minister of Health.

Observation notes for this study revealed that the appointment of the Ministry of Health representatives was questioned by some academic members of the committee who saw the role of the MHSC as pertaining to academe and the HE sector and not the health services. In a meeting of the MHSC attended and observed by the researcher (Meeting No 4/2015), a senior academic member voiced scepticism about the value of including members from the health services sector in the committee. This reflects a dichotomy among academics and health services professionals in the context of Sudan and this aspect shall be taken further for analysis in the discussion of governance relationships in this thesis. As reflected by the membership list of the MHSC, representatives from academic factions are a majority.

The Minister of Higher Education, as head of NCHE, appoints the chairperson and members of MHSC and a room and secretariat are provided for the committee within the premises of the MOHE. The committee, however, works independently from MOHE and ministry line department directors are usually not members of the committee. The MHSC reports directly to the NCHE represented by its chairperson, the Minister of Higher Education, and exercises its power according to a bylaw emanating from the Higher Education Act (NCHE, 1995).

According to the bylaw, The MHSC is entrusted with roles and responsibilities relating to:

- Setting academic standards and requirements for approval of HPE institutions and programmes
- Organising and managing the process and procedures for approval of institutions and programmes including the site visits to verify compliance with the standards

- Recommending to the NCHE chairperson on approval of new HPE schools and programmes across both public and private universities based on fulfilling the standards and requirements
- Monitoring of compliance of HPE schools and programmes with the academic standards and requirements
- Recommending to the NCHE chairperson on closure of schools or programmes based on review of compliance with approval requirements

The MHSC produces guidelines to set norms and criteria for approval of educational institutions and programmes based on a consultation process leading into publication of the guidance. One well-known document of the MHSC is that on establishing new institutions. Covering medical and other health sciences schools, the document is known as "the model college". This document, containing standards and directives, is being used to help with the establishment of new schools or the evaluation of existing ones (Elsheikh, 2015).

The MHSC discusses relevant issues and recommends to the NCHE for final decision and approval in relation to the governance of health professions education. In executing its role and functions, the MHSC works through sub-committees and taskforces to investigate specific applications, including site visits to HPE schools. The committee then discusses the work and recommendations of these taskforces to reach a conclusion. Final decisions of the MHSC are taken based on consensus or voting by all members. The majority of the MHSC membership comes from academic institutions and this certainly has implications on voting power and decision making.

Respondents interviewed in this study saw the MHSC as a powerful and important structure within the HPE governance arena as its recommendations to NCHE are invariably approved and made effective. Access to membership of this committee has always been sought, as verified by a respondent senior official from the professional regulatory councils:

> *"Our presence in the committee [MHSC] is crucial as important decisions about regulating health professions education are mostly taken there; we are working with higher education authorities in enhancing our representation."*

However, the nature of the MHSC structure was regarded by health sector respondents as hampering its effectiveness and fair decisions:

"While the committee [MHSC] is doing its work in a good consultative manner, sometimes its balanced and fair decision is affected by some members trying to lobby in favour of their

institutions whether in public or private sector; this, you know, leads to hindering some decisions and sometimes compromising." Key informant interview, Senior Official, FMOH.

4.4.3. Ministry of Higher Education

Documentary sources reviewed in this research reflect the evolution of the MOHE. The Ministry was introduced for the first time into the national government apparatus in 1975, following the inauguration of two additional universities besides the long-standing University of Khartoum (Emubarak, 1985). The Ministry was later abolished, and its role was taken up by the NCHE. During the 1980s, the MOHE was reintroduced shortly, only to be abolished once again with its role transferred again to the NCHE (Nasr, 2011). In 1993, the MOHE was introduced again and continues since then to exist. This fluctuant pattern seems to be related to political context and decisions about the size of the government as has always been the case with alternating regimes and might also be related to differing views on the role of the Ministry and the NCHE. The fairly long period of the Ministry's existence (since 1993) could possibly be explained by the huge expansion of universities and HEIs, both in the public and private sectors, necessitating commensurate leadership and management roles from national government. Interview data provides for perspectives on the history of the MOHE and the need for its existence. Academic respondents from universities were sceptical of the value of a higher education ministry in view of the existence of the NCHE:

> *"As a vice chancellor, I feel the existence of the ministry [MOHE] adds not much value, you know in universities we are autonomous and legally mandated and for policy issues we have the council [NCHE] as a reference body, so honestly I do not see a point for a ministry for higher education and I feel you know that it might hinder rather than help"* Key informant interview, Vice Chancellor, a public university.

This type of position is understandable from a factional point of view (the tendency of universities to autonomy). However, the scepticism around the need for the MOHE was also raised from within the terrain of the Ministry itself, as typified by this quote belonging to a respondent senior MOHE official:

> *"University vice chancellors do not appreciate the role of the Ministry [MOHE] and they see it as challenging the autonomy of their universities; honestly I myself do not see a clear role or need for the Ministry in the presence of the NCHE and universities."*

The MOHE contributes to governance of the HE sector in Sudan through different roles. Since the NCHE is the main oversight and policy setting body, the MOHE mainly takes on a supportive and coordination role. The Undersecretary of the MOHE simultaneously serves as

Secretary General for the NCHE. The MOHE provides the venues and technical secretariat functions to support the NHCE and its committees, including the MHSC.

There are several departments under the MOHE including planning and research, training and international cooperation, funding for HE, admission and certificate authentication, and private and foreign education. Additionally, the MOHE manages several agencies including Technical Education Corporation, Quality Assurance and Accreditation Corporation (QAAC), and an agency for promotion of the Arabic language in HE. Down the hierarchy of the MOHE, there are several sections and units serving different functions (MOHE, 2015).

According to the MOHE reports reviewed in this research, the role of the MOHE involves setting policies, plans, and programmes for the HE sector (through the NCHE) in addition to coordination between the NCHE and universities. Additionally, the Ministry is involved in advocacy and resource mobilisation for HE, international cooperation, and capacity building (MOHE, 2015). Like all other governmental entities, the MOHE operates through its departments and units to execute its role and functions.

Since the strategic role of HE governance lies with the NCHE and there is great deal of autonomy and executive role for universities secured by university legal bills, it is pertinent to question the role and effectiveness of the MOHE in this governance terrain. As shown in Section 4.4.2, the composition of the MHSC does not include membership for the MOHE line departments and there is an issue of power imbalance between the MOHE on one hand and universities on the other hand, explaining the tensions that arise in this respect. A respondent senior MOHE official reflected on this aspect by stating:

> *"The council [NCHE] is you know, dominated by university representatives who always emphasise the autonomy of their universities and this issue challenges our role in the Ministry [MOHE]."*

The coordination and liaison role entrusted to the MOHE is not always clear, and that might explain the shift in legislation (the 1993 Higher Education Act) to designate the Minister of Higher Education as Chairperson of the NCHE to probably bring the Minister into the centre-point of HE governance.

4.4.4. Universities

Documentary sources reviewed in this study outline the history of universities and the evolution of their role. The University of Khartoum was inaugurated in 1956 on the heritage of Gordon Memorial College, which was opened in Khartoum in 1902 during the early times of the British

ruling of Sudan. Prior to the establishment of the University of Gezira and the University of Juba, and the introduction of NCHE in 1975, HE governance and provision were mainly organised under the University of Khartoum (Emubarak, 1985). Universities in Sudan are classified as national institutions regardless of their geographic locations. Autonomy of the university in the country has its roots in the first legislation on the establishment of the University of Khartoum where the relation between the university and the State was clearly defined as being related to mobilisation of funding and not in any way related to controlling the management and academic role of the university (Nasr, 2011).

Each university in the country has its own legislation in the form of a national bill approved by the Parliament and signed by the President of the Republic. The legislation is generally harmonious for each university and specifies its objectives, roles and functions and stipulates its governing structures. An Ex-Minister of Higher Education interviewed in this research explained the evolution of university legislations:

> *"We modelled all university bills after the University of Khartoum example, you know this is the oldest university and its regulations are tested and mature; we also wanted to harmonise things and send a message that all universities can be as good as the mother university [University of Khartoum], I think this has worked well."*

In each university, the supreme authority comes under the *university council* which is constituted according to the legislation of a chairperson and members from within and outside the university. The council chairperson must be from outside the university and is appointed by the President of the Republic based on a recommendation from the Minister of Higher Education, as chairperson of the NCHE (MOJ, 1993).

According to university bills, the university council plays a strategic role in university governance including the setting of polices, approving plans, and mobilising resources to support the university. Additionally, the council approves the establishment of new schools, institutes and departments and decides numbers and types of admissions and student intake in the university. The legislation (each university bill) stipulates that the university council operates within the guidance of the NCHE and reports to the President of the Republic through the chairperson of the NCHE, i.e. Minister of Higher Education.

The university vice chancellor is the chief executive officer and chairperson of the university senate which governs academic affairs and operational aspects of the university functions. According to university legislations (each university bill), the vice chancellor is appointed by

the President of the Republic based on recommendations set by the Minister of Higher Education.

Each university in Sudan works through schools, institutes, and departments to execute its role and functions. There are variable degrees of autonomy for schools and departments, but the general tendency is that strategic and financial decisions are mostly centralised within the university council and administration (Elmagli, 2015). Some universities create clusters for related schools, such as the medical and health cluster, to decentralise some authorities, responsibilities, and resources (Nasr, 2011). There are, however, tensions within universities around resources and autonomy of schools. A respondent dean of a public medical school maintained:

> *"It is really pity when you generate in the medical school revenues from the quota of privately accepted students and the university administration takes all that money to be distributed among all schools and departments; we get in the medical school a peanut of what we generate in the first place*."

Overall, universities have strong footing in HE governance in Sudan. Besides their wide room of manoeuvre that is legally backed, they form the majority of the NCHE membership as explained in Section (4.4.1.). The influence of universities on NCHE decisions could easily be appreciated in view of the existence of the Association of Sudanese Universities (ASU), which brings universities together for coordination and collective work at periodic meetings and observes the interests of universities. Apart from the leadership of the Minister of Higher Education for the NCHE, universities in Sudan are not under the direct governance or control by the MOHE.

4.4.5. Sudan Medical Council

Documentary sources reviewed reveal that the SMC was established during the 1950s as a national regulatory body to licence physicians for practice. Later it took on the additional role of licensing and regulating dentists and pharmacists and became fully operational in 1968 (Elobeid, 2012). The legal mandate of the SMC rests on its first legislation introduced in 1955 and amended later in 1973 and 1986. A new SMC Act was approved in 1993, expanding the structure and role of the SMC. Additional legal amendments gave birth to the SMC Act of 2004. This new legislation dictates that the council accredits medical, dental, and pharmacy schools; and "participates" with HE authorities in the approval of new schools of medicine, dentistry, and pharmacy (MOJ, 2004a).

According to its legislation, the SMC is composed of a president, a general secretariat, and council members. Membership of the council represents schools, professional associations, the FMOH, and the MOHE in addition to the SMSB, and civil society. The President, Secretary General, and council members are appointed by the President of the Republic for a four-year term.

The main role of the SMC is to protect, promote, and maintain the health and safety of the public through ensuring proper standards for education and practice of physicians, dentists, and pharmacists (Elobeid, 2012). Specific functions include (MOJ, 2004a):

- Licensing of practitioners in medicine, dentistry, and pharmacy
- Keeping registries of licensed practitioners in the three professions
- Setting standards for good medical practice
- Monitoring practice and dealing appropriately with medical misconduct
- Accreditation of existing medical, dental, and pharmacy schools
- Participating with the higher education ministry in the approval of new medical, dental, and pharmacy schools

According to its records, the SMC works through circles and committees devoted to different specialties and specific functions. Committee membership is drawn from different professional disciplines, in addition to representatives of relevant governmental and professional entities. Committees and circles recommend decisions to be approved by the governing council chaired by the SMC president. Council decisions are commonly taken based on consensus but also the voting of all members when required. A Secretary General of the SMC leads the executive aspects of work, including operations and finance management. To manage the accreditation system, the SMC constituted a dedicated committee (Accreditation Committee) chaired by the SMC President with members from senior academics and representatives of relevant entities including FMOH, MOHE, and professional associations for practitioners and students.

Despite the respect enjoyed by the SMC, its role in terms of educational QA and accreditation is contested and yet to be developed and consolidated. A senior SMC official interviewed in this research maintained:

> "*There is a challenge to implementation of accreditation decisions by the council [SMC] in view of role ambiguity and the protection of public medical schools provided by the Ministry [Ministry of Higher Education]; more and more new medical schools are being established*

without involvement of the council [SMC] which is, you know, runs against what the legislation says."

To support medical education reform and quality, the SMC has been leading since 2011 a programme in partnership with the FMOH and the WHO office in Sudan on updating curricula to reflect principles of social accountability and better respond to health system challenges. The programme is piloted in four medical schools and is expected to lead to adoption of improved curricula that could be generalised in the context of medical education in Sudan (Grant, 2011). In relation to its educational governance role, the SMC introduced national accreditation standards, systems, and procedures which have been applied in Sudan. In 2018, the SMC was recognised by the World Federation for Medical Education (WFME) as a competent national authority to accredit medical schools[6]. This decision, which was celebrated in the country, enhances the governance role of the SMC and might carry future implications for the balance of power and influence within HE governance in Sudan.

4.4.6. National Council for Medical and Health Professions

The NCMHP, previously known as the Council for Allied Health Professions, is a nationally mandated structure for professional regulation. According to its legal stipulation (MOJ, 2010), the NCMHP is entrusted with the regulation of practice and educational quality for nurses, midwives, and allied health personnel such as laboratory, radiology, and anaesthesia technicians and scientists. Until 2010 when a new legislation was passed for the NCMHP, the council had been working under the jurisdiction of the FMOH and the Public Health Act of 1975. The NCMHP Act 2010 brought about more autonomy to the council, and it drew considerably from the legislation and experience of the SMC.

A president and a secretary general were appointed by the President of the Republic to lead the NCMHP in 2010, following the adoption of the new legislation. The membership of the council draws from academic to professional representation in addition to experts from different health professions. Since the NCMHP has only recently been introduced in its current shape, its full-fledged effect on governance of education and practice is yet to be appreciated. According to its reports, the council is making notable progress with setting standards, ensuring registration and regulation of practice for over 20 health professions. Unlike the SMC, there is no accreditation programme currently running in the NCMHP but there are plans to introduce the function of QA for health professions education (Elbashir, 2014). However, the role of the

[6] https://wfme.org/news/sudan-medical-council-smc-awarded-recognition-status/ [Accessed 10 October 2019]

NCMHP in the accreditation of HPE schools has not been operational. The council is still probably overwhelmed by the roles relating to the regulation of practice for the huge and diverse set of health professions under its jurisdiction. A respondent senior NCMHP official reflected on this by stating:

> *"You know our council [NCMHP] is still new and we haven't yet taken the role of accrediting health professions schools. I mean this is an important role but we are currently overloaded with ground work to develop the registry and ensure regulation of practice for the extensive list of professions under our responsibility."*

According to the 2010 legislation, the NCMHP works through disciplinary circles and committees to execute its role and functions. Decisions are taken by the council in its periodic meetings based on consensus or voting on the recommendations raised by circles and committees. The technical and operational activities of the council are conducted under the leadership and management of the Secretary General. Overall, the role of this council in HPE governance is still unfolding and there is currently an evident gap in QA and accreditation for nursing, midwifery, and allied health professions' schools.

4.4.7. National Council for Technical and Technological Education

According to records reviewed in this research, the government introduced the NCTTE in 2008 based on the felt need to scale up technical and vocational education in the country. There was a feeling that academic university education is gaining prominence at the expense of mid-level technical and vocational training and this academic-vocational imbalance has been a subject of growing concern (Eltayeb, 2015). As a result, the council was established as a national entity to oversee and re-engineer technical and vocational education and training (TVET) in the country to address the gaps in the labour market. In 2011, a national bill was passed in the Parliament to legalise the mandate and work of the NCTTE. This legislation grants the council authority to oversee, plan for and promote TVET including in the health sector (MOJ, 2011).

The NCTTE is composed of a technical secretariat, led by a secretary general appointed by the President of the Republic. The technical secretariat reports to a governing council, chaired by the First Vice President of the Republic. According to the 2011 legislation, the NCTTE is entrusted with roles and functions related to:

- Policy development and strategic planning for TVET
- Designing of routes and career paths for candidates pursuing TVET qualifications
- Mobilisation of resources and funds to scale up TVET

- Approval of educational institutions and programmes for TVET in different sectors (including the health sector)
- Monitoring of institutions and programmes providing TVET qualifications

However, the introduction of the NCTTE was accompanied by controversy as it seemed to overlap with the role of the Technical Education Corporation which forms part of the structure of the MOHE and has been responsible for mid-level training of technicians, including the health professions. A respondent Ex-Minister of Higher Education expressed resentment in relation to the role of the NCTTE:

> *"The council [NCTTE] brought confusion to the work of the Ministry [MOHE]; I mean we are already working to address the issue of technical education through the corporation [Technical Education Corporation] and the council [NCTTE] as a foreign body got us into conflicts and made it difficult to progress with the intended work."*

In line with its legal stipulation, the NCTTE functions through committees and taskforces in addition to the units affiliated to its permanent secretariat. Decisions are taken based on proposals and recommendations raised by the secretariat for discussion and approval by the council. There was a recent change of leadership in the council which resulted in a senior person from HE assigned to lead the technical secretariat of the NCTTE, probably as an attempt to alleviate the severe tension between the council and the HE sector. More recently, a decision was taken in 2018 to incorporate the NCTTE within the higher education ministry and the Minister of Higher Education eventually became the chairperson of the Council (MOHE, 2018). This probably reflects the escalating tension and the tendency of the higher leadership to resolve the conflict by bringing power back to the remits of the MOHE. There is currently debate on how best the NCTTE exerts its governance role in relation to TVET, including for health professions.

4.4.8. Sudan Medical Specialisation Board

In 1995, a Presidential Decree was issued on the establishment of the Sudan Medical Specialisation Board (SMSB) with a national mandate to govern and deliver specialty training for physicians. The first piece of legislation was approved in 1999 under the Sudan Medical Specialisation Board Act. Subsequent amendments gave birth to the SMSB Act 2004 which represents the current legal framework (MOJ, 2004b). The Board is composed of a governing council chaired by the President of the SMSB (a senior medical specialist) who is appointed by the President of the Republic and includes membership from academe, professional

associations, and discipline-based groups, in addition to representatives from several governmental entities including the FMOH.

A secretary general, appointed by the President of the Republic based on the recommendation of the supervising minister (currently the Minister of Health), leads the executive work in the SMSB, including operational, technical, and financial management. Despite its foundation on a national legal stipulation, the advent of the SMSB was disputed by universities, especially the University of Khartoum that traditionally hosted postgraduate medical education programmes. A respondent senior SMSB official summarised the dynamics and the fate of this conflict:

> *"when the idea of the board [SMSB] was brought up in early 1990s, the university [University of Khartoum] led the opposition and rejected the proposal and decided not to nominate members for the board. The reason you know is that the university [University of Khartoum] is so diligent and proud of its postgraduate clinical education role and saw a threat in the board taking over; but I think they were not justified as it is the trend globally for boards to organise this type of training. At last you know it was the strong stand of the President [President of the Republic] that defeated this opposition and enabled establishment and operation of the board."*

After a period of protracted tension with the universities, the SMSB ultimately gained the full authority to govern and deliver specialty training for clinical and professional disciplines taking these functions out of the jurisdiction of universities and HEIs. Postgraduate "academic" qualifications such as Doctor of Philosophy are still run under universities.

In accordance with the legislation (MOJ, 2004b), the SMSB reports to the President of the Republic through the Minister of Health, and its role and functions include:

- Setting policies and standards for professional qualifications in health with special reference to postgraduate training for physicians
- Accreditation of hospitals and training sites for the purposes of specialty education (residency)
- Overseeing clinical rotations for trainees enrolled in different specialties
- Setting assessment standards and conducting exit examinations for trainees
- Awarding certificates for graduates of different specialty programmes
- Contributing to health workforce capacity through providing refresher training for physicians and other health professionals

In line with its legislation, the SMSB mainly works through appointed specialty councils, based on the representation of universities and health providers from the health ministry, military, police, and the private sector, besides professional associations. There are also committees for training, accreditation, and examination and assessment. The general secretariat supports the functions of the SMSB through mobilisation of resources and technical staff. Decisions are taken in the senate and the governing council based on recommendations proposed by the secretariat. In 2015, the SMSB introduced professional specialty training programmes for nurses, midwives, and allied health professions for the first time in the country. This is meant to support health workforce development for better health care and to produce qualified trainers to promote the capacity of undergraduate HPE for nursing, midwifery, and allied health professions.

4.4.9. National Council for Training

The NCT is a governmental agency affiliated to the Ministry of Labour and Human Resource Development. The Council is mandated to plan and fund national training activities at postgraduate domain (both long and short courses) for public employees in training institutions within the country and overseas. According to a national bill passed by the Parliament in 2009, the NCT was able to take the role of licensing and approval of public and private training centres offering CPD and short training activities. This legislative provision enabled the NCT to issue licences, and monitor performance of training centres nationwide (MOJ, 2009).

In accordance with its legislation, the NCT operates mainly through a technical secretariat led by a secretary general appointed by the Cabinet based on recommendations by the Minister of Labour and Human Resource Development. The technical secretariat has departments and units, including the department for licensing of training centres. The NCT develops and applies standards and criteria for the approval of training centres and training programmes in the CPD domain. Documentary sources reviewed in this research reflect a recent tension between the council and the MOHE in regulating training institutions. Some institutes and centres licenced by the NCT issue “diploma” certificates instead of in-service training certificates, exceeding their mandate (Elmagli, 2015). This has generated controversy within the HPE governance arena in addition to public concern in the country (Ahmad, 2014). The effectiveness of the governance role of the NCT in relation to CPD is largely shaped by its conflict with the MOHE and this is elaborated more in the next chapter.

4.5. Indirect governance structures

As shown by Figure 15, entities outside the HE sector having indirect roles in HPE governance include the FMOH, parastatal health providers such as the army and police health services, professional associations, and some community-based organisations. Based on the study findings, the indirect governance structures are described below in the same order.

4.5.1. Federal Ministry of Health

As explained in this Chapter (Section 4.2.), the FMOH was the sole governor of HPE in its early beginnings. Subsequently, the FMOH retained the role of governing vocational training for nurses, midwives, and allied health professions until 2001 when all types of HPE became under the jurisdiction of the NCHE and the MOHE. The FMOH however, continues to exert a governance role in relation to the HPE, albeit in an indirect manner. Records related to the HE sector and regulatory bodies reflect the representation of the FMOH in important HPE governance structures for undergraduate HPE, including the NCHE, MHSC, and the board and accreditation committee of the SMC. The position of the FMOH is thus reflected by its representatives, who are usually senior staff. The role of the FMOH is more prominent perhaps in governance of CPD and postgraduate specialties, both outside the scope of this study.

Following the transfer of vocational training schools under the auspices of the FMOH to be part of the university structure in 2001, the FMOH lost its long-standing role in governing and managing the basic education of health workers. However, the Ministry has been trying to get back to this domain in view of the critical shortages of nurses, midwives, and allied health personnel:

> *"we started to close the vocational schools in 2001 assuming that the universities will take over but you know, there was a huge disappointment as the admission of nurses and other health professions students by these universities was a peanut of what we used to do through our vocational schools. This I mean led to severe shortages and we in the Ministry [FMOH] opted to intervene because it is our duty to ensure adequate health workforce to cover the population."* Key informant interview, senior official, FMOH

The FMOH established at this time a decentralised educational academy (the Academy of Health Sciences) to scale up the production of nurses and paramedics and this has led to tensions with HE authorities, as will be discussed in the next chapter on governance relationships.

The governance role of the FMOH in relation to HPE has been a subject of controversy during recent times. Respondents from the HE sector held the opinion that the health ministry should not get into HPE governance or delivery, and it should rather focus on health services issues:

> *"People in the health ministry are struggling to improve the health services, I mean coverage and quality… but while they are not succeeding in this, they wanted to venture into education and training, I think this is totally not their role."* Key informant interview, Ex-Minister of Higher Education

Respondents from the health sector, on the other hand, generally believed that the FMOH cannot avoid playing an active role in HPE as education is the producer of health workers who ultimately operate the health services. The indirect influence of the FMOH on HPE governance through representatives in structures and committees was seen by health sector respondents as not adequate or satisfactory. Representation carries certain difficulties and shortcomings in terms of ensuring an effective HPE governance role for the FMOH, and this will be discussed in more detail in the next chapter on governance relationships.

4.5.2. Parastatal health care providers

These are mainly army and police health services departments together with their staff. They are not part of direct HPE governance but like the FMOH they enjoy representation in some HE governance structures such as the SMC and the SMSB albeit in less magnitude. Both the army and police established universities, including medical, nursing, and some other health professions schools. Leaders of the two universities and their schools are also represented in HPE governance structures, such as the NCHE and the MHSC, as dictated by the Higher Education Act and its bylaws. Apart from mainly serving the special interests of their universities, the influence of army and police health services on HPE governance is not actually significant.

4.5.3. Professional associations and community entities

According to documentary sources, professional syndicates and associations are deeply rooted in Sudan, and they have taken through history important labour and political roles (Bella, 2011; Wali, 2014). The Sudan Doctors Union (SDU) is a notable example, but other associations are also active. Although they have no direct role in governing HPE, their members participate widely in governance mechanisms and events. Factions like the SDU are represented in HPE governance structures such as the SMC, SMSB, and some ad hoc HE committees. The General Trade Union for Health Workers is also much involved in issues related to the governance of nursing and allied health education through representation in the NCMHP, lobbying, and

expression of positions on relevant aspects. The trade union is regarded as an important player in the context of governing nursing, midwifery, and allied health education as it provides financial support and mobilises industrial action to influence decisions (Wali, 2014).

Apart from having seats on the governing body of the SMC, community and community-based organisations are not well represented in other HPE governance structures at the national level. The influence of the community groups is thus not significant on key decisions relating to HPE governance. At the level of individual HPE schools and institutions, there is better community representation and social accountability principles are observed in several medical schools (Elsheikh, 2015). A member of a community-based organisation interviewed in this study reflected on the community role by stating:

> *"While we feel presence at the level of universities and some medical schools by being consulted and represented, I mean this is not there at higher levels where policies and big decisions are made…the voice of the community and ordinary people need to be heard up there…that, you know, would better guide education and mobilise additional support from the community."*

4.6. Discussion

Governance of HE and HPE in Sudan involves a complex array of structures within and outside the HE sector, exerting both direct and indirect influence on steering and decision making. All governance structures internal to the HE sector rest on solid legislative foundations; with the Higher Education Act being the prime one. This formative legislation, first introduced in 1975, was not changed until the year 1990 when a new legislation was enacted. This fact, together with the subsequent amendments of the legislation in 1993 and 1995, reflects the active engagement of the state in HE.

The changes and amendments to the HE legislation have their roots in the Sudanese politics, policies, and governance system post 1989. In 1993, a dedicated Ministry for Higher Education was re-introduced and the legislation echoed this by shifting the leadership role of NCHE to the Minister of Higher Education and the executive role in the council to the Undersecretary of the Ministry. With the adoption of a market oriented liberal policy in Sudan during the early 1990s, private sector investment in the service sector rose dramatically, including the university and HE domain (Elbeely, 2015). The legislative amendments of the Higher Education Act in 1995 responded to this trend by representing private universities in the governance structures of HE, including the NCHE.

Structures governing the HE and HPE in Sudan traditionally mimic a UK model at times when academic freedom and power of academe is emphasised. This colonial type of effect is observed in the HE literature (Austin and Jones, 2016). The post-1989 era, however, witnessed a distortion of this model due to overt state interference. A remarkable observation in the governance arena in Sudan is that the HE sector is more pluralistic in decision making compared to other public sector domains. Across governance structures examined in this chapter, the mode of operation largely rests on collective member views and voting. Unlike the traditional civil service customs in the country, appointment to academic positions follows a tenure system with specified periods for senior posts such as for vice chancellors and deans.

Governance structures within the HE sector of Sudan play fundamental roles in control of HPE and the HE in general with the NCHE being at the apex of power and authority. The NCHE is mirrored by the experience in Africa where several countries establish councils or commissions for HE with roles related to regulation, coordination, resource mobilisation, advice to government, and monitoring of HEIs (Bailey, 2015). The challenges are also largely similar in terms of political interference, resource and capacity constraints, and data problems. However, the NCHE in Sudan is rather old compared to several African countries that embarked on introducing councils and commissions at a later stage.

Permanent committees of the NCHE, including the MHSC, play pivotal roles in governance because the direct authority and effectiveness of the NCHE is hampered by its large size of membership and infrequent meetings. In view of the strong policy role of the NCHE and the autonomy enjoyed by universities, the role of the MOHE has always been at cross-roads. To compensate for this, the Minister of Higher Education commonly brings on board his/her status and role as the Chairperson of the NCHE, and that usually makes him/her a strong and important player in HE governance.

The role and influence of governance structures outside the jurisdiction of the HE sector is variable. While some entities such as regulatory councils (SMC and NCMHP), other training councils, and the SMSB have some direct and prominent roles, other stakeholders are not so influential with only an indirect bearing.

The regulatory councils probably occupy a special position to HPE governance through their legally mandated roles in accreditation of HPE schools and programmes. The rather long tradition and practice of the SMC enabled it to be more effective and respectful when compared to the NCMHP. This latter council has only recently gained full autonomy based on its 2010

legislation and it evidently needs to develop its full capacity to match the level of influence of the SMC.

In the cases of the other training councils, including the NCTTE and the NCT, some ambiguities jeopardise the governance role and influence. Both councils experienced difficulties and bottlenecks in functioning probably due to a lack of vision and suitable positioning in relation to their role. This is clearly shown by the fate of the NCTTE, which eventually ended up under jurisdiction of the MOHE with nearly idle status.

On the aspect relating to indirect influence, the FMOH, once a powerful governor of HPE, gradually lost its influence in favour of the governance structures within the HE sector. This transfer of power and authority is underlined by historical as well as conceptual underpinnings. Since the early 1990s, the MOHE has gained stability as one essential ministry in the government apparatus. The successive presidential decrees granted the NCHE and the MOHE powers related to policy, regulation and control of the HE sector and its institutions. On the conceptual aspect, voices, especially from academe, have increasingly been criticising the direct involvement of the health ministry in HPE management and delivery and that probably led to the power shift in favour of MOHE governance over HPE.

The role of professional associations and community organisations is not prominent in HE and HPE governance at system level. Despite their conceived power, professional associations such as the SDU are not truly democratic and representative structures. Apart from the individual glamour of their leaders, they do not enjoy true collective power or solid consensus-based ideas and positions. Representation of community organisations in HPE governance structures is largely missing at the national level. In contrast, universities and HPE schools devote attention to community engagement and reap benefits in terms of community support.

The role of the state (higher governmental levels) in HE and the HPE governance arena warrants commenting on. While the state logically retains the overall role of steering and directing the sector, evidence reviewed reflects a proactive state interfering with direct decisions in HE context. This brings in the questions of politics, ideology, and the tendency to control that will be further explored in the next chapter.

4.7. Locus and focus of HPE governance

Any description and discussion of governance structures for HPE will not be complete without commenting on the locus (location of governance structures) and focus of these structures and

mechanisms (in terms of whether they play strategic or operational roles). As discussed in Chapter 2 (Section 2.5.5.), educational governance structures could exist within or outside universities, within the HE sector, or beyond. Likewise, these governance structures either play strategic roles and functions relating to oversight of HE and HPE or execute operational actions relating to processes of governance and regulation (Rebora and Turri, 2009). In the current landscape of educational and HPE governance in Sudan, responsible structures could be positioned at certain levels in relation to the locus and focus of governance as reflected in Figure 16 below.

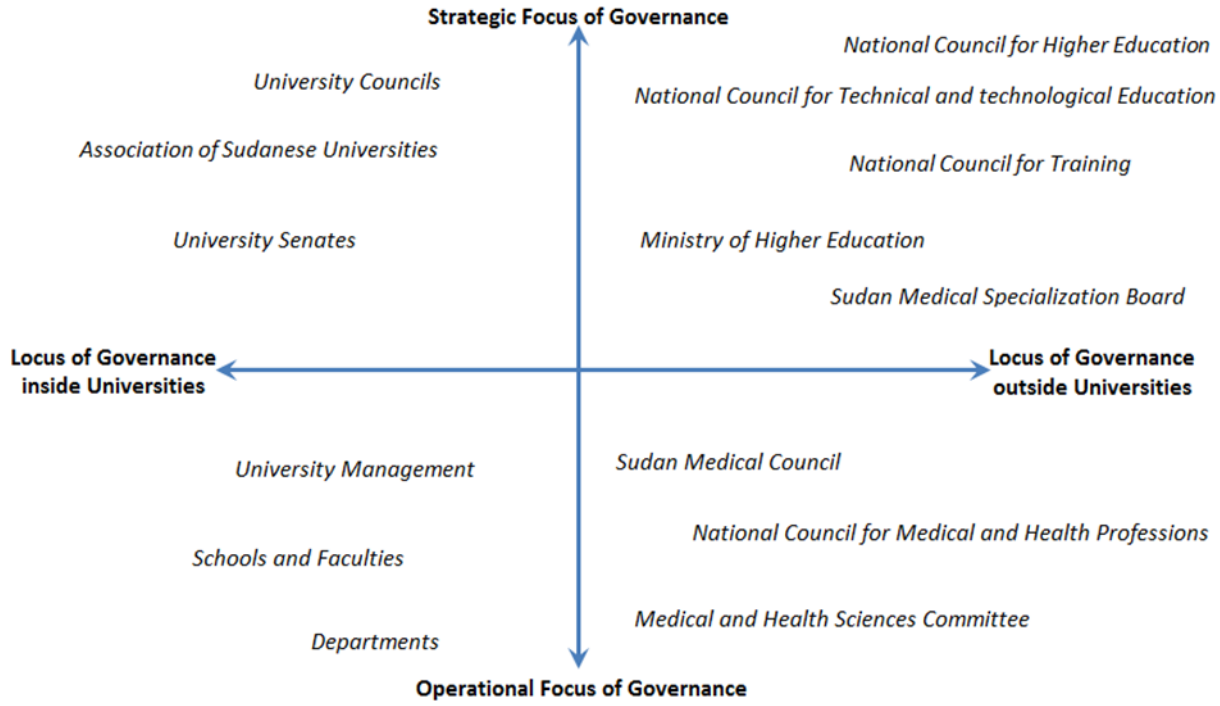

Figure 16: Locus and focus of governance for health professions education in Sudan, based on Rebora and Turri (2009)

This typology largely reflects the reality of HPE governance in Sudan, although some of the governance structures could be viewed as having a mixture of strategic and operational roles. Within universities, the university council and the senate are apparently policy setting and strategic structures while the university management, schools and departments largely focus on implementation and operational aspects. Beyond the universities, the NCHE, in addition to the other councils, are naturally oversight strategic structures. The MOHE also plays some strategic role but at the same time has some operational and executive dimensions and for this reason was positioned in Figure 16 in the strategic quarter but down towards the operational compartment. The professional regulatory councils and the Medical and Health Sciences Committee mostly execute operational roles relating to HPE regulation and quality assurance.

4.8. Summary

The study findings discussed in this chapter showed how HPE governance structures have evolved over time in Sudan to culminate into a complex set of institutions with inter-related functions. The analysis demonstrated that the sector of HE, including HPE, is mainly governed from within, with the main functions falling under jurisdiction of the NCHE, the MOHE, and universities. Several other structures beyond the HE sector also play direct or indirect roles in educational governance and their existence is not free from tensions with HE entities. Governance structures generally enjoy established legal frameworks and mandates and there is cross representation and participation in decision making. However, challenges related to relationships, effective coordination and monitoring do exist. The next chapter discusses these issues with a focus on governance relationships.

CHAPTER 5: GOVERNANCE RELATIONSHIPS FOR HPE

5.1. Introduction

This chapter explores the study findings on the relationships and linkages among governance structures for HPE in Sudan, addressing the second research objective. Guided by the conceptual framework of the study (Figure 11) and the delineation of governance structures in Chapter 4, this chapter examines HPE governance relationships in three main sections. The first section focusses on the state-HE relationship, the second examines the relationships among the governing structures within the HE sector, and the third section analyses the interactions of the HE structures with external stakeholders, including the health sector. In each section the content is structured around types, trends, and effectiveness of governance relationships. The chapter goes on to describe enablers and barriers for effective governance relationships before closing with a summary.

5.2. Higher education and the State in Sudan

This section starts by clarifying some concepts around the state, HE, and HPE in the study context to situate the research findings. It then describes, based on data sources for this research, the evolution of the state-HE relationship in Sudan.

The term "The State" is taken to mean the national government apparatus, namely the Presidency and the Cabinet (Council of Ministers) in Sudan as supreme state power. The HE sector could well be a diverse set of entities in different countries. In the context of Sudan and for the purposes of this study, the HE sector encompasses the NCHE, the MOHE, and universities and HEIs in the public and private sectors. The relationship between the state and HE as defined here is taken to project on HPE, a subsidiary of HE apparatus in the country that operates under its governing rules. Notwithstanding this, the analysis refers to specific examples and cases of relationships in the context of HPE.

The data sources of this study enabled identification of three main phases in the state-HE relationship in Sudan, corresponding mainly to evolution of the political governance of the country, which are presented as follows:

1. State supervisory relationship model (1956-1969)
2. State control relationship model (1969-1989)
3. Overt state control governance model (1989-2019)

The following subsections present the study results on the state-HE relationship through the three phases identified in addition to an account of the contemporary issues involved and the effectiveness of this governance relationship.

5.2.1. The period 1956-1969: a state supervisory governance model

Documentary sources reviewed in this study reveal important dimensions related to the state-HE relationship since the inauguration of the Sudanese independent state. Following independence in 1956, the HE sector in Sudan represented by the University of Khartoum enjoyed a great deal of autonomy based on the British legacy (Emubarak, 1985). The University of Khartoum Act, passed by the Parliament in 1957, defined the relationship between the university and the state as relating to setting the overall direction and mobilisation of funding and not in any way as controlling the management and academic role of the university (Nasr, 2011). This represented a typical state supervision model of governance where the university is highly valued as a society of elites and a source of knowledge; an Ex-Vice Chancellor of a public university interviewed in this research reflected on the situation supporting the documentary findings:

> *"During the 1950s and up to early 1970s the university [University of Khartoum] was highly respected by the state and society. I mean it enjoyed strong power in managing the academic affairs and higher education issues… the academic traditions were themselves very powerful and impartially applied. Academics, I mean especially senior staff were powerful and respected…you can hardly feel any existence of the state power…only overall supervision, I mean policy directions for the country needs and resource mobilization but not interference in the university management or policies."*

This tradition, described by respondents of this study as a loose type of state-university relationship, continued up to the early 1960s with the university gaining more autonomy with minimum political interference. Staff appointment and dismissal, selection of leadership, and other decisions were left to the University Senate and political affiliation was not an overt factor in recruitment (Kilase, 2013).

The political landscape of Sudan during the period 1956-1969 involved the first elected national government that stayed in power for only two years. In 1958 the military took power and their ruling extended to 1964 when a public uprising gave birth to an elected government which stayed in power until 1969, the date of another military coup. Despite nearly half this period under military government, the state-university relationship was mainly based on state distancing and respect for the university and its academic autonomy (Emubarak, 1985).

The impact of state-HE relationship during this period on HPE mainly took the shape of plans for expansion. Guided by the overall development plan of the post-independent Sudan to expand health services, the University of Khartoum increased intake in its medical school, opened a nursing school in 1956, a pharmacy school in 1964, and a dental programme within the medical school in 1971 (Bayoumi, 1979).

5.2.2. The period 1969-1989: a state control governance model

In May 1969, a military coup termed the "May Revolution" seized power, putting an end to the second democratic government in Sudan. Documentary sources reviewed in this research describe the shift in governance arrangements with the advent of the May Revolution. Soon after the regime established itself, political interference within HE (the University of Khartoum) became evident and university autonomy was compromised (Nasr, 2011). This took shape in the form of the political appointment of senior university management and the dismissal of staff based on political reasons; and ultimately the military ruler appointed himself as the guardian and chairman of the University Council (Kilase, 2013). The academic freedom and authority ensured by the powerful role of the university senate was compromised by the introduction of the university council as the supreme body for university governance. Unlike the university senate, the university council involved membership from outside the university and its formation was a function of the presidency of the country. Documentary sources describe these changes as motivated by the desire of the regime to abolish the threat of a strong unionised university (Emubarak, 1985; Nasr, 2011).

These arrangements represented a shift in the state-HE relationship from a supervision to a control governance model. The "May Revolution" regime went further with diluting the power of the University of Khartoum by constituting in 1973 the NCHE. Subsequently in 1975, the first national legislation for HE was introduced, coinciding with the opening of two more universities in the country in the central and southern regions (University of Gezira and University of Juba). These authoritative and legal arrangements marked the era of compromising the once strong elite power of the university in Sudan (Emubarak, 1985).

The state-HE relationship thus shifted from a link with one university to a sort of government arrangement with the NCHE, which in turn had jurisdiction over the three universities in the country. The NCHE now replaced the University of Khartoum as governor for HE sector and the state maintained tight control on the council (Nasr, 2011). This situation continued until

1985 when a public uprising sparked by professional syndicates put an end to the military government.

After the downfall of the May Regime in 1985, the elected democratic government re-established university autonomy and provided a framework for more liberties. A charter was passed in 1986 ensuring academic freedom and the filling of university senior positions by elections (Kilase, 2013). During the short span of the democratic government (1986-1989), signs of return to university autonomy were observed and a movement for review of HE policies and legislature started to gain momentum (minutes of the NCHE meetings, 1986, 1988). However, the short period of this government did not allow for changes to take place as a third military coup seized power in June 1989.

The impact on HPE during this period took the form of expansion of universities and student intake to respond to the expanding health services network. The authoritative nature of the regime helped to overcome the strong elite power of the University of Khartoum and resulted in adding two new medical schools. Respondents of this study generally reflected positively on the expansion of HPE accomplished during that period. A respondent leader of a professional association substantiated this by stating:

> *"I remember well the resentment of the university people [University of Khartoum] over the proposals of establishing the two other universities; I mean people saw this as diluting higher education and affecting quality you know… Some staff of the medical school in Khartoum were even cynical about the two new medical schools outside Khartoum. Yet the result was that the two medical schools were established, and their graduates came out as strong addition to the pool of the medical profession. It was due to government determination that this turned into reality."*

Overall, the predominant form of state-HE relationship during this period mainly took the shape of control and political intervention in addition to the shift from the single university governance to a national body (NCHE) functioning in the interface between the three universities and the state.

5.2.3. The period 1989-2019: overt state control governance model

Probably the most profound effects of the state and politics on HE in Sudan came with the advent of the military coup in 1989 (effected by the Islamic Front Party and named "El-Engaz – meaning salvation – Revolution"). Documentary sources reviewed describe the accompanying shifts in HE governance. Soon after its inception and in 1990, the new regime declared an educational reform under the name of the Revolution of Higher Education (RHE).

The cardinal signs of this revolution included reforming the legislation (Higher Education Act) to give more control to the state, an expansion in the number of universities, a substantial increase in student enrolment, and introducing Arabic as the medium of instruction (Bishai, 2008).

As discussed in Chapter 4 (Section 4.4.1.), a new HE act was introduced in 1990 and later amended twice in 1993 and 1995 to strengthen central control over universities. Subsequently, all bills of universities were harmonised in terms of objectives, structure, and function. The Head of the State was named as Chancellor of all universities and he retained the power of appointing chairpersons of university councils and vice chancellors, in addition to providing direction for HE (MOJ, 1993).

The state control model was maintained over the 30 years of the "El-Engaz regime" and achievements of the RHE included expansion in the number of universities including HPE institutions (Figure 2). However, the educational revolution was associated with funding problems that were made more overt by the rapid horizontal expansion in HEIs. Manifestations such as an extreme teacher deficit, degradation of university resources and infrastructure, and quality concerns were commonplace (Bishai, 2008).

Respondents in this study considered the post 1989 period as the era of the major changes in HE in Sudan. The state-HE relationship was described to be authoritative, close, and taking the shape of direct control over the sector by the regime:

> *"Changes that happen to the higher education sector after the coup in 1989 were major and tremendous…I would say they wouldn't occur without the strong and authoritative control of the regime over universities… Vice chancellors were appointed on political basis and tasked with strict implementation of the directives of the regime…Academic opposition was oppressed, and some academics who expressed opposing views were dismissed."* Key informant interview, Ex-deputy vice chancellor, public university.

Respondents from the health sector, while referring to the tight state control over HE, cherished the expansion that happened and indicated its relevance to health care needs:

> *"It is no doubt this regime followed a tight control approach on universities and this, you know is not liked by academics but I mean the expansion of universities and student intake in a country with growing population is highly needed; I mean the health services benefited a lot from this expansion and this was only possible through the strong power of the government."* Key informant interview, Ex-Undersecretary, FMOH

The governance model has always been of close steering and tight control of HE by the state with the NCHE closely monitored by higher government authorities.

5.2.4. State-higher education relationship: contemporary issues

Respondents of this research described the contemporary state-HE relationship as a type of tight control by the government over HE council and universities. Characteristics described by respondents about this relationship can be summarised as follows:

- Vertical reporting relationship where accountability to the state is demonstrated by reporting and conformity with directives from higher government levels
- Dependency type of relationship based on block funding for universities and room for manoeuvre within the remits of national financial regulations
- Ideologically driven relationship where the regime effected direct measures on HE such as policies, curricular, and instructional reforms to reflect an Islamist ideology. This was seen by respondents as utility type of relationship as HE was directed to serve ideological agenda. The introduction of content on Islamic studies in all curricula was pointed out as an example.
- Complex relationship models involving direct relationships of the state to universities as well as through the NCHE.

Documentary sources, including meeting minutes of the NCHE and its committees, reflect the complexity of the state-HE relationship and affirms the control nature of this relationship. The state interference challenging the role of the NCHE was expressed as being of concern in several meetings of the council. In one council meeting, members raised serious concerns about the government jeopardising the role of the council through direct interference with university functioning and creation of some lateral platforms (NCHE, 2012).

The adverse implications of a tight vertical control by government over HE were pointed out by the academic respondents who saw autonomy as corner stone for universities to flourish. This was substantiated by an Ex-Vice Chancellor of a public university interviewed in this study:

> *"When you are not giving enough room for universities to exercise academic freedom and enhance diversity and dialogue and promote independent views; you are hindering scientific progress and killing innovations… How can a university stand up to compete globally if its resources are constrained and its structures are imposed with no real election and competition to ensure accountability and good performance?!"*

Academic respondents viewed political interference with HE as mostly not beneficial. Elimination of qualified educational leaders and staff on political basis, imposing ideology on educational processes and programmes, and taking irrational decisions were instances described as adversely affecting the sector.

Respondents form universities felt a political motivation behind the decision of the regime to substantially expand the HE intake, including HPE. A Dean of a public medical school further explained this by stating:

> *"The government wanted to dilute the elite power of universities and the closed campus nature where students are tightly linked for academic and unionised activities… the opening of new universities and expansion of intake I mean is partly a political strategy to avert the hazard of university movement against the regime…while political aims could be achieved, serious consequences would result on higher education, you know, including weak quality of graduates''*

Health sector respondents however, viewed governmental interference within HE as useful in ensuring harmony, mobilising resources, and safeguarding the rule of law and accountability. Respondents from the MOHE concurred with this and the phrase "positive state engagement" came out during interviews. This group of respondents claimed that with a positive state engagement, the following can be realised:

- Aligning university and HE planning to the overall national planning and development
- Ensuring national identity of HE, e.g., dictating the national language as medium of instruction
- Showing commitment to provide and mobilise financial resources for universities to support expansion and quality of educational programmes
- Putting in place legislation and monitoring to ensure rational political/partisan practice by students and staff within universities
- Ensure legislative control and practice to rationalise, regulate, and streamline the private sector investment in HE and HPE
- Designing and implementing national schemes for academic staff retention and migration management in general
- Instituting national intelligence on HE and promoting learning and collaboration among universities
- Building capacities and supporting universities to enhance their competition in a globalised educational environment

5.2.5. Effectiveness of state-higher education relationship

The evidence so far examined demonstrates that the state-HE relationship in Sudan is functional and dynamic. The state has actively pursued links with its HE sector whether directly with universities or through nationally mandated bodies (the NCHE and the MOHE). Academic respondents described the state-HE relationship as being effective in achieving the goals of the state in controlling and directing the sector towards stipulated agenda, but not necessarily so in responding to other stakeholders, especially the academic community:

> *"If you want to assess the results of the government control of higher education you can say that there is success in making higher education to serve the agenda of the government…I mean the government utilises universities to satisfy political agenda and orientation…the academic community might not be satisfied with the results."* Key informant interview, academic member of the NCHE

Health sector respondents noted the existence of a clear strategic vision as to the future of HE and the agenda it should serve with positive ramifications on producing the required health workforce. This is clearly articulated in the 1992-2002 national comprehensive strategic plan for the country, and later in the 2012-2016 national plan (MOHE, 2015). This was seen by these respondents as helping in ensuring clarity of relationship between the state and HE. Respondents from the MOHE also noted the political commitment shown by the state to pursue its objectives for HE. The existence of overall legal framework and specific legislations for universities was also described by these respondents as creating a good governance principle and a factor for effective relationships.

5.2.6. Discussion

The trend analysis presented above demonstrates that the state-HE relationship in Sudan evolved from a state supervision to culminate into a tight form of state control model, generally corresponding to the type of the political regime. For a period of over a decade following independence of Sudan in 1956, autonomy was the main feature of the state-HE relationship. This could be explained by the colonial effect and the legacy of the British system as university autonomy, elite power, and academic freedom were considered as constituting the model of university governance in the UK at the time (Shattock, 2006). The mostly democratic nature of the government during that period was another factor supporting this type of state-HE relationship. The period from 1969 up to 2019 was dominated by military ruling, hence the control nature of the relationship.

The tight control of military governments over universities is probably motivated by a legacy gained by universities as being the nucleus of movements leading to public protest against military regimes. Student unions have enjoyed privileges in easy assembly and some freedom within the university environment that enabled them to spark opposition against the political system. Mechanisms to ensure state control over HE included umbrella HE legislation, a national council for HE, and a dedicated ministry, in addition to the Head of the State being a patron.

The decade of the 1990s marked an era of major reforms of HE in Sudan. Ideological orientation, marketisation, and massification of HE represented the main features of the reform. With the move of HE from elite to mass type of enterprise, the government interest in closely steering the sector became prominent. This corresponds with an observed trend in the literature as HE is becoming a political leaver after massification (Goodman, 2013).

The state-HE relationship in Sudan is evidently effective in terms of responsiveness to achieving the desired state plans. The heavy state involvement in HE and the control model enabled prominence of some governance principles and practices, especially those relating to oversight, rule of law, and accountability to the regime. A utility type of relationship developed in this context where HE is used to serve the ideological and political agenda of the state.

Overall, the state's role in HE is still prominent in Sudan, taking the shape of a control model. Yet, the many changes and contextual factors, such as the increasing student mass, market forces, and globalisation, are representing pressure factors and introducing new players in HE governance. The landscape for state-HE relationship in Sudan is prone to getting more complex and multidimensional, and this mimics a global trend (Taylor, 2013).

5.3. Governance relationships within higher education

As explained in Chapter 4 (Section 4.4), governance structures within the HE sector of Sudan include the NCHE, the MHSC, the MOHE, and the universities/HEIs, together with their affiliated medical and other health professions schools. The relationships among these governance structures are framed around some legal stipulations and historical developments. Since its inception in 1973, the NCHE has been in continuous existence and holds the mandate of governing the HE sector. Thus, it has line management relationship and responsibility for the work of the MOHE and universities, and the MHSC is, in essence, one of the permanent committees formed under the direct jurisdiction of the NCHE. Figure 17 below depicts the first impression relationships among the main governance players within the Sudan's HE sector.

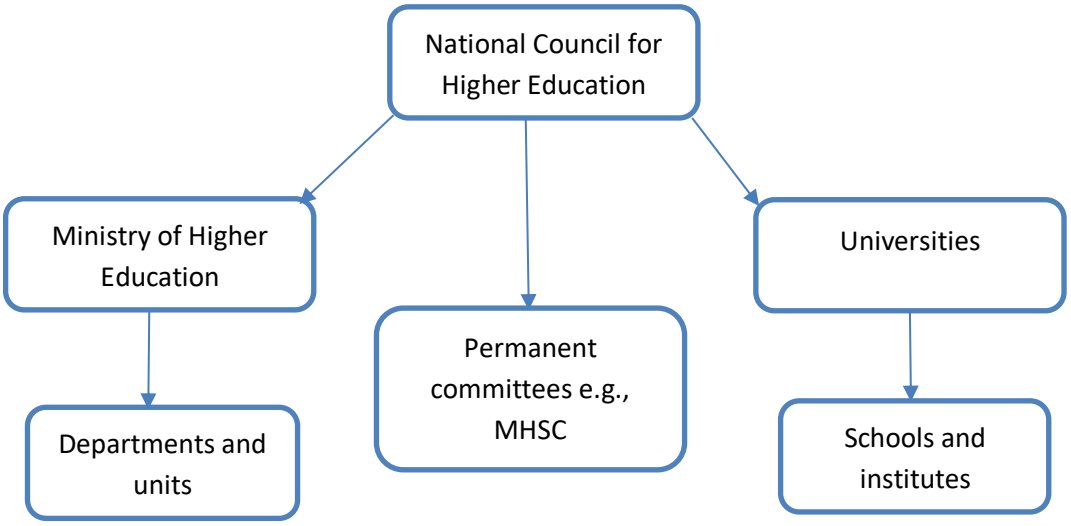

Figure 17: First impression relationships among governance structures within higher education sector in Sudan

When examined closely, the relationships among governance structures within HE are more complex, with unfolding formal and informal set of interactions. The analysis in this section focuses on ascertaining the relationship dynamics among the HE governance trilogy: NCHE, MOHE, and universities. The first subsection examines the relationship dynamics between the NCHE and the MOHE as two constitutional governance structures and the second subsection adds the dimension of universities to this governance relationship.

5.3.1. The National Council and the Ministry: a confused relationship?

The NCHE and the MOHE are closely related in the context of educational governance in Sudan. However, the type of relationship is not that simple; the roles of the NCHE and the MOHE have always been at cross-roads in terms of responsibility for policy, planning, quality assurance, and monitoring. The Presidential Decree No. 32 for the year 2015 granted governance roles to the MOHE in terms of setting policies and plans for HE, supervising universities and HEIs and deciding their roles, and dictating admission policy among other responsibilities (Elmagli, 2015). These roles are in great part also assigned to the NCHE, according to the 1993 Higher Education Act. Unlike national councils in other ministries where the main role is advisory, the NCHE is not a consultative arm to the MOHE; it is rather a powerful legal entity; hence a governance conflict arises. A respondent Ex-Undersecretary for Health who was also a member of the NCHE illustrated the situation by stating:

> *"You have the national council [NCHE] inappropriately situated in relation to the Ministry [MOHE]…unlike what we see in Ministry of Health here the council [NCHE] is not an*

> *advisory body; it is rather a legal body mandated by law to exercise certain power and roles that should be integral to the responsibility of the Ministry [MOHE]…the way the council [NCHE] functions tells you about these dichotomies and conflicts."*

In an attempt probably to address this relationship tension, the 1993 Higher Education Act secured the chairpersonship of the NCHE to the Minister of Higher Education and the executive secretariat to the MOHE Undersecretary (MOJ, 1993). This arrangement brought the MOHE leadership to assuming key positions in the NCHE but the situation for the ministry departments remained unsettled. The mechanism that is tying the MOHE to the NCHE, represented by the Minister and Undersecretary assuming leadership roles in the NCHE, appears as not adequately effective in linking the departments and units of the Ministry with the executive roles of the NHCE. A respondent MOHE senior director substantiated this by stating:

> *"We are not part of the scientific committees of the council [NCHE] where major decisions are taken, universities are dominating those committees and university vice chancellors think that there is not much need for the Ministry… they think the council [NCHE] can define policies and guidelines and universities can act as implementation arms… this is in fact not healthy and it leaves us, as directors in the Ministry [MOHE], confused."*

Observation notes of this study reflects this situation of delink. In a meeting of the MHSC committee devoted to discussing HPE planning attended and observed by the researcher (Meeting No 4/2015), the director of planning in the MOHE was not involved or invited to the meeting as he was not a member!

5.3.2. The National Council, Ministry, and universities: a complex web of governance

The dichotomies in relationship between the NCHE and the MOHE are also mirrored by the case of the NCHE interface with universities, albeit in less magnitude. A subtle relationship tension exists between the NCHE and universities in educational planning and implementation. While the NCHE develops policies and monitors their implementation, including supervising the performance of universities, the fact that universities have their university councils and vice chancellors both appointed by the President of the Republic creates some confusion and ambiguity in roles between the NCHE and universities. An exemplary area is the decision around student admission; while it is the role of university councils (public and private) to plan for admissions according to university bills, the NCHE has its superior word in deciding the number of seats for student admission. Respondent academics from universities noted the

confusion involved in the context of student admission decisions. A respondent Vice Chancellor of a public university maintained:

> *"We sit in our university council to plan for and decide the intake of students according to the bylaws and based on our capacity and resources, but we at sometimes receive a directive from the council [NCHE], I mean its chairperson and secretariat telling us to enrol bigger numbers of students. This creates confusion and affects quality of education and sometimes gets the university into problems of increased demand for services and amenities."*

It is not uncommon for the NCHE and the MOHE to interfere to increase the numbers of admission for universities including for medical and other health professions schools beyond the capacities declared by universities (Elmagli, 2015). The researcher attended and observed one meeting of the MHSC (Meeting No 4/2015) where a heated debate ensued on dealing with refusal of the dean of the medical school of the University of Khartoum to comply with the number of enrolments dictated by the MOHE.

Official viewpoints from the MOHE tend to explain the pressures on universities to expand student intake by the need to respond to the public quest for HE. A senior MOHE official interviewed in this research went on explaining:

> *"We sometimes receive complaints from some universities regarding our directives to enrol additional numbers of students…I mean we are pressed by increasing demand for higher education…slots in higher education absorbs only 18 percent of eligible students and the Parliament is urging the Ministry [MOHE] to scale up intake of students…that is why we are asking universities to expand capacity to allow for more access especially for students from rural and marginalised areas."*

The mechanism that links universities to the NCHE is stronger than in the case of the MOHE's linkage to the NCHE. As explained earlier in Chapter 4 (Section 4.4.1.), universities form the majority of membership of the NCHE and they can influence decisions based on their collective power, which is enhanced by the existence of the SAU which helps to bring universities better prepared to the NCHE meetings:

> *"While universities are in some tension with the council [NCHE],they usually do not worry much about this as they have the majority of seats in the council [NCHE] and that is enough to secure their positions and interests, that is to say they can coordinate their stand during their association meetings and (frowning) manipulate the council [NCHE]."* Key informant interview, Senior director, MOHE.

Although some directors in the MOHE are usually seconded from universities, the institutional relationship between the Ministry and universities is not always healthy. As mentioned earlier in this section, some university leaders see the existence of the MOHE as jeopardising the

autonomy of universities and several respondents from universities held the opinion that the NCHE could prepare policies and guidance for universities to lead operational planning and implementation without a need for a dedicated ministry for higher education.

Overall, the nature and dynamics of the relationships among governance structures within the HE sector are complex and unfolding with some odd patterns observed. The current situation entails three main players: the NCHE, the MOHE, and universities with a governance mandate and responsibilities, which form a complex web of interrelationships.

Figure 18 below displays the status of links (and delinks) involved in internal governance apparatus within Sudan's HE sector. This is a further development on Figure 17 based on further elaboration of the data from documents, interviews, and observation.

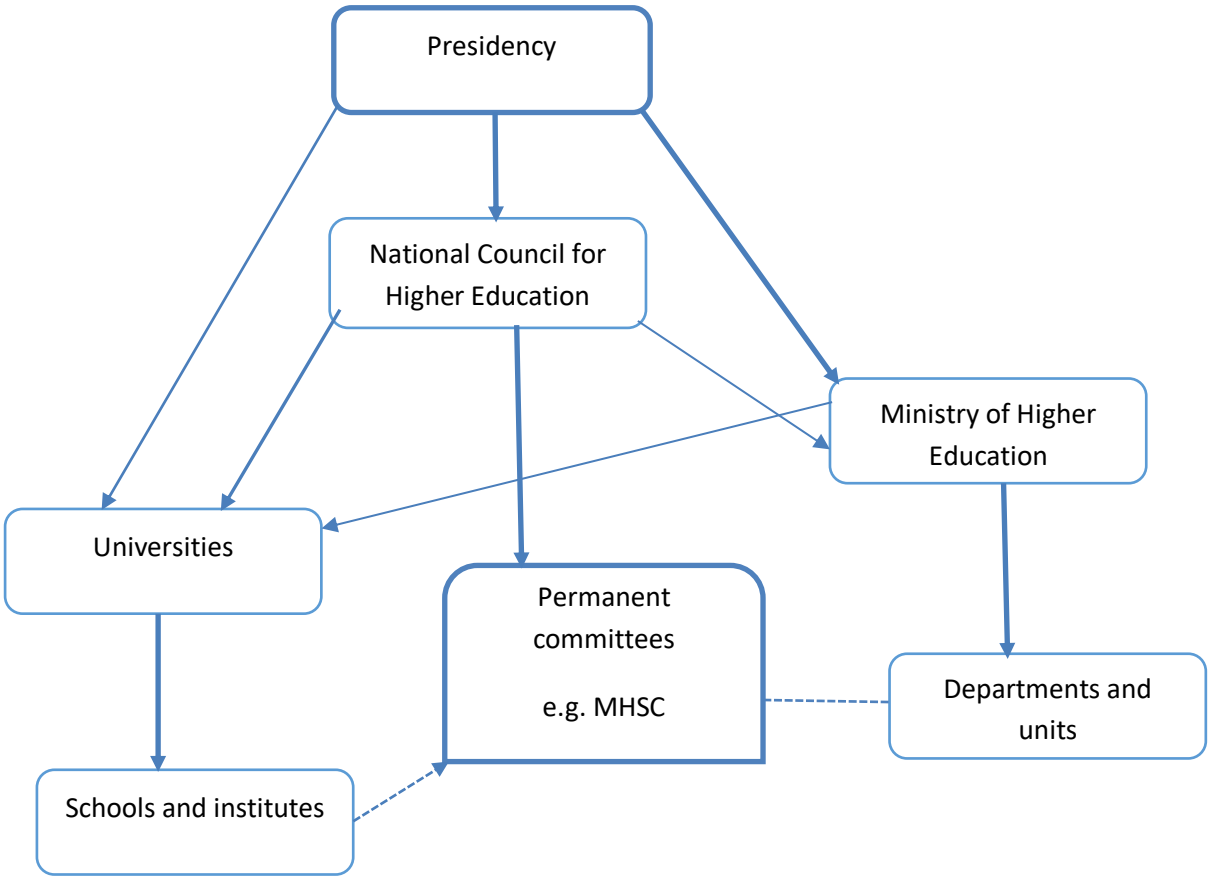

Figure 18: Inter-relationships among governance structures within higher education sector in Sudan

The solid arrows indicate line management relationships with the thickness of the arrow generally reflecting the strength of the control. The dotted arrow between university schools and the MHSC indicates representation relationship where deans of medical, nursing, and other

schools are usually represented in the committee. The dotted line between the MOHE departments and the MHSC refers to secretarial and logistic support to the committee, and no representation or other type of relation exists in this context. Thus, the MHSC as a powerful governance structure for HPE does not relate properly to the MOHE and in particular to its departments and units where much work related to the HE functions is conducted.

Besides the formal relationships shown by Figure 18, the informal types of dynamics among internal governance structures were found to be significant. Access to membership of the MHSC does not adequately follow systematic rules. Although representation is one main principle, some senior educationalists access membership through lobbying:

> *"When the Minister reconstituted the committee [MHSC] recently, I looked up its membership and observed that my name was not there…I went to H.E. the Minister and she kindly agreed to add my name to the membership of the committee [MHSC]; I think I have a claim to this as a person who spent over 40 years in teaching and leadership in higher education."* Key informant interview, Ex-vice chancellor, public university.

In a document solicited for this study, Elsheikh (2015) noted that some of the academics who are owners or shareholders in private medical or nursing schools gain access to the MHSC membership as senior educational experts but when inside the committee they tend to observe the interests of their schools. This is confirmed by the observation data reflecting such a trend of behaviour. In one of the MHSC meetings (Meeting No 1/2016) attended and observed by the researcher, a professor owner of a private university stood to defend his institution and provide information and clarifications around applications under discussion, although his membership did not relate to representation of his institution.

Documentary review also confirms the existence of informal networking in the context of governance within HE sector. Elmagli (2015) identified lobbying as one main challenge in reaching an equitable policy of balancing schools and programmes across universities. The conflict of interest with the examples of owners of private universities functioning at key public policy positions has been alluded to (Hag Ali and Hassan, 2015). In an extreme case, a professor and owner of a private university was once appointed by the Minister of Higher Education as chairperson of the MHSC, a key entity in regulating HPE (Elsheikh, 2015).

5.3.3. Discussion

Relationships in the context of governing structures within HE sector are sustainable in the sense that they rest on legal stipulations and interdependency. They are as well functional in

many aspects due to the continuous need for policy level and operational decisions to steer HE sector including HPE. These governance relationships are producing results in terms of key strategic directions taken, institutions established, and programmatic areas implemented. The huge expansion in HE infrastructure and programmes is achieved through functional governance structures and relationships within the HE sector guided by the state policy and directives.

There are, however, several issues involved in this internal dynamic within the HE apparatus in Sudan. Role confusion, dichotomy, tensions, and conflicts are not uncommon among the governance triage: NCHE, MOHE, and universities. The MHSC as key governance structure for HPE also represents a case of governance complexity through the way individuals access its membership and through the way it functions and reaches decisions. Formal as well as informal relationships usually come into play with regards to the work of this committee. The fact that most of the owners of private HPE schools are themselves senior academics who occupied important public leadership positions add complexity to the governance arena. Similar trends of this type of family business run by academics are observed in some other contexts, such as Brazil and India (Davey et al., 2014; Scheffer and Dal Poz, 2015). Lobbying, patronage, and collegiality are thus important factors shaping relationships and influencing decision making in the context of HPE governance. The unique social configuration of the Sudanese community might explain the effectiveness of lobbying and patronage. During reflective discussions with committee members following observed meetings, the researcher could confirm the views of several members not wanting to interfere with otherwise controversial decisions based on avoiding embarrassment with their colleagues.

5.4. Higher education and other sectors/ stakeholders

This section discusses the relationship of governance structures within HE (NCHE, MOHE, and universities) with entities outside HE, including in the health sector. An overview of the relationship nature will be provided followed by specific cases of relationship dynamics between HE and some external governance structures. The section will then devote a focus to the relationship between HE (represented by HPE) and the health services sector at national and sub-national level before concluding by discussion of relationship effectiveness.

5.4.1. Relationship nature: a governance representation model

As discussed in Chapter 4 (section 4.4.), the structures for HE and HPE governance are representative in nature. Therefore, some entities external to HE gain access to membership of

important governance structures such as the NCHE and the MHSC. However, there are caveats to this form of representative governance.

As shown by its membership list, the NCHE, which is the main governance structure for HE in the country, provides limited representation to external bodies with an HPE governance role. Apart from the FMOH (represented by its Undersecretary), other structures such as the regulatory councils, the SMSB, the NCT, the army and police health services are not part of the NCHE membership. Despite the existence of some of these external governance structures in the scientific committees of the NCHE, such status of inadequate representation in the main policy setting and governing body (the NCHE) is a limitation. Health sector respondents interviewed in this study noted the inadequate voice of health services institutions in the NCHE:

> *"The council [NCHE] which is the main governing body for higher education is dominated by higher education people…I mean higher education ministry leaders and university leaders represent the vast majority of members in the council [NCHE]…we as big ministry [FMOH] have only one seat in the council and still other partners are not represented at all…I don't think this is an ideal situation."* Key informant interview, Senior director, FMOH.

At the level of the MOHE, linkages with external governance structures are also generally inadequate. The departments of the Ministry seem to largely function within the milieu of HE with no systematic involvement of other ministries or relevant agencies in its consultative structures (Elmagli, 2015). This situation pertains especially to the relationship of the MOHE with the FMOH which is discussed later in this chapter. Respondents from academe however, viewed this situation as normal due to the need for people with an academic background and experience who understand and better contribute to discussing HE issues. Observation notes of this study confirm this type of thinking, and in one observed meeting of the MHSC (Meeting No 4/2015) a senior professor was questioning the importance of having representatives from the FMOH in the committee.

The MHSC allows for a better representation of stakeholders external to the HE sector. In this committee, the regulatory councils, the SMSB, and the FMOH are all represented as explained in Chapter 4 (Section 4.4.2.). That is, at a theoretical level, one strong facet in the HPE governance arena as the MHSC is an important structure where policies, standards, and directives about HPE are prepared and submitted for the NCHE for approval and endorsement, and where monitoring of HPE schools and programmes usually takes place.

Observation notes of this study confirm that the presence of these external governance structures in the MHSC has in some situations made a difference to directions and decisions relating to the HPE governance. This has been enabled by taking active roles in the discussion, providing information, highlighting perspectives, challenging academic views, and explaining positions. One active comment from a representative of the FMOH in a meeting observed for this study (MHSC meeting No 2/2015) led the MHSC to organise a special meeting on health workforce planning and projections and that meeting was attended by the Undersecretary of the MOHE, who is at same time the Secretary General for the NCHE.

There are, however, challenges to this "representation" type of relationship. Trends have shown that decisions by the Minister of Higher Education in his/her capacity as chairperson of the NCHE, regarding composition of the MHSC, were never systematic. Some important external governance entities lose their representation in the committee altogether. This has happened twice with the FMOH membership over the past decade:

> *"The committee [MHSC] is an important regulatory structure for health professions education but you know our membership [FMOH membership] in it has never been stable as the Minister [Minister of Higher Education] sometimes excludes the Ministry [FMOH] form the membership list"* Key informant interview, senior director, FMOH.

Effectiveness of external representation was also observed to be hampered by the majority seats enjoyed by universities and academics represented in the MHSC and this carries important implications on the voting power for committee decisions. A decision taken based on voting in one meeting of the MHSC (Meeting No 1/2016), attended and observed by the researcher, defeated the plans of the FMOH to expand nursing education in order to address the skill mix imbalance in the health workforce and to respond to population health needs in states and underserved areas.

5.4.2. Relationship dynamics: dispute over roles?

The dynamicity of relationships between governance structures within the HE sector and the external stakeholders is characterised by tension more than collaboration. Three cases are described here to substantiate this argument in relation to HPE.

Higher education and the Sudan Medical Council: role confusion?

The relationship of HE to the SMC entails some tensions and role confusion. Two examples are taken further for discussion based on the study findings to illustrate the governance

dichotomy: one example relates to establishing new medical, dental, and pharmacy schools; and the other relates to accreditation of medical education.

In relation to the first example, the SMC Act (MOJ, 2004a) dictates that "the SMC is to participate with the MOHE in approval of new medical, dental, and pharmacy schools". In principle, this legal statement was regarded by regulatory councils' respondents to be vague in terms of defining the line of responsibility. In practice, there were problems as the SMC criticised the expansion of medical schools in the country and complaints about not being involved in decisions about opening new schools. A senior official from the SMC interviewed in this research maintained:

> *"The unplanned expansion of medical schools is a problem in this country; although our legislation dictates that the council [SMC] is to participate with the Ministry [MOHE] in decisions around opening new schools; we are normally not consulted or asked to provide institutional opinion. The Ministry [MOHE] sees this as its own territory and in some cases opening of these new schools is not far from political agenda."*

Observation notes for this study confirm this trend as the decisions taken on establishing new medical schools and programmes during the MHSC meetings observed did not consider deliberate approval or engagement of the SMC. The representative of the SMC in the MHSC raised a concern in one of the MHSC meetings (Meeting No 1/2016), attended and observed by the researcher, in relation to a decision taken on the establishment of a new public medical school in a remote area. The representative commented that such a decision should be sent for consideration by the related committee within the SMC before being approved by the MHSC.

For the second example on accreditation of medical education, there is role confusion between the SMC and HE authorities. While the SMC operates a national accreditation programme based on its legal mandate (MOJ, 2004a), the MOHE has an umbrella agency, the QAAC, assigned to develop standards and apply an accreditation programme to university institutions, including health professions education schools. This has been a major tension area where the SMC is not able to take decisions based on accreditation standards and visits to schools in anticipation that the MOHE will not allow compliance of medical schools, especially in the public sector, with those decisions (Karrar, 2009). Issues around accreditation will be further discussed in Chapter 6 on HPE governance processes.

Higher education and the NCTTE: a severe governance conflict

Another example of relationship tensions and dynamics between the HE apparatus and external stakeholders is represented by the case of the NCTTE. As explained in Chapter 4 (Section 4.5.4.), the NCTTE was introduced as an independent body in 2008 in response to felt needs to address the gap in technical and vocational skills in the labour market. The NCTTE was given high momentum through the First Vice President of the country chairing its governing structure, which includes representation of the MOHE among other entities. However, the NCTTE was introduced when there is a corporation under the MOHE that is dedicated to technical education.

Documentary sources reviewed in this research demonstrate that tensions started to emerge when the NCTTE started its work on defining technical and technological education to include diploma and bachelor degrees leading to technical qualifications, including for HPE. Here the MOHE felt that this was going to be a university degree issue and not a vocational qualification (Eltayeb, 2015). The NCTTE went on in 2009 to prepare its legislative framework and submitted it for approval by the parliament. This led to escalated fears from the side of MOHE with regards to disputes over scope of authority (Hag Ali and Hassan, 2015). The interview data reflects this situation of conflicting overlap. An Ex-Undersecretary for the MOHE interviewed in this research maintained:

> *"This council [NCTTE] is sort of mess in higher education environment, it is taking one role and function that already existed in the Ministry [MOHE]. We established a dedicated corporation for technical education, and we are opening schools oriented at producing mid-level cadres with technical and vocational skills to respond to market needs, so this new council [NCTTE] is actually going to muddle things… I do not see a real need for its existence as such."*

Due to these tensions, the NCTTE could not implement practical programmes on technical education including on HPE, although it exerted efforts in policy setting, planning, and conceptualising the career paths for technical education. A respondent senior NCTTE official reflected on this by stating:

> *"Despite our extensive work on developing the policies and designing pathways for technical and vocational education, the implementation is hindered by higher education authorities; you know they claim that this is their area of governance although they did nothing for years; this situation I mean is unfortunate and crippling for the role of the council [NCTTE] and the government should intervene."*

Due to this conflict, the legislation of the NCTTE, passed in 2011, remained largely idle. A reconciling movement by the national government was represented by a recent change of leadership in the NCTTE; a professor who was the State Minister for Higher Education was appointed as Secretary General for the NCTTE. An interesting governance shift followed later in 2018 when a Presidential Directive was issued dictating that the NCTTE to be under supervision of the MOHE (MOHE, 2018).

Higher education and the NCT: a case of overt governance tension

A third case of a tense governance relationship is represented by the role of the National Council for Training (NCT) in education. As explained in Chapter 4 (Section 4.5.5.), the NCT operates under the Ministry of Labour and Human Resource Development and is mainly entrusted with funding governmental scholarships for local and overseas postgraduate training in different sectors, including HPE. In 2009, and according to a national bill, the NCT took on the additional role of licensing training centres in the public and private sectors that work in the delivery of short courses and in-service training across different areas and disciplines, including the health sector (MOJ, 2009).

The NCHE and the MOHE recently put a legal case against the NCT in view of the increasingly observed practice of some private training centres, licensed by the NCT, offering "diplomas" which are beyond their scope of the in-service training mandate (MOHE, 2015). This created confusion with other basic degrees obtained through HEIs based on longer training periods and structured curricula. HE authorities regarded the situation as fraud and malpractice, and the phenomenon generated public controversy and media attention, especially that it relates to key health professions such as nursing and pharmacy (Ahmad, 2014).

5.4.3. Higher education and the health services: an unfolding relationship

The interaction between HE, including HPE, and the health sector represented by the Ministry of Health and health services institutions, is a critical dimension of the governance relationship. The two sectors; education and health, are complementary in terms of creation and utilisation of the health workforce to fulfil a common purpose: community service and population health improvement. This section focuses on the relationship between the MOHE and the FMOH as the two main ministries representing education and health in Sudan. Relationships lower down the system between institutions on both sides will also be examined to illustrate the dynamics. A historical background is provided first followed by discussion of the relationship at national and sub-national levels.

An influence of history

The discussion in Chapter 4 (Section 4.2.) referred to the history of HPE governance starting under the oversight of the health services in the first half of the 20th century, diverging later into a two-tier system under health and HE following the independence of Sudan in 1956, and ultimately converging under the HE sector jurisdiction post the year 2000.

Documentary sources reviewed in this research demonstrate that the period following independence witnessed a harmonious type of relationship where medical and nursing schools were well tied to health services. Public hospitals were traditional sites for training of medical and nursing students with smooth functioning and health services staff were heavily involved in teaching side-by-side with their colleagues in the university (Bayoumi, 1979). University staff members were likewise part and parcel of Ministry of Health committees and mechanisms on health services matters such as investigation and control of diseases, in-service training, and operational research activities (Haseeb, 1967). Interview data in this study generally supports this proposition of close collaboration that existed between health services and academe:

> *"When we were medical students, we could hardly know who is employed by the university and who is employed by the Ministry [Ministry of Health] among our teachers… there used to be a true spirit of collaboration you know, or I would say integration between the university and the health services."* Key informant interview, A senior official, SMSB

With the expansion of HEIs in the 1980s and more evidently in the 1990s, the relationship between education and health started to get complex with segregation, tension, and even dichotomy (Tahaa et al., 2013). Gaining more popularity as employers for specialists, universities started to marginalise the teaching role of specialists employed by the Ministry of Health. Hospitals affiliated to the Ministry of Health reacted to this by deciding on a certain number of units inside the hospital where training activities for medical students are conducted; with other units led by Ministry of Health specialists not much involved in teaching activities (Wali, 2014). A respondent Dean of a public medical school classified this as an odd occurrence in the record of medical education and health services and maintained:

> *"Strange things started to occur, some of our colleague specialists employed under health services started to abstain from their teaching role inside hospital wards [exclaiming] claiming that this is not an original duty for them… well as a doctor the Oath requires you to educate young generations in the profession; I think the relationship gets tense because of dichotomy between health and education ministries."*

In a document solicited for this research, Elsheikh (2015) described the trend of academe-health services relationship. During the late 1990s and with the advent of the new millennium, the tense relationship between HPE and health services became more overt. Some hospitals abstained from training medical students claiming that universities should provide financial and logistical support in return for using hospitals as training sites for their students. This phenomenon escalated with the emergence in the late 1990s of private medical schools also wanting to train their students in Ministry of Health hospitals. In Khartoum state, where many of the medical schools operate, the Ministry of Health at the state level went far in this direction asking private medical schools to sign contracts with public hospitals in order to use them as training sites. Private medical schools were requested to contribute to hospital budgets and infrastructure development and the Ministry also started to demand similar arrangements from public medical schools; these measures created debate and controversy (Badr, 2015). Implications of relationship dynamics around hospitals as training sites are discussed in more depth in Chapter 8.

Relationship dynamics at national level: striving for improvement?

Documentary sources for this research suggest that the relationship between education and health represented by the two ministries has not been an ideal one. The two ministries largely work in silos and coordination mechanisms are largely lacking (Tahaa et al., 2013). The case of health workforce planning is a typical example of the disconnect between the two ministries (Elmagli, 2015), and this is discussed at length in the next chapter on HPE governance processes.

The relationship between HPE and the health system at the national level is mostly of a representation type as alluded to earlier (Section 5.4.1.). The FMOH is represented in the NCHE through membership of the Undersecretary for Health in the NCHE (MOJ, 1995). At the level of the MHSC there are three members representing the FMOH as pointed out in Chapter 4 (Section 4.4.2.). Within the structures of universities, representation of the Ministry of Health and health services is uncommon apart from membership of the director of human resource development in the FMOH in some of the medical schools' boards (Wali, 2014). Likewise, the FMOH has no formal representation in any leadership or departmental mechanism within the MOHE apparatus.

Health sector respondents interviewed in this study expressed reservations about this "representation" type of relationship and questioned its value. Factors mentioned included the

mostly small size of representation for the health sector, lack of regular meetings, and the possibility of vital decisions being taken in the absence of health sector representatives or based on majority voting in their presence:

> *"The relationship between the health system and higher education is never systematic; yes, we are represented in some governance forums such as the national council [NCHE], but that is a limited representation not adequate for the voice of the health system to be heard clearly; it is in fact an imbalanced power relationship. Our links with the Ministry [MOHE] itself, you know, are largely missing and the two ministries plan and work separately".* Key informant interview, Senior director, FMOH.

Table 5 below depicts the modalities and weight of the FMOH representation in HE governance structures based on evidence discussed above.

Table 5: Status of the Federal Ministry of Health representation in HE governance structures in Sudan

Higher education governing structure	**Ministry of Health representation**
National Council for Higher Education (NCHE)	One seat for the Undersecretary MOH (out of over 180 members)
Ministry of Higher Education (MOHE)	No representation in leadership forums or departmental mechanisms
Medical and Health Sciences Committee (of the NCHE)	Three members currently (out of a total of 25 committee members mostly academics)
Universities (university councils and senates)	Ad hoc representation
Health professions education schools (school boards)	Occasional (e.g., in some medical schools)

Despite the lack of a sustainable and strategic relationship between HE and the health ministries at the formal level, the dynamics of informal relationships proved to be critical in the context of education-health interactions. In 2005, two closely related physicians were appointed as ministers for higher education and health. They contributed to enhancing relationship between the two ministries and that culminated in a written agreement on streamlining coordination (FMOH, 2006). Likewise, the relationship was adversely affected later when two rival

undersecretaries were appointed in the two ministries (Tahaa et al., 2013). This signifies the influence of people and informal relationships in the context of Sudan.

Having discussed in some detail the links between education and health sectors, from the angle of the influence of the health ministry and health services structures on governance within HE, it is not to give the impression that there are no problems on the opposite side, the health ministry side. HE respondents interviewed in this research held the opinion that representation of HPE schools and senior professors in medical and health disciplines in the Ministry of Health structures are minimal and ad hoc:

> *"I can't see that the Ministry of Health itself is opening up for collaboration and true representation of our people [higher education figures] in the business of health policy and health services planning and organisation. Our professors in medical and nursing schools for instance feel not adequately involved in health services issues especially those pertaining to service planning, research funding, and the work of Ministry of Health with the WHO and other international organisations."* Key informant interview, Ex-undersecretary, MOHE.

During the last two decades, there have been some efforts and movement to address the limitations of the relationship between HPE and the health system (FMOH, 2012). At ministerial level, the FMOH proposed the establishment of a national mechanism to coordinate health care provision based on the increasingly fragmented health system with a multitude of actors. The Presidency responded in 2008 by declaring the formation of the National Council for Health Care Coordination (NCHCC) to be chaired by the President of the Republic. The Council included the Minister of Higher Education as a member, and down in the executive committees of the Council, representatives of the MOHE sit side-by-side with FMOH members in addition to other factions, including in one committee dedicated to health workforce issues. As a result of this arrangement, collaborative work achieved some successes with a catalyst role from the National Human Resources for Health Observatory (Badr et al., 2013). There ensued joint work between the two ministries on health workforce projections as well as on defining the scope of practice for different health professions (Badr and Abuagla, 2017).

Down the hierarchy, medical schools are approaching hospitals and health services institutions for collaborative arrangements. One format is the joint appointment of staff adopted by some medical schools and involving staff working originally in health services institutions, leading to more collaboration for educational development and health services improvement (Elsanousi et al., 2016). Respondents interviewed in this study were positive about collaborations such as joint teaching activities and exchanges between HE and health sector:

> *"In the Ministry [Ministry of Health] we benefited much from the involvement of university staff in delivering training and capacity building sessions for ministry employees; I mean this also gave the opportunity to university professors to know more about the health system and the tremendous work carried out in health services. Our qualified ministry [Ministry of Health] professionals are also teaching in universities widening their horizons and helping with addressing the shortage of staff in universities."* Key informant interview, Ex-Minister of Health, State level.

The contractual arrangements between private medical schools and public hospitals in Khartoum State referred to earlier in this section is another form of joint work between HE and health services. Despite the limitations and challenges, this type of relationship is helping to strengthen linkages and bringing in more collaboration, effectiveness, and efficient use of resources towards common goals (Badr, 2015). Increasingly, hospitals in Sudan are opening their doors to collaborative arrangements with training institutions and training initiatives. There are signs of an era that might possibly bridge the gap between HE and the health system if these positive steps are emphasised and further promoted.

The relationship between education and the health sectors is thus complex, dynamic, and unfolding. The recent attention in the country to the health workforce crisis and the emergence of overarching governance structures, notably the NCHCC, provide for more collaboration between the two sectors. However, this relationship is plagued with many difficulties and challenges, as discussed. The culture of working in silos and the disarray among actors in both sides together with the lack of effective oversight from higher government levels are barriers hampering functionality and sustainability of the relationship. The following chart (Figure 19) summarises the enabling as well as constraining factors for a collaborative relationship between the two sectors as suggested by the evidence generated by this study.

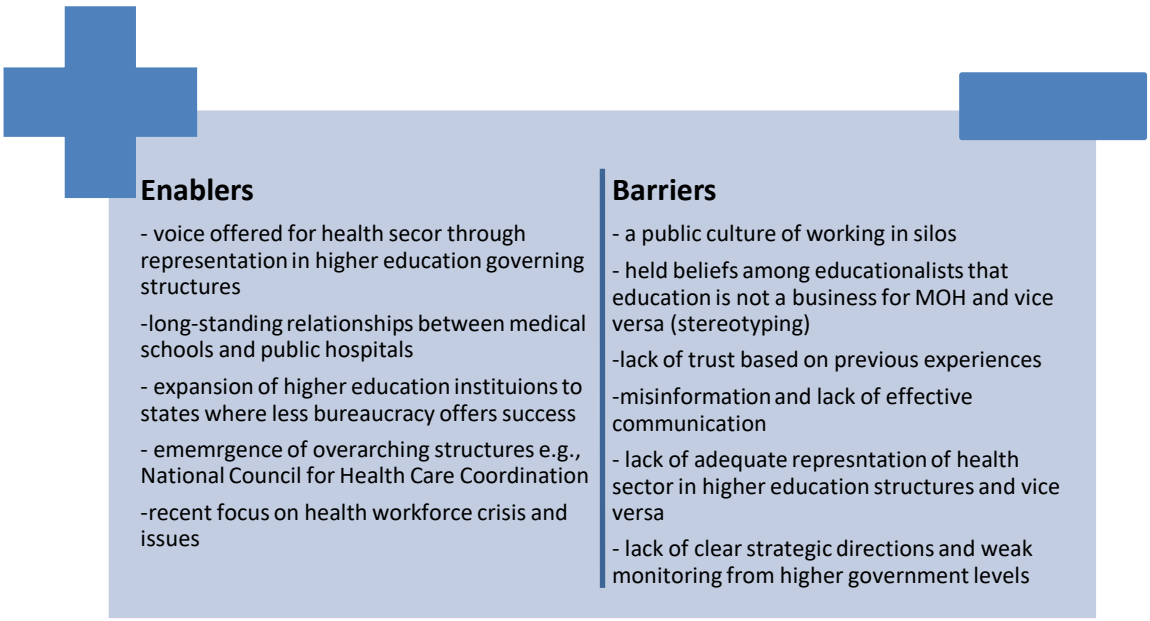

Figure 19: Enablers and barriers for the health sector-higher education relationship in Sudan

Relationship dynamics at sub-national level: a potential for best practice

The situation of the HPE-health system relationship is arguably better at the level of states outside of the Capital, the decentralised levels. Operational links and cooperation between universities and health services at decentralised levels are stronger and that might be explained by the less complex management bureaucracy, fluent relations, and scarce resources necessitating complementarity (FMOH, 2012). Interview data in this research supports this proposition:

> *"In our state here, we are well tied to the Ministry of Health as our health services facilities are limited and collaboration is needed in terms of staff and resources, I mean we have regular meetings and our university staff in medical and health schools are part of daily business of the health services in the state, we feel no barriers."* Key informant interview, Vice chancellor, public university at state level.

Gezira State in central Sudan probably provides a best practice example in collaboration between HPE and health services (Elsanousi et al., 2016). The University of Gezira, well known for its community-oriented programmes, maintains unique links with Gezira State Ministry of Health. There is structural and substantial cross representation between the two entities. An Ex-Minister of Health in Gezira interviewed in this research described the close arrangements between the university and the ministry by stating:

> *"Deans of the medical and health sciences schools and senior professors of the university [Gezira University] are part of our consultative council and ministerial committees; likewise,*

> *staff members of the Ministry [Gezira State MOH] are involved in teaching and research activities of the university in addition to membership of the university council and school boards; we are satisfied and proud of this close collaboration which is fruitful."*

The Gezira State Governor constituted in 2011 a high-level permanent committee to coordinate between the state government and the university and it included the State Minister of Health besides the Dean of the medical school (Elsanousi et al., 2016). Interviewed in this research, the Deputy Vice Chancellor of the University of Gezira maintained:

> *"The relationship between the Ministry and the university in Gezira is very strong, and it is behind many successes in health care here in this state I mean. Trust, transparency, personal relations and effective communication are factors promoting success of this relationship; our staff are immensely engaged with projects and activities within the health services in the state."*

Documentary sources reviewed in this study affirm the effectiveness of the ministry-university relationship in Gezira State. The collaborative relationship culminated into fruitful collaborations and tangible results (Elhadi et al., 2013). Joint projects included the rural residency programme for HPE students and the deployment of clinical specialists affiliated to the university to serve in provincial hospitals in the state, leading to improved coverage and quality of services. Likewise, several initiatives are jointly planned and implemented between the university and the Ministry. Recent examples include the safe motherhood initiative and the family medicine training programme, both described as successful ventures (Elsanousi et al., 2016).

The relationship between HPE and health services at state level in Sudan provides learning opportunity and lessons for the national level and the state of Khartoum and probably elsewhere. There seems to be true collaboration and integration leading to effective and efficient use of resources in pursuit of common goals at states and more rural settings of Sudan. Dichotomies, conflicts, and working in silos are seldom seen at the state and local levels. Besides the less complex environment and the need for resource complementarity, informal relationships play a catalytic role in bringing individuals and institutions together, as believed by respondents from the state level:

> *"At our setting here [a town in Sudan] we enjoy excellent personal relationships as we are tied together and have more time for informal meetings and networking… this is I mean, helping for us to discuss and streamline our projects and initiatives…it is really useful in resource sharing and joint work towards common objectives."* Key informant interview, Dean, state level medical school.

Gezira State offers a distinguished example of effective relationships that can bring in results and benefits for both the education and health sector through collaboration and even integration at times (Elsanousi et al., 2016). Figure 20 below lists the salient features and major results of the positive relationship between the education and health sectors in Gezira State as suggested by the data discussed in this section.

- Joint representation at senior and lower levels e.g., ministerial council, university council and school boards
- Teaching collaborations; involvement of MOH staff in teaching throughout university HPE schools
- Joint management and service delivery in the main hospitals affiliated to the ministry of health
- Joint projects based on resource complementarity e.g., rural residency, deployment of university specialists to provincial hospitals
- Joint ventures in training and capacity building e.g., twining for expansion of nursing training, the Blue Nile Training and Research Institute jointly managed by the Ministry and the university
- Joint initiatives targeting priority health issues, e.g., the safe motherhood initiative, the family medicine training programme, etc.
- A strong network of informal relationships including collegiality and social ties

Figure 20: Features of the collaboration between the Gezira State Ministry of Health and the University of Gezira, Sudan

5.4.4. Discussion

The interaction between governance structures within the HE sector with the external stakeholders including the health services is existent and dynamic. However, mechanisms linking the two set of actors are not fully functional or sustainable. This reflects on achieving results in terms of progress and attainment of common goals. Because the involvement of external governance structures depends mainly on representation in the HE structures such as the NCHE, the effectiveness of the relationship is hampered by the inadequate representation, irregular meetings, and long disconnects.

The liberalisation of HE as part of the structural reforms introduced in Sudan in the 1990s brought more complexity to the relationships in the context of educational governance. Private universities were introduced and steadily increasing, and many public ministries and agencies

established their own universities or HEIs on a private basis. The dichotomies that resulted created governance concerns in the context of relationships among stakeholders related to education and training including for HPE. The emergence, for the first time in Sudan, of the tensions around teaching hospitals is a testimony of the complexities of the rising private sector investment in HPE.

Sudan is not an exception from the lack of effective coordination between education and health sectors in the context of health workforce production and utilisation. In many settings elsewhere, disconnect between education and health services has been noted as a persistent problem (Celletti et al., 2011). Despite the instances of good practice in relationships between education and health especially at the lower decentralised levels, the state of affairs between the two big societal sectors is not optimal. The legacy of HPE in Sudan, showing a case of full integration with health services, was not maintained over years and it did not adequately reflect on a relationship that should be symbiotic. The culture of working in silos, the stereotyping in academe-service relationship, and the huge expansion of the HPE sector that brought more complexity could all be reasons for relational problems in the context of Sudan.

Within the WHO Eastern Mediterranean Region where Sudan belongs, dichotomies between education and health are also known to exist with adverse implications on both sectors. Lack of effective intersectoral coordination for medical education, including with the health sector, has led to quantity and quality gaps in the health workforce (WHO, 2015). One of the countries in the region, the Islamic Republic of Iran, has the experience of structurally integrating medical education and health services into one ministry. This merger, introduced in 1985, was described to be successful in scaling up production of health workers, enhancing quality and relevance, and bringing in efficiency and mutual benefits for both education and health services (Pezeshkian et al., 2003; Marandi, 2009). A review of the Iranian experience by the WHO affirmed its positive effects and recommended that other countries in the region might embrace the model (WHO, 2006a). However, no country in the region opted for this type of integration and Iran remained the only example in this respect. The learning from this experience is possible for Sudan given the cumbersome issues involved in HPE-health system relationships.

5.5. Summary

This chapter presented and discussed the study findings in relation to HE and HPE governance relationships. The discussion showed that governance relationships for the education of health professions in Sudan are complex, dynamic, and multi-dimensional. The state relates to the HE

sector in mostly a control model leaving little room for institutional autonomy and academic freedom. Although legislative frameworks are in place and cross-representation is a relationship pattern, tensions and role disputes exist among HPE governing structures in the country at the national level. The HPE-health system relationship is no exception and dichotomies between HE and health ministries are commonplace. The states and decentralised levels enjoy a better situation and offer lessons in effective governance relationships. The status of the HPE governance relationships in the country has ramifications on different functions including HPE governance processes, addressed in the next chapter.

CHAPTER 6: GOVERNANCE PROCESSES FOR HPE

6.1. Introduction

The previous two chapters successively addressed HPE governance structures and relationships; this chapter discusses the study findings on governance processes addressing the third research objective and completing the discussion of the three main pillars of governance depicted in the conceptual framework for this study (Figure 11). The chapter starts with an overview of HPE governance processes and their historical evolution in Sudan and identifies some specific examples of processes for further exploration. The subsequent sections discuss consecutively the three selected governance processes: policy on student admission, HPE planning, and accreditation of HPE institutions. The chapter eventually closes with a summary.

In line with the topic and aim of the study, the chapter addresses governance processes relating to HPE. Yet, reference is made in several places to arrangements taken at the level of HE at large. This should be understandable as HPE is a subset of HE and is governed accordingly; for instance, admission policy guides student enrolment in all disciplines of HE, including HPE. Given these structural linkages, the analysis in the chapter is tailored to focus on specific processes and examples pertaining to HPE.

6.2. Overview of governance processes

Governance processes in this research represent the functions performed by the governing bodies to direct, regulate, and manage the HE sector at large and HPE in particular. As identified in the conceptual framework developed by this study (Figure 11), governance processes include the broad categories of policy development, planning, and QA for HPE. This section appraises the main governance processes for HE and HPE in Sudan and selects some of these processes for further analysis in the chapter.

6.2.1. Policy development for higher education and HPE

Policy development is one crucial function and process for HPE governance. HE policies here refer to the statements, directives, and overarching arrangements taken by the government and HPE governance structures to regulate and steer the functioning of HEIs and relevant aspects. Documentary sources reviewed in this research identify some main policies in HE and the HPE arena in Sudan, including policies on educational orientation, financing education, establishing new educational institutions, student admission, and the policy toward the private sector involvement in HE (Emubarak, 1985; Nasr, 2011; Hag Ali and Hassan, 2015).

Policy development for HE in Sudan has historically evolved to reflect political, economic, and sociocultural characteristics of the country. Hag Ali and Hassan (2015) suggested that factors such as the quest for development and modernisation, politicisation, and globalisation also contribute to an active HE policy arena in Sudan. They identified an ascending path for HE policies starting from a modest post-independent set of policies to an active policy environment that escalated following the advent of the El-Engaz regime in 1989. Interview data for this study supports this proposition as respondents generally agreed to the burgeoning policy arena witnessed over the past 30 years of the El-Engaz government. Academic respondents, mostly from universities, related the flaring policy environment to the intention by the government to control HE and impose certain ideological positions:

> *"This government [El-Engaz regime] I mean introduced major changes to higher education through new policies such as the Islamic ideology and the huge expansion of universities and privatisation…although these policies were not fully agreeable, the government could ensure their implementation through control and close monitoring."* Key informant interview, Ex-Vice Chancellor of a public university, member of NCHE.

Soon after taking power in 1989, the military government of the El-Engaz regime organised the famous 1990 National Conference on HE that declared a major transformative agenda. The main policies announced included: a substantial expansion of universities, a huge increase in student intake, adopting Arabic language as medium of instruction, and the promotion of private sector investment in HE (Elmagli, 2015). These policies projected on HPE as a subset of HE.

The analysis in this chapter will take one policy (student admission policy) as an example to demonstrate the situation and associated issues in Sudan in relation to HE and by projection, HPE. Devoting a focus on one policy to illustrate the dynamics of governance processes for HPE in Sudan should be reasonable as this research addresses governance from a process perspective rather than content (Chapter 1, Section 1.6.). The policy on student admission is selected for further scrutiny and unpacking in this chapter due to the following considerations:

- The admission policy focuses on the size, attributes, and capabilities of individual students and prediction of graduate outcome. In this manner it relates closely to the concept of graduate appropriateness (quantity, quality, and relevance) which is central to this research

- The admission policy can provide a nuanced picture about HE and the HPE policy arena as it intersects with other important policies such as financing the HE, institutional expansion, and privatisation.
- In a vast country such as Sudan where geography is extensive, population is diverse, and developmental disparities exist; it is important to study admission policies to examine access and social inclusion issues again central to appropriateness concept in the context of HPE
- Admission policy is given high attention in Sudan with the Minister of Higher Education chairing the Admission Committee and membership involving university vice chancellors and other senior HE officials.
- The documentary review conducted for this research revealed more complete data on admission policy compared to other HE policies.

6.2.2. Planning for higher education and HPE

Planning in the context of HE and HPE is vital to translate policies into an organised set of steps, define priorities, and rationalise resources. For the HE sector, documentary sources reviewed in this study reveal an increasing trend towards more deliberate planning in Sudan (Bayoumi, 1979; Nasr, 2011; MOHE, 2015). At the outset of HE in the country, planning was limited and mainly focused on securing candidates to fill the elite positions in the then small civil service apparatus (Nasr, 2011). Physician education within the medical school in Khartoum observed strict quality and elitist criteria rather than responding to wider population needs (Haseeb, 1967). With the advent of the military regime in 1969, a broader development agenda started to ensue and the expansion of HE during the 1970s came as a response to address geographic coverage for a rising country population (Emubarak, 1985). Planning for HE, however, became more organised following the inception of a HE reform agenda by the El-Engaz regime in 1990 and that was underlined by the preparation of the HE strategic plan for the period 1992-2002 (Elmagli, 2015). The five-year strategic cycles of planning that followed reflected a habitual planning culture for the HE sector.

On the health sector front, planning for the health workforce has been part of the overall health planning under the health establishment. Up until the year 2001, when the vocational education of nursing and allied health professions was moved to be regulated under MOHE, the FMOH used to plan this aspect of HPE. Wali (2014) described the process of planning a new intake of nurses, midwives, and allied health personnel based on institutional needs (hospitals and health centres) and decentralised arrangements. The institutional expansion for the education of allied

health professions also followed the numerical and qualitative needs of the health services during the period following independence of Sudan in 1956 (Bayoumi, 1979). Despite practices on planning the human resource as part of health planning, it was not until 2012 when the FMOH developed a comprehensive plan dedicated to health workforce development. This strategic plan spans the period 2012-2016 and encompasses health workforce production and utilisation besides capacity for health workforce functions (FMOH, 2012).

This chapter will take the specific planning for HPE in Sudan for further analysis with a focus on both institutional expansion and production of graduates and the linkages of that to other relevant planning frameworks, including the overall planning for HE and the national health workforce strategy.

6.2.3. QA for higher education and HPE

Documentary sources reviewed in this research indicate that the planned and systematic approaches to ensure and enhance quality of HE system and practices are a relatively new concept in Sudan (Babikir, 2015; Abdall, 2017). These systematic efforts became more crystallised following the establishment of the QAAC in 2003 as part of the MOHE apparatus (MOHE, 2015). This corporation has helped to promote a culture of quality in HE and supported the establishment of QA units within universities and HEIs (Babikir, 2015). Since 2003, the momentum on QA has been escalating with the creation of structures and production of guidelines and reports. The NCHE, through its permanent committees including the MHSC, facilitated the preparation and adoption of the "model college" manual to guide newly established institutions towards quality practices (MOHE, 2014b).

Despite being part of its mandate, the QAAC of the MOHE has not embraced accreditation as an external process to recognise and certify universities and HEIs (Babikir, 2015). MOHE leaders interviewed in this study attributed this situation to reasons relating to the corporation being overwhelmed with promoting a quality culture and overseeing the establishment of QA structures within universities, in addition to issues being raised about its autonomy. Capitalising on its legal mandate and an autonomous status, and in response to the rising quest for QA, the SMC introduced in 2004 an accreditation programme for medical, dental and pharmacy schools (Karrar, 2009). The programme was developed later to embrace the global quality standards prepared by the WFME as a basis for developing national accreditation standards. Apart from this effort, which focuses on certain professions, this research could

identify no efforts at adopting an accreditation system for other HPE institutions such as nursing, midwifery, and allied health professions.

With the expansion of the HE sector in Sudan; concepts of quality are becoming more prominent. Academic respondents interviewed in this research commended the increasing attention paid to QA in HE and HPE in the country. A Dean of a public medical school interviewed substantiated this by stating:

> *"This concept [quality assurance] is critical for higher education and especially medical education as you would like to ensure safe doctors, and doctors who can practice worldwide…it is really good to see strong efforts on quality assurance and accreditation in the country; the Ministry [MOHE], the council [SMC] and medical schools are all actively involved in these efforts."*

Accreditation of HPE will be taken further for analysis in this chapter as an example of a governance process in the broad domain of QA. This selection is justified by the role that accreditation can play as a strong lever to ensure graduate appropriateness, which closely relates to the topic of this study. Additionally, there is an active accreditation experience in the context of HPE in Sudan (the SMC accreditation programme) and this has supported data generation.

6.3. Policy on student admission

The student admission policy is examined here based on a policy analysis framework (Walt and Gilson, 1994) composed of four dimensions: content of the policy, context for the policy in terms of the country situation and dynamics, actors referring to stakeholders involved, and processes referring to stages of the policy process.

6.3.1. Policy content

In terms of the broad content and based on documentary sources reviewed in this research (MOHE, 1999; MOHE, 2014a; Hag Ali and Hassan, 2015), the following categories of admission criteria for universities and HEIs are identified:

- General (national) admission criteria; based on academic performance and achievement of a secondary school certificate with freedom for students to apply nationally to any of the HEIs.
- State-level admission criteria: this refers to seats reserved for inhabitants of a certain state in the universities or HEIs located in that specific state. In 1991, the criteria dictated that 20 percent of seats to be reserved to students from the state in which the

university is located; and this percentage was subsequently raised to reach 30 percent in 1999 and eventually 50 percent in 2002 (Hag Ali and Hassan, 2015).

- "Less developed states admission criteria"; here a certain percentage of seats in all universities focusing on rare subjects such as medicine, dentistry, and engineering are allocated for students coming from remote and marginalised areas (quota system) with the intention to promote equity and access to HE. These seats are dictated annually by the NCHE. Selected students must sign contracts with their respective state governments to serve for five years following graduation.
- "Private admission criteria"; referring to a policy on admitting special quota of students in public universities on a private basis to boost funding of public universities. This type of admission was introduced in 1997 allowing universities to enrol up to 25 percent on top of their planned public admission on a private basis (MOHE, 1999). This allowance was further increased to 50% in 2014 (MOHE, 2014a).
- "Martyrs' dependents admission criteria"; referring to the government decision to allocate special seats for sons, daughters, and spouses of martyrs (people who died in the war against rebels) based on full waiver of tuition fees.
- "Dependents of HE staff admission criteria"; this refers to seats allocated for sons, daughters and spouses of professors and staff of universities based on subsidised tuition fees.
- "Handicapped student's admission criteria": special seats are provided for handicapped students, and they are exempt from tuition fees.

The mass of students admitted in each university usually represent these different sources of admission criteria. The substantial one is the general admission category, but the others represent a considerable percentage when summed together (Hag Ali and Hassan, 2015). The multiplicity of admission criteria with considerations related to social and geographic inclusion should be important for HPE appropriateness. However, the dynamics of the policy including its implementation and monitoring determines its effectiveness; the subsequent discussion explores these aspects.

6.3.2. Policy context

Documentary sources reviewed in this study refer to the role of the country context, including geography and demography, politics and security, economics and development, and sociocultural aspects in shaping the development and evolution of the admission policy in the HE sector of Sudan (MOHE, 1999; MOHE, 2014a; Wali, 2014; Magboul and Ibrahim, 2015;

Hag Ali and Hassan, 2015). In a document solicited for this study, Wali (2014) recognised the value of admission criteria sensitive to demographic and local needs in expanding the access to health services for rural populations in a vast country such as Sudan. Respondents interviewed in this study commended the inclusiveness of the student admission policy and consideration of variables beyond academic performance and looked positively to criteria sensitive to states and marginalised populations. A respondent senior official from the FMOH maintained:

> *"In a country like Sudan, you have huge variations in socioeconomic and development conditions, so in the absence of positive discrimination you will end up with students coming from rural and remote marginalised areas not accessing university education, I mean they cannot factor well in the academic competition simply because they do not enjoy good secondary education; the council [NCHE] has done well in devising special criteria to enable access of those students to universities especially in critical disciplines such as medicine."*

However, a few respondent academics cautioned the tendency to adopt non-academic criteria at the expense of ensuring academic standards and warned against the adverse influence of such policies on student and graduate quality:

> *"while agreeing to diversity in admission criteria, I think it is hazardous to compromise academic performance in a discipline like medicine where you need high standard safe doctors to attend to human lives. Instead of lowering the academic standard, the government can better work to improve general education in rural and remote areas to ensure good quality applicants to medical schools."* Key informant interview, Dean of a public medical school.

This thread of views was also observed during the meetings of MHSC where some senior academics kept expressing their reservations on introducing non-academic criteria in admission for medical schools. In one meeting of the MHSC, an academic member voiced the view point that the government can better provide incentives to deploy competent doctors to rural areas rather than allowing for low quality candidates from those areas to join medical schools (MHSC meeting No 2/2015). The dynamics involved here reflect considerations for medicine as a critical profession related to preserving human life but might also reflect the elitist view prevalent in the medical profession.

The political context probably influenced the HE sector in general and admission policy in particular in a major way since the advent of the El-Engaz Regime in 1989. The strong state leverage on HE discussed in Chapter 5 (Section 5.2.) has enabled the government to advance its agenda including in shaping the admission policy. This is reflected in the form of expanding

student admission and extending its inclusivity in geographic and demographic terms (Elmagli, 2015). It was decided to double the intake in all universities and HEIs and to adopt a strategy to enable students from states and rural backgrounds to access HEIs (Hag Ali and Hassan, 2015). The political influence, however, went further in also imposing criteria related to the regime's ideology and specific interests. Special seats were allocated to dependents of "martyrs", soldiers and volunteers who died in the fight of the regime against rebels in South Sudan and later the government waived tuition fees for students from the Darfur region as part of peace deals and agreements signed with the rebels (Elmagli, 2015). Respondents from universities were sceptical on these types of policies, seeing them as violations of academic principles:

> *"When you interfere irrationally in the academic criteria and allocate seats or waivers in university education based on ideological or political grounds, you are causing damage to education process and standards; you could as well adversely affect fairness and trust, I mean the trust of community and outside world in your educational standards and products."* Key informant interview, Deputy Vice Chancellor, public university.

However, the respondents from the health sector generally showed understanding to political interference to expand access to HPE and to allow for representation of students disadvantaged by social or conflict related factors. A senior FMOH official interviewed maintained:

> *"yes I can understand that academic people may not agree with increasing numbers for student intake but I personally support the expansion brought by the government, I mean Sudan is a vast country with conflicts affecting access to higher education and we need more and more health workers and you know, you certainly need to include students from rural background because they tend to stay and serve in their communities."*

Documentary sources demonstrate that these types of policies were intense during the 1990s when war and conflict were at toll, especially the war of the regime against rebels in South Sudan (Elmagli, 2015; Hag Ali and Hassan, 2015). These policies were, however, subject to intense debate and criticism, especially with regards to fairness of competition and academic merits (Abdel Rahim, 1998; Bishai, 2008). Politics and ideology interfered even in the case of the general admission criteria anchored in academic competence (Gasim, 2010). Some academic respondents in this research were extremely critical of imposing ideology on student admission policies; an ex Vice Chancellor of a public university resentfully reflected:

> *"You know, a bonus equating to 7 percent was allowed for those students who volunteered to join the fight against rebel groups in South Sudan; I mean they are granted seven scores above their academic performance; this is a sheer violation of academic competition and fairness to all students."*

Documentary sources show that these types of discriminative policies diminished over time concomitant with less war intensity and peace settlements; for instance, the 7 percent academic bonus given to those students who take part in the war against the rebels was eventually abolished (Hag Ali and Hassan, 2015).

The economic context of Sudan has its influence on contributing to shaping the admission policy. Documentary sources reviewed in this research refer to the economic constraints and the low priority afforded to spending on social sectors, including HE (Babikir, 2015; Elmagli, 2015). In the late 1990s, the private admission policy was introduced based on economic grounds; the reason being to help funding of schools and universities in the face of a diminished governmental spending (Hag Ali and Hassan, 2015). Another justification put forward for medical education, in particular in allowing private admission in public medical schools, was the improvement of quality through supporting infrastructure and staff retention schemes. A respondent Dean of a public medical school criticised this policy:

> *"The private admission policy is unfair to students with high academic scores who lose seats in medical schools to those with lower academic scores but high financial affordability."*

In addition, other respondents from academe criticised the way it was implemented:

> *"While the reason behind this private admission policy is seen as supporting quality of medical schools, implementation is in fact the otherwise; I mean university administration usually control these financial resources and only provide small share to the medical schools."* Key informant interview, a senior academic, regulatory councils.

Substantiating this last preposition, an ex-Dean of a public medical school interviewed maintained:

> *"Our school generated over 2 million United States Dollars from private admission fees but the university has taken all that money to distribute among other schools in addition to management expenses; our medical school is only given a peanut of it (frowning); this policy is irrelevant and it will not lead to quality improvement in such a way of implementation."*

One of the contextual factors for HE is the increasing migration of skilled workers in Sudan to other countries in search for better economic and professional conditions (Abuagla and Badr, 2016). Staff members of universities are not exempt, as one study estimated that the University of Khartoum, the prime HE institution in the country, has lost 40 percent of its staff to outmigration over the last three decades (Magboul and Ibrahim, 2015). This context shaped some polices in HE, including the admission policy. In an effort to improve staff retention, the NCHE devised and endorsed a policy allowing special seats and 75 percent fee-waiver in

admission in each university for dependents of staff members as part of the private admission criteria (Hag Ali and Hassan, 2015). Respondents of this research generally valued this policy and pointed out its possible contribution to educational staff retention. A respondent Dean of a public nursing school maintained:

> *"This intervention [the special admission criteria for staff dependents] is good gesture towards teaching staff but not enough in rewarding sacrifices of staff members in the face of poor working conditions."*

6.3.3. Policy actors

According to the admission regulations, the admission policy is essentially governed by a special NCHE committee chaired by the Minister of Higher Education (the NCHE chairperson). It includes vice chancellors of public and private universities in its membership, in addition to senior staff of the MOHE and representatives from Ministry of General Education and other related sectors (MOHE, 2014a). This committee is entrusted with the roles of preparing and updating the admission policy, devising guidelines and criteria, and proposing the numbers of admission to be endorsed by the NCHE (Hag Ali and Hassan, 2015). Policy implementation is entrusted to universities and HEIs which normally operate local committees to plan and manage student admission and report back to the NCHE Admission Committee (Elmagli, 2015). Admissions for HPE are managed as part of these arrangements.

Respondents from the HE sector believed that the senior membership of this committee reflected the importance of admission in the context of HE in the country and resulted in some gains for stakeholder engagement and effectiveness of the policy:

> *"When you have the Minister, the Undersecretary and all vice chancellors of universities as members of this committee [Admission Committee] that shows how the council [NCHE] really focusses on admission policy…this senior broad membership also facilitates effectiveness and consensus."* Key informant interview, Senior official, MOHE.

Academic voice is however not unified in relation to the role of the NCHE Admission Committee. Despite their involvement in the membership of the Admission Committee and the fact that they propose seats for annual admissions, universities feel concerned about dichotomies in decisions around admission, as voiced by senior university leaders interviewed in this research. A respondent public university Vice Chancellor maintained:

> *"Although our university council has the mandate to decide admissions and numbers for intake based on the university capacity and resources, and we propose annual seats for the council [NCHE] we often see the council and ministry [NCHE and MOHE] imposing*

additional criteria and numbers on us; I mean these decisions might be political and they compromise the role of the committee [NCHE Admission Committee]."

On the health sector front, respondents interviewed questioned the inclusiveness of the NCHE Admission Committee and pointed out the lack of health services' voice in decisions on student admission. A senior FMOH official interviewed maintained:

"*The Ministry [FMOH] is usually not consulted in the introduction of educational programmes and student admission criteria; people in higher education see that role as their domain and we in the health services, in their opinion, have to receive graduates and employ them. I mean this is a major pitfall in our system, the lack of coordination."*

Documentary sources reviewed in this study indicate that other important stakeholders such as the health ministry and the regulatory councils have no clear role or adequate involvement in the admission policies other than their membership in the NCHE (which is very limited, as discussed in Chapter 4, Section 4.3.). Although the admission regulations state that the chairperson of the NCHE shall select representatives from relevant sectors as members in the Admission Committee (MOHE, 2014a), a sample of the meeting minutes of this committee do not show the existence of these representatives (Admission Committee meetings No 2/2014, No 1/2015, No 3/2015). One senior official in the MOHE attributed this lack of representation to *"the huge number of ministries and relevant sectors having stake in higher education issue which makes it not practical to select some and exclude others"*. The national health workforce strategy 2012-2016 describes this lack of representation of the health sector in admission policies as one major cause of the mismatch between the production and utilisation of graduates (FMOH, 2012).

6.3.4. Policy stages

When asked about the stages of the admission policy, respondents from the MOHE described an incremental process of looking into the experience of previous years and suggesting amendments accordingly. The policy is then sent to the Admission Committee of the NCHE to be discussed and decided upon. The understanding of MOHE officials reflected this, as illustrated by the words of a senior ministry director interviewed:

"As for the stages of it [Admission Policy] this is straightforward, we in the Ministry prepare the proposal based on discussion and consultation with universities and that goes to the admission committee of the council [NCHE] for further discussion and approval, the council [NCHE] I mean might request revisions or amendments before final decision is taken and declared".

Implementation and monitoring were usually not mentioned as part of the admission policy stages but on further probing with respondents from academe, responses came indicating weaknesses in monitoring and evaluation of the admission policy:

> *"The policy [admission policy] is usually designed and discussed in an ideal way, and after approval it gets implemented, I mean implementation might be good, but it is not monitored or evaluated, monitoring is largely missing."* Key informant interview, Ex-vice chancellor, public university.

Observation notes of this study support these responses and in many instances implementation and monitoring challenges were referred to during committee meetings. In a meeting of the MHSC attended and observed by the researcher (MHSC meeting No 4/2015), some members described the lack of effective monitoring as the main problematic area in the context of HPE and admission policy. Respondents from the health sector also commented on monitoring problems of the admission policy and one senior FMOH official interviewed brought the case of the quota system (seats allocated for rural students) and the lost opportunity in monitoring it:

> *"Good decisions are taken but institutions are not monitored to ensure effective implementation; and accountability you know is largely missing…you have the striking case of students admitted based on the quota for less developed states, but when they graduate, states governments release them to come and work in Khartoum [the Capital of Sudan], you see how such valuable resource for marginalized population is wasted?"*

A document commissioned by the NCHE on review of the quota system admission for less developed states/areas in Sudan shows that less than 20 percent of students enrolled based on this policy (from a total of over 32,000 graduates) remained to practice in their states of origin following graduation (Elmagli, 2015). State governments were seen by some academic respondents as the main culprit in this respect:

> *"It is the state government that usually gives release to these candidates [who studied based on less developed state criteria/quota system] instead of employing them to pay back for the rural population; you see; state governments have no clear plans for absorbing graduates based on service needs."* *Key informant interview,* Public university Vice Chancellor.

6.3.5. Discussion

The role of policy development in the HE arena in Sudan is well established albeit not well coordinated. The admission policy for students has been considered here as an example to illustrate the influence of policy development for HE and HPE.

The admission policy content is largely shaped by the country context, including sociodemographic, political, economic, and developmental factors. The myriad of admission criteria adopted in Sudan can be conceived as a strength and a weakness. The advantageous part of it is the flexibility in not sticking to rigid national criteria based on academic achievement in a country with vast geography and diversity, in addition to access problems. Criteria that promote equity and relevance to population needs should always be celebrated. The international HPE community widely acknowledge the need for social accountability and for diversification within the medical student population (Sturman and Parker, 2013). The discussion in Chapter 2 (Section 2.6.) provides some best practice examples from the international literature in this respect. On the weakness side, the various categories of student admission criteria in Sudan contain some contested provisions influenced by politics and ideology. This situation can adversely affect quality and standards but also fairness, equity, and relevance. The tension in admission policies between academic criteria on one hand and geopolitical and social inclusion dimensions on the other hand is observed in countries with a similar context to Sudan, such as India and South Africa (Ghosh and Biswas, 2014; Van der Merwe et al., 2016). The onus is on the national governance to craft the admission policy in a pro-equity approach while not compromising other pillars of the education system, including quality.

Context in Sudan seems to be a major shaper on admission policy impinging on the frequent amendments to this policy over the last period. The nature of the state-HE relationship discussed in Chapter 5 (Section 5.2.) projected on the admission policy where ideological and political motivations were factored into student admission. There is also the possibility that the state might be influencing the use of admission criteria as leverage to provide funding for universities to cover for its unacceptably low spending on HE. The tight economic conditions leading to waves of outmigration and brain drain, especially among the skilled workforce, also reflected on admission policy, this time in an attempt to retain staff. Approaching staff retention form this angle could be an innovative approach for Sudan and countries with a similar context. The challenge, however in this respect and in relation to other discriminative criteria, is related to equity, ethics, and fairness.

Actor involvement in admission policy seems to reflect the dominance of governance structures within HE sector, mainly the NCHE, the MOHE, and universities. Lack of adequate involvement of the health sector represented by the FMOH is a serious governance issue in this respect. Even within the HE sector itself; the case of admission policy reflects tensions and

power dynamics. While the universities are striving for autonomy, the state represented by the NCHE and the MOHE are centralising decision making and exerting more control. This signifies the unfolding debate around admissions.

The stages related to the admission policy process are not clear in the context of Sudan and might not follow those steps stipulated in the literature, including agenda setting, situation analysis, policy development, and implementation and monitoring (Barker, 1996). This might relate to the less focus on the science and art of policy development in the higher in education sector compared to the health sector of the country, where health policy is a major function. It is also striking to see how implementation is not adequately monitored causing a waste of valuable resources, such as in the case of retention of graduates benefiting from the conditional seats allocated for less developed states.

6.4. HPE planning

Planning for education of health workers is essential to ensure sustained availability of the valuable human resource that spearheads the health system functioning and production of health. HPE planning is taken here to encompass the two dimensions of educational institutions and production of graduates: the institutional and individual dimensions.

The analysis in this section will consider the availability and scopes of plans, main actors and their roles, and implementation and monitoring of plans.

6.4.1. Availability and scope of plans

Documentary review conducted for this study revealed the existence of regular five-year strategic plans for HE, with the recent ones covering the periods 2007-2011, 2012-2016, and 2017-2020. HPE is covered as part of the general HE planning and there are no specific plans for HPE institutional expansion or graduate projections (MOHE, 2015). The HE strategic plan for 2012-2016 stresses the following in relation to institutional and workforce planning for all sectors (MOHE, 2012):

- Expansion of student intake and admission to raise access of citizens in the age range of 18-22 years to HEIs from the current figure of 14 percent to 20 percent.
- Expansion of universities and HEIs including promotion of private sector investment in this respect
- Devoting priority to vocational and technical education to reach up to 60 percent of HE intake

- Responding to labour market needs through education and production of graduates with competencies relevant to the current and future needs of the community

Within these broad strategic directions, no detailed planning documents were found by this research in the context of HPE to translate those strategies into specific objectives and sequential interventions.

Respondents interviewed in this research noted the lack of a national plan for HPE; a senior MOHE official respondent confirmed this but providing the explanation:

> *"Yes, there is usually no national plan for expansion in medical and health professions schools and production of graduates over a period of {pausing] say five years…I mean there is no specific body to deal with this aspect…higher education ministry plan for all types of schools and in broad terms you know… and universities are responsible for planning within their scope and for all schools…so planning for health professions education is only part of all these arrangements."*

In one of the MHSC meetings attended and observed by the researcher, there was hot debate on the issue of HPE planning and the meeting noted the absence of a comprehensive projection plan to guide the student intake and institutional expansion (MHSC meeting No 4/2015). Members were not clear on whose role it is to prepare such plans and called upon the ministries of health and HE to address this endeavour.

On the health sector front, the series of the annual statistical reports of the FMOH reviewed in this study reveal the existence of workforce planning as part of overall health plans with a focus on numerical planning for physician requirements. The tendency to develop comprehensive health workforce plans, including quantitative and qualitative aspects, only appeared recently, as represented by the national health workforce strategy 2012-2016 prepared by the FMOH based on a consultative process (FMOH, 2012). This strategy does not contain specific projections for the health workforce or specific targets for expansion of educational institutions. It does however refer to the skill mix imbalances and the necessity of close collaboration between education and health sectors to address this through planning the health workforce production according to needs.

6.4.2. Actors and their roles

Two set of actors are in control of health workforce and HPE planning in Sudan. The MOHE takes the role of planning educational institutions and intake as part of an overall strategic planning and numerical calculations for the whole sector of HE, as explained in the previous section. Universities play a pivotal role in this through proposing numbers for admission. On

the other hand, the FMOH leads on the comprehensive planning of the health workforce, including issues related to production and utilisation of the health workforce. These two planning systems largely work in silos with no evident collaboration or synergy.

Respondents from the health services interviewed in this research referred to this as one main problematic area in the health workforce domain:

> *"planning in higher education occurs in silos with no involvement for health services planners; you know they expect us to receive and absorb graduates in the health system as such; this is not the right approach [pausing], at times we find that competencies and skills of some categories graduated are not in line with health services roles and skills needs, and that creates tedious problems for us and for graduates… this should be rectified."* Key informant interview, Senior director, FMOH.

Wali (2014) referred to the famous example of an HPE school that graduated certain cadres rejected by the regulatory council (the NCMHP) and the FMOH as their curriculum and competencies did not match the role they were prepared for. There is, however, another perspective from the HE sector on pointing out the culprit for the uncoordinated HPE planning. In a paper prepared for the National Conference on HE, the Undersecretary of the MOHE suggested a lack of cooperation from the health services sector in providing data on health needs as an obstacle for effective planning for producing the right number and quality of health professionals (Elmagli, 2015).

No evidence was found by this research to substantiate the meaningful involvement of other stakeholders, including regulatory councils, SMSB, and professional associations in HPE planning. In fact, there has always been tension between the SMC and HE in relation to the opening and approval of new schools, as discussed in Chapter 5 (Section 5.4.3.). The SMSB notes the lack of consultation and describes the huge expansion in medical education as a daunting challenge for the capacity of postgraduate medical specialisation in the country (SMSB, 2015). A senior SMSB interviewed in this research substantiated this by stating:

> *"We are not involved in planning undergraduate education for doctors and health professionals and as you can see this is creating a huge burden on us; I mean we are receiving increasing number of applicants for specialty programmes, and this is stretching our capacity".*

In their comments on the range of actors and influencing factors on HPE planning, respondents from academe identified politics, community pressure, and privatisation as important players in shaping "and distorting" the planning outcome. The following paragraphs reflect the findings related to these aspects.

Politics

Records of the HE sector clearly reflect the tendency towards massification of students and adoption of a liberal policy towards enhancing access to HE. An Ex-Minister of Higher Education interviewed in this research substantiated this by declaring:

> *"Yes, the country adopted a philosophy of opening up chances for education regardless of employability opportunities; you know I fully agree to this as you really need to widely educate the youth as this raises the intellectual capacity of the society and, I mean graduates can find employment anywhere within or outside the country".*

However, some academic respondents interviewed criticised this "laissez-faire" perspective towards HE and HPE and noted the political interference to undermine rational planning for health workforce producing:

> "*What can we do if we are confronted by senior State men who tell that education is for education [exclaiming] and it should not be imprisoned into the idea of responding to specific needs of the country; this I mean is an ideological position which may not be agreeable to several people…but it is the power of the State."* Key informant interview, a physician professor, member of the MHSC.

Data obtained from observing a meeting of the SMC Accreditation Committee (Meeting No 2/2015) reflected the tendency of members in valuing rational health workforce planning based on the actual needs of the health services and considerations for quality of graduates. A committee member serving as Dean of a public medical school resentfully maintained: "*the tendency of the government to flood medical schools with students will only lead to low quality and migration in addition to harming our medical education reputation*".

People

The social context of the country also carries implications for the institutional and individual aspects of HPE planning. The case of establishment of new universities is an example in this respect. Some academic respondents held the opinion that the opening of new universities is mainly a response to public pressure rather than sound or rational decisions:

> *"In the current Sudan with increasing conflicts and geographical tendencies, you find states and localities demanding a new university, you know not as rational thing, but communities see it as a right or their share in the cake, and they lobby politically to realise it."* Key informant interview, a Senior director, MOHE.

A Dean of an established public medical school interviewed in this research described how a new medical school was set up in a rural area:

> *"I come from that area and my relatives there approached me to support their efforts in approval of a new medical school in the town…I talked to them about the requirements and criteria and that it might not be appropriate to open this school given lack of many essential requirements…those people just ignored me and few months later I learned that the school has been approved by the Ministry [MOHE] and a dean appointed!"*

However, this rural tendency is celebrated by some respondents interviewed, mainly from the health sector:

> *"While academics may see establishment of medical schools in rural areas as something inappropriate, we as health services planners see the otherwise; I mean it is right to say that a medical school in a rural area is a desired thing responding to local needs and providing graduates for increasing access of people to services."* Key informant interview, senior official, FMOH.

Politics seems to intersect with the public pressure and demand of people to have universities and HEIs located in their geographical areas. Elmagli (2015) referred to the electoral motives as pushing politicians to pledge promises of realising approvals for establishing new universities in urban suburbs and rural communities. This was substantiated by a statement from a physician member of the MHSC interviewed in this research:

> *"It is not uncommon in Sudan that the President of the Republic visits a state or locality and declare the establishment of a new university leaving it for the educational authorities to perform necessary arrangements to realise the decision usually under pressure from local authorities and communities".*

Privatisation

The market-oriented reforms introduced in Sudan during the 1990s signalled liberalisation and led to policies promoting private sector investment, especially in services and the social sector (Suliman, 2007). This has projected to the field of HE and HPE which witnessed an increasing dominance of the private sector, as shown in Chapter 1 (Section 1.3.3.). The private sector no doubt contributed to the capacity and expansion of HPE, but several respondents from both academe and health sector saw this role as a challenge to a balanced planning of production:

> *"Private schools are needed, and they can provide additional seats for students but the problem you know, they are [private schools] for profit and they target high return disciplines such as medicine, pharmacy and laboratory technology; they do not invest in nursing or midwifery, and these are needed to address shortages we have."* Key informant interview, Ex-Undersecretary, FMOH.

During observation of MHSC meetings, the issue of the private sector acting slow on nursing and midwifery programmes was raised several times with members noting the lack of effective

monitoring as a reason behind this noncompliance. In one of the MHSC meetings attended and observed by the researcher (MHSC meeting No 1/2016), the committee discussed a case where a private university did not activate nursing and midwifery admissions, despite being a condition for approving its medical programme. A nurse member of the committee described this as "*distorting the already distorted planning for producing health professionals*".

Private sector respondents however, defended the expansion of private medical schools as reflecting an increasing demand by candidates and the requirements of health services in a vast country such as Sudan:

> *"You know we as private medical schools, are contributing to securing the required medical staff for the country; there is still increasing number of applicants from different parts of the country not finding slots in the public medical schools; I am unaware of what is happening in planning the production of other cadres, but this should be addressed by the government".*
> Key informant interview, Dean, private medical school

6.4.3. Implementation and monitoring

This research found no documented unified plan pertaining specifically to HPE, therefore implementation and monitoring in this section addresses the overall HE plans inclusive of HPE.

Documentary sources reviewed in this study also point to limitations in implementation of plans and in monitoring and evaluation as opposed to effectiveness in the phases of plan preparation and endorsement (Elmagli, 2015; Hag Ali and Hassan, 2015). Likewise, respondents interviewed predominantly noted the weak implementation and monitoring of plans and attributed this to the following factors:

- Ambiguity in roles and duties relating to planning and who should be responsible
- The fact that implementation of plans usually requires collaboration of different entities and the difficulties associated with this
- Lack of adequate capacity for both implementation and monitoring at institutional and system level
- Political interference and public pressure which sometimes leads to distortion of plans or impeding of effective monitoring
- Lobbying and effects of personal relationships and manipulation from the side of private sector

During observations of the MHSC meetings, the issue of implementation and monitoring came up repeatedly. Members were especially referring to shortcomings in monitoring to ensure that

educational institutions abide by the stipulated commitments for approval of programmes. One member pointed out the habit of the HPE schools getting approval of some programmes based on a pledge to put in place the missing requirements and subsequently abandoning pledges, capitalising on the lack of effective monitoring by HE authorities (MHSC meeting No 2/2015).

The issue of capacity in terms of human and financial resources was repeatedly mentioned by respondents from academe as a major impediment for HE efforts to monitor institutions in both public and private sectors. Academic respondents also blamed the lack of coordination and institutional dichotomy as hampering effective implementation:

> *"You take the case of technical education…I mean the higher education strategy dictates that 60 percent of applicants for seats [in higher education institutions] should be for technical diplomas to address country needs for mid-level cadres but you know the number is much less now…the Ministry [MOHE] was progressing well when the government formed another council to deal with technical education…and you know that council started to work in isolation from higher education and it even created conflicts…the price is reflected in weak implementation."* Senior official, MOHE.

6.4.4. Discussion

Strategic planning for both education and health exists in Sudan as part of an overall national planning framework. The problem, however, is in translating broad strategies into meaningful operational plans, especially as in the case of HPE where no documented comprehensive plans are found. Actors in the context of health workforce planning perform in disarray, and dichotomy between HE and health ministries is commonplace. This goes in line with a wider observation in the literature (Celletti et al., 2011). The two ministries seem to take divergent philosophical stances, with the health ministry seeing planning as a rational process to respond to service needs and the higher education ministry conceiving education as a commodity for all regardless of service needs or employability issues. The implications of this is felt in Sudan in terms of labour market anomalies and skills mix imbalances in the health workforce.

Actors in planning and planning outcome are further influenced by contextual factors, the three Ps: politics, people, and the private sector. In the context of Sudan, these three considerations mostly put weight to shift planning towards more irrational forms. Despite its social and developmental merit, establishing universities and HEIs in Sudan is known to be used as political leverage for the government to gain more popular support. Such a trend corresponds with the situation in some countries in the African continent that have witnessed an explosion of HEIs in response to political agendas (Wan and Geo-JaJa, 2013). The tendency of the private sector to establish schools for profitable professions such as medicine, dentistry, and pharmacy

is a growing burden on rational HPE planning in Sudan. The fact that most of the owners of private HPE schools are senior specialists in medicine and health sciences with long experience in the public sector makes it easy for them to effectively lobby for decision making and approval of their schools and programmes.

6.5. Accreditation of HPE institutions

Informed by the literature discussion in chapter 2 (section 2.6.2.) and Figure 9, This section examines the accreditation of HPE in Sudan in terms of four dimensions: targeted institutions, accrediting agency, accreditation standards, and process for accreditation.

6.5.1. Targeted institutions

Documentary sources reviewed in this study reveal that the accreditation of HPE has only recently been embraced in Sudan. The SMC Act 2004 dictates that the council is to set standards of undergraduate education for medical, pharmacy and dental schools and ascertain that the national standards are comparable to regional and international standards, as well as accrediting those schools (MOJ, 2004a). As the SMC involves medicine, dentistry, and pharmacy professions, these three types of HPE schools are targets for the accreditation programme. Since 2004, the SMC has exerted efforts to establish and operate an accreditation system for medical, dentistry, and pharmacy education. Plans were developed, workshops organised, and some guiding documents were produced (Elobeid, 2012). The focus of the SMC, however, has mostly been on medical education, as illustrated by the following statement by a Dean of a public pharmacy school interviewed in this research:

> *"We are glad that the council [SMC] is progressing on accreditation but you know as pharmacy profession we feel that steps on accreditation of pharmacy schools are very slow… the council [SMC] gives much focus to medical schools may be [laughing] because it is dominated by medical doctors. Accreditation for pharmacy schools is not really progressing you know, and this should be given attention."*

Observation notes for this study support this view, as meetings of the SMC Accreditation Committee mostly discussed the accreditation of medical schools and voices were raised by dentists and pharmacists asking the SMC to pay more attention and balance to advancing the accreditation of dental and pharmacy education. In one of the observed meetings of the SMC Accreditation Committee (Meeting No 2/2015), a senior dentist maintained: *"it is high time to broaden accreditation and take it beyond medical schools"*.

On the other front, the NCMHP responsible for nursing, midwifery and allied health professions, does not embrace or operate any accreditation system. Hence, these types of HPE

schools are not yet covered by any accreditation programme. A senior official in the NCMHP interviewed alluded to the importance of establishing the accreditation programme but provided some explanations for the delay:

> *"We are trying to look into the experience of the medical council in order to develop an accreditation programme for nursing and midwifery schools and the large number of other health professions schools, but you know that the council is still newly established under the new legislation and we have other priorities."*

Although the accreditation programme for HPE in Sudan should target all types of HPE schools, the practice so far covers only the medical schools.

6.5.2. Accrediting agency

There is an overall lack of clarity on the governance of accreditation of HPE in Sudan with some role confusion. While the SMC is mandated by law to accredit medical, dental, and pharmacy schools (MOJ, 2004a); the MOHE is also managing an accreditation programme through a dedicated corporation (Chapter 4, Section 4.4.3.). This corporation is embarking on preparation of national standards, systems, and procedures for accreditation of all types of HEIs, including HPE schools (MOHE, 2015). A draft legislation is being developed and the MOHE is pushing for its approval by the Parliament:

> *"Accreditation of higher education is our mandate and we are in the process of endorsing the national legislation. We target all types of institutions within higher education and I mean we might delegate the implementation of the accreditation process to professional councils such as the medical [SMC] or engineering councils."* Key informant interview, Senior official, MOHE.

The MOHE recently declared a focus on quality and accreditation in the context of an expanding network of universities and HEIs with the envisioned accreditation programme representing mainstay of the strategy for HE (Babikir, 2015).

In the context of HPE, the dispute between the MOHE and the SMC over the responsibility for accreditation programme is looming. One of the meetings of the MHSC, attended and observed by the researcher (MHSC meeting No 2/2015), witnessed conflicting views and heated debate related to who is to accredit HPE schools.

This tension over governing the accreditation programme is largely theoretical although not without practical implications. In reality, the functioning accreditation programme is currently run under auspices of the SMC and there is an increasing response and compliance from the side of both public and private medical schools to this programme. This is evidenced by the

records from the SMC showing an increasing number of applications by medical schools seeking SMC accreditation. This direction has been further emphasised by the recent recognition of the SMC by the WFME as a competent national authority for accreditation. The council is actually implementing the programme, including sending accreditation surveyors to visit medical schools. The caution is however still there, as the council is sceptical about the response to its final decisions about the accreditation status of medical schools. In one meeting of the SMC accreditation committee observed by the researcher, there was an agreement to defer accreditation decisions until the role confusion is resolved between the council and the MOHE in fear of non-compliance (meeting No 4/2015).

The SMC is running the accreditation programme through a dedicated committee chaired by the Council President. The Accreditation Committee involves, in addition to council members and experts, broad membership with representation for MHSC, FMOH, professional associations, students, and the community (SMC decree No 13/2012 on establishment of the Accreditation Committee). This committee is responsible for setting the standards, regulations, and procedures in addition to monitoring the activities of accreditation of medical, dental, and pharmacy schools (Elobeid, 2012). The committee recommends to the SMC Board the final decisions on accreditation. There is an accreditation secretariat with full-time officers to support the work of the committee.

6.5.3. Accreditation standards

The SMC has led, through its Accreditation Committee, a process on developing national standards for accreditation of medical schools. The standards are largely based on the WFME quality standards for basic medical education and were contextualised and adapted to suit Sudan (SMC, 2015). The council invited international experts to assist with development of the standards and several national workshops were organised to discuss and endorse the standards. Respondents of this study were generally content about the consultative process of standards development and noted many positive aspects:

> *"The council [SMC] succeeded in developing excellent accreditation standards that really suit the country; I mean there has always been consultation and workshops to discuss and debate standards and reach an agreement…I think all those who are related took part and no one is left behind…it has been really an inclusive process."* Key informant interview, Dean, private medical school.

Events organised by the SMC to review and update the national accreditation standards were also positively perceived by the respondents who saw credit in considering the growing

discussion around professionalism and social accountability. The SMC published guidance documents on the accreditation programme, including a national policy and a self-study guide in addition to the actual standards that were based on the frameworks of the WFME quality standards and the MOHE guide for the model college.

Observation data reflect the slow action on developing standards for accreditation of dental and pharmacy schools. In one of the SMC Accreditation Committee meetings observed, members noted the shortcomings in this respect and recommended to the SMC to enhance capacity and seek government support to promote the accreditation of dental and pharmacy schools to match up to the accreditation programme for medical schools (SMC Accreditation Committee meeting No 4/2015).

6.5.4. Accreditation process

According to its documentation on accreditation, the SMC stipulates a process and procedures to implement the accreditation programme for medical, dental, and pharmacy schools. The process includes three main phases, namely, the self-study, the site visit, and the final report, before a decision is made (SMC, 2015). The following chart (Figure 21) depicts the phases and sequential steps of the process adopted by the SMC to implement the accreditation programme for medical, dental, and pharmacy schools.

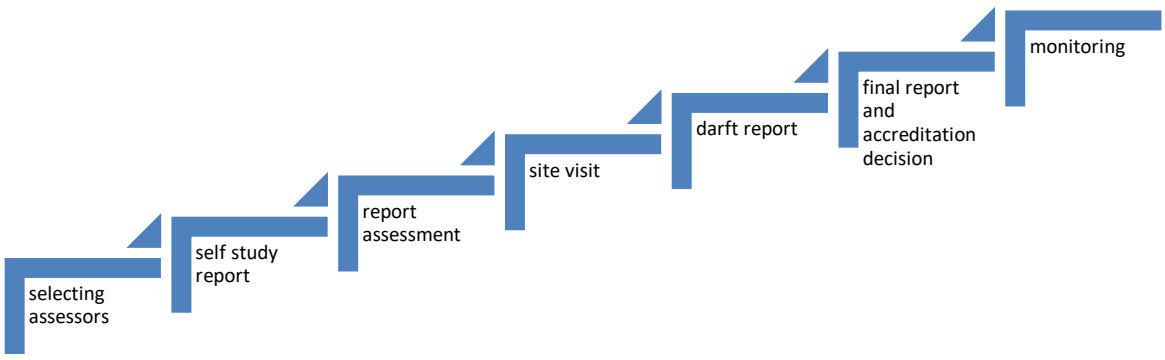

Figure 21: The stages of the Sudan Medical Council process for accreditation of medical schools (source: SMC, 2015)

Documentary sources reviewed in this study show that the first round of accreditation of medical schools was conducted using the basic standards in the period 2008-2012 (Elobeid, 2012). Subsequently in 2012-2013, the SMC held a series of consultative meetings and conducted a national workshop to update the standards based on acquired local and regional experiences, the national and international directions in medical education, and the

international guidance provided by the WFME. Medical education experts from the WFME and the UK were invited to attend the national workshop as resource persons (SMC, 2015).

The SMC managed to select and train assessors and surveyors from among professors and university staff to investigate self-study reports provided by medical schools and to conduct site visits. The accreditation procedure has been tested in full, with some schools reaching the final decision status. Respondents from universities were satisfied about the process and pointed out some of its benefits to their medical schools:

> *"Our school went through the whole accreditation process and the council [SMC] applied its procedure including reviewing our self-study report, sending the team of assessors and deciding on the final report…it has really been a very useful experience you know… our team in the school took it as a challenge and we worked hard on it, the university and the state government provided resources and support and even the students were energetic. I mean accreditation experience has really benefited the school, and mobilised resources for it."* Key informant interview, Dean, public medical school.

A respondent member of a community-based organisation also voiced satisfaction about the experience of accrediting medical schools in the country:

> *"Yes, we feel more assured by adoption of accreditation standards by the council [SMC] as this will help in educating and producing safe doctors for the community; we are seeing more involvement of communities in taking part and supporting accreditation of medical schools in different parts of the country, I mean this is something good and benefits the community".*

Stakeholders in the health sector are also positive about the experience of the SMC accreditation programme and about involvement in discussing policy and standards. Respondents from the health sector however, raised concerns about the lack of involvement of health services representatives in application of the standards through the accreditation process and procedures:

> *"The council [SMC] does not involve experts from the health services and the Ministry [MOH] in the procedure including site visits to medical schools…I mean experts from health services background can provide useful suggestions for medical schools based on their experiences with graduates and health care management…the council [SMC] should consider this in its future work."* Key informant interview, Senior director, Ministry of Health.

Students, on their turn as stakeholders in the accreditation processes, reflected useful perspectives on the SMC accreditation experience. The FGD conducted in this research with the leaders of the Sudan Medical Students Association yielded the following results:

- Content and satisfaction of students about introduction of the SMC accreditation programme:

  "as students we are glad to see the movement on accrediting medical schools, this is good for the quality of education we receive and it also support our future to get employed inside or outside the country." Student leader 3; *"we are worried of the expansion of medical schools without ensuring adequate resources and we welcome accreditation as it can help in ensuring that each medical school possesses the required capacity and resources to function well"* Student leader 5

- Celebration of the step by the SMC to represent students in the accreditation committee:

  "the medical council [SMC] has done well by involving students in its accreditation programme, we as students are important party of it and the purpose of education is to qualify us for future role, so we know from our experience where things work and where problems are." Student leader 5; *"representation of medical students in the committee is a great step, what remains for us as students is to bring up our voice to reflect the important issues in accreditation."* Student leader 8

- The adequacy of consultation: despite invitation of students' representatives to the SMC Accreditation Committee and their involvement in the process through their schools, the FGD data reveals some concerns:

  "during the meetings of the committee [SMC Accreditation Committee], we were a bit reserved to express sharp viewpoints due to the difficulty of being so frank in front of our professors, the cultural factor operates here." Student leader 2; *"because it is difficult to be given adequate chance to reflect during committee meetings, and because professors dominate the discussion, there should be wider forums for students to express their views such as in seminars."* Student leader 6

- Reflection of student perspectives in the accreditation standards: the FGD data reflects a relative discontent of students towards the outcome:

  "when we saw that the accreditation standards are published by the council [SMC], we were generally happy that they reflect good practice as well as international standards but our contribution as students is not adequately reflected. We pointed out specific needs and facilities for students and these are not adequately incorporated." Student leader 1

- Reflection on the attitude of medical schools towards accreditation: the FGDs data provide for student opinions around being engaged in the preparatory work by their medical schools for accreditation and the concerns involved:

  "medical schools are keen about the accreditation programme and we as students are excited, however our role in preparing for accreditation is not as intensive as we desire; it is usually a committee of academic staff that runs the show." Student leader 4; *"the assigned committee in the medical school mostly oversee and conduct most of the preparatory work for accreditation, the students are engaged in general consultations and seen as receivers rather than contributors."* Student leader 2; *"our medical schools sometimes demand the students to focus on positive aspects and not to be critical during accreditation site visits, they tell students that this is in their own*

> *benefit; but as students we are worried by this and we want to be critical to ensure a true accreditation experience."* Student leader 7

- Reflection on the adequate use of students' potential: the FGD data demonstrate students' concerns around adequate involvement in accreditation of medical schools and in medical education issues in general:

> *"while we are happy about opportunities for involving us in accreditation process, we think that students have great potential and we still aspire for our views to be heard more"* student leader 1; *"if the recommendations of students activities, conferences, and seminars were well attended to by decision makers, the situation would have been much better; students are a rich resource because they live the actual experience and they have the time and motivation to contribute."* Student leader 8

Students are no doubt important folk in the educational community as they are the subject and object for change. They can bring in valuable insight to the educational process and efforts at improving it. Their potential is, however, not well utilised in the context of Sudan as the FGD data demonstrated.

6.5.5. Discussion

Reflecting a regional reality and trend, accreditation of HPE in Sudan is still in its infancy. However, the energy devoted to developing the accreditation programme carries the potential and promise for a strong practice in this respect. In the experience of Sudan so far, accreditation is emerging as a powerful leverage to transform and improve medical education. Sudan should be leading on this as countries in the Eastern Mediterranean Region are still struggling with accreditation with statistics showing that around 40 percent of the medical schools in the region are not subjected to any accreditation experience (WHO, 2015).

The focus on the accreditation of medical schools in Sudan to the neglect of other HPE schools at current times has roots in national as well as international trends. The medical profession in Sudan is dominating the scene with physicians commonly assuming leadership positions in HE and health entities; and study of medicine is enjoying substantial social prestige. Internationally, the totality of literature is largely skewed to accreditation in the context of medical education. Additional focus is brought by the existence of the WFME with its exclusive attention to medical schools and training for physicians. Accreditation systems across health professions are not yet a reality in Sudan and probably worldwide and that should be seen as a gap.

The locus of governance for accreditation in the country is disputable as the MOHE is challenging the role of the SMC in this respect. Anecdotal evidence points to the fears by the

MOHE about losing control and being subjected to accreditation decisions by the SMC adversely affecting its expansion plans for HPE schools. The logic is, however, to the side of the SMC as patron of accreditation as it is an entity external to the HE sector and thus free from any vested interest. The recent recognition of the SMC by the WFME as a competent national authority for accreditation of medical schools certainly boosts the position of the council as a governor of the accreditation system.

The inadequate involvement of the health services management in the accreditation programme of the SMC is underlined by the lack of health services representation in accreditation teams and by the lack of synergy between SMC accreditation for undergraduate education and the postgraduate and health services accreditation programmes running under the health ministry umbrella. This situation could be explained by the dichotomy between health services and academe referred to in Chapter 5 (Section 5.4.6.). Leaders of the SMC are usually selected from academic backgrounds and this might explain their prejudices against health services professionals.

The suboptimal engagement of students in the SMC accreditation programme might be explained by the culture of patronage and the distancing between teachers and students in the context of medical education in Sudan. Evidence also shows the inadequate consultation of students in development and review of medical curricula in the country (Grant, 2011). However, the increasingly observed energy and networking of students carry the potential for more influence of students and their feedback on the design and implementation of accreditation system.

6.6. Summary

This chapter reviewed the governance processes for HPE in terms of policy development, strategic planning, and QA arrangements. Three specific governance processes were taken for further scrutiny including policy on student admission, HPE planning, and accreditation of HPE institutions.

The student admission policy involves broad criteria beyond academic competition and the policy is largely shaped by the country's context, including geopolitical, economic, and social factors. HE sector devotes considerable attention to governing and organising admission to serve the national agenda and there is rigorous process followed in deciding intake to HEIs, including for HPE. The involvement of other stakeholders such as the health sector is, however, found to be limited, raising concerns around inclusiveness and relevance.

Strategic planning for HE and for the health workforce exists in Sudan albeit in a dichotomised manner. A unified national plan for HPE with operational arrangements is lacking in the country and actors in the two sectors of HE and health exchange blame on the lack of coordination. The planning process is largely incremental and implementation and monitoring are identified as weak links with consequences on quantity, quality, and relevance of HPE graduates.

Accreditation in the context of medical education is strongly emerging in Sudan with efforts at adoption of international best practice. Governance in this area is taking shape despite some sector conflicts, and accreditation standards are gaining more consensus and appreciation. Application of the accreditation standards and processes is encouraging although it is too early to assess the outcome of the process. A major limitation of the accreditation programme in Sudan is the focus on medical schools to the detriment of institutions for other health professions where accreditation is not yet in sight.

The previous three chapters discussed the three domains of governance: structures, relationships, and processes. The next chapter will now turn to examining governance principles in the context of HPE in Sudan.

CHAPTER 7: EXPLORING GOVERNANCE PRINCIPLES FOR HPE

7.1. Introduction

This chapter explores the study findings on governance principles in the context of HPE in Sudan, addressing the fourth objective of this study. The chapter essentially discusses and tests the conceptualisation developed earlier in this thesis around good governance principles for HPE (depicted in Figure 12). It also contributes to elaborating and clarifying the main conceptual framework of the study (Figure 11) of which the dimension of governance principles is a component.

Analysis in the chapter covers the three grand categories of governance principles depicted in Figure 12: strong state oversight, empowered stakeholders, and robust HPE system in three successive sections. Each section is structured around exploring meanings for governance principles, discussing the application of governance principles in the country context, and making inferences about good and poor governance. The chapter proceeds then to presenting a revised conceptualisation of good governance principles before closing with a summary.

7.2. Strong state oversight

Three principles for good governance are included under the domain of strong state oversight: strategic vision, proactive state, and effective regulation. Findings from data sources of this research in relation to this domain are presented and discussed in the following sub-sections.

7.2.1. Strategic vision

Respondents interviewed in this study saw strategic vision as central to setting an overall goal for HE bearing in mind current and future needs for developing human capital. Expressions such as direction for HE, long term perspective, desired outcomes, and alignment of HE and HPE with the country's development needs emerged during interviews. A respondent public university vice chancellor described the strategic vision for HPE as *"the desired outcome in terms of ensuring the adequate and competent human resources to ensure healthy future for individuals and communities"*

While noting the existence of strong state involvement in providing direction and planning for HE, respondents interviewed differed in conceiving the motivation and the resultant changes. Health sector respondents were generally positive about the state oversight in advancing a vision towards expanding HE and decentralising its provision and the role of this in addressing the country needs. A senior FMOH official interviewed maintained:

> *"The government actually brought in a strong vision for promoting access to higher education, you know the huge increase in student intake and the extension of universities in different parts of the country are a welcome direction; this I mean will ensure future sufficiency in health workers to staff the extensive health services network in the country and that wouldn't be possible without the strong vision of the state".*

Academic respondents (mainly from universities), while appreciative of expansion, expressed concerns around the political and ideological motivations of the regime and the possibility of harming the quality of the health workforce through disproportionate expansion of HPE institutions. A respondent academic member of the MHSC substantiated these concerns by expressing the following viewpoint:

> *"You have a lot of strategies and plans produced for higher education some of them for a period of five years and some even longer, maybe 25 years…these plans, you know, show the strong interest of the government in higher education I mean its [government] desire to control it [higher education],,,you know most of these plans are imposed by the government to secure political and ideological gains; I mean for health professions you cannot expand as such without ensuring quality and also fairness where you ensure academic standards and not enrol students based on other criteria, political or so"*

Documentary sources for this research concur with interview data in terms of reflecting the strong state involvement in providing direction and vision for HE, as demonstrated by the existence of regular planning cycles and ensuring implementation of macro reforms (MOHE, 2012; Elmagli, 2015; Hag Ali and Hassan, 2015). Some documents reviewed in this research also support the expressions by academic respondents on the role of politics and ideology in fuelling the vision of expanding HE at the expense of standards and quality (Abdel Rahim, 1998; Bishai, 2008).

An important point raised by academic respondents interviewed in this research relates to the lack of a specific vision for HPE in the country. Respondents, including those from universities and the MOHE, noted that the strategic vision for HE stays at the level of the overall sector with no clear extension to the sub-sectors such as HPE. A respondent physician Deputy Vice Chancellor of a public universities substantiated this by maintaining:

> *"Even with the existence of all those strategies and plans produced by higher education sector, you do not normally find specific vision or strategy on how education of health professionals is organized to serve the needs of the country; I mean it [HPE] has always been a follower of what happens in higher education; this is not right as you know education of health professionals is sensitive and different from humanities for example, no, it is totally different and needs special arrangements"*

In support of this proposition, no documentary sources were found by this study to demonstrate translation of the national strategies for HE to the domain of HPE. Observation notes for this study also reflect this gap with committee members noting, on several occasions, the lack of strategic planning and vision for HPE in the country, especially in relation to projections and linking production of the health workforce to utilisation (MHSC meeting No 2/2015; MHSC meeting No 4/2015; SMC Accreditation Committee meeting NO 4/2015).

Health sector respondents tended to concur with the gap in strategizing for HPE and pointed out the lack of coordination from the side of the HE sector as a culprit. FMOH officials interviewed reflected on the skill mix imbalance in HPE as a symptom of the lack of an agreed vision and direction for HPE:

> *"There is no agreed vision for health professions education in the country and the loss of direction resulted in mismatches in mix of the health workforce we are getting from our educational institutions."* Key informant interview, senior official, FMOH

The imbalanced expansion of HPE schools, for instance medicine versus nursing, and the distorted skill mix of the health workforce represent a reality in Sudan and has been alluded to in Chapter 1 (Section 1.3.3). Thus, while there is an overarching strategic vision for the HE in its totality, this does not project to the domain of HPE as suggested by the data sources of this study.

7.2.2. Proactive state

In the context of this study, respondents interviewed conceived a proactive state as a state or government that prioritises the HE sector across its policies, plans, and interventions and demonstrates leadership on directing, planning, and monitoring the HE sector. University respondents interviewed also viewed state proactivity as when the government is ready to encourage bottom-up planning, promote funding, and respond to the needs of democratic governance for universities.

State proactivity in relation to the HE sector is probably a remarkable observation in the post-1989 era in Sudan. The governance structures discussed in Chapter 4, together with the accompanying legal reforms and the burgeoning relationship dynamics involving the state with HE discussed in Chapter 5 (Section 5.2.), all signify a proactive state. Respondents interviewed in this study generally concurred that state involvement in HE, including HPE in the post-1989 regime, is unprecedented. Health sector respondents kept referring to the positive side of the

matter, describing the state proactivity as a strong factor in ensuring expansion of HPE as part of HE reform and thus better responding to workforce needs of the health services:

> *"The heavy involvement of the government in organising higher education is a good thing…I mean it reflects the care and priority given to universities and in many ways, you need government support to ensure funding and capacity especially with the increasing demand and enrolment in higher education…this you know has reflected positively for the health sector through increasing production of health workers and expanding access to remote and rural area".* Key informant interview, senior official, FMOH.

State proactivity in relation to HE in Sudan was, however, seen in some adverse connotations by academic respondents from universities who referred to political and ideological motivations of the government and the "selective nature" of the state proactivity to serve certain political agendas. The state was described to be proactive for a purpose and not necessarily for the benefit of HE in general and HPE. A few senior academics interviewed alluded to state actions such as dictating top-down policies, limiting democratic practices, and jeopardising academic freedom as unfavourable types of state engagement and oversight:

> *"When you see the regime strongly interfering with university functioning to promote its [regime] ideology or to obtain political gains I don't think this should be seen as positive…I mean strong governmental leadership is needed but in a fair way and in ways to promote national agenda…I mean the state should provide a strong framework for universities to grow and compete regionally and globally and not be selective for example ignoring funding universities while requesting expansion of intake."* Key informant interview, an ex-public university vice chancellor.

Observation notes of this research reflect the tension and variation of opinions in relation to state proactivity on HE matters and projections of that on HPE. During the meetings of the MHSC committee observed, there were voices welcoming the strong state engagement and voices sceptical about the strong central control imposed. In one of the committee meetings, a member from the FMOH objected to the description by an academic member of the government's decision to open medical schools in states and some remote towns as inappropriate (MHSC meeting No 4/2015). Likewise, records of the NCHE meetings reviewed for this study reflect celebration as well as criticism in relation to the nature of state engagement with HE in Sudan (NCHE meeting records 2012, 2014, 2015). In the context of interviews conducted for this study, the term "positive state engagement" emerged to describe a set of desired areas for state intervention with HE; see Chapter 5 (Section 5.2.6.).

7.2.3. Effective regulation

Regulation as a fundamental component of state oversight was conceived by respondents of this study as the state ability to harmonise the HE and ensure acceptable quality and standards in its provision and outcome. Respondents from public sector universities referred to regulation as essential in the context of privatisation of HE in the country and saw it as mainly a state function dedicated to streamline the private sector and avert its irregularities motivated by the pursuit of profit making. However, the respondents from private universities disagreed with this selective perspective and noted a wider relevance of regulation:

> *"When you limit the role of regulation to apply to private universities this is not right; you know regulation as a government function is useful to ensure compliance and quality in both public and private institutions; I mean some public universities may even need it [regulation] more as they are under-resourced compared to private institutions".* Key informant interview, Vice Chancellor, Private University

Documentary sources for this study demonstrate that the regulatory function of the state has been increasingly emphasised in Sudan with the expansion of the HE sector (MOHE, 2012; Babikir, 2015; Elmagli, 2015). The post-1989 era has witnessed an increasing focus on structures and processes of QA and accreditation of HE (Babikir, 2015). As alluded to in Chapter 4 (Sections 4.4. and 4.5.), the NCHE and its permanent committees including the MHSC, the accreditation corporation of the MOHE, and the regulatory councils are the main governance structures mandated with regulation of HE and its graduates. Policies on student admission, planning of HPE institutions, and accreditation of institutions are examples of processes discussed in Chapter 6 and directed at regulating HE and HPE.

The function of regulation of HE and HPE by the state was disentangled by respondents of this study as including the dimensions of:

- Developing policies and frameworks for QA in education
- Setting and implementing standards for approval of educational institutions,
- Monitoring of compliance of the approved educational institutions with the stipulated requirements
- Setting and implementing accreditation standards of educational institutions and programmes,
- Establishing and operating systems for licensing of graduates

Documentary sources reviewed in this research raise concerns around the state capacity for regulating HE in view of the expansion and massification of students in addition to the

burgeoning private sector (Bishai, 2008; Gasim, 2010; Babikir, 2015). QA systems and practice are described as areas needing major improvement both at system and organisational levels, especially in the face of limited resources (Babikir, 2015). Respondents interviewed generally concurred with the documentary evidence in this respect describing the regulation function of the state in the context of HE and HPE as generally suboptimal. An academic respondent interviewed substantiated this by reflecting on the increasing dominance of the private sector HPE institutions:

> *"The government regulation of the exploding [laughing] private sector is really not strong… you know the government in my opinion is lazy to develop the will and capacity to oversee the exploding private sector schools I mean medicine, dentistry, nursing, and the like…without effective regulation I am sure we will face generations of low-quality graduates".*

Other academic respondents including from private institutions alluded to challenges with the state regulation for HE including for the public universities:

> *"You have this irrational expansion of public universities and schools…I mean while some people are accusing private sector you can also see that public medical schools and other health professions schools, I mean are rapidly expanding and regulation on them is not tough enough".* Key informant interview, Dean, private medical school.

The observation notes do not, however, fully concur with the interview findings in this respect. During observation of MHSC meetings for instance, it was clear from the proceedings and documentation that approval of HPE institutions as part of the regulatory function of the state is robust. Reports presented to the MHSC by delegated teams to recommend on approval of new HPE institutions and programmes demonstrate rigorous processes of applying standards and verifying the requirements (MHSC meetings No 2/2015; No 4/2015; No 1/2016). During observation of one of these meetings (MHSC meeting No 1/2016), a member from a private HPE institution voiced the complaint of the private schools being subjected to tougher measures of approval compared to their public counterparts. In a paper presented at the National Conference for Higher Education, Eltahir (2015) reported the stringent measures adopted to approve private HEIs.

Respondents of this study suggested capacity limitations, political interference, and funding problems as factors explaining the challenges in the state regulation of HE, including for HPE. The capacity dimension was repeatedly alluded to by respondents as one main constraint,

especially that the government is facilitating the expansion of HEIs in a milieu of scarce resources. During observation of the MHSC meetings, members described capacity limitations as one main factor for the inability to monitor progress of newly established HPE institutions for ensuring compliance with approval requirements. Committee members referred to capacity as including adequate and competent staff, funding, logistics and transport, and decision enforcement. Babikir (2015) concurred with this and adds factors such as inadequate information technology infrastructure and staff turnover and migration.

Lobbying is probably another important confounding factor for effective regulation in the context of HE. The observation notes of this study record several instances when academics, especially owners of private institutions, have obtained favourable decisions about their schools and programmes through lobbying committee members and decision makers. In one meeting of the MHSC (meeting No 2/2015), where approval of a programme application submitted by a private medical school was discussed, a physician member of the committee sitting next to the researcher uttered, referring to the owner of the medical school, "*this person is strongly linked to the Minister and can get what he wants*".

7.2.4. Discussion

Data sources for this study largely concur with the notion of strong state oversight as a critical governance domain. The experience of the respondents with HE issues together with the heritage of overt state engagement in HE in Sudan enabled deep insight on governance principles, including meanings attached to concepts and perspectives on new dimensions for the state oversight function. The context of the country with strong ideology-driven HE reforms and effective individual lobbying based on expert power, political affiliations, and collegiality dimensions has allowed aspects of poor governance to be revealed by respondents. Issues of unwarranted expansion, political interference, inadequate funding, and promotion of partisan agenda were all alluded to and these might explain the challenges of effective regulation.

As discussed in Chapter 2 (Section 2.5.3.), the complexity of HE in the world of today has led to calls for governments to exercise more oversight to enable a framework which supports HEIs to be effective in meeting national agendas and targets. This is also relevant to Sudan; hence, the findings of this study are elaborating governance dimensions under the domain of state oversight. The prospects for state oversight in relation to HE and HPE in Sudan are getting more complex and challenging in view of emerging power of non-state stakeholders. This includes an increasingly emerging private sector and a decentralised tendency with public

demand and pressure for the expansion of HEIs. In this respect, the dynamics of state oversight in Sudan reflects a general trend in the literature, where the crowded stakeholder nature of HE is shaping governance and the exercise of the state's role (Taylor, 2013).

7.3. Empowered stakeholders

This domain of governance principles is emphasising the role of stakeholders, people, and communities as opposed to governments. Hence, participation, intersectoral action (ISA), and accountability are included as governance principles or dimensions under this domain. The following sub-sections explore the study findings in this respect.

7.3.1. Participation

Respondents of this research viewed participation in the context of HE and HPE governance as the engagement of individual people, whether they represent institutions or professional groups or the community or just being persons with expertise relevant to HPE, in policy development, planning, and implementation arrangements. Respondents from academe related participation more to involving experienced academics in issues and decisions pertinent to HE and HPE. The respondents referred to the state and HE authorities as having the mandate and duty of engaging individual stakeholders in opportunities for participation including conferences, forums, committees, and other instances where HPE issues are discussed and decided on.

Perspectives differed in assessing the contemporary situation in the country in terms of participation as a governance principle in the context of HPE. Over half of the respondents interviewed valued the trend of governmental efforts at inclusive consultation while some respondents, mainly from academe, noted the inadequacy in meaningful engagement of stakeholders. The first group referred to the frequent conferences and events organised to discuss issues relating to HE as evidencing the state's intention to appreciate different views. They also mentioned other occasions for allowing participation, including the wide representation of public and private sector universities and HEIs in the NCHE (discussed in Chapter 4, Section 4.4.), multi-sectoral representation in the MHSC, and the heavy involvement of community representatives in the boards of universities, medical schools, and other HPE institutions.

The sceptical group of respondents on the other hand, noted a lack of meaningful participation in educational governance. They referred to the top-down planning approach, the nearly absent

community representation at national governance structures, and the low voice given to academics as factors signifying a state-dominated decision-making structure:

> *"Decisions in higher education are largely dictated by the government and I mean with a lot of political agenda…academics who are the masters of this business are really given very low voice and you know at times they are coerced."* Key informant interview, Ex-Deputy vice chancellor, public university.

The issue of undervaluing academe repeatedly came up in data sources for this study. Observation notes reflect the discontent of committee members (largely academics) about the lack of effective consultation and room of manoeuvre for professors. During observed meetings of the MHSC and SMC Accreditation Committee, some members expressed views on the neglect of the academic voice in policies and major decisions taken in HE and HPE, giving examples of the admission policy and expansion of medical schools (MHSC meeting No 2/2015; SMC Accreditation Committee meeting No 4/2015). Some documentary sources reviewed in this study also provide instances for the underrepresentation of the academic voice. Magboul and Ibrahim (2015) described instances of neglecting contributions of academics in decision making as including minimal representation in key decision structures, a non-consultative decision approach of university management, and a lack of adequate attention by the government to recommendations of academics. Some other authors refer to the political oppression in form of compromising academic freedom in this respect (Abdel Rahim, 1998; Bishai, 2008; Kilase, 2013).

Two other stakeholder groups claiming inadequate representation were health services managers and community members. Respondents from the FMOH brought up the issue of the imbalanced participation in HE and HPE deliberations and decisions. A senior FMOH official maintained:

> *"Participation in decision making for education of health professionals is not balanced I mean there is bias toward more weight for higher education people, and I mean academic people think that health services experts are not relevant in discussing educational issues; you know I attended a seminar on accreditation of medical schools and I was struck to listen to a senior professor representing the organisers concluding that this business is the responsibility of academics who understand education and accreditation".*

Over half of the respondents, including from both academe and health services, described community participation in HPE governance as far from satisfactory. They postulated reasons for this, including the lack of a true democratic approach by the government, inadequate community awareness, and a lack of capacity among community-based groups and networks.

A leader of a community-based organisation interviewed in this study further elaborated on this aspect by stating:

> *"The government and national bodies are not keen on representing the community or they misplace this representation I mean…you have the example of the medical council [SMC] where a medical doctor was appointed as community representative [exclaiming]… we are still far from true community involvement; we need awareness and capacity for both the government and community organisations."*

7.3.2. Intersectoral action

Respondents interviewed in this research saw intersectoral action in the context of HPE governance as the formal and collective engagement of different related sectors in influencing key policies and actions to advance the agenda of HPE. Describing the HE sector as the main player, respondents also referred to other important stakeholders including the health sector represented by the FMOH, the regulatory sector including professional councils, and the postgraduate professional bodies. Respondents also mentioned the financial and labour sectors as important players. A senior FMOH official interviewed pointed out the critical role of intersectoral action for HPE:

> *"Education and production of health professionals is not an isolated action; it should be linked to service needs, the labour market, and the quality level to ensure patient safety; I mean we cannot also ignore the funding to secure jobs and ensure retention and also career progression; you know it is not only the role of higher education sector that is important here".*

The above description makes intersectoral action distinct from participation where the wider incorporation of views and opinions of individuals is sought.

Different data sources investigated in this study reflect on the inefficiencies and culture of working in silos in the Sudanese civil service machinery. The health workforce strategy document refers to the dichotomies and lack of coordination as hampering intersectoral action for health workforce development (FMOH, 2012). Compartmentalisation and dichotomies in the work of education and health sector, in addition to capacity limitations, have also been alluded to (Elmagli, 2015). Several respondents in this study, while appreciating the representation type of governance relationships in the context of HE in Sudan (Chapter 5, Section 5.4.), pointed out the lack of effective intersectoral relationships. A lack of coordination was described by respondents as leading to inefficiencies, confusion, and unfavourable competition:

> *"The absence of meaningful coordination between education and health ministries you know is causing lots of duplications and waste of resources…I mean for instance the donors are*

> *providing funds for workforce training and the Ministry [Ministry of Health] is using that separate from universities…you also find examples where universities and health professions school are graduating numbers and types of health workers that may not fit the needs of the health services; so you know it is the problems of working in isolation and not collaborating".*
> Key informant interview, Senior official, regulatory councils

During observation of the MHSC meetings, repeated mention was made in relation to the lack of coordination mechanisms between the ministries of health and HE. Likewise, in a meeting of the SMC Accreditation Committee observed by the researcher, members were directing criticism to the MOHE for not involving regulatory councils and other stakeholders in decisions around opening new HPE schools (SMC Accreditation Committee meeting No 2/2015). Still, a few respondents from the HE sector projected a positive picture for intersectoral action and celebrated the wide representative nature of the NCHE and its permanent committees. An ex-Minister of Higher education interviewed maintained:

> *"The structure of the council [NCHE] really allows for involvement of other sectors in the government and more importantly you know the permanent committees such as the ones on health, agriculture and engineering are involving, I mean, members from line ministries…. this is to link education to the services sectors."*

Having noted this variable set of views on intersectoral action for HE at the national level, it is pertinent to reflect on data obtained from sub-national levels. Respondents from the two states visited by the researcher generally concurred on the existence of robust intersectoral action for HE and HPE at decentralised levels and noted the positive practice they experience in this respect. The experience of Gezira State (see Chapter 5, Section 5.4.6.) where formal mechanisms for intersectoral action are existent, joint use of resources is evident and informal relations are rampant; this lends itself as a best practice example. A deputy vice chancellor for a state-level university interviewed reflected on intersectoral collaboration by stating:

> *"Our university council has a lively representation of all important sectors in the state, you know health, industry, agriculture, environment and the like; we in the university have also a seat in the consultative council for the governor of the state and our voice is well respected; I mean it is a fruitful joint work for the benefit of the state population".*

7.3.3. Accountability

Respondents interviewed in this study generally understood accountability as feeling the answerability for actions, especially in relation to working for the public interest. Attitudes of taking decisions in the special interests of individuals or institutions and in ways that are not backed with rules were described by respondents to be lacking an accountability dimension.

Respondents also described a number of domains for accountability in the context of HE and HPE, including the following:

- Accountability of individual players to institutions
- Accountability of institutions to the government
- Accountability of the government to the public
- Accountability of institutions to stakeholders and the public
- Accountability of decisions and actions (by individuals, institutions, or government) to stated rules and regulations

Respondents interviewed in this research described the accountability of HE individual or institutional players to the government to be strong and functioning. The reasons provided included the proactive engagement of the state in HE to realise the regime's agenda, the appointment of political allies in senior academic positions, and the tough measures applied by the government in cases of non-compliance to stated directions and policies. Observation notes of this study provide evidence for the existence of reporting mechanisms, practices, and answerability of committees to the government apparatus.

On the other hand, the accountability of the government to the public in relation to HE and HPE seems to be a contested area. Documentary sources reviewed in this research suggest various positions in describing state accountability in this respect. While some writings refer to the accountable actions of the government in expanding HE and HPE schools to better respond to population health needs (Elmagli, 2015; Hag Ali and Hassan, 2015), other sources point out the challenges of political interventions, lobbying, and partisan agenda as adversely influencing accountability (Abdel Rahim, 1998; Bishai, 2008; Gasim, 2010; Kilase, 2013). This trend in the documentary sources corresponds to the findings from the interview data and may be explained by political divisions and partisan positioning. Respondents in this research were divided among those who viewed the expansion of HE and HPE and extension of educational institutions to decentralised levels as a good example of government accountability to its population, and those who believed that the government was motivated by a political and partisan agenda rather than genuinely promoting the national interest. A senior FMOH official from among the first group of respondents celebrated the expansion policies as true representation of accountability:

> *"The government has done well in moving higher education from an elite nature to the widely open doors for students from different socioeconomic backgrounds to join universities and medical schools; I mean this is a true revolution when we consider the old days where*

enrolment in medicine is confined to elites and big urban settings, you know, I see this as a very good practice of accountability to the people and their welfare".

In contrast, a respondent Dean of a public medical school viewed the expansion of universities and medical schools as not serving the true needs of rural communities and therefore lacking the right accountability dimension:

"When you as government work irrationally to open new universities or medical schools for political gains and electoral purposes, I mean you are not showing proper accountability to the community and people; the irrational expansion can lower quality and harm the health of people I mean …Also you know, the true interest of people might be not in opening a new medical school but in improving the status of secondary education or other services; …that is how I see it."

The dimension of accountability of HE and HPE to stakeholders and the community at large (commonly termed social accountability) has gained prominence in the recent debate around HPE in Sudan. The SMC accreditation programme targeting mainly medical schools has included dimensions of social accountability in terms of the requirements for interaction of medical education with the community. Respondents interviewed in this research viewed social accountability as existing and practised at the organisational level, referring to representation of community members across HPE schools' boards and to several initiatives directed at serving communities. A Dean of a public medical school substantiated this by stating:

"Our school engages community members in its board and events and we actually direct our education and research in response to needs of the local communities, in addition we get into direct health services delivery through deploying our staff to rotate across outreach hospitals in our region, our experience in being socially accountable is well known and appreciated".

Respondents of this study, however, pointed out the limited adoption of social accountability at the HE and HPE systems (national) level. Limitations mentioned included: inadequate or no representation of the community in HE governance structures such as the NCHE, MHSC, and the MOHE and the lack of effective mechanisms to ascertain community health needs.

The dimension of accountability of decisions and actions to the stated rules and regulations (e.g., effective and equitable implementation of rules) had its share in the interview data of this study. Academic respondents, especially those from universities, raised concerns around this dimension noting that individuals, institutions, and the government tend to overlook rules and regulations in some instances for political reasons. An Ex-Vice Chancellor of a public university interviewed in this research maintained:

> *"Yes, we have seen instances when some decisions are taken away from the rules, the government pushes us sometimes to enrol additional numbers of students beyond our admission policy; and I mean we have seen some academic staff promoted not in accordance with academic bylaws".*

Observation of the MHSC meetings showed some events when decisions about the opening of new medical schools were taken by the MOHE without fulfilment of the stipulated criteria of the MHSC. On such occasions, the MHSC had to deal retrospectively to ensure fulfilment of requirements by these new schools. During observation of a meeting of the MHSC, a member raised concerns about cases of MOHE interference in approving new public medical schools while not fully conforming with the stated rules of the committee (MHSC meeting No 4/2015).

7.3.4. Discussion

The proposed good governance dimensions under the domain of empowered stakeholders found resonance in the findings of this study. The meanings and applications of participation, intersectoral action, and accountability are contextualised, resulting in highlighting some conceptual and practical aspects in addition to limitations and challenges. The expansion of HE and HPE institutions in Sudan and the interactions involved brought more varied stakeholders to the table with ramifications for decision making. This reflects a global trend where the crowded stakeholder nature of HE is becoming prominent with implications on the role of the state (Taylor, 2013).

The proactive role of the state in HE affairs gave birth to different platforms for stakeholder engagement and participation. However, the strong state influence on final decisions regarding the organisation of HE probably gives the feeling of discontent, especially for academics despite the theoretical engagement opportunities. The discontent of academics may additionally be explained by a strong collegial culture and legacy of academic power in the early phases of HE in the country. The educational governance literature refers to the scepticism of academics towards the increasing variety of stakeholders beyond the academic territory (Kennedy, 2003).

A running theme that shaped the principles of participation, intersectoral action, and accountability in Sudan is the strong presence of the state. Although this could be desired, the associated political and ideological motivations in the case of Sudan might explain the concerns raised around lack of effective participation and the rather weak accountability towards stakeholders and the public. The regime is obviously pushing its partisan agenda through policies and interventions related to the functioning of HE sector.

Despite the intimate interrelationships among the three governance dimensions of participation, intersectoral action, and accountability; the analysis in the study provides for distinctive features for each in the context of HPE governance. The mostly non-democratic nature of HE governance throughout the history of the modern state in Sudan might be a possible reason for the lack of a more elaborate analysis of the governance principles under the domain of stakeholder empowerment.

The evidence from this study reflects a better situation for stakeholder engagement in the governance of HE and HPE at sub-national levels compared to the situation at the national level. This might be explained by the less complex landscape and the relatively small size of institutions, in addition to the symbiotic relationship between educational and health sectors at the decentralised levels. Strong participation and intersectoral action at decentralised levels offer lessons for improving governance at the national sphere despite the fact that the landscape nationally is more complex.

7.4. Robust HPE system

This governance domain includes the principles of responsiveness, equity, and ethics. They together constitute characteristics and attributes deemed necessary to enable an effective HPE system. The following sub-sections present and discuss the study findings on these aspects.

7.4.1. Responsiveness

Responsiveness in the context of HPE was seen by respondents of this study as the sensitivity of the educational system for the needs of stakeholders and communities at large. The following were suggested by the interview data:

- Responsiveness of HPE to the needs of students/communities in terms of the range of programmes offered.
- Flexibility of educational modalities to suit the busy lifestyle and bridging types of qualifications.
- Responsiveness of the educational programmes and output for the labour market and employability considerations.
- Sensitivity/suitability of the educational programmes and graduates to the development needs of the country and the social context.
- Responsiveness of educational standards to the competitiveness and international employability of graduates.

Respondents interviewed in this research generally described the contemporary HPE in Sudan as being responsive to community needs and the aspirations of students. These arguments were substantiated with evidence of the expanding network of HPE institutions in different parts of the country with their multitude of educational programmes. However, some respondents from the health services side expressed concerns around the lack of flexibility of academic criteria to accommodate some contextual realities:

> *"We have been trying to convince higher education people to allow a waiver to accept students with secondary school certificates in the arts pathway [as alternative to science pathway] to join nursing and midwifery schools… but I mean higher education people are dogmatic they want to strictly enrol science pathway students in these programmes… but you know the reality in states and rural areas is different I mean there are very few students with science pathway certificates and there is no problem in my opinion to enrol candidates from arts pathway, I mean it works in the past and in several countries."* Key informant interview, Minister of Health at state level.

Observation notes of this study reflect the heated debate during MHSC meetings around the issue of allowing waivers for "arts pathway" students to enrol in HPE schools. The dominance of academics in the committee has prevented the approval of such a waiver. In a meeting attended and observed by the researcher, representatives of the FMOH failed to convince committee members (predominantly academics) to allow students with an "arts secondary school certificate" to join nursing schools (MHSC meeting No 2/2015). Documentary sources reviewed point to the lack of bridging programmes in health sciences as opposed to engineering and humanities where mature students are accepted for a shorter period of qualification based on recognition of prior learning (Wali, 2014; Elmagli, 2015; Hag Ali and Hassan, 2015).

Health sector respondents also expressed concerns around the responsiveness of HPE to the labour market needs and to health services demand. The inattention to technical and vocational education was given as an example in this respect. These respondents likewise criticised the dominance of medical, dentistry, and pharmacy schools over the schools and programmes for the education of nurses, midwives, and allied health personnel. A state Minister of Health interviewed highlighted the skill mix imbalance by stating the following:

> *"nowadays the tendency of universities in both private and public sectors is to establish medical schools and more or less dental and pharmacy schools; you know they neglect nursing and others and this is causing major problems to health services, we are very short of nurses and midwives and we have several vacant positions; I mean vocational schools were effective in providing a supply of nurses and midwives but those are closed and universities are not able to replace them".*

Documentary evidence reviewed in this study demonstrates shortcomings in implementation of plans for technical and vocational education expansion. Eltayeb (2015) estimated the share of vocational schools in secondary education as being only 4 percent and the ratio of technician students to medical students in HE as 1.3:1, denoting a marked skill mix imbalance.

The issue of the responsiveness of HPE in Sudan to the requirements of international accreditation and competitiveness has always been raised, especially in academic circles. Observation notes of this study reflect the priority given to this aspect as part of discussing the quality agenda for HPE. In a meeting of the SMC Accreditation Committee observed by the researcher, a heated discussion ensued around the expansion of medical schools and its adverse influence on quality and the associated threat of losing international recognition (SMC Accreditation Committee meeting No 2/2015). Academic respondents interviewed in this research concurred with fears related to quality and standards in the HPE sector in the country. The expanding infrastructure and network of HPE schools in the face of constrained funding and resources was described as reflecting inadequate sensitivity of the government and HE to international employability of graduates.

7.4.2. Equity

Respondents interviewed in this research valued equity in the context of HPE governance and provided perspectives on the dimensions and considerations for equity. The following connotations for equity were prominent during interviews:

- Equitable access to HPE across geographic and socioeconomic contexts
- Fair and just policies and criteria for student admission to HPE institutions
- Alleviation of financial barriers for students from rural and remote areas
- Equal opportunities for academics
- Gender balance and equity

Respondents interviewed predominantly held the opinion that the government adopts a pro-equity policy in ensuring a wide geographic distribution of universities and HPE institutions and putting in place a comprehensive admission policy with positive discrimination for rural students, including financial protection through providing scholarships. The discussion in Chapter 6 (Section 6.3.) elaborated on these dimensions. A few academic respondents however, voiced criticism of the admission policy with regards to some criteria that allow advantages for some students while bringing in injustice for others. A physician member of the MHSC interviewed substantiated this by stating:

> *"I mean the policy [admission policy] is generally good and it gives special considerations for equity but you know when you accept students based on political considerations I mean like this Darfur issue [acceptance of students based on Darfur Peace Agreement] you are then introducing bias….also when you accept private students in public medical schools I mean you are doing injustice to those poor students with high marks…if the government is escaping from funding higher education it should not do that at expense of fair admission criteria and equity."*

In a conference paper reviewed in this research, Hag Ali and Hassan (2015) expressed the same reservations but noted the corrective measures taken by HE over the last few years to eliminate the unjust criteria for student admission and indicated the example of abolishing the 7 percent bonus for students who were involved in the regime war against rebels.

On the dimension of equal opportunities for academics, the respondents interviewed commented on different dimensions including academic promotion, opportunities for staff development, and the dynamics for assuming leadership positions. Academic respondents predominantly noted the lack of equitable policies for staff development opportunities in general and attacked the practice of academic promotion in some universities where retired health services professionals are provided academic appointments. A public medical school Dean interviewed maintained:

> *"When you have a university granting professorship status to senior health services physicians you have to be worried about academic rules and equity; I mean we do respect senior physicians who spent their career in the health services, but we cannot accept giving them academic titles that require certain academic record and publications; this is even demotivating for young academics who aspires to build their records towards professorship".*

Respondents also concurred on the influence of politics on the chances for academics to assume leadership positions. A private university vice chancellor interviewed maintained:

> *"Look at all public universities and medical schools, you will clearly find that vice chancellors and deans are associated with the regime in one way or another; I mean no one can deny the influence of political affiliation on academic leadership appointments".*

This is substantiated by some documentary sources reviewed in this research (Abdel Rahim, 1998; Bishai, 2008; Kilase, 2013). Examining membership of committee meetings observed, the researcher could identify dominance by personalities politically affiliated to the ruling party.

Respondents also discussed gender in the context of HE and HPE providing diverse perspectives. The gender dimension of HPE was seen by respondents as a contentious issue involving equity considerations. Health sector respondents raised concerns about the increasing

feminisation of the HPE student mass and the implications of that on the resultant health workforce:

> *"When you have these rising numbers of female students in medical schools you get worried about the matter, you know female graduates might not continue work, I mean because of family obligations, and you know most importantly females do not usually go to work in rural areas…so my opinion is to keep the numbers in medical schools balanced between males and females."* Key informant interview, senior FMOH official

Yet, some respondents (including all females interviewed) celebrated the increasing female participation in HPE and considered it as one fundamental dimension of gender rights and equity. Views were expressed on the need to achieve more equitable gender balance in managerial and leadership positions in HE posts. A female Dean of a public nursing school interviewed in this research maintained:

> *"I don't see any problem in increasing numbers of female students…this is only equitable and fair as females are achieving high grades and working hard,,, females you know are performing well in the health workforce,,, not less than males if not more…what we hear about capping access of female students to medical schools is serious and not just…what we want to see is fair treatment and equal opportunities in managerial and leadership positions where females are still not finding their deserved share."*

Documentary sources and records demonstrate the existence of non-discriminative policies and practices in student admission and opportunities for equal employment and further training of the health workforce (FMOH, 2012; MOHE, 2014a; Hag Ali and Hassan, 2015). However, the gender dimension of HPE has been a topic for debate in policy discourse in Sudan with various opinions emerging. In one of the MHSC meetings observed for this study (MHSC meeting No 2/2015), there was a heated debate on the gender dimension as a response to a suggestion by some members to adopt a quota system for student admissions to medical schools in order to achieve gender balance (limiting number of female enrolment). The discussion could not reach an agreement and the committee chairperson had to postpone deliberations on the matter to avoid tensions. In a subsequent meeting also attended and observed by the researcher (MHSC meeting No 1/2016), one member reminded the chairperson of the MHSC committee of coming back to discussing the gender issues, but the chairperson ignored that request.

7.4.3. Ethics

Respondents of this study identified some ethical dimensions relating to governance in the context of HPE. Meanings and perspectives contributed included respect for academic freedom, impartial application of rules and procedures, justice, and measures to address conflict of interest.

Academic respondents conceived academic freedom as the key ingredient of HE and considered it as an ethical practice and obligation. Respect for academic freedom was believed by some respondents to be jeopardised in the context of HE in Sudan. Examples were given of cases where academics were questioned or even detained based on presenting research results or expressing liberal viewpoints. This is supported by documentary evidence where reference to attacks on the academic freedom of university staff is repeatedly mentioned (Abdel Rahim, 1998; Gasim, 2010; Kilase, 2013). The observation notes, however, reflect the relaxed atmosphere and open criticism for governmental policies and decisions during committee meetings. During the seven committee meetings observed by the researcher, no instance of oppression or tough responses to individual views were recorded.

For the impartial application of rules and procedures, respondents appreciated the long-standing traditions of sticking to rules and procedures in Sudanese academe. There was mention of the strict academic criteria for student admission, followed rules and procedures for staff appointment and promotion, and established standards and criteria for approval of new institutions. Despite their generally positive impressions about this dimension, academic respondents expressed concerns about contemporary practice:

> *"Academic traditions used to be very strong and respected in the university [University of Khartoum], I mean nobody can overrule a decision that is based on the bylaw or procedures; even the vice chancellor or the minister himself…you know…these days there are irregularities and odd things that are happening like unjustified promotions, I think this should be corrected [pausing] respect for academic rules is fundamental."* Key informant interview, Ex-Vice Chancellor, public university.

A few academic respondents were extremely resentful about some practices of academic promotion for university staff that do not follow the established academic traditions. These were described as serious breaches of rules and regulations with consequences on academic performance, fairness, and justice:

> *"Some universities, you know, especially the newly established ones are violating academic rules for staff promotion… I mean some persons without proper publication records were promoted to professorship status, this is [frowning] a real chaos…in fact it does harm to the system and a lot of injustice to competent staff who earn professorship through their distinguished work and record."* Key informant interview, Dean, public medical school.

Respondents from professions other than medicine raised some concerns in relation to grievances in the context of HPE. Reference was made to the dominance of medicine which is reflected in the form of resources and focus devoted to medical education to the detriment of

nursing and allied health professions education. The medical profession in Sudan traditionally dominates the scene in terms of physicians occupying leadership positions and constituting a majority in key decision-making structures for HPE. The nursing profession, on the other hand, has not enjoyed such privileges and that reflects on the suboptimal situation of nursing education (Hamid, 1989). During observation of committee meetings, the researcher could identify the simple majority and dominant opinion of physicians compared to other health professionals. A nurse member of the MHSC interviewed in this study was apt in underscoring the situation:

> *"Our educational system is dominated by doctors…I mean they are dominant and in leading positions, the medical schools as such are syphoning the resources and this is doing injustice to education of other health professions…dominance of doctors went far you know [exclaiming] even the nursing school of our biggest university has a medical doctor as dean."*

Respondents expressed concerns about the phenomenon of conflicts of interest in the context of HPE. Examples were given of owners and shareholders of private HPE schools holding membership in key decision-making committees in HE. A striking case in this respect is represented by an owner of a private university (a professor) who assumed chairpersonship of the MHSC, which is a key regulator and decision-making structure in HPE governance. During observation of the MHSC committee meetings, there were several instances when some members who were owners or shareholders of private HPE institutions used their membership privileges to the advantage of these institutions as alluded to earlier.

7.4.4. Discussion

The findings of this study describe a robust HPE system as adopting governance principles of responsiveness, equity, and ethics. For responsiveness of HPE, there is an inherent tension between ensuring the relevance of graduates to local needs on one hand and conformity with international requirements on the other hand. Academics are in general preoccupied with keeping up with international standards and that is an observed influence on the functioning of medical schools. However, there is increasing evidence showing a discrepancy between taught competencies and the actual needs of the local communities that represent the actual field of practice for graduates. To resolve this tension, it is probably pertinent, as Frenk et al. (2010) suggested, that HPE programmes should be locally relevant and internationally connected or, put in another way, learning in context, and educating for excellence (Grant, 2011). Achieving this balance would require close collaboration between academics and health services leaders, a missing link in the current context of Sudan.

Another aspect of HPE responsiveness that carries equity and ethical dimensions is the sensitivity to the labour market. An outstanding example is the balance between academic and technical/vocational education. In the context of Sudan, academic education is growing disproportionally compared to technical and vocational education. An explanation is probably the perceived superiority of the academic tract with better employability horizons and rewards. The need to scale up technical and vocational education to improve coverage and relevance of health care is globally noted and advocated (WHO, 2016). Chapter 8 will provide more elaborate discussion on labour market issues in the context of HPE.

The institutional dimension of equity and ethics is generally observed to be well considered in Sudan. The inclusive admission policy and the wide geographic distribution of HPE institutions represent best practice in this respect. There are, however, concerns on the individual dimension of equity and ethics where examples of conflict of interest, injustice, and lobbying are commonly referred to. Politicisation of HE and the intense state interference in university functioning might explain these anomalies, especially when ideology is a driver in HPE and HE governance. Another explanation might be in the fact that senior academics are heavily involved in the privatisation of HPE as owners or shareholders in private schools and institutions. Also, the dominance of the medical profession in Sudan has historical, social, and access to power dimensions. It is increasingly affecting the balanced health workforce development leading to professional conflicts and jeopardising inter-professional practice.

The gender dimension is another contentious case of responsiveness, equity, and ethics in the context of HPE. While concepts of gender rights call for non-discrimination, the realities of gender-related trends in practice demonstrate the need for corrective interventions to ensure access of population to health workers. In view of increasing feminisation of the global health workforce (WHO, 2016), the gender aspect of HPE would need to be carefully addressed in pursuit of universal health coverage. Chapter 8 provides more perspectives in this respect.

7.5. A revised framework for HPE governance principles

The findings of this study shed more light on the HPE governance principles in terms of giving meanings to concepts and contextualising them, and in terms of suggesting additional dimensions for governance principles. Table 6 below summarises the meanings or ingredients attached to the HPE governance principles as per the contributions of the study respondents.

Table 6: perspectives of the study respondents on meanings of HPE governance principles, Sudan

Governance Domain	Governance Principles	Meanings/ingredients
Strong state oversight	Strategic vision	• Direction for HE and HPE • Long-term perspectives • Alignment of HPE with country needs/plans • Development of policies and plans
	Proactive state	• Prioritising HE and HPE (positive state engagement) • Leading, planning, and directing HE • Encouraging bottom-up planning • Responding to the needs for democratic governance of universities
	Effective regulation	• State ability to harmonise HE • Ensuring acceptable quality and standards for HE and HPE • State function directed to streamline private HE and ensure its compliance • Relevance of regulation to both public and private sectors
	Fairness	• Nationalist approach and upholding collective benefit over ideology considerations • Non-partisan policy towards HE • Preserving common goods and avoiding discrimination
	Capacity	• Ability to develop effective policies and plans • Existence of effective implementation, coordination, and communication • Strengthening the monitoring function to ensure compliance
Empowered stakeholders and community	Participation	• Platforms for broad consultation and involvement • Community involvement in HE; role of individual community members • Promotion of individual contributions
	Inter-sectoral action	• Formal involvement of institutional stakeholders in HPE issues • Joint action on HPE by all related stakeholders • Efficient use of resources through coordinated action • Addressing the silo culture of work

Table 6: perspectives of respondents on meanings of HPE governance principles, Sudan continued		
	Accountability	• Accountability of individuals to their employer institutions • Accountability of institutions to government • Accountability of government to the public • Accountability of institutions to stakeholders and public • Accountability of actions to rules and regulations
	Capacity	• Technical expertise across stakeholder institutions • Enlightened community in relation to HE and HPE issues • Resources and logistics to support effective implementation
Robust HPE system	Responsiveness	• Responsiveness of HPE to individuals in terms of programmes offered • Flexibility of educational modalities e.g. part-time approaches, bridging programmes • Responsiveness of HPE to labour market needs • Relevance of HPE graduates to population needs • Responsiveness of HPE to international standards
	Equity	• Fair criteria for student admission • Equal opportunities for staff welfare and development • Gender balance for students and staff • Balanced geographic distribution of HPE institutions
	Ethics	• Respect for academic freedom • Impartial application of rules and procedures • Equity, especially with regards to balanced attention to all professions • Measures to address conflict of interest
	Adaptability	• Flexible forms of admission • New programmes based on emerging needs • Continuous renewal of HPE based on context
	Capacity	• Capacity for effective monitoring and evaluation to ensure compliance

The perspectives and findings of this research generally affirm the suitability of the proposed framework for HPE governance principles suggested in Chapter 2 (Figure 12). The three-pronged classification of HPE governance domains, together with the included governance principles, seem to resonate well with concepts and practice in HPE arena. The study findings do, however, led to more scrutiny and the introduction of additional dimensions resulting in further improvement of the proposed framework. The chart below (Figure 22) depicts the revised framework for HPE governance principles (a revised version of Figure 12) based on the findings of this research.

Figure 22: A revised framework for good governance principles for HPE based on study findings

7.6. Summary

This chapter discussed and tested the proposed conceptualisation for good governance principles in the context of HPE. The findings generally support the suitability and relevance of the proposed framework of good governance principles under the three categories of the state oversight, empowered stakeholders, and robust HPE system. Further clarity of concepts and contextualisation of governance principles was provided through the contribution of respondents and other data sources. The analysis helped to ascertain some dimensions for good governance in the HPE arena in Sudan, as well as identifying aspects of limitations and poor governance. The ensuing revised conceptual framework is a reflection of the dynamics and practice in the field of HPE governance in Sudan. This conceptualisation will contribute to further revision and development of the overall framework on HPE governance developed during the conceptual phase of this research (Figure 11) and will inform further analysis in this study. The next chapter will now turn to synthesising the influence of governance structures, relationships, and processes in addition to application of the governance principles on the appropriateness of graduates to population health needs in Sudan.

CHAPTER 8: IMPLICATIONS OF HPE GOVERNANCE ON GRADUATE APPROPRIATENESS

8.1. Introduction

This substantive chapter explores the study findings related to the influence of governance on the appropriateness of HPE graduates addressing the fifth research objective. The chapter starts with discussing the appropriateness notion, including its three domains of quantity, quality, and relevance and their associated concepts. It then examines implications of governance on each of the three domains. The chapter goes on to provide a synthesis of governance influence on HPE graduate appropriateness before closing with a summary.

8.2. Notion of appropriateness

Respondents interviewed in this research generally concurred with the notion of graduate appropriateness as encompassing the dimensions of quantity, quality, and relevance. Certain themes and lines of thought emerged from the interviews in relation to the three dimensions of appropriateness.

Under quantity, respondents saw the related aspects as including decisions on the required numbers and benchmarks for health workforce density to meet the health service's needs, determination of the appropriate skill mix of the health workforce, and management of the institutional expansion of educational capacity. Respondents believed that the quality dimension of graduate appropriateness relate to educational strategies, clinical training environment, educational staff, and privatisation. For relevance, respondents described some components including identification of and alignment with population health needs, geographic location of HPE institutions, gender dimension of graduates, and the balance between academic and vocational/technical education.

Despite the description of distinct components under each of the three dimensions of appropriateness, respondents also noted the simultaneous effect of some of these components on the three dimensions of quantity, quality, and relevance of HPE graduates. A Dean of a public medical school interviewed further illuminated this by stating:

> *"When you look at the imbalance in the mix of different professions, for example the production of more doctors and less nurses, you can say that this might influence the three aspects of quantity, quality, and relevance; I mean if nurses are fewer than doctors this can result in numerical shortage of cadres in rural areas where nurses are needed and it can affect quality in hospitals where doctors cannot play the role of nurses…and you know also the relevance of services to people depends on the right mix of health providers".*

Documentary evidence reviewed in this study also reflects the multidimensional influence of the described ingredients. Mahgoub (2010) noted the influence of crowded training sites on the quality of medical graduates as well as on limiting expansion of intake (a quantity dimension). Ahmed (2012) described the compounded effect of the gender dimension – increasing feminisation of the Sudanese medical student mass – on both quantity and relevance of graduates. The same observation has been noted in the context of the academic-vocational education imbalance (Eltayeb, 2015).

Noting the interdependency among the factors impinging on quantity, quality, and relevance; the sections of this chapter are structured based on the arbitrary classification resulting from the interview data.

8.3. Issues around quantity

This section presents and discusses the study findings on the quantity dimension of HPE graduate appropriateness including perspectives on defining quantity and reflecting on the related situation in Sudan. It involves subsections on numbers and benchmarks, skill mix and ratios, and institutional expansion of HPE capacity.

8.3.1. Numbers and benchmarks

Respondents interviewed in this research contributed differing views on the concept of health workforce quantity and adequacy and its implications on educating health professionals. Senior officials of the HE sector interviewed believed in the idea that HPE should not be imprisoned in responding to certain numerical requirements; it should rather provide for a platform for educating young people to realise their aspirations to become health professionals. The matter of employment and work comes later as graduates assume positions in the public or private sector, within or outside the country. However, other respondents from HE – mainly university academics – held the opinion that education of health professionals should be tied to health services needs for efficiency reasons, hence the necessity of planning the required numbers. They saw benchmarking as an important consideration to define the required numbers of health workers, pointing out the responsibility of the FMOH in this respect. Adequacy in their opinion should be defined and calculated based on the specific needs of different health facilities for different types of health workers. Respondents from the health sector side tended to value a rational planning model linking health workforce production to the needs of the health services and attainment of certain densities of health workers to the country's population. They, however, noted the dynamicity and changing nature of health needs and hence the value of joint and flexible planning between health and HE.

On the practical side, contrasting opinions emerged during interviews in relation to the challenges associated with planning for the health workforce from the angle of defining the required quantity of health workers. Respondents from academe noted the lack of meaningful guidance for HPE institutions on the required numbers of graduates to address health needs in the country, pointing out the responsibility of the health sector. A senior academic physician member of the MHSC interviewed maintained:

> *"When you ask us to educate and produce the right number of graduates for the needs of health services in the country, my first question is what is this right number and what are the health service's needs? [exclaiming]… people in the health ministry are saying that higher education is not producing according to our needs, but they didn't educate us in the first place on these needs."*

On the other hand, health sector respondents acknowledged the lack of agreed national standards and benchmarks for the health workforce density; yet they tended to believe that the HE sector plans in a silo with a lack of responsiveness even to the broad directions of the health service's needs:

> *"Yes it is the reality that we lack agreed standards and benchmarks in terms of precise numbers of graduates needed for health services; and this is, you know, a problem in many countries…but in my opinion this is not an excuse for higher education people to ignore joint planning with us in the health sector… if we sit together we can definitely come up with some agreement to balance production of health workers."* Key informant interview, Senior official, FMOH.

A respondent official from the regulatory councils also provided a perspective and expressed concern about the lack of national standards and benchmarks and the adverse consequences of that on regulation:

> *"When you look at the health workforce production and utilisation in the country, you will easily note a chaotic case [frowning]… I mean we feel that higher education is overproducing graduates, but we don't know in the first place the needs of the health services because the ministry [FMOH] has no standards for this, that situation I mean leaves us as regulators in a dilemma."*

The observation notes of this study reflect this dilemma of defining and planning the required numbers of health workers for the country. During committee meetings observed, the same situation described by some people as an overproduction of doctors was described by others as underproduction. In a meeting of the MHSC attended and observed by the researcher (MHSC meeting No 4/2015), a representative from the FMOH strongly objected to a statement by a senior academic member of the committee describing HPE schools as producing abundant

graduates for the country. Evidence from the observation notes also confirms the absence of benchmarking and a lack of agreement on the required numbers of graduates. It was mentioned several times in committee meetings observed for this study that the lack of health workforce projections in terms of numerical needs is a major challenge for orientation of HPE and its production capacity. In a meeting of the SMC Accreditation Committee observed by the researcher (meeting No 4/2015), members described the lack of benchmarks as a governance problem within the terrain of the national health system.

Documentary sources also reveal the lack of robust planning for the quantity of graduates and numerical requirements for health services (FMOH, 2012; Elmagli, 2015; Eltayeb, 2015). This research likewise, notes the absence of evidence on any existing benchmarks for health workforce density in the country.

8.3.2. Skill mix and ratios

Respondents of this study identified three types of skill mix imbalances in the context of HPE. The first is the inter-professional mismatch as exemplified by the numbers and ratios of medical students vs. nursing students; the second is an intra-professional imbalance noted in the context of nursing education where the focus is geared to high-level nursing at the expense of mid-level cadres; and the third is the lack of an ideal balance between academic education on one side and technical and vocational education and training (TVET) on the other side. Respondents noted the effects of these imbalances on producing the adequate numbers and mix of health workers to effectively operate the health services in the country, and they contributed perspectives on the three aspects of imbalance.

Inter-professional imbalance

For the inter-professional imbalance, respondents noted the rising dominance of medical education as a reflection of social demand, private investment favouring medicine, and imperatives for prestige by universities. Invariably all respondents believed that for an ideal mix of the health workforce, doctors should not outnumber nurses, midwives, or allied health personnel. Respondents generally conceived a doctor-nurse ratio in the order of 1:4 to be suitable for Sudan. This is compared to an educational pipeline which produces a reversed ratio (see Figure 5).

Respondents from the health sector expressed concern over the imbalanced educational pipeline for health workforce production. A senior FMOH official interviewed substantiated this by stating:

> *"The case of overproduction of doctors at the expense of nursing and midwifery graduates is just a sad fact…health services provision you know depends on a mix of cadres and in our environment here [Sudan] the need for nurses and paramedics is even greater due to the huge size of the country and dispersed population groups ideally served by nurses and paramedics… I see the current situation of health professions education as threatening realisation of universal health coverage in our country."*

Documentary sources reflect the rising trend of inter-professional skill mix imbalances, especially with reference to the disproportionate growth of medical schools in comparison to nursing and midwifery schools and the concerns involved (Chapter 1, Section 1.4.3.). Badr et al. (2013) noted the adverse implications on coverage and quality of health services contingent upon production of more doctors and less nurses and midwives. The national health workforce strategy 2012-2016 describes the imbalanced production of health workers as having numerical implications in the sense that it jeopardises coverage of health services through shortages of certain cadres, such as PHC personnel required to staff rural health facilities (FMOH, 2012).

During observation of the MHSC meetings, repeated concerns were raised around the relative neglect of nursing and midwifery education and the sheer size of the budget allocated to these programmes. Nursing respondents interviewed concurred with this and raised concerns about the dominance of medicine and the effect of this on shifting resources away from professions such as nursing:

> *"The whole system you now is in-service of medical schools from higher levels down to universities…doctors who are leading our educational system are biased towards their profession and I mean they tend to undermine us in nursing… as you can see now several nursing programmes are established under medical schools and not as separate nursing schools…Deans of medical schools do not spend enough on nursing programmes, in fact they marginalise them."* Key informant interview, Nurse academic, member of MHSC.

Despite the influence of cultural and social realities on the preference of medicine, nursing respondents also tended to denote a lack of effective governance as one main reason leading into imbalances. They believed that a focus on nursing and midwifery to bring in more balance is imperative and could be achieved through strong regulations and appropriate incentives, both regarded as central roles for governance.

Intra-professional imbalance

The intra-professional skill mix imbalance relates to the educational level and role differentiation within a single profession. This is most evident in nursing and midwifery where cascading roles are known to be carried out by a spectrum of nursing and midwifery cadres in the context of Sudan. In a document solicited for this study, Wali (2014) referred to three categories of nursing cadre: those with a bachelor's degree in nursing termed "sister nurses", technical nurses with diploma attainment, and staff nurses who are vocationally trained. Midwifery has also the nurse midwife with a higher level of education and the village midwife with vocational training. With the advent of the Sudan Declaration in 2001, the vocational schools were abolished, and nursing and midwifery education moved to universities. This led to the production of bachelor and diploma cadres and a shortage of vocational cadres leading to adverse implications on a comprehensive spectrum of nursing and midwifery services (Wali, 2014). The implications are most felt in rural areas where a shortage of village midwives is considered the main reason for unacceptably high maternal mortality ratios (Bella, 2011; FMOH, 2017).

Health sector respondents referred to these intra-professional imbalances as threatening both the coverage and full spectrum of health services. A senior FMOH official provided the following perspective:

> *"The abolishing of vocational schools for nurses is a big mistake in my opinion… we are left, you know with university nursing schools producing sister nurses [Bachelor nurses] not sufficient in number and not able to deal with the whole range of services… vocationally trained nurses are indispensable, and their role cannot be covered by others."*

Academic-vocational education imbalance

The imbalance between academic education and TVET is also an area of debate and concern in Sudan, as reflected by the findings of this research. Respondents interviewed noted the tendency to value academic education to the detriment of TVET that is needed to produce the technical and mid-level cadres that are highly required in the context of health services. A shortage in this category was described by respondents as leaving a gap in service provision that would not be bridged by academically trained graduates, even if in abundancy. Documentary sources reviewed also reflect the challenges involved in this respect. While the HE strategy recognises the importance of and need for TVET and dictates that it constitutes 60

percent of the total capacity of HE in the country, records demonstrate a suboptimal performance with figures reaching only 25 percent of the target (Hag Ali and Hassan, 2015).

The governance conflict around academic education and TVET alluded to in Chapter 5 (Section 5.4.4.) was described by respondents as the main culprit in jeopardising production of the highly needed vocationally and technically trained cadres, including in the health sector. Eltayeb (2015) noted the prevailing notion of superiority of academic education over TVET and the associated labour market signal undermining technical and vocational graduates. Academic-vocational educational balanced is further elaborated in this chapter under the section on relevance.

8.3.3. Institutional expansion for HPE

Documentary sources reviewed in this research demonstrate that the numerical capacity for HPE in Sudan has tremendously improved as part of HE expansion over the years, especially following the advent of the RHE in 1990. HE massification entered effect through increasing student intake from 6,000 in 1989 to reach over 170,000 in 2014 (Elmagli, 2015). The expanding pool of applicants for HE was enabled by a parallel expansion in secondary schools in the country with statistics showing a rise in numbers passing the Sudan National Certificate (secondary school leavers) from 60,000 in 1989 to 530,000 in 2014 (Hag Ali and Hassan, 2015). In addition to the government leadership on expanding the network of HEIs in the public sector, private institutions are contributing an increasing share of graduate production in HE, as discussed in Chapter 6 (Section 6.4.2.). Due to the much higher level of fees required, the private sector is seen as complementing rather than competing with the public sector in relation to student intake (Eltahir, 2015). Figures 2, 3, and 4 reflect the concomitant growth of both public and private sector HPE schools.

Respondents interviewed in this research agreed that the expansion of HPE institutions has positively influenced the availability of health workers. A respondent Ex-Minister of Higher Education voiced a favourable note on the increasing number of HPE institutions:

> *"The huge increase in medical schools and other training institutions, you know, is really great and the government is to be praised for bold action and leadership on this, I remember in our days when there is no single doctor in rural areas or even some towns… nowadays I mean doctors are staffing rural facilities and numbers of graduates are reassuring."*

Respondents enumerated some factors as enabling the massive expansion of HPE capacity in the country including:

- Strong state oversight and strategy leading into the expansion of secondary schooling with extension into rural areas and increasing access for females that mitigated gendered community traditions.
- Bold state actions to expand universities and move HE from elite enterprise to mass education.
- Adequate pool of applicants for HE in general and for HPE brought about by the increasing number of secondary school graduates.
- High social preference for studying in health professions disciplines, especially for medicine.
- Rising investment of the private sector boosting the resources and capacity for HPE in the country.
- Positive change in community awareness about importance of HE due to sociocultural and economic factors.
- Regional and international labour market signals promoting the tendency of accessing a health sector job as an economic strategy.

The observation notes of this research confirm the increase in number and types of HPE programmes applying for approval by the MHSC over the last period, with a tendency for both public and private institutions extending across the country. In a meeting of the MHSC attended and observed by the researcher (Meeting No 2/2015), the committee chairperson described the extension of private HPE institutions in places outside Khartoum, the capital of Sudan, as a positive occurrence and a desired response to the increasing social demand for medicine and health sciences.

The expansion of HE and HPE capacity in Sudan, though celebrated, has generated a quantity-quality debate among professional and public circles, and this is explored in the section on quality.

8.3.4. Discussion

Production of health workers in Sudan has witnessed considerable improvement over the past three decades with evident gains in the quantitative dimension of the health workforce. While this expansion is celebrated, its categorical and skill mix imbalance represents a concern. Adequate numbers of health workers are certainly needed and associated with a positive impact on health indicators (Anand and Barnighhausen, 2004), but it is not the absolute number that matters, it is rather the mix of an adequate health workforce. Planning of the health workforce

is effective when it ensures that the right people with the right competences are in the right jobs at the right time (Stokker and Hallam, 2009).

The influence of governance on the quantity of health workers in Sudan can be appreciated by noting the role of strong oversight and state proactivity in enabling expansion of HPE as part of an overall scaling up of educational capacity in the country. The thrust to move HE and HPE from elite to mass and the framework conducive to private sector investment are two major related policy imperatives adopted in the post-1989 era. This corresponds to an observed trend in HE globally where massification and privatisation are on the rise (Noui, 2020). It was noted long ago that medical education capacity in Sudan would need to expand to support the needs of an increasing population (Haseeb, 1967). However, meaningful action was only taken several years later, with state proactivity playing the leading role.

Despite gains, there are challenges and limitations facing the quantitative dimension of HPE in Sudan, as displayed by the study findings. The lack of agreed conceptualisation is one main caveat in terms of both defining the optimal quantity of health workers and adopting a unified planning approach.

For the first part, Sudan is no exception from the global situation where benchmarks for the density of the health workforce in relation to health services and population needs is lacking. The WHO earlier noted this gap and its efforts to address the matter resulted in suggesting only indicative benchmarks for a limited number of health professions(WHO, 2006b).

For the second part on planning, the divergence of views (rational vs. laissez-faire approaches) and the absence of a unified plan for health workforce production and utilisation can be attributed to some structural and technical factors. HE leaders' preference for a laissez-faire planning approach, though not probably appropriate for the economic situation of Sudan, might be explained by the structure of oversight and accountability where the state is pushing for massification of students for political and social gain. The dichotomy between education and health services alluded to several times in this thesis might explain the lack of agreement on a unified plan for the production and utilisation of health workers. The lack of adequate evidence and the limitations in technical capacity are also contributing factors to this planning dilemma. Planning a health workforce to suit a specific country context is a complex task requiring technical capacity and methodological rigour (Lopes et al., 2015). This capacity dimension is suboptimal in Sudan, and it has impeded the development of health workforce projections.

Taking a labour market perspective demonstrates both supply and demand-side problems. The unilateral planning of production by HE sector underpinned by a laissez-faire approach results in imbalanced cohorts of graduates. The lack of effective demand-side measures by the health system, on the other hand, exacerbates the imbalance through favourable employment conditions for doctors and academically trained graduates to the detriment of nurses and vocationally trained cadres. Developing polices to address health workforce imbalances requires an understanding of the economics of labour markets (Sousa et al., 2013), a missing dimension in Sudan.

Findings on the quantity dimension of HPE in Sudan reveal that the policy tools applied to HE produce complex and mixed results. For instance, policies on HPE expansion and promotion of private sector investment brought in numerical advantages while at the same time resulting in categorical imbalances leading to shortages in cadres for certain segments of health services; the case of doctors-nurses imbalance is typical of this. This observation entails the complexity of a policy arena where shortcomings in the policy cycle leads to unwanted results. Such policy conflicts are reported in the literature, hence the introduction of the "systems thinking" notion to provide for a holistic approach moving from a tree-by-tree thinking to forest thinking through understanding the context and relationships (Adam and de Savigny, 2012).

The quantitative aspect of HPE and the health workforce in Sudan reveals a paradox. While the number of HPE institutions is huge and their production capacity is substantial, the country has been persistently classified as being in critical shortage of health workers (Chapter 1, Section 1.4.3.). This is probably explained by factors related to the utilisation of graduates, including labour market failures, and massive emigration trends. Such factors essentially operate beyond the remits of the educational system with responsibility mainly falling with the country's health system. This demonstrates that educational governance alone will not be sufficient to address the complexities of health workforce production and utilisation. Health system governance fundamental to ensuring relevant guidance and optimisation of the demand side is highly called for to synergise with educational governance in reaching a sufficient and stable health workforce. This is an important assumption suggested by the conceptual framework developed for this study (Figure 11).

The findings of this study also reflect the role of the inequitable attention to health professions in distorting the skill mix of the health workforce. Historical, socio-cultural, and structural aspects around the relationship between medical and nursing professions seem to influence the

imbalances observed. The undermining of nursing might probably be explained by a long history of vocational training falling short of the status of university education enjoyed by doctors. There is also a strong social preference for medicine in Sudan, together with a view of nursing as being a lower rank profession with certain ethnic connotations. Based on these factors and due to medical dominance, doctors tend to assume leadership positions in the health sector, thus sustaining these imbalances through managerial influence. The hierarchal type of structure in health professions with medicine dominating has been noted in the literature. Kenny and Adamson (1992) conceived professional autonomy, economic power, unionisation, and administrative influence as factors supporting medical dominance.

8.4. Issues around quality

This section presents and discusses the study findings relating to considerations impinging on the quality of HPE graduates. After providing perspectives on the quality concept and the situation of HPE quality in Sudan, the section addresses the privatisation policy, the situation of clinical training sites, and the realities of educational staff before concluding with a discussion.

8.4.1. Conceptualising quality

Respondents of this research perceived the quality of HPE graduates as relating to knowledge and clinical skills with the term "competence" mentioned to denote this combination. There was consensus that graduate quality should be judged by the level of theoretical knowledge and practical clinical skills as pertaining to the job duties and expectations. Attitudinal aspects were not specifically mentioned but, on probing with respondents, the word "professionalism" was offered with connotations relating to ethics and communication skills. Respondents tended to value a focus on actual clinical skills to judge the quality of graduates, such as ascertaining abilities for diagnostic and treatment skills for doctors and bedside skills for nurses. Poor quality in the context of HPE was described by respondents as situations where inappropriately functioning educational institutions produce graduates lacking adequate theoretical knowledge and practical skills required for patient care and job duties.

During committee meetings observed for this study, members referred to quality as denoting certain levels of knowledge and skills leading into safe and effective practice, in addition to international competitiveness. In a meeting of the SMC Accreditation Committee attended by the researcher (Meeting No 4/2015), the committee members were referring to quality as essentially involving rising to international standards. Documentary sources likewise refer to the knowledge and skills dimensions of quality but also emphasise the attitudinal aspect

relating to communication skills, professionalism, and ethical practice (Mahgoub, 2010; Babikir, 2015; Eltahir, 2015).

8.4.2. Perspectives on status of quality

Respondents interviewed in this study cherished a history of quality HPE in the country as exemplified by an early cohort of competent graduates in medicine, nursing, and midwifery. This is substantiated by documentary sources describing the once high-quality HPE system in the country (Haseeb, 1967; Bayoumi, 1979; Bella, 2011). HE leaders interviewed tended to believe that HPE in Sudan still generates quality products, as testified by the uptake of Sudanese doctors and health professionals by regional and international labour markets. However, other respondents, including academics from universities and health sector officials, raised concerns about the hitherto situation in HPE in terms of the rapid expansion of medical and nursing schools and the associated effects on quality. A respondent Dean of a public medical school substantiated this by stating:

> *"I don't think the quality of medical graduates of today is comparable to old days, I mean the expansion of medical schools especially in areas with no adequate infrastructure and teaching staff has negative effects on quality of graduates, I mean we can feel that in the practice of medicine… the situation in nursing is similar and might be even worse."*

Documentary sources on the contemporary situation of health workforce quality are variable and do not provide for adequate evidence to assess or judge levels of quality performance for HPE. Babikir (2015) posited an adverse influence of the post-1989 expansion of HE on the quality of graduates, while noting a lack of rigorous evidence in this respect. Records of the SMC display an average pass rate of 88.5 percent for doctors in the national certifying examinations for the period 2011-2016 and anecdotal evidence reflects good performance of the Sudanese medical graduates in international exams. Karrar (2009) described Sudanese medical graduates as of quality comparable to the region and to international standards. On the other hand, an average pass rate of 29 percent for the years 2011-2016 in the SMSB entry examinations for medical specialties has generated concern and debate around quality of medical graduates. Some senior trainers attribute this suboptimal examination performance to limitations in the undergraduate medical education. Mahgoub (2010) described the current medical education system as producing unqualified doctors lacking the appropriate medical skills, attitudes, and professionalism. This is also coupled with some anecdotal evidence exemplified by clinicians complaining of the competency of young medical graduates and the lack of adequate bedside skills for practicing nurses.

This perception around quality gaps extended even to the policy makers and leaders in the health sector, as typified by this reflection from a state Minister of Health interviewed in this study:

> *"In our state we have serious shortage of nurses even in the big hospitals you know…when the first group of bachelor nurses was graduated from the university in the state here we were so glad and we employed the whole batch… but you know we were shocked [exclaiming] to discover lack of skills among those graduates… the nurses told us that they would rather work as matrons [managerial role] and not in actual nursing of patients."*

Respondents of this study suggested several influencing factors relating to perceived problems in graduate quality in the context of HPE in Sudan. These factors included:

- A lack of a national competency framework to guide curriculum development in the context of HPE, especially with respect to ensuring acquisition of commensurate levels of skills dictated by expected roles of graduates.
- Accelerated expansion of HPE institutions, especially in areas where infrastructure and resources are lacking.
- Increasing number of private HPE institutions with profit-oriented attitudes not supporting proper attention to infrastructure and resources for quality education.
- Limitations in student admission criteria in relation to verifying personal qualities of candidates and in keeping with a minimum score attainment for enrolment in private medical schools.
- Eroding educational staff capacity due to shortages, outmigration, and lack of staff development programmes.
- Major shortcomings in clinical training sites, especially in relation to inadequately performing hospitals overloaded with increasing numbers of medical students
- Suboptimal use of PHC and community facilities for education and training purposes.
- Neglect of nursing education in terms of adequate capacities for infrastructure, educational resources, and staff.

Documentary sources concur with most of these findings. Fahal (2007) noted the traditional and static nature of the medical curriculum as one quality limitation. More recent literature suggests the need for a national competency framework to guide medical education curricula towards ensuring quality graduates (Taha, 2019). The neglect of verifying personal qualities of applicants to medical schools in Sudan has been pointed out (Azizi, 2003), and the political influence on admission of students has been described as resulting into a high intra-curriculum

failure rate and a perceived fall in the standards of medical graduates (Fahal, 2007). Documentary review also reflects criticism to the expansion of medical schools amid a lack of adequate infrastructure and resources. Al Mahdi (2019) anticipated adverse implications on graduate quality due to the rising number of private medical schools in a milieu of inadequate regulatory capacity. Shortcomings and challenges in relation to training sites and educational staff have been alluded to several times (Fahal, 2007; Mahgoub, 2010; Grant, 2011). The following subsections elaborate on the dimensions of private sector, training sites, and educational staff as associated with HPE quality.

8.4.3. Private sector education and quality

Two viewpoints emerged among respondents of this study in relation to the private sector and its impact on graduate quality. The opponent camp involved mainly the public sector academics, while the proponent group is wider and included the HE officials, academics from private institutions, and health sector respondents. Opponents believed that allowing overt privatisation in HE generated problems for HPE and its quality:

> *"Privatisation [of medical education] is not good in my opinion, medicine is a sensitive and vital profession and medical education should not be subjected to profit making… look at many private medical schools today, I mean they lack suitable buildings and enough staff, I know of one [private medical school] where the dean is the only full time staff [exclaiming], that is why you know we are seeing more of poor quality graduates."* Key informant interview, Dean, public medical schools.

Proponents on the other hand held strong opinions on the need for the private sector and its unique contribution to quality of medical education, noting that privatisation has brought additional resources to HPE arena. Private sector respondents cherished the efforts of private HPE institutions in the face of a prejudiced regulatory measures:

> *"I think the private sector adds a lot to the capacity and quality of education, private medical schools are better resourced than their public counterparts and this is clear… we, as private sector face tougher regulatory measures that are not applied to public universities, I mean you can find today several public medical schools that are severely under resourced and yet licensed to function."* Key informant interview, Vice chancellor, private university.

Evidence generated by the observation notes suggests appreciation of the role of the private sector in enhancing capacity and quality of HPE. Records of the MHSC meetings reflect an increasing number of approved private HPE institutions and programmes. The issue of stringent regulatory measures applied to the approval of private sector institutions was verified during MHSC meetings observed for this study. In one of the meetings attended and observed

by the researcher (MHSC meeting No 1/2016), the committee chairperson justified the "tougher measures" towards the private sector as safeguard against any superseding profit-making agenda.

In contrast to the largely positive perspectives on the influence of privatisation on HPE quality suggested by the interview and observation data, documentary sources raise some concerns. Bella (2011) observed that the private medical and nursing schools in Sudan generally tend to depend on part-time teaching staff rather than employing full-time teachers. These institutions also lack dedicated training sites and compete with other schools over public hospitals (Mahgoub, 2010). Additionally, Eltayeb (2015) referred to anecdotes on instances relating to a lack of compliance of the private sector with post-approval regulatory requirements. The fact that private for-profit HPE institutions constitute nearly 90 percent of private investment in the sector (Eltahir, 2015), fuels the scepticism around maintaining standards amid this commercialisation of HPE.

8.4.4. Clinical training sites and quality

Respondents interviewed in this study expressed concern around the contemporary situation of clinical training sites (mainly hospitals) and the associated influence on quality for HPE graduates. Respondents believed that a proper teaching hospital or training site is fundamental for ensuring quality graduates in medicine, nursing, and other health professions. Concerns raised during the interviews included:

- The weak infrastructure and inadequate resources in many of the public hospitals used for HPE students training. These hospitals were also believed to be lacking effective clinical governance in terms of standardised protocols and guidelines.
- Training site overload where the numbers of medical students, for instance, exceed the capacity of the clinical setup in hospitals leading into inadequate exposure and suboptimal clinical experiences for students.
- Coordination problems between medical schools and the management of public hospitals used for training purposes.
- Lack of adequate supervisors for students in these hospitals including inadequate time allotted by clinicians for teaching purposes and absence of effective coordinators.
- The inability to use private hospitals for teaching purposes due to hospital owners fearing reactions from patients and their refusal to be used as cases for teaching purposes.

Documentary sources also reflect challenges with using hospitals for teaching purposes. Records of the MHSC demonstrate that out of 68 medical schools in the country in 2019, only three have dedicated teaching hospitals. Mahgoub (2010) described the crowded student groups during teaching rounds in hospitals as seriously impinging on the quality of medical education. Medical schools today are competing on using public hospitals amid an increasing dichotomy in the relationship of health services and academe. Chapter 5 (Section 5.4.6.) discussed the tensions between medical schools and the health authorities in this respect.

During observation of committee meetings for the purposes of this study, there were discussions around problems of using hospitals for clinical training. Some members were pointing out shortcomings in resources, standards, and the capacity of hospitals as training sites. There was also discussion and debate on the meaning of a "teaching hospital" and when this status is to be conferred. This last point was echoed by some interview data with respondents noting a lack of criteria for recognition of training sites:

> *"You have this ridiculous thing [laughing] of small hospitals in some towns with banners containing their names linked to the phrase "teaching hospital", I mean a teaching hospital should essentially observe some strict requirements and it should not be just as something for prestige. This chaotic situation is caused by lack of regulation, I mean application of standards and criteria."* Key informant interview, Ex-deputy Vice Chancellor, Public University

The use of hospitals as training sites for nursing students is even more challenging in the context of health services in Sudan. During observation of committee meetings, alarming views were expressed on the weak side of practical training for nurses. In one of the MHSC meetings attended and observed by the researcher (MHSC meeting No 1/2016), a Dean of a public nursing school reflected on cases of some hospitals turning back nursing students and requiring fees to be paid in return for training. This is further testified by some interview data as a respondent senior clinician (senior official in the SMSB) maintained:

> *"There is some serious issue with nursing education these days… nursing students you know visit hospitals two or three times a month for practical training… this is I mean very dangerous on quality…the nursing education we know happens almost totally inside hospitals because of the nature of this profession…nursing is a bedside work in essence and a profession that is very close to the patient."*

The use of PHC facilities for clinical training in the context of HPE in Sudan is controversial. Respondents from academe pointed out the poor and substandard situation of PHC centres as one main barrier for using them as training sites. A lack of qualified trainers, weak

infrastructure, and inadequate educational resources were shortcomings mentioned in this respect. Health sector respondents, on the other hand, noted an academic tendency of undermining PHC settings and valuing tertiary care for training purposes. Those respondents perceived the lack of adequate use of PHC facilities for teaching purposes as leading to quality and relevance problems among HPE graduates:

> *"Our education system overwhelmingly focusses on hospitals for teaching and training purposes, primary care facilities you know are not usually used despite their rich teaching potential… the lack of skills for identifying and treating common diseases and caring for chronically ill patients we observe in medical graduates can be explained in my opinion by the lack of using primary health care centres for teaching."* Key informant interview, Senior official, FMOH.

This same direction was noted during observation of committee meetings where members pointed out the missed opportunity in using PHC facilities for teaching purposes. In a meeting of the SMC Accreditation Committee observed by the researcher (Meeting No 4/2015), a senior academic member pointed out the lack of utilising PCH centres for medical students training as something unacceptable. Some documentary sources reviewed in this study also support the claims on the inadequate use of PHC centres and community health facilities as training sites for HPE students (Azizi, 2003; Ahmed, 2012).

8.4.5. Educational staff and quality

Respondents of this study overwhelmingly described problems relating to educational staff as one main culprit for HPE quality limitations. Staff-related challenges identified by respondents included: numerical shortages, demotivation due to low salaries, time-constraints caused by moonlighting, and lack of effective staff development opportunities including research and scholarly work. A few academic respondents were extremely concerned about the contemporary situation of HPE faculty. A respondent physician member of the MHSC maintained:

> *"Teachers you know are the backbone of education and without good teachers you cannot expect quality graduates…the problem today is that you have severe staff shortage in medical schools due to migration and low payment….this has unfortunately led some schools to lower the bar and today you find persons promoted not on academic merits which is not acceptable…additionally you have this thing of mobile staff [laughing] I mean teachers mostly in basic sciences who carry their bags and teach across four, five, or even more medical schools squeezing educational content to meet obligations."*

Observation notes of this study also reflect the concern around the situation of educational staff for HPE. Deliberations of the MHSC meetings repeatedly mentioned staff shortages as

adversely affecting educational quality, with some members expressing concern about the criteria for staff promotion in some universities. In one of the MHSC meetings attended and observed by the researcher (MHSC meeting No 2/2015), three members pointed out the incidence that some applications for establishing new nursing schools contained overlapping names of people as educational staff.

Documentary sources reviewed in this research describe inadequacy and quality limitations of educational staff as factors constraining the capacity and quality of HPE institutions (Fahal, 2007; Mahgoub, 2010; Al Mahdi, 2019). Along the same lines, Babikir (2015) expressed concern about the lack of national criteria and guidelines to regulate the promotion of academic staff across universities in the country. This, he claimed, led to a false impression about the competency of some staff and grievances among colleagues due to a lack of fairness in promotion.

As alluded to in Chapter 6 (Section 6.3.2.), emigration of HE staff, including HPE teachers, has escalated during recent decades as part of an increasing trend of skilled workforce migration in Sudan. Al Mahdi (2019) estimated that almost one third of the HE teaching faculty has left Sudan to join international labour markets, predominantly in the Gulf area. This massive emigration trend was aptly described by an ex-Undersecretary of the MOHE interviewed in this research:

> *"A delegate from one of the Gulf countries came to my office expressing their intentions and plans to recruit academic staff for their universities…I talked to them and tried to convince them of a part-time arrangement to enable our staff to teach with them [in the Gulf country] while also not leaving their positions here [in Sudan]… I thought that would make a win-win situation for both of us…. But you know the delegates sharply refused that and insisted on full time recruitment, and I was struck [laughing] when they turned up to me and gave me an excellent offer to leave my job [as Undersecretary for higher education] and work with them!"*

Loss of qualified educational staff is ongoing due to persisting poor working conditions and the pull from the expanding HE sector in the Gulf area. In a conference paper reviewed in this research, Magboul and Ibrahim (2015) noted the weaker staff salary structure in Sudan compared to countries in the region and the diminishing chances for overseas training in the context of sanctions on Sudan imposed by the United Sates in 1995 based on political grounds. Apart from the special admission policy for dependents of educational staff discussed in Chapter 6 (Section 6.3.1.), this research found no evidence of meaningful interventions to address the emigration of academic staff in Sudan.

8.4.6. The quantity-quality debate

The debate around quantity and quality in the context of HPE is a conceptual as well as a tactical one. The evidence gathered for this study reflects perspectives that are enshrined in rational approaches and others that are influenced by a factional type of positioning. The general thread of views among respondents of this study displayed variable viewpoints on balancing quantity and quality in HPE. Academics tended to group into two camps with teaching staff and academic practitioners invariably believing in small numbers of enrolment leading into high quality graduates, and academic leaders/officials defending an expansive approach to improve access to HE. Respondents from the health sector generally favoured an expansive approach responsive to population health improvement and linked to actual service needs. This type of grouping was also reflected by deliberations of committees observed for this research, with occasions of heated debate involving tensions around the subject matter.

Documentary sources also reflect the divergent views on the issue with academic writings expressing concerns around increasing numbers of HPE enrolment and its implications on quality (Fahal, 2007; Mahgoub, 2010; Babikir, 2015), and the health services literature blaming the restrictive nature of academe reflected in producing inadequate numbers of health professionals in particular for nursing and midwifery (FMOH, 2012).

Amid this debate, the determining factor in the case of Sudan is brought about by the political power of the state leading into the expansion of HPE, making the credit for increasing numbers seemingly superseding over quality considerations. A respondent Dean of a public medical school reflected on this:

> *"While it is well known that medical education is a sensitive issue relating to human life and therefore, I mean quality is fundamental, you find in our case that political decisions of the government lead to accepting huge numbers of applicants at the expense of quality…I mean if you want to expand you must provide for adequate resources and this is not happing."*

Respondents from academe were preoccupied by the idea of prioritising quality in view of the vital nature of the medical profession and to increase international competitiveness and reputation of HPE of the country. They seemed to be much concerned with the image of the profession rather than the adequacy of the graduates produced. In one observed meeting of the Accreditation Committee of the SMC (meeting No 2/2015), there were tough views by some academics on the increasing number of medical schools in the country. One committee member described the newly established medical schools as *"street shops with no capacity to make a*

doctor", and another member warned of ending up with poor quality doctors bringing in bad reputation and shame to the once prestigious medical education and medical profession in the country. There was no mention during those deliberations of the health services needs and how to meet them.

Health services respondents, on the other hand, tended to refute these ideas and further describe academics as being biased to an elitist view of HPE and the medical profession:

> *"This government has done good by expanding higher education against the will of some academic people, I mean there is huge need, for example, for health workers in the country and you need to increase intake to solve this issue… academic people are not right when they say increasing numbers produces low quality, I mean we are now seeing that medical graduates are succeeding in local and international exams and their performance is no less than graduates in our times [over 30 years back].., academics I mean wouldn't like to throw away this narrow elite mentality."* Key informant interview, Ex-Undersecretary FMOH.

Despite the expansive thrust exerted by the state and the increasing numbers of HPE programmes, the quantity-quality debate in the context of Sudan is unfolding with voices continuously calling for reviewing the situation. The emerging accreditation movement and practice is giving additional momentum to this debate, emphasising more the concept of quality and standardisation. A senior official of a regulatory council interviewed in this research reflected on the role of accreditation in relation to the quantity-quality debate:

> *"It is not about the numbers of intake in medical schools or the numbers of medical schools themselves, it is you know about accreditation, I mean when you have a sound accreditation system that is well implemented you can assure quality of education and graduates".*

8.4.7. Discussion

The quality of HPE graduates as determined by the level of knowledge and clinical skills is an area of dynamic discussion in the context of Sudan. The variation of views expressed around quality could be explained by the specific positioning of respondents, whether in academic or health services terrains and by political positioning as well. Due to these factors and the lack of rigorous studies, the situation of HPE quality is not adequately verified. However, some of the records related to national exams and documentary sources, in addition to anecdotes of practitioners, raise concerns that warrant attention.

Governance-related factors identified in Sudan as impinging on the quality of graduates are generally mirrored by what is reflected in the international literature. The case of India probably reflects the type of debate and the totality of the issues experienced in Sudan including

educational orientation, resources and training sites, privatisation, and educational staff issues (Dasgupta, 2014).

The private sector has certainly brought additional infrastructure and resources for HPE in Sudan and the totality of evidence in this research points to its contribution to quality. However, the influence of privatisation on HPE quality might be more contentious in view of the accelerated trends of establishing new private HPE schools and the tendency for commercialisation. Given the current realities and trends, private investment in the HPE sector in Sudan positions itself as a critical factor in the debate around quality. This goes in line with the international literature where the ramifications of the privatisation of medical education on quality are increasingly appreciated (Scheffer and Dal Poz, 2015).

The findings on the training sites for HPE in Sudan reflect a concern in terms of implications on quality. The situation is exacerbated by the increasing demand for training on the public hospitals already plagued with problems of resources. Hospitals are traditionally a unique learning environment for HPE students, but a tricky issue is the balance of a hospital mandate in relation to patient care and teaching roles (Kiessling et al., 2017). This aspect seems to be challenging in Sudan in view of increasing student load and a defective education-service relationship. Unlike a favourable past, the current situation of hospital training in the country poses a threat to the quality of medical education. Despite increasing appreciation for using PHC facilities for teaching and training purposes globally (Baerheim, 2007; Abdullatif Alnasir and Jaradat, 2013), the situation in Sudan displays limited experiences of clinical training beyond hospitals. The strong hospital-based culture enshrined in academe and the neglect of the health system to adequately capacitate PHC facilities are factors playing counterproductive to a teaching role for this level of health service. PHC centres in the countries of the Gulf, for instance, are well equipped and resourced for a teaching and training role, and this contrasts with the poorly resourced community health facilities in Sudan.

Evidence on educational staff situation for HPE in Sudan points to serious limitations. Emigration of qualified teachers probably poses one major threat on numerical adequacy and retention of the teaching staff across HE, including HPE schools. A lack of effective measures to tackle problems in this respect might be attributed to the low public spending on HE and the rather low priority afforded to educational staff. The rising privatisation of HPE is no doubt helping in teachers' retention inside the country but this is again problematic as it increases the load on the staff and supposedly compromises quality. Faculty development is widely

described as key for a quality educational experience (Steinert, 2000; Dieter, 2009). Its situation in Sudan is, however, plagued with limitations and challenges in terms of both a robust framework and adequate practice opportunities. In view of the United States sanctions on Sudan, educational staff face challenges in access to external training opportunities and scholarly activities.

Two observations around governance and quality of HPE outcomes probably warrant noting. One is that some policy imperatives such as institutional expansion and privatisation that support scaling up the quantity of graduates are associated with concerns around quality. The other observation recurring from a discussion on quantity is the influence of health system capacity and realities on functioning and outcomes of HPE. Educational quality is not determined by factors internal to educational system alone; it is heavily influenced by the health sector context such as the status of the clinical training sites and managerial collaboration (Grant, 2011). This again invites the proposition of a synergy between educational and health system governance in determining the quality of graduates.

The type of partisan positioning revealed by the data in this research in relation to the quantity-quality debate is possibly explained by the doctrine and tactical standings within academic, health services, or political quarters. The restrictive view of academics and the expansive perspective of health services personalities around the quantity-quality balance of HPE in Sudan generally reflect a trend in international debates. In some countries where academic voices are strong, the momentum has led to moratorium of medical education programmes (Wong and Abdul Kadir, 2017); while in other places where issues of health workforce shortages have jumped to centre stage, capacity has expanded despite a legacy of restriction in the name of quality (Norcini and Banda, 2011). In the United States for instance, there was realisation that the major reforms to medical education resulting from the 1910 landmark report of Abraham Flexner had adversely affected quantity of health workers despite their positive influence on quality and standards. Shortages of doctors started to be felt in the country and the stark case of criticism to the Flexner reforms (in the aspect of capacity) was reflected by Williams (1966, p.956) who maintained: *"The Flexner doctrine is dead. As sickness increases, we need quantity production of high-quality physicians."*

Notwithstanding the quantity-quality debate, the way out for Sudan might be in a rational approach to emphasise both capacity and quality in the context of the thrust toward universal health coverage and population health improvement. In view of the substantial expansion of

HPE over the past few decades, an immediate focus on quality is warranted. A positive move in this direction is already established in the country as testified by governance response to quality improvement. Since 2003, the MOHE has introduced quality structures and guidelines and medical education followed suit by introducing the accreditation programme.

The focus on quality, however, should not deter attention away from capacity issues, especially that Sudan loses substantial numbers of health workers to regional and international markets. Any substantive restrictions in educational capacity can lead to shortages of health workers in the medium to long term. The way out could probably be a balance of quantity and quality through an efficiency lens (Norcini and Banda, 2011). Approaching quality through efficient use of resources would probably be the best option for a country like Sudan with adverse economic realities.

8.5. Relevance

This section presents and discusses the study findings on the relevance of HPE graduates. It includes subsections on perspectives on relevance and its realities in Sudan, the notion of population health needs, the academic vs. technical/vocational education balance, and issues around gender.

8.5.1. Perspectives on relevance

Respondents of this study saw relevance of HPE graduates to population health needs as an essential concept and a goal for educational systems and institutions to pursue. Respondents described the relevance of HPE and its graduates as relating to ensuring consideration of the following aspects in the educational process:

- Epidemiologic profile and pattern of diseases and priority health problems in the country.
- Sociocultural aspects including norms and traditions and health seeking behaviour of people.
- Skill mix dimensions of the professions to enable the team approach to addressing health problems.
- The gender dimension to respond to established social traditions such as female patients strongly wanting to be seen by female doctors, in addition to the inherent female nature of some professions such as midwifery and nursing.
- Rural background of applicants as this facilitates rural placement after graduation.

- Mastery of communication skills, cultural competency, and ethical behaviour towards patients and community in handling health related issues

Academic respondents expressed a positive perspective with aspects of relevance of HPE in the country, noting the contextualised nature of educational programmes:

> *"Our education for health professionals [in Sudan] is highly relevant in my opinion as our curricula are prepared based on the common diseases and pathologies in the country and students are largely natives who come from different backgrounds within the country, I mean they are capable on graduation to serve different communities in the country."* Key informant interview, dentist member of the MHSC.

Health sector responders on the other hand expressed concern around the relevance of HPE graduates in relation to the discrepancies between graduate competencies and the actual needs and realities of health services. A senior FMOH official interviewed provided the following perspective:

> *"There is, in my observation, some major problems with relevance of medical graduates in this country… I mean when young graduates come to us for internship period, they tend to be not aware of protocols to deal with the common diseases in the community such as childhood infections and malaria… a lot of effort is exerted during internship training to prepare young doctors for the actual practice in the health services."*

As discussed in Chapter 1 (Section 1.4.3.), documentary sources reflect concerns around the relevance of HPE graduates in Sudan mirroring a global image. In a book reviewed in this research, Bella (2011, p.57) eloquently noted the paradox, commenting on the relevance of medical graduates in Sudan: *"Doctors study medicine which they do not practice, and practice social sciences which they did not study."*

During meetings observed for this research, members pointed out problems in the relevance of graduates. In one of the observed meetings of the SMC Accreditation Committee (meeting No 2/2015), a member raised concerns about poor communication skills of the newly graduated doctors and told a story of one young doctor who failed to take a proper history from a patient of a rural background due to cultural competency limitations. In another meeting attended and observed by the researcher, a nurse member of the MHSC pointed out the lack of social acceptability of the new medical assistants' cadres by rural population as their ages were much younger than the traditional medical assistants used to staff rural health facilities (MHSC meeting No 1/2016). Karrar (2009) referred to the introduction by the SMC of an initiative on promoting professionalism among medical graduates in response to voices noting problematic practice.

8.5.2. Notion of population health needs

If relevance of graduates is linked to the notion of population health needs, it is pertinent to state here that this research uncovers a controversy in this respect. Respondents, especially from academe, expressed a lack of clarity on the health needs of the communities in Sudan and the means of ascertaining those needs. This was more overt among university academics interviewed in this research:

> *"When people in the health services describe our graduates as not relevant to the health system and population health needs, I always wonder [exclaiming] what are those needs and where can we find them?...there is nothing existing in terms of scientific document or menu telling us about specific needs of health services and population…what we are doing in education is that we are using our experience and common sense in orienting our curricula and teaching towards the country needs as we know and feel them."* Key informant interview, Deputy Vice Chancellor, public university.

Respondents from regulatory councils concurred with the academics' views and noted the lack of agreed documentation of the population health needs in the country. They, however, posited that study of medicine should not be imprisoned in responding only to local needs as doctors are required to demonstrate the competence to practice internationally as well. This direction of thinking was also verified during observations of the SMC Accreditation Committee meeting, where several members were emphasising the international competitiveness of medical graduates. In a meeting of the SMC Accreditation Committee observed by the researcher (Meeting No 2/2015), a senior academic member warned against tailoring medical curricula to local needs and forgetting the importance of the international dimension of medicine. Documentary sources reviewed in this study reflect these tendencies relating to considering global relevance of HPE graduates. Grant (2011) noted the aspiration to excellence and international benchmarking in the context of curriculum review in Sudan. Even among political and governmental circles in the country, there are expressions of appreciation that the Sudanese physicians are excelling outside the country, bringing in pride to the quality of medical education in Sudan (Elsheikh, 2015).

Health sector respondents admitted the existence of limitations in precisely identifying and documenting the population health needs to provide a menu for guiding HPE. Several possible reasons were mentioned by these respondents for the lack of clarity on health needs, including poor data and weak health information system, a lack of capacity and funding for health research, dichotomised actions, and coordination bottlenecks. Notwithstanding this, a respondent FMOH official conceived the problem to be in the academic terrain:

> *"People from academia do not look at our reports, I mean these reports tell about the epidemiology and common health problems in the country as well as data on social and cultural aspects… these [reports] can better guide curricula for medicine and other health professions but you know, academics do not listen to us…I give you an example of a case when we approached some medical schools to include the protocols for treatment of malaria in the curriculum and we promised to fund the curriculum revision but you know, nobody listened to us."*

Documentary sources reviewed in this study confirm the limitations in documenting the population health needs in the country and point out the lack of coordination as a culprit. Early writings in Sudan described education and training systems as embedded in health services and thus conforming to disease patterns and community health needs (Kendall, 1953; Haseeb, 1967). With the increasingly dichotomised educational and health systems, a divergence of educational and health services objectives emerged, and curricula became entirely developed within the academic terrain (Azizi, 2003; FMOH, 2012). The influence of the dichotomy on the shortcomings in identifying population health needs is also echoed by the regulatory point of view. A respondent official from the regulatory councils signified this by stating:

> *"Yes I agree there is lack of clarity about this issue of population health needs, you know as regulators this is very important for us to know in order to guide our accreditation standards…internationally these needs are identified by stakeholders including academics, health services people, professional bodies and others…but you know in our situation [Sudan] unfortunately there is no joint effort on this exercise."*

In the context of discussing the notion of population health needs, respondents also provided perspectives on the concept of social accountability as linked to the relevance of HPE. Academic respondents referred to the engagement of public figures and community representatives in school boards and committees as supporting the orientation of curricula towards addressing the health needs of communities. They, however, noted the lack of adequate resources to conduct community diagnosis to further ascertain health needs. Respondents from the regulatory councils pointed out the efforts of the accreditation programme of the SMC to incorporate social accountability dimensions into the accreditation standards and the expected role of this in enhancing the relevance of HPE. Health sector respondents, however, criticised the approach of viewing social accountability as a bilateral relationship between HPE schools and communities. A respondent Ex-Undersecretary for Health further delineated this:

> *"Academics are taking social accountability as the interaction of medical schools with communities without passing through or involving the health services… I mean this is a defective view, true social accountability should come through medical education and*

health services working together to engage community, incorporate its views and needs, and address its health needs and concerns."

While the evidence reflects the lack of meaningful community involvement and social accountability at national sphere, documentary sources suggest a better situation for social accountability at sub-national level. Elsanousi et al. (2016) described the experience of the Gezira medical school with social accountability as providing real interaction with community views and needs in a milieu of strong relationship of the school to the local health system. This is supported by the discussion in Chapter 5 (Section 5.4.6.) which shows useful synergies between HPE and the health services at decentralised levels to provide socially accountable services to the community.

8.5.3. The case of academic versus vocational education

Respondents of this study viewed the imbalance between academic education and TVET as an issue adversely impinging on relevance of HPE. Perspectives however, differed on the causes and associated factors. Health sector respondents tended to blame the HE culture that focuses on academic education and undermines TEVT, with educational institutions in both public and private sectors prioritising academic programmes. On the other hand, respondents from academe generally believed the lack of resources and contradicting signals from higher government levels about TVET as factors that led to inadequate enrolment of students in the technical and vocational pathway. They mentioned the case of the government imposing the introduction of the NCTTE which created a conflict with the already established efforts within HE to scale up TVET (see Chapter 5, Section 5.4.2.).

Documentary sources reviewed in this study reveal an interesting case of comparison and contrast between academic education and TVET in relation to relevance. Bella (2011) provided a detailed account on the experience of midwifery training in Sudan marked by the establishment of Omdurman Midwifery Training School in 1921. The school was pioneered by the British midwife Ms. Mable Wolff who was later joint by her sister Gertrude. The educational model was described as integrated with the health services in terms of objectives and curriculum design and content. The intake of students was planned based on a midwife for every village as a service target. Student admission observed criteria such as rural background, geographic balance, and nomination by community leaders. Pedagogy depended on local culture, using proverbs, and adapting appropriate technology such as making use of plastic and textile remnants for simulation. The author describes teaching strategies that used "women vocabulary" and the smell and taste senses to identify drugs to suit the context where illiterate

candidates were enrolled. The school building was attached to the main maternity hospital to ensure integration of theory and clinical training. Following initial success of the school, a decision was taken to decentralise midwifery training and a network of midwifery schools ensued in different parts of the country under supervision of the mother institution.

The experience of midwifery training in Sudan was described as highly relevant and influential in transforming midwifery service from a primitive unsafe practice to a modern type of care. Impressive results included better deployment and retention of midwives, reduction of maternal mortality, and improvement of mother and child health (Kendall, 1953; Bella, 2011). The midwifery school received recognition by renowned visitors including academic figures and health services personalities from the UK. Bella (2011, p.150) referred to visits and statements by two eminent presidents of the Royal College of Obstetricians and Gynaecologists. Mr John Fairbairn commented during his visit to the school in 1936 *"their school made me feel humble as a teacher"* and Sir Eardely Holland commented in 1946 *"the work of the school and the influence that spreads from it was, I felt, more appealing than anything I knew of in all medicine."*

In a report solicited for this study, Wali (2014) described similar arrangements for training of nurses and medical assistants in Sudan following establishment of vocational schools at the beginning of the 20th century. Nursing schools were established inside hospitals and nursing students were enrolled based on service needs and provided with stipends and apprenticed into the nursing profession. Based on record and years of practice, some nursing graduates are selected to join further training to become medical assistants prepared to staff rural health posts providing wider health care for communities. The role of the medical assistant in Sudan (known as Al Hakeem, meaning the wise man) is well known and documented as the cadre was instrumental in extending health care to the vast rural populations at times when physicians were in jeopardy.

In contrast to the experience of midwifery and nursing, medical education history in Sudan displays challenges in terms of organisation and relevance. Despite the undeniable role of education of physicians and their pioneering contribution to health arena in the country, medical education falls short of the relevance attributes experienced with vocational training of nurses and midwives (Bella, 2011).

Respondents of this research concurred with the proposition that the study of medicine in Sudan started as an elite enterprise with limited student intake valuing academic criteria and highly

skewed towards urban settings and elite quarters. A respondent FMOH official reflected on his personal experience of joining the medical school back in the 1960s:

> *"I was accepted in 1968 based on my academic achievement to study medicine in Khartoum…at the interview my rural background was like taken against me and they tried to lead me to study at the institute of education to graduate and go back to teach in primary schools in my rural setting… later on in the medical school I came to appreciate this type of thinking as I used to hear the phrase 'medicine runs in families'… yes medicine was highly elite as a profession, but you know, with expansion during recent decades things are changing."*

Documentary sources reviewed in this study also reflect the challenges of relevance in the history of medical education in Sudan. The course of studying medicine was also cumbersome and the attrition rate of students used to be high. Haseeb (1967) noted that out of 789 students enrolled in the medical school in Khartoum between the years 1951 and 1966, only 399 managed to graduate, reflecting an average attrition rate of nearly 50 percent. Despite the declared objectives of the medical school following its establishment in 1924 to build up a cadre of Sudanese doctors to address disease pattern and health needs of the country, the educational orientation, and the curriculum followed mirrored international trends. John Bryant (1969) cited in Bayoumi (1979, p.165) stated:

> *"The medical school in Khartoum faces the challenge of preparing its graduates for the awesome health problems of the Sudan; it has been attempting to do so through a traditional British-style curriculum. Not surprisingly, the students are more interested in, and better prepared for, hospital-based medical care than in the quantitative problems that are so prevalent."*

Clinical training in the medical school has been predominantly hospital based and largely geared to secondary and tertiary care. This has historically raised concerns about medical education and was hypothesised to fuel a trend of emigration among Sudanese medical graduates (Bayoumi, 1979). The tendency of graduate doctors to abstain from deploying to rural areas could be partly explained by the prevailing medical education model. As pointed above, the vocationally trained medical assistants were extensively deployed in rural and remote areas to compensate for the gap in physicians.

Despite huge expansion and better geographic coverage of medical education today, the legacy of the early times is still felt in the curricula and education strategies across medical schools, leading to shortcomings in relevance (Bella, 2011). Medical education could probably learn much from the experience of the vocational training in health in terms of integration with the health services, educational planning, curriculum strategies, and practical training (Wali,

2014). The following chart (Figure 23) summarises the research findings on the main points of comparison and contrast between vocational and academic education in Sudan.

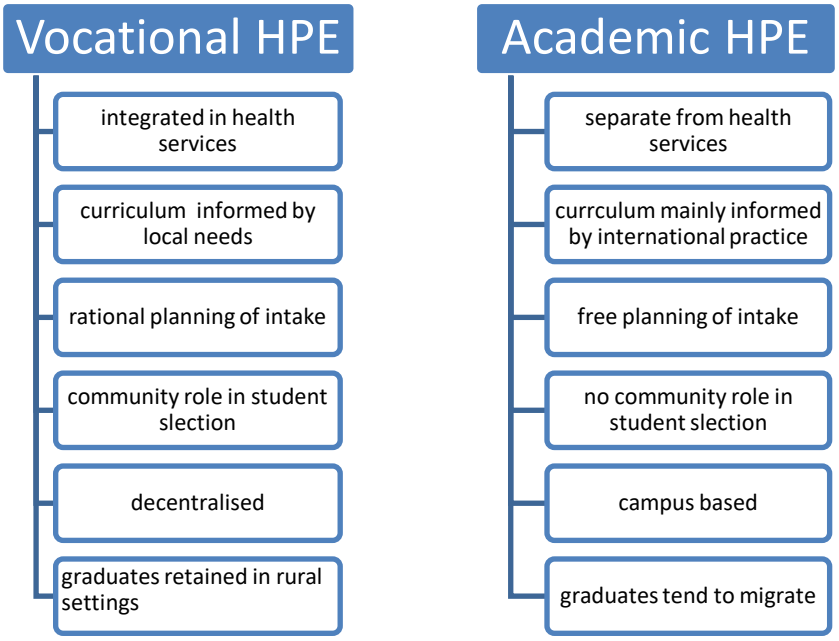

Figure 23: Comparison between vocational and academic educational models in Sudan

8.5.4. Gender and relevance

Two aspects of the gender dimension of relevance emerged from the interview data. For the first aspect, respondents thought that the biological sex itself is associated with the relevance of health services for the community. There were repeated mentions of the example of female patients in some communities in Sudan refraining from accepting male health providers, especially in maternal and reproductive health issues including pregnancy and childbirth. The second aspect related to how gender balance is approached in the country in the pursuit of ensuring access and acceptability of health services. Responses generally segregated into two differing views in this respect. Respondents from a health services background, in addition to a few academics, raised concerns about increasing feminisation and noted the lack of interventions to tilt the balance towards males in the health professions:

> *"Our health workforce is getting more feminised, you can see now the rising numbers of females in medical schools…Nursing and midwifery are largely female professions…I am not against dominance of females in health professions but you know I am worried not to see any steps taken by the government or authorities to balance the situation…I mean females do not prefer certain specialties and do not go to rural areas and most of them get carried away with family and social obligations…in that case you need to ensure adequate number of male providers."* Key informant interview, State level Minister of Health.

However, other respondents, including all females interviewed, saw the problem not in the increasing female numbers but rather in the lack of "gender-sensitive working conditions". There was mention of lack of flexible working hours, poor facilities and amenities for females such as lactation rooms, and inadequate security measures as factors adversely affecting deployment and performance of females in the health professions. Female respondents were passionate about a substantial existence of women in the health profession. A respondent female Dean of a nursing school maintained:

> *"Females you know are very suitable for a caring profession such as health, their rising numbers should be a plus for health care… the problem you know is dominance of male mentality which I mean led us into male type decisions and work environment… this is unfair, and it should be rectified, and you will then see how females are useful and productive."*

The observation notes of this study confirm the inertia towards devising policies or measures to adjust with the rising feminisation trends in HPE and the health workforce. As pointed out earlier in Chapter 7 (Section 7.4.2.), complexity and sensitivity of the gender issue blocked any meaningful discussion during the committee meetings observed. During a meeting of the SMC Accreditation committee observed by the researcher (Meeting No 4/2015), a member suggested inclusion of gender balance as part of the accreditation standards for medical schools, but the chairperson reacted firmly against the suggestion.

Documentary sources reviewed in this study reveal that the gender dimension continues to shape HPE in the country with an ever-increasing female presence in HEIs. Despite the overall picture showing female dominance, there are some deep-seated gender biases in the context of HPE, HE, and the health system. Mohamed nour (2013) noted the presence of a gender gap in skill level, share of women in economic activities, labour force participation rate, employment and return to education in Sudan. Professional and academic achievements of females in medical education and health care are described to be lower compared to their male counterparts (Mohamed et al., 2012; Ibn Auf et al., 2019). In the context of the Sudanese community, cultural barriers and family commitments are known to impinge on the professional and academic potential of females. The challenge therefore, as described by (Mohammed et al., 2018), relates to optimising gender-sensitive working conditions in both academe and health services.

8.5.5. Discussion

The question of relevance is a highly pertinent one for HPE and its output, graduate professionals. The global literature suggests that, despite educational reforms, relevance of graduates to population health needs is a caveat across HPE programmes (Frenk et al., 2010; Celletti et al., 2011). The totality of evidence from Sudan reflects similar concerns and concurrence with this global observation. The country, however, has witnessed important policy imperatives promoting relevance of HE, including HPE. Expansion of educational capacity with notable geographic coverage by institutions, admission policies sensitive to rural and socioeconomic considerations, and an open policy towards female participation in HPE stand out as prominent examples. There are signs from records and administrative reports to support the contribution of such policies to deployment and retention of health workers in states and rural locations, a fundamental dimension of relevance. Interventions such as inclusive admission policies and rural location of educational institutions are reported to produce similar effects in other settings, especially in terms of retention of graduates and their relevance to local needs (Lueddeke, 2012).

Notwithstanding these positive dimensions for relevance, there are some challenging aspects for Sudan in this respect. These include issues around defining and incorporating population health needs, the balance between academic education and TVET, and the rising feminisation of graduates amid work environment challenges.

The evidence in this research reflects both conceptual and practical problems in approaching population health needs in Sudan. The tendency among academics to point out the health sector as being solely responsible for defining the population health needs contrasts with the line of thought in the literature where the definition of those needs is regarded as a collective responsibility among health and educational stakeholders (Boelen and Heck, 1995). Despite rising attention being given to the concept of social accountability of HPE in the country, concerns still remain around community engagement especially at the national level. The current situation might be explained by a strong culture of medical education still enshrined in western medicine and a tendency among the medical community to value internationalisation of HPE, in addition to the persistence of hierarchies in Sudan where community engagement is not valued and decisions tend to be made by committees dominated by persons in power.

The historical development of vocational and academic educational paradigms in Sudan provides for an interesting compare and contrast case. It, however, represents a missed

opportunity for mutual learning. Unlike the academic education which operates separately with a laissez-faire planning approach, vocational education in Sudan has grown within the remits of the health service and managed under overall health planning. At a time when Sudan is abandoning its once rich system of vocational education, global calls are emerging for promoting technical and vocational education for health care (WHO, 2016).

The increasing feminisation trends in HPE in Sudan corresponds to a global picture where females constitute up to 70 percent of the global health and social care workforce (Betron et al., 2019). The case of Sudan, however, reflects inertia in addressing the gender dimension of the health workforce in terms of planning intake for HPE or ensuring a female-friendly work environment. This inertia is probably explained by the lack of statistics and rigorous evidence on the gender dimension of the health workforce, and the sensitivity of discussing gender issues in the context of the country. Confusion and inertia can best be used to describe the current approach to gender dimension of HPE in Sudan. Other countries in the region with similar trends are considering gender optimisation measures, such as enhancing health system and labour market readiness for a female dominant health care (Mohammed et al., 2018). The lack of gender streaming measures amid the rising feminisation trend in HPE and the health workforce call for further research to examine the situation in Sudan and provide evidence to support an appropriate response.

As observed in the discussion of quantity and quality dimensions, the very policies that brought fruitful results to relevance were also associated with some adverse effects due to the way in which they were developed and implemented. Educational expansion resulted in massive skill mix imbalances, privatisation has tilted admission policy towards urban high-class candidates, and gender realities mean increasing feminisation with implications on health services coverage. The explanation to this policy contradiction is probably multifaceted. There is lack of systems thinking in planning and devising polices to identify and modulate any inherent inconsistencies. Time spent on careful planning prior to action is described to be repaid by a well-managed process that requires no repair (Gale, R. and Grant, 1997). The situation is further exacerbated by the dichotomised action in terms of policy setting and implementation. A third possible aspect is the established weakness in monitoring and evaluation of policies in the context of HPE and the health system in Sudan. The example of remote states in Sudan not retaining medical graduates who studied based on a quota system is a typical case of inefficiency and opportunity loss.

8.6. A synthesis of governance influence on appropriateness

Based on the study findings discussed in the sections above, this last section synthesises the influence of governance arrangements in Sudan on the appropriateness of HPE graduates in terms of quantity, quality, and relevance. Some trends are identified and the governance related factors with a bearing on appropriateness are further analysed to identify the lines of action and the prospects for strengthening HPE governance.

Governance is shown by this research to be critically important for the appropriateness of HPE and its graduates. The story of Sudan reflects both evolutionary and revolutionary changes in the sector of HE and HPE brought about by an influence of governance on quantity, quality, and relevance of graduates. Strong state involvement in HE, transformational policies, and burgeoning relationships and dynamics among governing entities are shaping the contemporary situation of HPE with several gains but also bottlenecks and challenges.

With an increasing production of HPE graduates, the health workforce sector in Sudan is ever-expanding and this reflects positively on the human capital for the health system. Factors such as the skill mix imbalances, health labour market anomalies, and emigration due to poor working conditions and low remuneration are jeopardising the full use of the quantitative potential. The massive scaling up of student intake has generated debate and concerns around quality of the once-robust HPE sector of the country. Thinning of educational resources, limitations of clinical training sites, and educational staff losses are among factors generating both a system response and an ongoing debate on graduate quality. The relevance of HPE has benefited from the geographical expansion of educational institutions, the diversified admission policy, and the promotion of gender participation. Yet, issues around educational orientation, gender streaming, skill mix imbalances, and increasing commercialisation of HPE need to be addressed to optimise the situation.

A trending perspective to contemporary HPE in Sudan reflects some important phenomenal dominances. There is rising privatisation of educational offerings, a dominance of medical education over other HPE disciplines, increasing feminisation trends, a dominance of academic over vocational education, and rising emigration waves. These phenomena are central to quantity, quality, and the relevance of HPE and its graduates. They are either resulting from direct governance influence or amenable to governance interventions. These aspects are factored in the discussion to come in this section.

The analysis in this chapter uncovers complexity in terms of ascertaining the influence of governance on appropriateness of HPE graduates in Sudan. Governance structures, relationships, and processes exert dynamic, multidimensional, overlapping, and sometimes conflicting effects on the three aspects of quantity, quality, and relevance of HPE graduates. The major reforms of the post-1989 era have resulted in policies and interventions with ramifications across the three dimensions of appropriateness. To disentangle governance complexities, six main observations emanating from the study findings warrant discussing. These are: the lack of adequate conceptualisation; the conflicting effects of policies; the governance dichotomy; the imbalanced application of good governance principles; the sociocultural preferences in the context of HPE; and the challenge of implementation, monitoring, and evaluation. These six dimensions are examined in the following paragraphs.

8.6.1. Lack of adequate conceptualisation

On this dimension of the guiding concepts, there is either lack of, or disagreement around, important concepts in the educational and health arena in Sudan. An absence of benchmarks for health workforce density and mix and the disagreement on a harmonised planning approach are two major limitations for robust health workforce development, especially for the production and utilisation of graduates. This is complicated by the lack of long-term health workforce projections required to guide enrolment and balance for HPE. Education of health professionals is a resource-intensive, long-lead process, hence conceptual clarity and a strategic view are fundamental to ensure effectiveness and efficiency. The absence of national competency frameworks to guide HPE curricula, besides the lack of clarity around ascertaining population health needs, are factors playing counterproductive to ensuring quality and relevance of HPE and its graduates.

The lack of conceptualisation might be attributed to both local and global factors. Locally, there is dearth of research and evidence on HPE and health workforce development. The field of educational development and governance in Sudan is rudimentary with no adequate capacity to support theorising and conceptualisation. This dilemma is part of an overall poor spending on educational and health databases and research in the country. On the global front, theorising around competency based and socially accountable educational systems is still to be testified by significant best practice models capable of offering adequate lessons for uptake. Crystallised actions on a transformative HPE that is competency driven are still to be fully realised (Frenk et al., 2010). Those experiences emerging on competency-based education are also criticised in terms of both conceptual and practical considerations (see Chapter 2, Section 2.6.2.).

8.6.2 The conflicting effects of policies

This observation revolves around the multidimensional and often conflicting effects of educational policies on the appropriateness of HPE graduates. Analysis under quantity, quality, and relevance in this chapter shows that some policy interventions resulted in desired effects in relation to one domain while exerting adverse consequences in another domain. Examples are given on the effects of institutional expansion, privatisation, and admission policies. In some instances, the conflicting influence is experienced at the level of a single policy intervention such as the effect of expansion policy on increasing the overall numbers of graduates while distorting the skill mix with resultant shortages in certain professions. Table 7 below provides a summary of the multidimensional effects of governance interventions on appropriateness of HPE graduates in Sudan, as suggested by the data of this study.

Table 7: the multi-dimensional Effects of governance policies and interventions on HPE graduate appropriateness in Sudan

Governance interventions	**Effects on appropriateness of health professions graduates**		
	Quantity	**Quality**	**Relevance**
HPE expansion	• Improved total production • Categorical shortages (e.g., nursing shortages)	• Implications on quality due to expansion amid poor resources • Distorted skill mix	• Improved geographic distribution of institutions
Privatisation policy	• Enhancing production of health workers (top-up effect)	• Equivocal evidence on quality • Commercialisation	• Focus on medicine leading to skill mix imbalance • Urban-biased
Admission policy	• Positive effects through multitude of admission criteria enhancing access	• Adverse effects brought by non-academic criteria (political and ideological)	• Positive effects through diversity in student population, equity, and social representation
Sudan Declaration 2001	• Adverse effect through resulting into critical shortage of nurses and allied health personnel	• Perceived improvement of quality due to upgrading educational level	• Adverse effects through shortages of midlevel cadres especially in rural and remote areas
Accreditation of medical education (SMC programme)	• No ascertained influence	• Quality enhancement through improvement of standards and resourcing for medical schools	• Skewed coverage for medical schools leaving nursing and the rest behind
HW planning	• Laissez-faire approach leading to increased production but distorted balance	• Perceived negative implications due to student numbers stretching resources	• Lack of measures to ensure skill mix balance negatively affecting rural health coverage

It is, however, pertinent to note that these policy interventions may not be inherently conflicting but the way they are designed, implemented, and monitored (or not) results in the observed discrepancies. The compartmentalised approach of planning and acting in silos that characterises the HPE arena in Sudan might be playing the major role in this situation of policy conflict. A systems thinking that appreciates complexity, recognises interconnectedness, and considers the context of relationships in the design and implementation of policies and interventions (Adam and de Savigny, 2012) is warranted in Sudan.

8.6.3 HPE Governance dichotomy

The observation around the governance dichotomy relates to the locus of governance whether within the educational or health system terrain and the links (and delinks) involved. It has been systematically observed during the analysis that the quantity, quality, and relevance of HPE graduates are not determined by governance interventions at the education domain alone. Arrangements beyond the educational process are needed to optimise graduate appropriateness. Of paramount importance is the health system governance and its synergy with educational governance. Interventions to optimise the labour market and to strengthen clinical training sites, in addition to measures to improve and re-orientate work environment, are all health system examples with direct influence on appropriateness of HPE graduates. Health workforce planning probably illustrates the utmost importance of a synergistic relationship between education and health. Beyond the educational and health systems, there is the imperative of ensuring a framework for wider stakeholder coordination and engagement. The cases of governance conflict discussed in Chapter 5 reflect the consequences of defective relationships and inadequate stakeholder streamlining on HPE appropriateness. The lack of an adequate voice for the community at a strategic educational level alluded to several times in this thesis is also a gap in this respect.

A synergistic relationship and complementarity between educational and health governance is primarily important for robust policy and planning, and as a base to effectively engage other stakeholders. While the literature is strong on the urgency for such synergy, the practice globally shows situations of delink and dichotomy between education and health (Frenk et al., 2010; Celletti et al., 2011). The experience of the Islamic Republic of Iran in realising a structural integration of medical education and health services has alleviated the dichotomies and brought in desirable results to the capacity and outcome of HPE (WHO, 2006a; Marandi,

2009). This type of arrangement may not be the only way out, but it signals the need for robust governance to ensure effective coordination for a health workforce development fitting in with population health needs.

8.6.4 Imbalanced application of good governance principles

This observation relates to application and balance of good governance principles in HE and the HPE arena in Sudan. The good governance principles identified by the study (Figure 21) as essential to support the appropriateness of HPE graduates are synergistic in nature. Their application needs to be comprehensive, balanced, and concerted for effective results to be achieved. It is however observed that while some of these principles such as strategic vision and proactive state are clearly felt, others such as effective regulation and intersectoral action are rated lower in implementation with aspects relating to poor governance.

Some of the principles such as participation and consensus orientation are widely adopted but their implementation might entail selectivity and marginalisation of some stakeholders. A process that is seen as participative by some entities might be viewed as exclusionary by some other factions. For instance, the academics were not in agreement with the description of government and managerial circles of HE polices as participative. Academic voice was described to be undermined in the context of major HE policies in the country. A systems approach to the application of governance principles is fundamental to ensure synergies and avoid dichotomies and adverse implications.

8.6.5. The sociocultural preferences and medical dominance

The observation around sociocultural factors in the context of HPE in Sudan is important. Although not essentially a governance domain, the sociocultural preferences and issues of professional dominance have bearings on the balance and outcomes of HPE. As noted in the context of Sudan, there is substantial social preference for studying in health disciplines and this has enabled diversity, expansion, and, supposedly, the quality of HPE. Yet, the overwhelming preference for studying medicine is contributing, among other factors, to a distorted skill mix of graduates. This is exacerbated by a lower social status for nursing and midwifery with social class connotations. The problem is further complicated when it is taken to professional spheres where subordination of nursing and midwifery in the context of medical dominance emphasises the imbalances. The unchallenged leadership of the medical profession still maintains the leverage of distorting policies and interventions in the context of the need for a holistic approach to health workforce development.

The sociocultural factors are, however, amenable to governance interventions that can modulate the situation. The experience of the AHS in scaling up nursing education through waiving tuition fees and providing positive employment signals has resulted in a considerable number of applicants for nursing and midwifery, including high score achievers. It has also been noted that candidates represented different tribal backgrounds helping to alleviate the longstanding ethnic connotations of the nursing profession. The recent increase in Sudan of candidate doctors joining family medicine specialty programme is mainly attributed to a labour market signal, although coming from outside the country (Elsheikh, 2015). Evidence from the literature reflects similar challenges in balancing access to HPE in the context of social preferences and career choices. The case of attracting medical graduates to pursue careers in general medical practice in the UK is typical of a policy thrust amid preference for hospital-based specialties (Lambert et al., 2017).

The professional dominance issue on the other hand is globally experienced with powerful physician leadership styles. Nurses are mostly viewed as lacking influence and as doers rather than strategic thinkers (Godsey et al., 2020). In contexts such as Sudan, this form of stereotyping is exacerbated by the fact that nursing is largely a female profession. However, policies are experienced in some settings that facilitated taking nursing from "bedside to boardrooms" through leadership development (Institute of Medicine, 2011). Some forms of emerging practices such as prescription responsibilities for nurses are probably effective in enhancing nursing image and leadership, and improving the professional balance (Cooper et al., 2012). The lesson is that deeply rooted sociocultural aspects of professional dominance can be amenable to policy and governance interventions aimed at empowering certain professional groups.

8.6.6. Problems of implementation and monitoring

This last observation revolves around implementation and monitoring and evaluation as vital components of the policy cycle. The analysis in this study shows the gap in translating some policies and decisions into action and the consistently week monitoring in the context of regulation and policy implementation. The partial and selective implementation of the package of reforms declared during the HE conference in 1990 resulted into far reaching effects that shaped the sector for several years later. An example is the case of succeeding in massification of HE but failing to implement the declared share for TVET, resulting in a distorted mix of graduates leading into quantity, quality, and relevance challenges. Another aspect is the way some policies are implemented; for instance, while the privatisation policy is meant to enhance

access to HE, the way it has been implemented favoured medicine to the detriment of nursing and midwifery. It is also observed that the mechanisms for policy implementation are mostly one-sided and internal to HE sector. This results in partial and sometimes distorted effects as there are important determinants beyond the HE sector, such as the decisions within the scope of the health system.

A lack of effective monitoring and evaluation is probably one main culprit for problems in HE and the HPE policy and decision-making arena. It has been a consistent observation that policies and decisions at both strategic and operation levels are not well monitored to ensure the desired and effective implementation. The major reforms of the HE conference of the 1990 have been implemented only partially, despite their bundled nature. At the operational level, it was well documented during observation of committee meetings that follow-up and monitoring of decisions has always been a weak link. New institutions and programmes approved with conditions related to availing certain infrastructure and resources were not properly monitored to ensure implementation of pledged commitments. The case of the candidates accepted in medical schools based on special quotas for poor and remote states represents another example of weak monitoring. Following graduation, these candidates are not retained in the remote areas as committed due to the lack of monitoring by both HE and state governments.

The suboptimal situation of monitoring and evaluation of policies and decisions denotes a governance gap adversely impinging on appropriateness of HPE graduates. Problems in monitoring and evaluation in the context of Sudan are probably associated with culture, capacity, and corruption – the three Cs. A public culture of inattention to monitoring and evaluating policies and interventions is commonplace in the country. This cultural tendency is aggravated by the low priority and lack of funding for research and evaluation studies. The capacity issue has been heavily referred to and was identified in this research as one of the governance principles witnessing weakness. Funding, logistics, and technical capacity are dimensions identified as jeopardising effective monitoring in the context of educational regulation. The third dimension of corruption is reflected in the analysis as associated with political patronage and lobbying of private sector for decisions relating to approval of institutions and programmes. In a context where political agenda is dominant and private sector is influential, monitoring lacked its sanction power.

Thus, the complex and interrelated nature of factors impinging on appropriateness of HPE graduates as discussed in this chapter signifies the need for a strategic approach for governance

strengthening. The current trend of dichotomised policy setting, planning, and action would only sustain and possibly worsen the imbalances in HPE pipeline thus exacerbating the appropriateness challenge.

A major imperative is probably to reimagine social accountability in the context of both educational and health systems. The tripartite connectivity of education, health, and community is of paramount importance to a governance strengthening approach. The interdependence of education and health in the context of a proactive relationship in pursuit of appropriateness of graduates to population health needs is justified by many clues. Education is a social science with a very limited evidence base and its conceptualisation in terms of curricula and educational approaches is immensely context dependent (Grant, 2013). The health system on the other hand provides the required context for educational thinking. Azizi (2003) demonstrated how health system realities could fail the realisation of the benefits of a community orientated medical education. However, the health system itself is influenced by an evolving landscape requiring continuous adaptability. In this sense, both education and health are required to embrace change proactively and jointly towards a meaningful social accountability. The call for HPE schools to actively engage in health policy (Boelen, 2016) is also pertinent for a synergistic education-health relationship for the cause of population health and wellness. The situation of Sudan would require a carefully devised transformative effort to streamline and strengthen governance for HPE towards appropriateness of graduates to population health needs. This effort should essentially target strategic as well as operational dimensions along the continuum of governance for HPE.

8.7. Summary

This chapter examined the influence of governance on the appropriateness of HPE graduates in the context of Sudan in light of the data generated by this study. It discussed and disentangled concepts around quantity, quality, and relevance of HPE graduates and appraised the status of HPE appropriateness in the country. The chapter demonstrated the complex and multidimensional influence of governance on graduates' quantity, quality, and relevance. It explored issues of numbers and benchmarks, skill mix and ratios, and expansion of HPE institutions to ascertain their influence on the production of health workers. The chapter also reflected on the concept of quality and its status in the HPE sector of Sudan and disentangled some associated factors including privatisation, training environment, and the educational staff. Under relevance, the chapter reflected on conceptualising and defining population health needs

and discussed the cases of academic-vocational education balance and gender as factors impinging on HPE graduate appropriateness.

Developments in educational governance in Sudan were shown to result into complex and multidimensional influences on HPE graduate appropriateness with many positive aspects but also shortcomings and challenges. Implications included substantial numerical gains for the health workforce sector in the country, enhancing relevance through the geographic location of institutions and pro-equity admission policies, and putting in place structures and processes for educational quality. The chapter also reflected on the shortcomings of appropriateness in terms of skill mix imbalances impinging on quantity and relevance, in addition to the resulting quality concerns. Trends underlining these challenges were shown to include rising feminisation, increasing privatisation of HPE, and escalating emigration among educational staff in addition to preferences for medical and academic education.

The chapter then discussed the main governance challenges including the gaps in conceptualisation, a lack of policy coherence, governance dichotomies, and weak monitoring and evaluation. A synthesis was provided at the end to inform recommendations for strengthening governance for HPE, the subject of the final chapter of this thesis.

CHAPTER 9: CONCLUSIONS AND RECOMMENDATIONS

9.1. Introduction

This final chapter reflects on the overall findings of the study and their implications for theory, policy and practice, and research. It pertains to the sixth research objective in terms of identifying lessons and recommendations for good governance towards HPE appropriateness. The chapter first presents the main conclusions of the study, followed by the revised conceptual framework based on the research findings. The chapter then discusses the implications of the study's findings for policy and practice before concluding with methodological and epistemological considerations for future research.

9.2. Study conclusions

This research addressed six specific objectives (Table 1) in context of governance for HPE and its influence on appropriateness of graduates. The following paragraphs present the conclusions in relation to each one of the objectives.

1. *On examining governance structures for HPE*

Governance for HPE in Sudan has evolved from a unified structure integral to the health services into a complex web of actors predominantly controlled by HE sector. Currently, governance structures for HPE in the country exist both within and outside the HE sector with actors having a direct or indirect role

The governance armamentarium in the country exhibits dynamicity with some structures overly prominent and others less effective or idle. Structures with direct governance role are supported by legal mandate varying from national bills to administrative orders stipulating the governance responsibilities and modus operandi although some legal dichotomies exist. In context of a proactive state, the HE and HPE sector in Sudan is mainly governed from within with the NCHE, MOHE and universities playing a dominant role in the educational process and outcome. The situation is, however, not free of dichotomies among HE structures and, between HE and the external stakeholders with HPE governance role.

2. *On investigating governance relationships for HPE*

Governance relationships for HPE in Sudan are dynamic and multidimensional. The predominant type of state-HE relationship is a control model explained by the mostly non-democratic political governance of the country. The state has maintained a national development agenda not free of political and ideological objectives. The strong state presence

in HE, especially in post 1989 era, has shaped governance relationships reinforcing benefits to HPE and accountability to government but also jeopardizing institutional autonomy and academic freedom.

In the terrain of HE and HPE, both formal and informal relationships exist. Within HE sector, line management relationships are strong though not free of complexities and tensions among the governance trilogy of the NCHE, MOHE, and universities. The representation model adopted by HE to engage stakeholders is criticised for not being adequately effective. Interaction of HE sector with external governance entities is shaped by competition rather than collaboration. In context of politicisation and privatisation, informal relationships are multifarious and influential which adversely impacts on rational planning and a robust regulation for HPE, and this is exemplified by the rising skill mix imbalances and concerns around quality.

The HPE-health system relationship evolved from an integration model to culminate into segregation and dichotomy. The contemporary situation between the two sectors is shaped by compartmentalisation and tensions with adverse implications on governance arena such as the case of dichotomised HPE and health workforce planning leading into a distorted national health workforce picture. A synergistic model for education-health relationship is noted at decentralised levels in the country resulting into some fruitful collaborations and offering possible learning for the national level.

3. On analysing governance processes for HPE

Processes for HPE governance involves dimensions of policy development, educational planning, funding, and QA measures. Over the last few decades, governance processes have witnessed dynamicity due to active state involvement and a quest for standardisation and quality emanating from pressures within the country and beyond. HE reforms of the post 1989 era gave birth to a wave of policies motivated by national, political, and ideological agenda. The three governance processes of admission policy, HPE planning, and accreditation of institutions were further explored in this thesis to illustrate the processes shaping the governance arena.

Student admission policy for HPE has evolved overtime into diversified set of criteria covering academic, social, and equity-oriented considerations and it has not been free of political and ideological manoeuvring. The political, economic, and sociocultural context of the country has

shaped the dynamics and direction of admission policy resulting into highly welcome criteria such as considerations for social inclusion as well as some controversial criteria such as political and ideological influences. Admission is mainly governed internally by HE authorities with minimum role for other stakeholders including the health sector. The policy process is largely incremental and policy implementation is hampered by the inadequate monitoring and evaluation.

Planning for HPE student intake and institutional expansion happens within an overall HE strategy with no specific strategic plan for HPE. A clear dichotomised planning between education and health manifests in mismatches in production and utilisation of graduates. The expansion of universities and HPE institutions in Sudan is largely determined by politics, privatisation, and people's pressure rather than a deliberate rational strategy. The planning process is largely ad hoc and amenable to political decisions. Monitoring and evaluation function is also weak in context of HPE planning.

Accreditation of HPE institutions in Sudan is in its infancy and its application is limited to medical education. the SMC is emerging as a legitimate accreditor although not without tensions with the HE sector. The development of national accreditation standards for medical education has been robust and participative in nature with updates incorporating social accountability dimensions. There are also established procedures for implementing accreditation of medical schools involving self-study, review process, and site visits. The accreditation experience is evolving, and it carries a promise for enhanced quality and relevance of medical education. Yet, it needs to be extended to cover other HPE institutions including for nursing and allied health professions.

4. *On verifying application of good governance principles for HPE*

Importance of applying good governance principles in context of HPE in Sudan is emphasised in this study and noted with the findings supporting the suitability of the proposed conceptualization of good governance principles under the three categories of the state oversight, empowered stakeholders, and robust HPE system (Figure 12). The framework on good governance principles for HPE is further improved through contribution of the study findings resulting into an enhanced conceptualisation emphasising the importance of capacity and indicating specific ingredients for good governance in context of HPE (Figure 22).

The experience of applying good governance principles in context of HPE in Sudan shows both strengths and challenges. The strengths are shaped by the strong presence of the state and dynamicity of stakeholders enabling a strategic vision for HE, pro-equity policies for HPE responsiveness, strong accountability, forums for participation, and structures for regulation. On the other hand, aspects of poor governances exist as manifestations for the interplay of politics, ideology, lobbying, dichotomy, and inadequate funding and capacity in context of HE and HPE. Challenges are experienced in relation to suboptimal regulation, inadequate voice for academics, silos actions, limitations in HPE relevance, and concerns around accountability, equity, and ethics.

5. *On assessing the influence of governance on appropriateness of HPE graduates*

Governance structures, relationships, and processes exert multidimensional and complex influence on the appropriateness of HPE graduates in Sudan in terms of quantity, quality, and relevance. Of notable importance are the post 1989 reforms including massification, geographic expansion, privatisation, and diversification of admission policy resulting into both positive and adverse effects. One fruitful result is the quantitative gain with expanding mass of HPE graduates putting Sudan at a privileged position among fellow African countries. However, this numerical gain is undermined by skill mix imbalances in addition to quality and relevance concerns. The accelerated expansion and the rising private for-profit investment in HPE in addition to suboptimal educational resources including staff and clinical training are impinging on educational capacity with legitimate worries around quality of graduates. Challenges in relation to the relevance aspect are brought about by the skill mix imbalances jeopardising health coverage and PHC services in addition to rising feminisation amid inadequate policy response to address gender specific requirements.

The current landscape of HPE is shaped by increasing trends of privatisation, feminisation, and educational staff emigration in addition to sociocultural prioritisation for medicine and academic education. An adequate governance response to the appropriateness challenge of HPE graduates in Sudan is hampered by the gap in conceptualisation, policy inconsistencies, governance dichotomies, and lack of effective monitoring and evaluation.

6. *On identifying lessons, recommendations, and implications*

The study provided methodological tools to address governance and indicated recommendations and areas of significance to policy and practice in addition to lessons for future research. These aspects are discussed in the remaining sections of the chapter.

9.3. A revised conceptual framework for HPE governance

The conceptual framework developed to explore governance for HPE in Sudan (Figure 11) proved to be useful in guiding the research process and eliciting structured responses from data sources. Experience with data collection, analysis, and interpretation reflected the suitability of the logic and main components of the proposed framework. However, the evidence generated by the study has added perspective and insight contributing to revision and further enhancement of the conceptual framework.

The overall logic of the conceptual framework remains valid as it was firstly envisioned. It is built on the premise that governance structures, relationships, and processes exert oversight on educational institutions to prepare and produce the appropriate graduates to support health system responsiveness to health care and population health needs. This input, process, output cascade is optimised through application of good governance principles in a supportive context. The revised version of the conceptual framework reflects the contribution of the study findings and involves the following changes and enhancements:

- The content under governance structures, relationships, and processes is rearranged into analysis domains and analysis considerations. The analysis domains depicted in the earlier version are restructured and elaborated for clarity. Some analysis considerations are added corresponding to governance structures, relationships, and processes to guide and support more in-depth analysis. This is deemed helpful in capturing subtle but important governance dimensions such as indirect role of structures and the informal type of governance relationships.
- The dynamics of the framework linking HPE governance and its influence on educational institutions to the health system and ultimately to the community for a desired outcome on graduate appropriateness is changed from a unidirectional flow to a cyclic type of relationship. The framework chart now contains an arrow going back from the community and health systems boxes to HPE governance box to emphasise the cyclic nature and a feedback loop. This should better reflect an iterative process of interaction between educational and health systems in context of governance. It also

better reflects the tripartite relationship among HPE, health system, and the community in context of social accountability; a dimension highlighted by this research.

- The revised framework also emphasises a collaborative approach to applying good governance principles along the education-health continuum rather than the separation implied by the earlier version. This pertains more to addressing the governance dichotomy, identified by this research as one main challenge for HPE appropriateness.
- The revised framework counts for other contributing/confounding factors in ensuring a responsive health system and improved population health through adding a box on other health systems inputs. This reflects the fact that health system responsiveness to population health needs is not a function of HPE or the resultant health workforce alone, other enablers such as funding and materialistic resources are important.
- Monitoring and evaluation dimension is added to the framework as a result of the consistent observation around the importance of monitoring and evaluating implementation of policies, plans, and QA measures in context of HPE. The study reflected a problematic situation in this respect, hence the revised framework attended to the critical role of monitoring and evaluation in enhancing governance for HPE.

Figure 24 below depicts the revised version of the conceptual framework based on the findings and argument of this research.

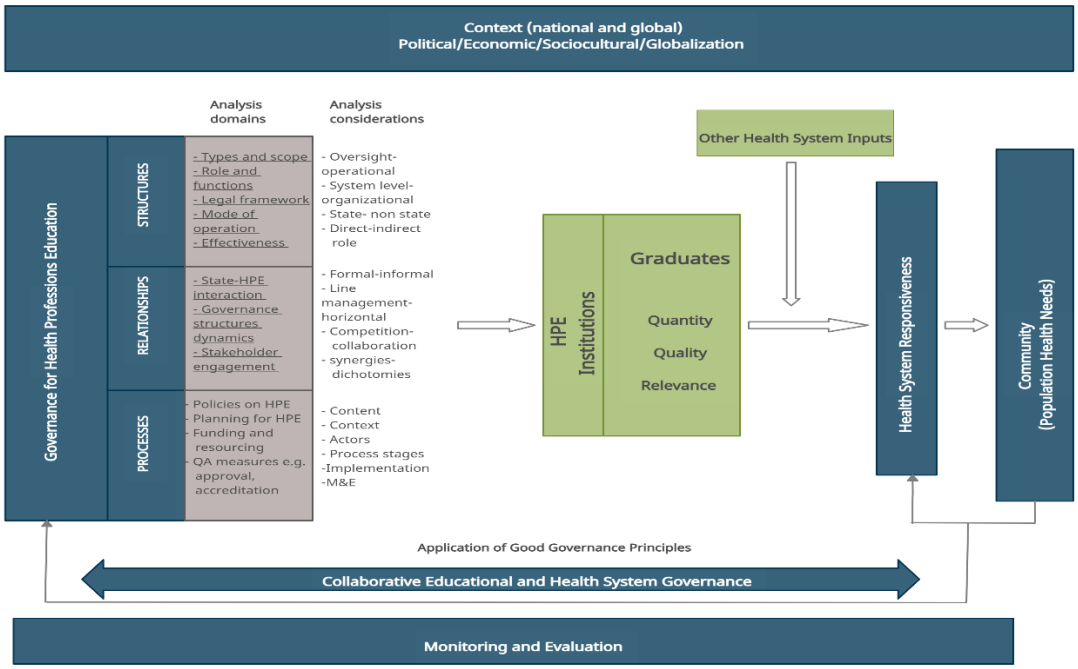

Figure 24: A revised conceptual framework for analysing and strengthening HPE governance

As an aid to elaborate the dimension of governance principles included in the main framework above, this research has also proposed and tested a conceptualisation for good governance principles in context of HPE. The proposed framework for good governance principles (Figure 12) was tested in this research resulting into a revised conceptualisation (Figure 22). The study findings contributed to expanding and refining principles and practices for good governance under the three domains of strong state oversight, empowered stakeholders, and robust HPE system. A notable contribution is represented by adding a dimension on capacity.

9.4. Implications for policy and practice

Governance of HPE has been shown by this research to exert complex and multidimensional influence on appropriateness of HPE graduates. The challenges identified in relation to governance structures, relationships, and processes; and to application of good governance principles provide for a basis for policy and practice recommendations to address the situation in the country. Three levels are identified for interventions in order to streamline governance influence: the strategic level, the HPE policy and planning level, and the operational level for regulation.

The strategic level

The NCHE is well positioned to play the oversight and strategic leadership role for HE, and by projection HPE. The council would however benefit from re-engineering to improve its inclusiveness and effectiveness. There need to be meaningful representation for stakeholders external to HE including the health sector, regulatory councils, and the community. Each university might be represented by one member instead of two as that can minimise the size of the NCHE thus enhancing its effectiveness. Another important dimension for the council work is to coordinate the relationship of the state to HE through an enhanced "buffer" role. This research has suggested the idea of "positive state engagement" through role differentiation between the state and HE apparatus. Substantive and procedural autonomy for the HE system and institutions in context of a strategic, supportive, and evaluative role of the state could be the way forward.

In its reengineered shape, the NCHE can better review and renovate HE policies to ensure production of the right human capital capable to serve the development agenda of the country including for the health sector. The council is certainly the suitable forum for reviewing and renovating the overarching policies such as geographic expansion of institutions, privatisation, educational type balances, and admission policies.

HPE policy and planning level

In context of HPE, the MHSC is an incredibly important governance structure as it leads on the planning for and approval of educational institutions and programmes. This leadership and regulatory role of the committee is an ideal entry point for streamlining governance for HPE through a systems-thinking approach. However, the MHSC would require reorientation and strengthening of its structure, inclusiveness, and capacity.

The committee membership would need to be inclusive reaching out to adequate stakeholder representation. Balanced representation for the health sector in the MHSC is imperative and it is pertinent for the FMOH to co-chair the committee with HE. Such arrangement is key to addressing the governance dichotomy between education and health, streamlining health workforce planning, and improving synergy along the education-service continuum. The use of regulatory leverage and incentives can improve the balance of educational institutions and programmes and reflect in optimising the skill mix of the graduates with special pertinence to production of doctors and nurses. Human, financial, and technical resources are key for enabling a renovated MHSC to better execute its role and mandate especially in relation to site visits and monitoring institutional compliance.

Operational level for regulation

Accreditation as external QA tool is best suited to serve as a leverage for ensuring appropriateness of HPE and its graduates. Through a robust participatory accreditation system, Sudan can better balance the quantity, quality, and relevance of HPE graduates towards addressing its population health needs. The rising QA culture in the country and the strongly emerging accreditation programme for medical education targeting both public and private institutions are assets in this respect. However, an urgent matter is to extend the accreditation programme beyond medical education to reach out to the other educational institutions for critical health professions.

The regulatory councils (SMC and NCMHP) are best suited to govern the accreditation system but they need to be legally empowered, adequately resourced, and more inclusive for stakeholder representation. Accreditation standards and process would need to adjust to the context of a close relationship between education and health including possible synergies with health services accreditation. A robust accreditation system can also pertain to promotion of social accountability of HPE.

9.5. Considerations for further research

An important aspect of this thesis has been the quest to develop an appropriate methodological approach to study an elusive and complex phenomenon such as governance for HPE. A specific area of importance relating to this, is the thrust in this research to link governance dynamics to the outcome of HPE in terms of appropriateness of graduates to population health needs. The resultant conceptualisation and analysis were useful in decoding and illuminating the national governance for HPE in context of Sudan. The approach and outcome of the analysis can inform future methodological and epistemological development of governance research.

One main contribution of this research is the development and testing of a conceptual framework to analyse and strengthen governance for HPE. The ensuing revised conceptual framework may be used to conduct case studies or further research on HPE governance in Sudan and beyond, and it can benefit from further development through application in different contexts. The framework may also be suitable to guide research on governance in the domains of postgraduate HPE and CPD. The conceptualisation of governance principles leading to development of a three-domains framework for good governance principles (figure 22) might also be useful to guide specific studies on governance principles and practices in context of HPE and HE.

Another area for further research is exploring organisational governance for HPE (e.g. medical school governance) in the context of Sudan. This is imperative and may generate evidence to complement this study which addresses system level governance and thus enabling fuller understanding and a nuanced picture of the governance terrain in undergraduate HPE. Additionally, further analysis can use the conceptual framework to focus on a specific domain of governance. Of importance in this respect is the investigation of state-HE relationship in context of the changing landscape for governance. Another worthy consideration is a further research on accreditation as a governance process and as a leverage for educational change.

The use of reflexivity in this research as a tool for enhancing other data sources and data analysis also carries a promise for research in “own field”. In the HPE and health system arena, experienced academics and practitioners are likely to contemplate on studies within their territories of work entailing some internal or hybrid position to research topics. Such situations demand using reflexivity as concept and as methodological tool to address intersubjective dimensions and enhance quality and trustworthiness.

From an epistemological perspective, this research uncovers gaps in conceptualisation in HPE arena in addition to lack of adequate understanding of some phenomena and trends. The increasing feminisation, medical dominance, privatisation, and preference for academic education in context of HPE are examples of trends observed. Studies of these dimensions might generate useful insight for policy and governance towards ensuring appropriateness of HPE graduates. Further research is also required to disentangle issues around sociocultural preferences and to investigate the contribution and challenges of rural location of HPE institutions.

Finally, for me personally, there are some directions that I would like to pursue based on this study and its database. Although the analysis is complete for the purposes of addressing the objectives of this thesis, the wealth of data I have would allow for further analysis of some important dimensions. I would like to explore in more details the policy process in context of HPE as this aspect entails significant importance to the observed changes in the health workforce landscape. Based on the insight and the data I have, I will pursue a closer look and scrutiny of the policy context, process, and actors to gauge lessons for policy evaluation and future development of robust policies. The other line of enquiry I would like to pursue based on the available data is an in-depth investigation of the interface between HPE and the health system through a multi-theoretical approach. Approaching this domain through relationship theories such as the structural perspective, agency theory, and the human relations paradigm is expected to yield more complete and rich analysis for dynamics and peculiarities. The dilemma of education-health relationship in Sudan and globally justifies such analytical work to better inform synergies towards addressing population health.

Appendices

Appendix 1: literature search strategy

Based on the background reading and identification of the topic for this research, the following is a description of the search strategy adopted to identify literature on HPE governance.

Databases

I conducted a literature search using databases accessible through University of Leeds Library. Databases consulted included MEDLINE, Science Direct, Web of Science, CINAHL, British Educational Index, ERIC, and Applied Social Science Index.

Search criteria

The following terms and key words were selected as a basis for literature search:

- Educational governance, educational leadership, educational management, educational QA
- Health professions, healthcare, health, population health needs
- Developing countries, Sudan

Use of alternative terms, truncation, and use of Boolean ‘’OR’’ were adopted to ensure wide coverage of available literature on the topic of educational governance. Quotation marks and the Boolean ‘’AND’’ were then adopted to limit search to educational governance for health and in developing countries. Different combinations of the key words above were tried in searching the databases indicated.

Search results

The term ‘’educational governance’’ produced 247 results in MEDLINE and generally same range in other databases. Using educational governance OR educational leadership, management, quality assurance produced huge results. The same happened with terms: health professions, health care, health, population health needs and the terms developing countries, Sudan all connected by ‘’OR’’. When combination of the three sets of searches was tried using ‘’AND’’ all databases returned less than 5 results indicating that literature on educational governance for health in the context of developing countries is scanty. No result was obtained on educational governance in Sudan and in fact, the few results on developing countries were found to be not relevant.

When the terms ‘’developing countries, Sudan’’ were abandoned the combination of educational governance and health produced a total of 89 results from the seven databases consulted. After removing duplications (assisted by EndNote) and reviewing titles and abstracts for relevance (materials on organizational and specific programme governance were excluded), 46 documents were found to be relevant and were stored in EndNote which was later used to generate citations and reference list. The 46 documents were read thoroughly and synthesised to identify issues and common themes that informed this report. An important note here is that one article identified through search strategy is itself a systematic literature review on educational governance for health (Coward, 2010). The reference list in this article proved to be helpful in identifying some additional resources. This systematic search was supplemented by a pragmatic approach through consulting some relevant websites and using links to obtain some grey and unpublished literature.

Conclusions and constraints

It can be concluded that evidence on educational governance for health is generally lacking with huge gap in the context of developing countries. This is reflected in the dearth of literature on the subject. A limitation on top of this is that most of the literature identified is not empirical and constituted reviews, expert opinions, and website materials. The fact that literature cut across a range of contexts and disciplines made it difficult to apply conventional evidence strength scales. The search was generally constrained by this lack of evidence in addition to limitation to English language. A publication alert was set in some databases/journals, and I signed up to some networks and listservs to remain updated on the topic through subsequent stages of the research.

Appendix 2: Document review grid

- What type of the document? Policy, Law, report, etc.

……

- Who wrote the document? When and where?

……

- Why was the document written? Purpose and type of audiences.

……

……..

- What are the main arguments and points made in the document especially in relation to my research enquiry?

……

…….

- What are my main conclusions from the document? What evidence supports those conclusions?

……
……

- What is the wider significance of the document?

……

……..

- What are the points or pieces of information from document analysis that needs further pursual through interviews or observation?

……
…….

Appendix 3: Guide for semi-structured interviews (higher education)

Governance structures

- What is your opinion on the existing structures for HPE governance? How do you see the role and functioning of the NCHE, MOHE, and universities?
- How do you see the effectiveness of governance structures for HPE? What could be the enablers and barriers in this respect?

Governance relationships

- How do you describe the relationship of the state (government) to higher education and HPE?
- What is the status of the relationships among the NCHE, the MOHE, and universities? What are the strengths and the challenges?
- What is your opinion on the relationship of higher education to other stakeholders including the health sector, other sectors, and the community? What could be the enablers and barriers?

Governance processes

- How do you see policy development for higher education and HPE? What is your opinion about the student admission policy? Content, context, actors, and stages of development and implementation, and monitoring
- How do you describe planning for HPE? What types of plans exist? Who is involved? What factors have bearing on HPE planning? Collaboration between education and health sectors on HPE planning?
- How do you describe QA and regulation of higher education and HPE in the country? What is your opinion about the accreditation programme for medical education? How do you describe the experience so far? Role of SMC and stakeholders/ standards development, accreditation process?

Governance principles

- How do you describe the state (government) oversight for higher education and HPE? The strategic vision, state proactivity, and effectiveness of regulatory function? Good practices and challenges…
- How do you describe the involvement of stakeholders and community in higher education and HPE governance? Participation, intersectoral action, and accountability? Good practices and challenges….
- How do you describe the status of HPE system in the country? Responsiveness, equity considerations? Ethical considerations? Good practices and challenges…

Graduate appropriateness

- How do you see the production and adequacy of health workers in the country? What is your comment on the mix of different categories produced? What factors are into play? What are the strengths and weaknesses?
- What is your opinion on the quality of HPE graduates in the country? What is your judgement on the situation? What factors do you see as impinging on quality?
- How do you see the relevance of HPE graduates to health system and population health needs? What is your judgement on the situation? What factors are in effect?

Overall

- Any concluding remarks or other observations?

Appendix 4: Guide for semi-structured interviews (health sector)

Governance structures

- What is your opinion on the existing structures for HPE governance? How do you see the role of the health sector/MOH?
- How do you see the effectiveness of governance structures for HPE? What could be the enablers and barriers in this respect?

Governance relationships

- How do you describe the relationship of the state (government) to higher education and HPE? What are the enablers and barriers for effective relationship?
- How do you describe the relationship of higher education/HPE to the health sector? What is the status of collaboration between the two sectors? What are the enablers and barriers?

Governance processes

- What is your opinion about the student admission policy for HPE? What aspects are you aware of and how do you see the outcome and the role of the health sector/MOH?
- How do you describe planning for HPE and the collaboration between education and health sectors on health workforce planning?
- What is your opinion on the regulation of HPE and the accreditation programme for medical education? How do you describe the experience so far? Role of the health sector/MOH in the process?

Governance principles

- How do you describe the state (government) oversight for higher education and HPE? The strategic vision, state proactivity, and effectiveness of regulatory function? Good practices and challenges…
- How do you describe the involvement of stakeholders and community in higher education and HPE governance? Participation, intersectoral action, and accountability? Good practices and challenges….

- How do you describe the status of HPE system in the country? Responsiveness, equity considerations? Ethical considerations? Good practices and challenges…

Graduate appropriateness

- How do you see the production and adequacy of health workers in the country? What is your comment on the mix of different categories produced? What factors are into play? What are the strengths and weaknesses?
- What is your opinion on the quality of HPE graduates in the country? What factors do you see as impinging on quality?
- How do you see the relevance of HPE graduates to health system and population health needs? What factors are in effect?

Overall

- Any concluding remarks or other observations?

Appendix 5: Checklist for observation sessions

The following format is used to support observation of committee meetings for this research

Observed event/aspect	**Possible observation notes**
Physical setting and context	Description of the meeting venue and atmosphere, seating etc.
Dynamics of event	Progress of discussion, dominant members, discourses and disagreements, style of decision making, tensions, consensus orientation, etc.
Role and practices of different stakeholders	Type of interaction, reflections on relations among stakeholders, tone of discussion, non-verbal expressions, etc.
Efficiency and effectiveness	Time management, achievement of objectives, assignment of tasks, discourse and conflict resolution, timeliness of decisions, etc.
Use of evidence	role of evidence during discussions and in decision making, balance of different sources of evidence, etc.
Leadership and management	Overall management of the committee, style of leadership, records keeping, documentation, monitoring, etc.

Appendix 6: Ethical approval from the University of Leeds

Faculty of Medicine and Health
Research Office

Room 10.110, Level 10
Worsley Building
Clarendon Way
Leeds LS2 9NL

T (General Enquiries) +44 (0) 113 343 4361
F +44 (0) 113 343 4373

UNIVERSITY OF LEEDS

Dr Elsheikh Badr
PhD Student
LIHS
Room G.02
Charles Thackrah Building
University of Leeds
LS2 9JT

16 August 2012

Dear Elsheikh

Re ref no: **HSLTLM/11/033**

Title: **Governance of Health Professions Education in Sudan: Implications for appropriateness of graduates to population health needs and health system challenges**

I am pleased to inform you that the above research application has been reviewed by the Leeds Institute of Health Sciences and Leeds Institute of Genetics, Health and Therapeutics and Leeds Institute of Molecular Medicine (LIHS/LIGHT/LIMM) joint ethics committee and following receipt of the amendments requested, I can confirm a favourable ethical opinion on the basis described in the application form, protocol and supporting documentation as submitted at date of this letter.

Please notify the committee if you intend to make any amendments to the original research as submitted at date of this approval. This includes recruitment methodology and all changes must be ethically approved prior to implementation. Please contact the Faculty Research Ethics and Governance Administrator for further information FMHUniEthics@leeds.ac.uk

Ethical approval does not infer you have the right of access to any member of staff or student or documents and the premises of the University of Leeds. Nor does it imply any right of access to the premises of any other organisation, including clinical areas. The committee takes no responsibility for you gaining access to staff, students and/or premises prior to, during or following your research activities.

Please note: You are expected to keep a record of all your approved documentation, as well as documents such as sample consent forms, and other documents relating to the study. This should be kept in your study file, which should be readily available for audit purposes. You will be given a two week notice period if your project is to be audited.

It is our policy to remind everyone that it is your responsibility to comply with Health and Safety, Data Protection and any other legal and/or professional guidelines there may be.

I wish you every success with the project.

Yours sincerely

Professor Darren Shickle
Acting Chair, LIHS/LIGHT/LIMM Joint REC

Appendix 7: Ethical approval from Sudan

Republic of Sudan
National Ministry of Health

HEALTH RESEARCH COUNCIL

NATIONAL RESEARCH ETHICS REVIEW COMMITTEE

Date: 22/3/2012

Ethical Clearance Certificate

This is to certify that the proposal (No.160-3-2012) entitled (Governance of Health Professions Education in Sudan : Implication for Appropriateness of Graduates to Population Health Needs introduced by : Dr. Alsheikh Elsiddig Badr from National Human Resources for Health Observatory (NHRHO), has been approved by the National Health Research Ethics Committee, National Ministry of Health to be carried out in the Sudan.

The principal investigator is requested to submit a copy of the final report to the National Health Research Ethics Committee.

Federal Ministry of Health
22/3/2012
Directorate of Research

Dr. Iman Abdalla Mustafa
Reporter of the
National Research Ethics Review Committee

Appendix 8: Letter to obtain respondents' consent

Consent form

Request for your participation as interviewee in a study on:

Governance of health professions education in Sudan: implications for appropriateness of graduates to population health needs

Dear,

The purpose of this study is to explore governance of health professions education (HPE) in Sudan in terms of its effects on producing graduates appropriate to population health needs. I will be addressing objectives related to status of HPE governance and the possible effects of governance structures, relations and processes on determining the quantity, quality and relevance (appropriateness) of graduates to health needs of populations.

Your participation in this study will involve an interview of approximately one hour during which you are expected to respond to some questions around HPE governance in Sudan. Our discussion will be digitally recorded to help me accurately capture your insights. The recording will only be heard by me for the purpose of this study. If you feel uncomfortable with the recorder, you may ask that it be stopped at any time. You also have the right to withdraw from the study at any time and in such event all information you provide will be destroyed and omitted from the study at your discretion. Though direct quotes from you may be used in the study, your name and other identifying information will be kept anonymous or presented in the way agreeable to you.

Insight gathered by you, other respondents and other methods will be used in writing a thesis on the topic which is expected to be of benefit to HPE in Sudan and beyond. I am asking for your kind acceptance for participating in this research.

By signing this consent form, I certify that I ..... agree to take part in this study

Signature..... Date .....

Appendix 9: Portion of a transcribed annotated key informant interview

Interview information				
Interview transcript Code:		**AG-3**		
	From	**To**	**Day**	**Date**
Time	10:00 am	11:13 am	Tuesday	08/07/2014
City	Khartoum	**Location**	Respondent office	

The transcript	
Person	**Discussion**
I	Hello professor and thank you for agreeing to discuss important issues around governance of health professions education in the country. We will be spending an hour or so to listen to your opinion and discuss
R	Thank you Elsheikh and welcome
I	The first question I would like to ask is that I would like to know your opinion on the structures or responsible bodies governing higher education and health professions education I mean in the higher education sector and how do you see their roles and functions?
R	Yes, you have the National Council for Higher Education as the main governor and you also have the ministry, I mean the Ministry of Higher Education and of course you have universities as autonomous bodies with governance role and also you have committees, I mean in our case the Medical and Health Sciences Committee…yes, this committee is important for health professions education. You know each of these have a role and responsibilities and there are laws to regulate this for example each university has a law approved by the parliament. The council is strategic director for higher education as a whole and it sets policies and you know strategies and direction and it has committees for each sector of higher education like medical and health and engineering also humanities and so forth…the universities then translate these policies into programmes and actions through their responsibilities for enrolment and education of students; and I mean that was the case in Sudan where you find the council and the universities in control of higher education… **I: and the ministry** R: yes, I am coming to this, a ministry for higher education wasn't there when the council was established to oversee higher education together with universities, later the ministry was established to play some roles you know such as there are other ministries under the government. Today the ministry performs some functions relating to higher education such as coordinating between the universes and the government and supporting funding and other role related to quality and reporting. The ministry is legally mandated according to the constitution of the country which specifies its responsibilities. But honestly as a vice chancellor and based on experience, I feel the existence of the ministry adds not much value, you know in universities we are autonomous and legally mandated and for policy

Structures (roles)

Structures (legal mandate)

	issues we have the council as a reference body, so honestly, I do not see a point for a ministry for higher education and I feel you know that it might hinder rather than help.	
I	So, in relation to this, how do you see the influence of these governance structures and what could be the enablers and barriers?	
R	Yes, the higher education governance is effective, and you have laws, rules, practices by the council, the universities, and the ministry and of course the committees such as the medical and health sciences committee. The clarity of mandate and the existence of laws and regulations could be seen as enabling for governance here; also, you have the long tradition of practicing governance I mean in this area which leads to established norms. But you also have shortcomings, and you know there are some disputes and lack of coordination. The council I mean is effective and strong and it leads higher education very well but [pausing] sometimes there are issues for example the interference of the ministry to try and take power. Here while the council delegates its authority to the Minister in between meetings to decide on urgent matters; this has been used inappropriately sometimes to expand the role of the ministry at the expense of the council and the universities; you know sometimes meetings of the council are delayed by one year or more. The role of the universities in governance is being influenced by the ministry I mean the ministry interferes sometimes in executive functions which are part of the role of universities.	Structures (influence)
I	Now, after discussing governance structures let us focus a bit on the relationships, so in this respect how do you see the relationship of the State or government to higher education of course including or with effect to health professions education?	
R	The higher education works through the National Council for Higher Education headed by the Minister of Higher Education...universities are somehow autonomous according to their laws...some people see autonomy as complete separation from State and higher education policies and directives [exclaiming]...I don't agree with this, I mean the overall guidance of the state or government is fundamental because you need strategic directions, power, and funding and the role of the government is essential for this; also you know the government decides about the country needs for higher education I mean for example the number and type of graduates and the development needs as well. So, I see a relationship between the government and higher education sector as important and as a healthy aspect you know. **I: and what is your judgement of the situation in Sudan, I mean the relationship between the state and higher education** R: Yes, the relationship is there and is active and as you know there are several conferences and meetings on higher education organized by the government, and I mean there is consultation and the government seem to be highly interested in organising and controlling higher education matters. This is very good in my opinion although some colleagues think that there is much interference form the government in higher education and university role but [pausing] I don't see it that way and yes sometimes the government seems to be controlling but when you look at the matter, I think overall the interest of the government should be seen as positive as it mobilises resources and provides support. And yes, there are some challenges for example the expansion of higher	Relations (state-HE)

	education institutions is extensive and good for the country but sometimes institutions are established without full consideration of infrastructure and the political dimension might play a role here, but this should be revised as you cannot for example establish a medical school without proper resources. Overall, I support a healthy relationship of the state to higher education, and I can talk of a model of positive state engagement in terms of overseeing, direction, and providing resources, and opening avenues for our universities to excel and compete regionally and internationally.	
I	As a continuation of discussing governance relationships, how do you see these relationships among the council, the universities, and the ministry	
R	Yes, in my experience the relationship of universities to the council is excellent as the roles are clearly demarcated and universities are members in the council. So, we have our voice in the council and the meetings are fruitful. Also, I mean the medical and health sciences committee which is part of the council is also important and it represents medical and other health sciences schools and senior academics and I think the relationships are also good in this respect. But [taking a deep breath], the matter comes with the ministry here there are some ambiguities and crossings in role and responsibilities…the ministry I mean sometimes interfere with the role of universities, even last time they tried to control the funding which used to come directly to universities form the Ministry of Finance. So, I think the relationships are functioning and can be described as good between universities and the council and also the ministry comes in but with some confusions. the role of the ministry in existence of the council should be more clarified to avoid dichotomy and conflicts. But I mean overall, the governance in higher education is active and functioning within the overall guidance of the state with council, the universities, and the ministry playing roles and steering the work.	Relations (within HE)
I	If this the case within higher education itself, then how do you see the relationship of higher education to other stakeholders I mean those related such as the health sector, other sectors, and even the community?	
R	Of course, the higher education sector relates to other sectors in the government as it is important to collaborate, and you know our mission in higher education is to serve other sectors for examples we graduate cadres for agriculture, health services, engineering, and other sectors. So, the way higher education does it is to represent these sectors in the council and its committees and also in our universities we have sometimes this sector representation in the university council or school boards sometimes. **I: but some people think that the representation model you referred to is not effective** R: No I don't agree, when you have a representative for example from the Ministry of Health sitting in the National Council for Higher Education this gives the health sector a voice and they can tell their needs and their views, and this true for other sectors…	Relations (HE-health)

Appendix 10: Portion of an observation note

Document Code: 1-M4/15

Researcher: Elsheikh Badr

Purpose: to get insight into the functioning of structures and dynamics of relationships and processes for HPE governance in Sudan

Place for event: Board Meeting Room, Level 2

Date/time: Monday 23 November 2015; 11 am-1pm Sudan time

Meeting started at 11:10 with the Chairperson reading the agenda that included approval of last meeting minutes, decision around one pending application and presentation of a strategic paper on health workforce planning and the link between education and health sector. The meeting room included a U-shape table with comfortable chairs, and tea and coffee were served. Some side talks among the embers indicated positive feelings about moving the meetings to this room. There were 19 members attending out of the 22 members of the committee *(OC: with regards to discussing planning issues, I noticed that the director of planning in the MOHE is not part of the meeting as he is a not a committee member!)*. Meeting minutes were read and approved by the audience. A professor member of the committee raised a point related to the previous meeting stating that the Dean of the medical school of University of Khartoum refused to comply with an increase in admission for this year dictated by a decision from this committee. The professor noted [frowning] that this refusal jeopardises the role of this committee and asked the Chairperson about the appropriate reaction. The Chairperson thanked the professor member and noted that this issue is raised to the Minister of Higher Education, and it should be solved soon. This part of discussion ended at 11:23 am.

Chairperson then asked a member of the sub-committee on reviewing the physiotherapy programme application from a university affiliated to the army to present the report. The member read the report mentioning that the sub-committee reviewed the infrastructure, resources, staff and the curriculum according to a form prepared earlier by the MHSC. The sub-committee, he maintained suggested some improvements to the curriculum and the university responded adequately to those comments. The member was suggesting the programme to be approved. The Chairperson was looking to members for reactions and on members knocking the table in agreement he declared the programme approved *(OC: reflecting on the way the subcommittee addressed the task of reviewing this programme for approval and*

considering my previous experiences with the approval process through the MHSC, I could clearly realise that the institutional and programme approval process for HPE in the country is robust). This part of the meeting ended at 11:34 am.

The Chairperson then introduced a committee member (from the Federal Ministry of Health) to present the paper prepared on strategic issues relating to HPE and health system plans in response to a previous request by the committee. The member distributed hard copies of the presentation to members and stood in front to use the power point show. On starting the presentation, the Secretary General of the Ministry of Higher Education (not a member of the committee) entered the room to join the meeting; the Chairperson welcomed him and noted the importance of the topic. The presentation included factual tables and figures on the situation of the heath workforce in the country including HPE outputs and figures. The presenter showed some statistics saying that Sudan still witnesses numerical shortage and skill mix imbalances with doctors outnumbering some other health professionals such as nurses. The presentation also touched on quality dimensions suggesting real concerns around quality of HPE graduates. The presentation also discussed the issue of coordination between education and health noting lack of shared mechanisms, effective communication, and collaboration on human resource planning for the country with consequences on availability, quality, and relevance of HPE graduates. The presentation concluded by throwing in some policy questions around approaches to planning the health workforce for addressing population health needs and health system challenges. Members and the Secretary General seemed to be highly interested in the presentation as they interrupted the flow several times to comment on specific slides *(OC: observing the non-verbal expressions, I could see that some academics were not at ease with the presentation and two senior professors siting at the middle of the table were repeatedly side talking during the presentation)*.

A heated debate followed the presentation, and a senior professor (one of the two I observed side talking) was commenting that universities and academic institutions are fulfilling their mission in educating and producing huge numbers of health professionals, but the health sector is not absorbing them; this should not be our problem he maintained, it is a problem in the health services and people there are not focusing on solving it. Following a moment of silence, the professor spoke again saying: “I honestly question the presence of representatives from the health ministry in this committee, I think they should focus more on managing the health services and creating jobs for graduates rather than education which is not their role.” The other professor member intervened and criticised the opening of new medical schools in some towns

and remote areas where resources are lacking. He pointed to the higher education ministry as to be blamed for interfering to support opening on public schools not fulfilling academic criteria while the current medical schools are producing abundant doctors. He also noted the problems in monitoring and follow up giving the example of students studying medicine based on the quota system for remote areas but on graduation not going back to serve in their rural areas to pay back the scholarship. He expressed anger about the government not following on this issue while it is pushing for expanding medical schools.

Members went on commenting on the presentation with a general line of views that saw major problems in the current situation of HPE and its link to the health system. Although members were acknowledging limitations on the side of HPE, many of them were also pointing to major problems in the civil service and the health sector such as lack of jobs leading to unemployment among graduates. Some members were suggesting preparation of health workforce projections to guide education and production of health workers, noting the lack of such important plans. A member dean of a public medical school raised the issue of gender imbalance noting the increasing numbers of females in medical schools and the implications of this trend on coverage of health services in rural and remote areas where male practitioners fit most. A female nursing dean reacted to the comment by noting the importance of women in the health professions and the danger of limiting their access to educational opportunities in medicine and other health disciplines. On noting a trend among members to debate the gender issue, the Chairperson reacted that the gender dimension is important but complex and there is going to be a future meeting dedicated to discussing it.

The Chairperson gave the floor to the presenter of the strategic paper from the health ministry to respond. The presenter (committee member) thanked the members for reacting and commenting and noted the importance of strategic planning for the health workforce and the need for collaboration between education and health sectors. He reaffirmed that the health sector is a stakeholder and should have a role in education and he objected to the criticism of expansion of medical schools across the country noting the importance of this to availability and relevance of graduate doctors. He called upon academics to appreciate the importance of providing access to health care to rural and remote population and suggested that the concentration of medical schools in Khartoum and big urban settings might not be the right approach to achieve universal health coverage.

Appendix 11: Portion of the FGD transcript

Document code: 1-SL/15

Moderator: Elsheikh Badr

Moderator:	Welcome to this session and thank you for coming and agreeing to participate in this research based on the purpose explained to you individually. I introduce to you Dr (A) who is a colleague and is going to assist me in conducting the session with you. I would like to take your permission to record this session to better capture the discussion; the recorded material will be kept confidential and only used for the purpose of this research; your identities will not be disclosed, and any quotes will be coded.
Student leader 7:	I agree to recording; (the rest of the group raised their hands as agreeing for the session to be recorded)
Moderator:	this is great, thank you; now we will start recording. I think you all know each other, and we do not need to run a round of introductions. This session will focus on listening to your views on accreditation in medical education in Sudan, mainly the Sudan Medical Council accreditation programme. We will run a group discussion where we expect all of you to participate and tell your experience, views, and reflections and feel free to speak and raise your opinion; the intention is to benefit from your contribution and ideas to enrich the study. To facilitate the discussion, I am introducing to you the main topics as including: your general impressions about accreditation of medical education in Sudan, your feelings about the student representation and voice in the accreditation committee, your views about the accreditation standards and their development and suitability, your experience of being involved in preparing for accreditation at your individual medical schools, and your reflections about the role of students in supporting improvements in accreditation and medical education in the country.

Research assistant: thank you and allow me to introduce some guidance for our session; I mean since we are recording, we expect you to speak one person at a time; feel comfortable in expressing your views and intervene in response to each other, kindly close your mobile phones or put on silent mode. If you feel you need any support or there is something, please do not hesitate to raise that; we are here to make you at ease for a fruitful discussion

Student leader 3 thank you, everything is ok, and we are interested to start the discussion, this is an important topic, and we have subject to say. (Other participants nodded in agreement)

Moderator: great, so now let's start with getting to know your opinion around the medical education accreditation programme in the country, as we all know this is a relatively recent thing happening with the aim of improving medical education; so, you can reflect on this aspect

Student leader 3 I would like to start here, as students we are glad to see the movement on accrediting medical schools, this is good for the quality of education we receive, and it also support our future to get employed inside or outside the country.

Student leader 1 I agree, and this also helps with opening chances for us to join respectable specialization programmes, I mean when you come from an accredited school you are valued

Student leader 5 yah, we are worried of the expansion of medical schools without having adequate resources and we welcome accreditation as it can help in ensuring that each medical school has the required capacity and resources to function well

Student leader 2 yes, for us as medical students the international reputation is very important and this accreditation will help with that, I think medicine is international

Moderator: now this is great, how do you feel about the student involvement in the Sudan Medical Council accreditation programme

Student leader 5	yah, the medical council has done well by involving students in its accreditation programme, we as students are important party of it and the purpose of education is to qualify us for future jobs, so we know from our experience where things work and where problems are
Student leader 8:	yes, representation of medical students in the committee [SMC Accreditation Committee] is a great step, what remains for us as students is to bring up our voice to reflect the important issues in accreditation
Student leader 2	yah, I agree to what is said but I have a point here: during the meetings of the committee [SMC Accreditation Committee], we were a bit reserved to express open viewpoints due to the difficulty of being so frank in front of our professors, the cultural factor you know prevents this
Student leader 6	yeeh…and that is the case here; because it is difficult to be given adequate chance to reflect during committee meetings, and because professors dominate the discussion, there should be wider forums for students to express their views such as in seminars
Student leader 4:	yes, the need to listen to us more and allow chances and forums for students to speak out their views
Student leader 7:	our expectations are high but the presence of students in the accreditation committee by itself is a good thing, a step forward and more should come
Moderator:	then as extension of this, how do you see the development of the accreditation standards for medical education and the involvement of students in this respect
Student leader 1:	sure, when we saw that the accreditation standards are published by the council [SMC], we were generally happy that they reflect good practice as well as international standards but our contribution as students is not adequately reflected.

Student leader 7: yah agree; we pointed out specific needs and facilities for students and these are not adequately incorporated

Student leader 3: I agree, the standards need to address the students' facilities in some details as we experience problems on the ground in our medical schools

Student leader 8: yah, all what is said is right, but I think the standards are balanced and cannot go much into details; when we compared them to international standards, we found they are not less

Student leader 2: yes, this is fine but schools in developed countries are well established and here we have problems with infrastructure and education environment; I mean accreditation standards can help if these details are included

Appendix 12: Thematic framework

Code		
Grandparent	**Parent**	**Child**
Governance domains for HPE	Structures	Types and scope
		Legal mandate
		Roles and functions
		Mode of operation
		Influence
	Relationships	State-higher education
		Within higher education sector
		Higher education/HPE-stakeholders
		Higher education/HPE-health sector
	Processes	Admission policy
		HPE/health workforce planning
		Approval (of institutions or programmes)
		Accreditation (of institutions)
HPE Governance influence	Appropriateness of graduates	Quantity (numbers)
		Quality
		Relevance
		Population health needs
	Governance principles	State oversight (strategic vision, proactive state, regulation)
		Empowered stakeholders (participation, intersectoral action, accountability)
		Robust HPE system (responsiveness, equity, ethics)
		Capacity

Appendix 13: Extract of charted data

A framework matrix for charting data including an extract from the "HPE governance relationships" thematic matrix

(the underlined text indicates exact wording from the data source and the "Q" and "QQ" indicates the likelihood of including a quote in the thesis)

Data source	Code/theme: Governance relationships			
	State-higher education	**Within higher education**	**Higher education/HPE-external stakeholders**	**Higher education/HPE-health sector**
Interviews (transcripts)	**Resp. AG-3:** State-higher education relationship is active (p3). The government seems to be controlling but this should be seen as positive as it mobilises resources for higher education (p3). **Q** **Resp. IA-13:** this regime followed a tight control approach on universities and this, you know is not liked by academics, but I mean the expansion of universities and student intake in a country with growing population is highly needed; I mean the health services benefited a lot	**Resp. AG-3:** the relationship of universities to the council is excellent despite some instances of confusion (p4). We sit in our university council to plan for and decide the intake of students according to the bylaws and based on our capacity and resources, but we at sometimes receive a directive from the council, I mean its chairperson and secretariat telling us to enroll bigger numbers of students. This creates confusion and affects quality of education and sometimes gets the university into problems of increased demand for services and amenities (p4). **QQ** **Resp. ZK-22:**	**Resp. AG-3:** Representation as a relationship type here is useful (p5). **Resp. IA-13:** Having few representatives of other sectors in higher education committees is not enough for effective relationship (p4). **Q** **Resp. ZK-22:** The unplanned expansion of medical schools is a problem in this country; although our legislation dictates that the council is to participate, with the ministry in decisions around opening new schools; we are normally not consulted or asked to provide institutional opinion. The ministry sees this as its own territory and in some cases	**Resp. AG-3:** we are now seeing dichotomies and lack of cooperation between education and health, and that is crippling for HPE (p5). **Q** **Resp. IA-13:** Working with higher education people has been difficult, they wanted to use Sudan Declaration as a mechanism to support their universities in terms of funds, infrastructure and equipment not paying enough attention to the preparations for admission of the right numbers of students to fill gaps in nursing and paramedics, you know. They came with the idea that WHO is providing huge funds to the health

	from this expansion and this was only possible through the strong power of the government (p3). **QQ** **Resp. ZK-22:** The state control for higher education is not a good model of governance (p2).	In higher education sector, the relationship between the ministry and universities is not healthy (p3). **Q** The work of the Medical and Health Sciences Committee is influenced by some political decisions within the Ministry of Higher Education and may be higher governmental levels (p9). **Resp. AE-9:** The Ministry of Higher Education is playing important role to support the council and universities and is doing so in harmony despite reluctance of some universities to cooperate (p8).	opening of these new schools is not far from political agenda (p4). **QQ**	ministry, and they should be taking a share in that, these were all wrong assumptions (p4). **QQ** **Resp. ZK-22:** The relationship between education and health sectors is complex (p4).
Documents	**Doc. HEA-17:** The Head of the State act as Chancellor of all universities with a power of appointing chairpersons of university councils and vice chancellors (p2). **Doc. KM-8:** The state supervision model for higher education has	**Doc. HEA-17:** The National Council for Higher Education is to guide universities and delegate power to sectoral subcommittees including one on medical and health sciences (p3). The higher education ministry is to provide logistical support for the higher education	**Doc. HEA-17:** Service sectors in the government are represented in higher education council (p7). **Doc. OL-14:** The higher education ministry does not allow for meaningful representation of other sectors in its structures (p17). **Doc. MCA-23:** the SMC is to participate with the	**Doc. HEA-17:** The Ministry of Health is represented in higher education council by its Undersecretary (p7). **Doc. OT-27:** the relationship between education and health started to get complex with segregation, tension, and even dichotomy (p7).

	been the norm until 1970 (p82). **Doc. KL-34:** With the advent of the military regime in 1969, the state-higher education relationship started to change to a control model (p11) Academics largely lost their power due to state control model of governance (p13).	council and its committees (p19). **Doc. KM-8:** Despite existence of formal arrangements, the informal links and lobbying influence governance relationships (p182). **Doc. KL-34:** The higher education council manipulates universities (p17).	MOHE in approval of new medical, dental, and pharmacy schools (p8). **Doc. HE-42** Higher education recently raised a legal case against the National Council for Training for violating academic rules by crossing boundaries (p12).	The two ministries largely work in silos and coordination mechanisms are largely lacking (p12). **Doc. HM-51:** The informal relationships contributed to augmenting the education-health relationships (p29).
Observation (notes)	**O. note. MC-4/15:** Government interference with higher education and HPE seen as of adverse implications (p2). **O. note. MC-1/16:** Political decisions on opening new medical schools compromise academic criteria **O. note. AC-3/15:** Members conceived political interference as a threat factor for the accreditation	**O. note. MC-4/15:** The Ministry of Higher Education interferes in the academic criteria of opening medical schools (P2) **O. note. MC-1/16:** The committee works with full support of the council, the ministry, and universities (p1). **O. note. UA-3/15:** Lobbying by universities to influence decisions of the higher education council	**O. note. AC-3/15:** Higher education authorities seen as compromising the role of the Sudan Medical Council (p3). **O. note. MC-1/16:** The Medical and Health Sciences Committee described as representative of other sectors besides higher education (p2).	**O. note. MC-4/15:** Presence of the Ministry of Health representatives in the committee was questioned by some academics (p3). Disagreements between health sector representatives and academics observed in relation to planning and production of health professionals (p3)

	programme for medical education (p3).			
FGD (transcript)	Not relevant	if the recommendations of students' activities, conferences, and seminars were well attended to by decision makers, the situation would have been much better (p6). **QQ**	Not relevant	Not relevant

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