

**FACTORS INFLUENCING INSTITUTIONAL
RESEARCH CULTURE: THE CASE OF A
PAKISTANI UNIVERSITY**

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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.

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DEDICATED

TO

MY SISTER & TEACHER

SALEEM AKHTER (LATE)

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Abstract

This study aimed to explain the prevailing situation of research culture in a state-run Pakistani university by identifying and analysing research-related cultural factors (e.g. ideas, beliefs, values, and assumptions etc.) characterising it. The study also examined the ways in which the influence of these factors condition academics' research practices. Moreover, the contribution of academics' research practices in maintaining or modifying existing research culture was also explored. A combination of Archer's social realist framework of cultural analysis and Evans's model of researcher development was used to meet the needs of the study. The latter was used as a thinking tool to point out various aspects of the complex phenomenon of research culture from the literature produced in different academic areas within the wider field of higher education while the former provides the overall theoretical basis for conceptualising the phenomenon as well as analysing the data.

In line with critical realism, the data about different aspects of the phenomenon was collected from two social sciences faculties of University X. Multiple tools were used including audio recording of semi-structured interviews of twenty-two academics with diverse research experiences, numeral data of questionnaires gathered from 70 academics, and the written texts in the form of relevant policy documents.

The study identified seven sets of prominent research-related cultural factors namely; aspects of academics' job, natural and social sciences divide, utility of research, choices of research strategy, research-related skills, intellectual engagement, and research productivity/outputs that characterised the research-related cultural system of the university. Most of the cultural factors entail constraining causal influences on academics' research practices as they were in the relationship of contingent/competitive contradiction which indicates a low level of integration in the research culture of the university. The study also found that the majority of constraining cultural factors were reproduced after the socio-cultural interaction occurred during 2008-11. However, the emergence of three cultural factors present in discourses about research-led teaching, quality of research outputs and research related skills was evident which suggested slight increase in the level of cultural integration during this period.

The detailed analysis of the existing situation of the university may serve as a resource for its leadership of the university to adopt appropriate policies to

promote research culture in the university, especially in social sciences faculties. The theoretically driven concept of research culture (based on Archer's approach) used for this study may also help other researchers and academics investigate this phenomenon in other universities.

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CHAPTER 1: INTRODUCTION

1.1 Introduction to the Study

This thesis reports on a research carried out in a state-run university operating within the higher education system of Pakistan. The study aimed to explain the phenomenon of research culture prevailing in this particular context by examining its constituent factors. It also examines how these factors contribute in shaping the research activities of academics and how the responses of the academics at aggregate level (i.e. action of agent in Archer's terms) tend to change/sustain the research culture in this particular context.

1.2 The Motivation/Rationale for Undertaking the Study

The study is timely as well as important for the following reasons. The first is that the landscape of Pakistani higher education at national level has been changing significantly since 2002, when unprecedented reforms, backed by sufficient financial resources, were introduced by a newly established Higher Education Commission (HEC) of Pakistan. The core of these reforms was to promote and support research activities in higher education institutions of the country. However, as a matter of policy, the preference was given to state-run universities, which still constitute a major part of the higher education sector in the country. As a result, a significant growth was recorded in certain research-related indicators (e.g. number of publications, conference papers etc.) at national level which may give an overall idea about growing research-friendly conditions within Pakistani universities. However, all individual universities could not respond to these emerging challenges in the same way owing to their distinctive characteristics e.g. geographical location, inherited research-related facilities, etc. (Jhangir, 2008). In the context of any individual state-run Pakistani university, the post-reforms situation, emerged particularly with reference to research culture, have not been studied yet, although, such insight is necessary for addressing the issues at institutional level that are practically faced by academics.

Secondly, research into academic research is an emerging field of intellectual inquiry parallel to that of research into other aspects of academic work such as teaching, supervision etc. Within the area, varying amount of scholarly literature has been produced on some aspects of academic research e.g. academic research productivity; teaching and research relationship; and social, political and cultural influences on academic research. However, there are various aspects of academic

research which have rarely been studied or still needed to be studied. Research culture is one of these aspects as Brew and Åkerlind (2009) pointed it out while sketching the anticipated directions of the development of academic research as an established field of study. Although, some efforts were made to study the idea of research culture in the context of universities of the advanced countries e.g. Australia (Pratt et al., 1999), and the UK (Lucas, 2006), the idea largely remained unexplored. The need for further conceptual understanding and empirical investigation of the phenomenon of research culture with reference to a single academic discipline is specifically highlighted in the literature (Brew and Åkerlind, 2009).

The situation of scholarly work produced in Pakistani context on the topic of research culture is not different from the overall situation of the academic area of the study in the world. Rather it seems bleaker as I was unable to trace any comprehensive study on the topic of academic research in general and research culture in particular within the Pakistani context. The study of Sabzwari et al. (2009) is the only exception in this regard which explores the attitudes and experiences of 176 junior academics towards research based on a quantitative survey in four Pakistani medical universities. Therefore, a study on the research culture in a Pakistani state-run university, which is the focus of my research endeavour, may significantly contribute to the existing situation of literature on academic research, especially, in the context of Pakistan.

The topic is also related to my experiences of working as a lecturer in a state-run Pakistani university and those of studying in an English university. I started my career as a lecturer in a Pakistani university nine years ago. In the beginning, I was unaware of the expectations of the university from me - as an academic - owing to two reasons; 1) I had no prior working experience in the academia; and 2) I was also not given any formal induction / orientation while I was joining the university. This situation led me to engage myself with university colleagues in frequent informal conversations about different aspects of academic life, for example, workload, facilities, policies, etc. During these interactions, I realised that most of the academics were primarily engaged in teaching activities and I was not different from others in this respect, rather I had to spend more time in preparing lecturers. On the other hand, I also came to know about the importance of research in these academics' life as I was told that a specific number and type of research articles were required to get subsequent promotion in the university. However, the concerns about research, mentioned by university fellows, created an impression that the demand of research publications was unfairly imposed by the Higher Education Commission (HEC) of Pakistan as there were insufficient research-related facilities

and provisions in the university. These things made me curious, in particular, about the research-related context of the university. I also realised the importance of learning research skills for surviving in the profession as I had no prior experience of doing research. Owing to teaching workload and limited opportunities for developing research skills within and outside the university, I was unable to materialise my wish to learn/understand about research until 2009 when I started my masters' degree in Educational Leadership at the University of Leicester. During my masters' studies, a small-scale exercise of reviewing literature on the topic of academic research was the beginning of my efforts to investigate and understand the research in a university setting. This exercise provided me initial awareness about a range of factors which may potentially effect academics' involvement in research activities. Later on, more readings of literature related to research in university settings developed my research interest in this area which, finally, inspired me to study the phenomenon of research culture in this project.

1.3 Aims and Significance of the Study

The focus of this study is to examine and explain the situation of the prevailing research culture in a state-run Pakistani university (University X) through understanding the dominant ideas, beliefs, values and assumptions held by academics towards research. The study also aims to investigate the reciprocal influences of these factors on academics' research practices. To achieve these objectives, the study addressed the following three interrelated research questions:

1. What are the factors which characterise the prevailing research culture in the university?
2. In what ways do these factors influence academics' research practices?
3. In what ways do academics' research practices contribute towards changing or sustaining the existing research culture in the university?

For the purpose of this study, I adopted a meta-theoretical framework from sociology to understand the complex phenomenon of research culture in the context of University X. Archer's morphogenetic approach (1995; 1996) not only provided a theoretical framework for understanding the concept of research culture but was also consulted throughout the study during various phases of the research process. Since every research work should contribute theoretically or practically to its broader field of knowledge/research and society, this study may also have possible implications for the conceptual development of the notion of research culture within a university as well as for the promotion of research culture in Pakistani universities.

I hope that the theoretically driven conception of research culture used for this study may help other researchers and academics to comprehend and investigate this phenomenon in other universities. Similarly, Archer's morphogenetic approach may also be used in a similar fashion to explain the phenomenon of research culture in other contexts. The explanatory account of the prevailing research culture in a state-run Pakistani university presented in this study would contribute to the existing slim body of knowledge on research culture in the world, in general, and in Pakistan, in particular. This may be considered as a base for designing other empirical studies on the topic of research culture, especially, in the context of a university. The detailed analysis of the existing situation of research culture in University X may also serve as a resource for the leadership of the university to take appropriate measures and adopt policies necessary to promote research in the university.

1.4 Context of the Study

This section comprises two parts. First, I briefly review the historical development of higher education in Pakistan in order to highlight important initiatives taken by the government to promote research in Pakistani universities between 1947 (independence) to early 2008. Overall, the historical perspective of higher education and research in Pakistan has also been discussed with reference to the reforms introduced by the HEC as these reforms seem to have serious implications for the creation of a research culture in Pakistani context. For this purpose, the details have primarily been derived from the analysis of academic literature related to higher education in Pakistan (e.g. Inayatullah, 2001; Inayatullah, 2003a; Inayatullah, 2003b; Saigol, 2005; Zaidi, 2002), and official documents and annual reports of the state university and Higher Education Commission (HEC) of Pakistan.

Secondly, I will present the contextual details of University X including its history and a description about its academic and administrative structures. The section will also comment about the relationship between University X and HEC, especially, in the matters related to higher education and research. The history of higher education in the county has overlapped with the history of University X since it was one of the two universities in operation when the country came into existence and a number of state universities currently working in the country were the constitutional colleges of University X before gaining the status of autonomous universities.

1.4.1 History of Higher Education Policy Reforms at National Level

This section reviews the state's policies and important steps taken to improve the situation of higher education and promote research activities in Pakistani universities. The discussion is divided into two broader eras; pre- and post-Higher Education Commission (HEC). The inception of the HEC of Pakistan is considered the most significant development for the promotion of research activities in the higher education institutions of the country (Academy for Educational Development, 2008). Because of HEC's concrete actions, the situation of higher education institutions, especially in relation to research, has significantly changed now.

1.4.1.1 Pre-Higher Education Commission Era

Pakistan emerged as an independent state in 1947 following the partition of India. At the time of partition, Pakistan¹ inherited a reasonably large area 796,095 sq. km of land (United Nations, 2003) and a population of twenty-five million (Findley and Rothney, 2011, p. 393). However, the resources and infrastructure inherited by and transported to Pakistan were scarce to meet the needs of its people. In addition, the area that constituted Pakistan was less developed than united India. Literacy rate of the country was very low at sixteen percent (Fayyazuddin et al., 1998, p. 78), and there were very few educational institutes, especially those dealing with higher education. Pakistan inherited only two state universities in four major and geographically wide spread provinces of the country. University X, where this study has been conducted, was one of these two universities. It may be argued that the limited opportunities of higher education for the huge population of the country encouraged a focus on the development of teaching activities in the universities from the birth of the country.

Immediately after partition, the Pakistan Education Conference 1947 determined the broad outline of the system for primary, secondary and higher education of the newly established country (Task Force on Higher Education, 2002). However, the participants of this conference did not agree on the need to promote research in academic institutions including those dealing with higher education (Isani, 2002). The first specific reform aimed explicitly at higher education was made five years later (1952) when an inter-university board was established to develop a working relationship between the universities (Inayatullah, 2001). This board failed to achieve its purpose because it had no administrative or fiscal powers to manage or interfere with the affairs of the universities (Higher Education

¹ Only West Pakistan

Commission, 2009a). Moreover, it also remained silent in relation to the promotion of research in the universities.

In 1959, a Commission on National Education was founded by the government of Pakistan to review country's educational system and make recommendations for its improvement and reorganization (Jahangir, 2008). This commission made comprehensive suggestions and, more importantly, recommended the promotion of research activity in Pakistani universities (Task Force on Higher Education, 2002). In this regard, the commission suggested engaging university teachers in research activities and assessing their research experience before selecting them for teaching assignments at graduate and post-graduate level (Isani, 2002). However, it overlooked the significance of social sciences for the country, and proposed specific measures to encourage teaching and research only in certain fields of science and technology i.e. engineering, medicine and agriculture (Isani, 2002; World Bank-UNESCO Task Force, 2000).

Another important recommendation of the commission was related to the establishment of a 'University Grants Commission' to develop higher education and to act as a coordination channel among the universities and colleges of the country (Task Force on Higher Education, 2002). Critics argued that this commission took 'a very general view of the education system' (Higher Education Commission, 2009a, p. 20) and set lofty but impractical targets, if we bear in mind the country's economic situation and the limited resources available at that time (Jahangir, 2008). However, the ideas and ambitions for the development of higher education sector envisioned by the 1959 commission were appreciated in second five years development plan 1960-65 (Isani, 2002). While these policy suggestions could possibly be interpreted as a great step forward, most of them died without implementation because of the lack of political will, limited economic resources and government's negligence (Isani, 2002). Consequently, the entire decade of the 1960 passed without any major breakthrough in the sphere of educational reforms, especially at the higher education level.

Inayatullah (2001) argues that the universities were gradually made a part of overall bureaucratic system of the country during the 1950s and 1960s. As a result, the state's interference in universities' internal affairs became prominent, eventually reducing their institutional autonomy (Inayatullah, 2001). The authoritarian policies of the governments discouraged the promotion of independent thinking, freedom of enquiry and expression in overall Pakistani society including universities (Inayatullah, 2003b). These two constraining factors largely made the environment of universities un-conducive for the pursuit of intellectual work and independent

inquiry, as well as for the promotion of critical and creative thinking among the academics (Saigol, 2005; Inayatullah, 2001).

In 1970, the next major initiative came forward in the form of a 'New Education Policy', which emphasised the need to introduce and strengthen research practices in universities. It was proposed that universities should develop 'centres of excellence' in various natural science disciplines (Isani, 2002) with the establishment of 'National Research Fellowships' and 'National Professorships'. It recommended developing a human resource that can carry on research activities in the universities (Task Force on Higher Education, 2002, Appendix 8). The policy also suggested that academic freedom and financial autonomy should be granted to universities for the improvement of their performance (Isani, 2002). Unfortunately, this policy was also not implemented because of a political upheaval which ultimately resulted in a change of government (Bengali, 1999).

A new democratic government, elected in 1971, formulated the 'Education Policy' of 1972, which suggested the nationalisation of all educational institutions within the country (Task Force on Higher Education, 2002). The policy also laid stress on the development of higher education and research in the country, and gave certain recommendations such as: establishment of centres of excellence, national research fellowship, and national professorship programmes, etc. which were largely adopted from the 1970 Policy (Jahangir, 2008). Moreover, similar to the Commission on National Education 1959, it also proposed that University Grant Commission should be established in order to mediate the influence of state bureaucracy on university administration (Isani, 2002). It also highlighted the need to ensure the academic freedom and autonomy of the universities through legislation (Isani, 2002).

Unlike previous policies, some suggestions from this policy were put into action by the government during 1971-1977 (Isani, 2002). For instance, an important practical measure, which adversely impacted the education system of the country later on, was the implementation of the nationalisation scheme of academic institutions (Jahangir, 2008). Consequently, the participation of private educational institutions was completely eliminated from the system, which put extra burden on the national exchequer (Higher Education Commission, 2009a). During this period, six new universities were built in various parts of the country to promote higher education and research (Task Force on Higher Education, 2002), and some centres of excellence in the field of natural sciences, and new teaching and research departments were established in the existing universities (Isani, 2002). Following the policy recommendations, the government also revised the federal university ordinance and legitimised universities' autonomy albeit to a limited degree.

However, the universities could not enjoy this autonomy in practical terms because of heavy political influences in their internal affairs and the authoritarian mindset of the Pakistani bureaucracy (Inayatullah, 2001).

Another significant contribution of the 1972 policy was the establishment of the University Grants Commission (UGC) in 1974 (Jahangir, 2008, p.41). UGC was given the tasks of the ‘assessment of the financial needs of universities, disbursement of grants, and building institutional capacity’, which it failed to perform actively and effectively (Higher Education Commission, 2009a, p.21). Moreover, the ‘UGC had very limited funds for research projects and little ability to enhance universities’ capacity for research’ (Higher Education Commission, 2009a, p.21). UGC continued to exist until 2002 with minor additions in its responsibilities and powers through the education policies of 1979, 1992 and 1998 but it never became effective enough to promote research activities in the universities to a great extent (Higher Education Commission, 2009a). Broadly speaking, government initiatives from 1971 to 1977 were insufficient to promote research in the universities but did leave a critical marker on the landscape of higher education in the country (Zaidi, 2002). In this regard, Zaidi (2002) argues that perhaps this was the only period in which relatively liberal and creative thoughts were encouraged in Pakistani society and educational institutions.

In February 1979, the National Educational Policy was announced by the new military government that came into power in 1977 (Jahangir, 2008). Its central objective was to restructure the education system on the basis of Islamic values and the ‘ideology of Pakistan’ (Task Force on Higher Education, 2002). The government focused on strengthening universities’ existing resources and infrastructure instead of establishing new universities. Therefore, it was, specifically, recommended in the policy that no new university would be built in next five years (Task Force on Higher Education, 2002). In order to strengthen the existing assets, a suggestion was made to build five new centres of excellence in the field of science and technology (Jahangir, 2008), implying that the development of natural sciences was considered important for the country as compared to the growth of social sciences. The 1979 policy also recommended that the task of revising curriculum at the higher education level would also be assigned to UGC (Isani, 2002).

Following the proposals of the 1979 policy, the government took various practical measures that significantly affected the overall education system and Pakistani universities (Ashraf, 2009). Most important, among these, was the inclusion of Islamic ideology in education (Jahangir, 2008), which was exploited by the military regime of that time to justify the legitimacy of its rule (1977-88) as well as to pursue its geopolitical agenda (Ashraf, 2009). To this end, the curriculum at

different levels was revised according to Islamic values and 'Islamic Studies' was introduced as a compulsory subject up to university level (Government of the Punjab, 1973). The government pushed academics/scholars to participate in Islamisation of knowledge movement. Consequently, researchers started viewing knowledge through the lens of Islamic ideology and produced a considerable amount of literature and research with an Islamic perspective, particularly, on economics, history and politics (Zaidi, 2002). However, Inayatullah (2001) argues that these attempts of the Islamisation of knowledge were made without reconciling the traditional incompatibilities between religious and scientific ways of thinking. The literature produced through these attempts could not gain intellectual depth and, primarily, remained superficial. He states, in the light of the remarks given by a Muslim scholar who remained actively engaged in the exercise of Islamisation, that the effort to combine religion and science did not contribute to the promotion of independent inquiry in socio-educational spheres. Especially, this stifled the advancement of social sciences research in Pakistan (Inayatullah, 2001).

Through the policy of 1979, the federal government took financial control of higher education institutions away from provincial governments, which led to a rapid increase in government interference in the policies of universities (Isani, 2002). Another paradigm shift made by the government in the 1979 policy was that the private sector was once again given permission to establish educational institutions in the country and the nationalisation policy of educational institutions, followed by the previous government, was reversed (Isani, 2002). Despite the enunciation of these new steps by the military government, the private sector mainly invested only in schools and the higher education still remained dominated by the state universities. The military regime (1977-88) imposed restrictions on the freedom of press, speech, expression, dissent and debate in order to gain and tighten the control over various segments of the society as well as on educational institutions (Saigol, 2005). This was another noticeable factor which adversely affected the promotion of research in the universities, particularly, in the fields of social sciences (Zaidi, 2002). Inayatullah (2001) believes that independent and creative thinking is a necessary prerequisite of the development of social sciences research in a society.

The next education policy was announced in December 1992 by an elected democratic government. In Jahangir's opinion, the National Education Policy of 1992 was largely derived from the recommendations of earlier policies (Jahangir, 2008). This policy, similar to previous ones, strongly stressed upon the development of primary and secondary education rather than the higher education. One of the important suggestions given regarding the higher education was that study

programmes offered in Pakistani universities should be market demand-oriented rather than supply-led (Isani, 2002). This was the first policy in which the need to a strategic plan for the successful implementation of the policy was highlighted. Practically, this policy also became a victim of political instability in the country and most of its suggestions could not be translated into concrete actions (Isani, 2002). Consequently, the policy could not introduce any significant change in the education system, especially higher education, of Pakistan.

In 1998 another education policy was articulated by a new government which came into power in 1997 (Government of Pakistan, 1998). In comparison to the previous one, the National Policy of Education 1998 emphasised on the promotion of research activities in various fields, including social sciences, in universities. It was also acknowledged that the existing conditions for research, especially, in social sciences were very poor. In this regard, It was identified that the 'shortage of research-oriented programmes', scarcity of trained 'manpower', and a 'lack of library and research literature facilities' were the most prominent issues causing poor research conditions and traditions in the sphere of higher education in Pakistan (Government of Pakistan, 1998, p.73).

In order to improve this situation, this policy proposed various reforms along with the implementation guidelines. Some of the major suggestions were that: a) the universities need to shift their orientation in the favour of research; b) applied research should be encouraged in various academic fields, including social sciences; c) laboratories and libraries should be strengthened; d) research degrees should be launched; e) special funds for research should be allocated; and f) the centres of advanced studies in important areas of social sciences should be established in the existing universities (Government of Pakistan, 1998, pp. 80-86). The 1998 policy aimed to reform the overall education system of Pakistan, including higher education, in ten years. However, the civilian government which initiated this policy was also over thrown in 1999 and, once again, the military came into power. This military government initiated another policy 'Education Sector Reforms-Action Plan' in 2002 for the development of education system. Therefore, the National Education Policy 1998 largely remained unimplemented. Overall, both the 1998 and the 1992 polices failed to introduce any fundamental change in the higher education sector (Jahangir, 2008).

In the 1980s and 1990s, there was a sharp rise in the number of non-government organisations (NGOs) in Pakistan (Zaidi, 2002). The majority of these NGOs were either engaged in or sponsored social science research in the country (Zaidi, 2002). Typically, the research initiatives of these studies were framed in line with the goals and priorities of the donors (Saigol, 2005). Moreover, these NGOs

were interested in quick and cheap solution to social problems rather than in the production of in-depth research work (Saigol, 2005). Therefore, Saigol (2005) argues that the NGOs-funded projects emerged as an important constraining factor for the promotion of rigorous research in the field of social sciences during this period.

The World Bank-UNESCO Task Force Report, 'Higher Education in Developing Countries: Peril and Promise', highlighted the critical role of higher education in a rapid and sustainable economic growth of developing countries such as Pakistan (2002). This report drew the attention of the military government towards the development of higher education in the country. Therefore, a task force on higher education (TFHE) was constituted in 2001 with the mandate of analysing the condition of, and making recommendations for the improvement of higher education in Pakistan. After an intensive consultation with a wide range of stakeholders (including University X), the TFHE identified the lack of research activities as one of the key reasons for the poor condition of higher education in the country (Task Force on Higher Education, 2002). The need to build the research-capacity of academics from both social and natural sciences, as well as for creating a research-friendly environment in universities, was highlighted. In order to improve the situation, the TFHE proposed radical reforms in the higher education system of Pakistan. In this regard, the most important recommendation was related to the creation of an administratively and financially autonomous body, the Higher Education Commission (HEC), to regulate and facilitate the uplifting of the standards of universities, especially in relation to research. The restructuring of the universities was also recommended to improve the working conditions for the academics so that they could actively engage in research.

In March 2002, the government of Pakistan appointed a steering committee on higher education (SCHE) as recommended in the report of TFHE (Steering Committee on Higher Education, 2002). The core purpose of the SCHE was to develop a detailed plan for the successful implementation of the reforms. For this purpose, it took universities and other stakeholders in higher education sector on board and prepared a detailed proposal for the creation of the HEC as an independent regulatory body at national level (Steering Committee on Higher Education, 2002). A model university ordinance was also proposed to ensure the institutional autonomy of universities (Steering Committee on Higher Education, 2002). These recommendations were endorsed by the government of Pakistan. As a result, the Higher Education Commission was established as a financially and administratively autonomous body on September 11, 2002 which replaced the ineffective University Grant Commission (Government of Pakistan, 2002a). After a

couple of months, the proposed university ordinance was also approved and enforced from November, 2002 (Government of Pakistan, 2002b). In this way, the proposals made by the SCHE were translated into concrete actions with full financial and administrative support of the government (Higher Education Commission, 2009a).

1.4.1.2 **Post-Higher Education Commission Era**

The central role assigned to HEC was to evaluate, improve and promote higher education and research in the country (Government of Pakistan, 2002a). For this purpose, the commission was permitted to perform various functions. Some of the key functions were to: a) to formulate policies, guiding principles and priorities for the higher education institutions; b) assist universities in enhancing their standards; and c) provide financial support to state universities according to their needs (Government of Pakistan, 2002a). The mandate given to the HEC was spelled out into four core and three supporting strategic aims (Higher Education Commission, 2005). One of the core aims was to enhance the capacity of universities to undertake high quality research in all academic fields (Higher Education Commission, 2005). The HEC also designed a medium term development framework (MTDF) in such a way that each of these aims had its own strategic objectives accompanied with intervention programmes for achieving them.

This framework also laid down the objectives for the HEC in relation to the enhancement of research-capacities of universities. Some of the key objectives were to: a) develop the enabling environment for research in both physical and technological terms; b) promote quality research along with teaching and learning; c) lay down a system that ensures the quality and quantity of research output and d) offer such incentives that simulate research practices (Higher Education Commission, 2005, pp.33-35). In order to accomplish these objectives, the commission initiated various programmes and schemes (still ongoing) including: the research grant programme for conducting research as well as strengthening the laboratories in universities; the digital library programme for providing access to the latest academic literature; and the faculty development programmes for enhancing academics' capacity for research and teaching (Higher Education Commission, 2005, pp.36-39). In addition to these initiatives, the HEC also formulated various overarching policies aiming at the promotion of research activities in the higher education institutions. For example, new rules and regulations to evaluate the quality and quantity of scholarly work in the universities were articulated and implemented. Moreover, the criteria for the appointment and promotion of academics in state universities were also revised, which made research work and a research degree mandatory for the career growth of academics. Along with these steps, the 'Social

Sciences and Humanities Research Council of Pakistan' was also established in 2003 for the first time in the history of the country. This council encourages research activities in social sciences sector and provides support for research grants, funds for seminars, conferences, libraries, and the data base development (Higher Education Commission, 2009a, p.79).

In order to introduce sustainable change within universities through these reforms program, on the one hand, the HEC provided both strategic and financial assistance to the universities for developing their plans to face new challenges emerging from HEC's interventions (Higher Education Commission, 2009a) while, on the other hand, it (the HEC) also exerted pressure on universities to adopt new rules and regulations by exercising its administrative and financial powers (Jahangir, 2008). These initiatives have affected almost every aspect of Pakistan's higher education sector in general, and research in particular (Higher Education Commission, 2009a). As the six years' (2002-8) report on the HEC revealed that 616 development projects costing PKR. 94,407.908 millions (equivalent to GBP 625 millions) were initiated in various state universities during this period (Higher Education Commission, 2009a, p.139). Nearly one third (32.65%) of this total amount was spent on the development of infrastructure for research (30.46%) and library facilities (2.19%) in the universities (Higher Education Commission, 2009a, p.139). It was also noticed, after the inception of the HEC, that the number of PhDs produced per year in Pakistan gradually increased from 202 in 2001 to 421 in 2007 (Higher Education Commission, 2009a, p.48). Facts regarding the research output of the universities also pointed out that there was a remarkable rise in the number of research publications of Pakistani academics and researchers in the renowned international journals from 815 to 3,640 in the period from 2002 to 2008 (Higher Education Commission, 2009a, p. 89). The total number (10,824) of these publications was three times greater than that of (3,260 publications) produced in the five years period prior to the formation of the HEC (Higher Education Commission, 2009a, p. 89). In addition to these research publications, large number (2,426) of research papers were also presented in international peer reviewed conferences during 2003-08 with the financial assistance, in the form of travel grant, of the HEC (Higher Education Commission, 2009a, p. 83). In the same period (2003-08), the state universities also organised 399 conferences / workshops / seminars in different academic disciplines including social sciences for which a sum of Rs.136.234 million (equivalent to GBP 0.9 million) was provided by the HEC (Higher Education Commission, 2009a, p. 83).

These developments reflected that higher education sector has largely responded positively to the HEC-driven interventions. However, it was not possible

for all individual higher education institutions (HEIs) to react in the same manner or produce results on equal grounds (Jahangir, 2008) because there was a wide variety of institutions. These HEIs can be classified into various groups depending upon their management (e.g. private or state-run), legal status (e.g. charter granted by the federal or the provincial government), and core areas of activities (e.g. general, medical, agriculture, or engineering etc.) (Higher Education Commission, 2009a). Every individual institute has its own needs and challenges (Jahangir, 2008); for example, according to new rules of the HEC, it is mandatory for all HEIs to maintain specific number of senior academics with certain research credentials before launching a research degree in any academic field (<http://www.hec.gov.pk/>). In practice, this rule created a more challenging situation for the universities located in remote cities as compared to those in major/metropolitan cities because it is difficult to hire and then retain qualified academics for the universities working in remote cities/towns (Jahangir, 2008). Similarly, as a matter of policy, the HEC made huge investments on developing infrastructure in public sector ‘general universities’(which offer degree courses in various academic fields such as social, applied, management, and natural sciences etc.) because almost 70 percent of the total enrolled students in all HEIs of the country were studying in these universities (Higher Education Commission, 2009a, p.139). Consequently, the effects of HEC’s policies on general public universities were different than those on other HEIs. In short, the degree of the impact of HEC’s reforms on the internal state of affairs of an individual university depends upon the compatibility of HEC-led interventions with the unique circumstances, needs and challenges faced by that university.

1.4.2 University X within the Landscape of Pakistani Higher Education Context

In order to understand the consequences of these interventions within the context of University X, it seems imperative to know the distinctive features of this university. In this section, I therefore present important information about academic and administrative setup of the university. A simplified hierarchy of both University X and the HEC is presented in the Figure 1, for describing their administrative setup as well as the link between these organizations.

University X is situated in a metropolitan city, Lahore, which is a hub of educational institutions, especially those of higher education including 24 universities (<http://hec.gov.pk/>). Though chartered and ceremoniously governed by the provincial government of Punjab, the university is an autonomous body run under ‘the [X] University Act 1973’. Vice Chancellor is the executive head of the administrative and academic activities of the university. Further, various regulatory/governing bodies (e.g. senate, syndicate), established under 1973 Act,

facilitate the management and regulation of the multi-faceted administrative and financial matters of the university (Government of the Punjab, 1973). The syndicate is the ‘executive body’ of the university, and is also responsible for taking/approving necessary steps to improve the quality of academic activities, including both teaching and research, in the university (Government of the Punjab, 1973). However, the syndicate is advised by the academic council of the university in the matters related to teaching, research and examinations. The measures taken or proposed by the syndicate in various administrative, financial and academic matters are finally approved by the senate, the highest body of the university (Government of the Punjab, 1973).

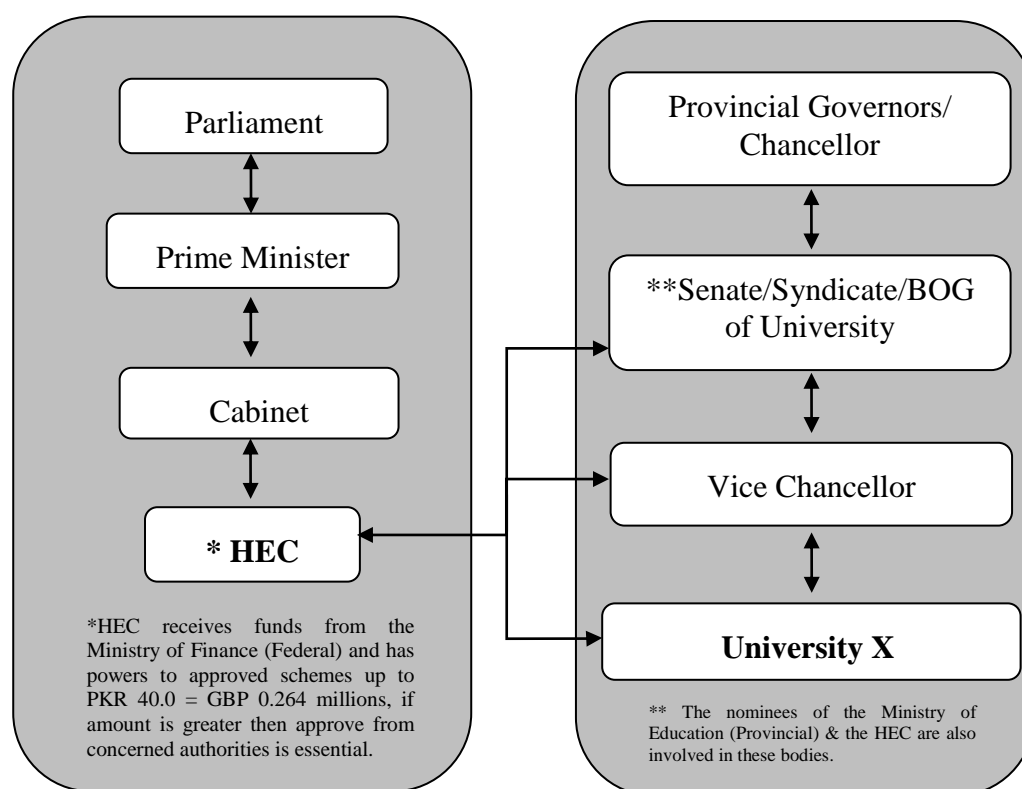


Figure 1: Links between the HEC and University X (Based on Jahangir’s idea, 2008)

University X is a large general university as categorised by the HEC (<http://hec.gov.pk/>). It comprises 13 faculties ranging from pure to social sciences, engineering and arts (University X, 2011a). The total number of academics in the university is nearly 700. The overall percentage of academics with PhD degree is 36.5 (University X, 2011a). In social sciences faculties, this percentage varies from 15 to 28, while in pure sciences ranges from 35 to 49 (University X, 2011a). So far, the overall academic traditions of University X, like other universities, remain teaching-oriented (Saigol, 2005); however, this element is more dominant in the faculties of social sciences as compared to those of pure sciences. The university was ranked 6th among general universities of Pakistan in 2009 when a ranking table

was first time introduced by the HEC. University X has shown a gradual improvement since then and is now (2016) ranked second in this category (<http://hec.gov.pk/>).

The HEC, since its inception in 2002, also intervenes in the administrative, financial and academic affairs of the university at different levels through its policies, regulations and programmes initiated for the promotion of higher education and research in Pakistan (see Figure 1). It is worth mentioning here that the university administration initially resisted the authoritative role and intervention of HEC, which showed different effects on its academic and research environment; for example, the rules and criteria for the selection and promotion of academics introduced by the HEC were strongly criticised by the administration of that time as an invasion of university's autonomy (Jahangir, 2008). We cannot, therefore, trace a visible or significant impact of the HEC policies on the promotion of research in the university until the end of 2007. However, the HEC, because of its financial powers and government support, increased its influence on university policies with the passage of time. One key reason for the increasing HEC intervention in the matters of university is that it works as an intermediary / a regulatory body between the federal government and the university in relation to the matters of financial assistance and grants (Jahangir, 2008).

A change of University X's administration at the beginning of 2008 also supported the implementation of HEC policies (University X, 2011b). The university's new leadership not only took radical measures on its own for the promotion of research in the university but also complied with the policies of the HEC outlined for the promotion of higher education. It also adopted administrative and academic changes suggested by the HEC to the universities of Pakistan. For example, the appointment of a vice chancellor in the university, which used to be a political decision of the provincial government, is now made by a search committee formed by the HEC for this purpose (Jahangir, 2008). In the academic sphere, University X initiated research degrees (MPhil and PhD) in many academic departments. In addition, on the recommendation of the HEC, the university also started four year undergraduate programmes in most of its departments and faculties, which also included research components. Because of the intervention of HEC and the measures taken by the university, its overall research environment became healthier after 2008 as compared to the past. The statistics, revealed in University X fact book, show that the average number of PhD theses submitted per year during 1990-2007 was 41 which increased rapidly to 113 after 2008 (University X, 2011a). The research output of the academics in the university was also meagre before 2008. For example, the total number of papers presented in international conferences by the faculty

members was only 57 during 2004 -08, which rose to 189 in 2008-11 (University X, 2011a). The university's overall research budget has also seen a dramatic increase from four million in 2007-8 to 70 million Pakistani rupees in 2010-11, which may have contributed to the promotion of research in the university (University X, 2011a).

1.5 Research Approach/ Theoretical and Conceptual Influences

This study employed Archer's morphogenetic-morphostasis theory (1995) to conceptualise and examine the phenomenon of research culture in a university. It provided overarching methodology to carry out cultural analysis without conflating culture with other domains i.e. material environment (structure) and academics' practices (agency) by the virtue of 'analytical dualism' (Archer). Since Archer's theory is underpinned in realist ontology, therefore, the analysis of research culture presented in this thesis also embodied a realist's claims that 'reality is a stratified, open system of emergent entities' (O'Mahoney and Vincent, 2014, p.6). The upholding of this assumption about reality also have serious consequences on the entire research process, for example, the selection of techniques to assess data and the procedures employed for argument building. Therefore, this study can be considered as a critical realist analysis of a research culture. Moreover, it is also different from both positivist and constructivist perspective as they hold distinctive views about reality (e.g. the former 'equates reality with recordable events' while the latter 'collapses ontology to discourses'(O'Mahoney and Vincent, 2014, p.9)) which have different implications on research process.

1.6 Synopsis of the Analytical Framework and Organisation of the Study

As mentioned above, Archer's framework provided theoretical guiding principles throughout this study. The direct and indirect influences of the framework at different phases will be illustrated in the following diagram. The explanation of figure 2 also includes the details of the organisation of this study.

First, the general concept of culture advanced by Archer (1995; 1996) facilitated me to review various available interpretations of research culture. Especially, it enabled me to reinterpret Evans's (2007) conception of research culture, with the help of relevant literature, in a way which made Evans's interpretation applicable/workable in the university setting. In this way, I eventually laid down an interpretation of the notion, which is not only applicable to the complex setting of a university but also has theoretical underpinning. More importantly, it (my reinterpretation of Evans's definition) was also in line with

Archer's morphogenetic framework for conducting the cultural analysis in empirical terms. The first section of the chapter 2 of this thesis presents a detailed discussion in this regard.

Secondly, Archer's morphogenetic approach offered generic characteristics of cultural as well as structural factors/items. These guiding principles enabled me to relate Evans's (2011b) conceptual model of researcher development with various aspects of research culture. In this way, Archer's approach facilitated me to gain insight into the phenomenon of research culture despite the unavailability of a model/framework/theory, which explicitly explained various components/elements of the notion of research culture in a university context. Moreover, the explanatory approach of Archer's framework, especially, cultural morphogenesis/stasis provided me guidance in understanding and explaining the dynamics of change/stability of research culture in a specific setting over a certain period. The rationale of using Archer's morphogenetic approach for this study and the details of its relevant parts are presented in the second half of the chapter 2 of this thesis. The next chapter presents a debate about the choice of Evans's (2011a; 2011b) conceptual model of researcher development as a heuristic tool for this study. Moreover, it also includes the details of the conceptual model and its meanings for this study with reference to the empirical data.

Thirdly, Archer's framework also indirectly informed the methodological decisions of this study, especially, those related to the choice of particular tools for collecting relevant data. Moreover, I have also taken help from Evans's conceptual model of researcher development while designing specific research tools, e.g. interview schedule, aimed to generate empirical data for the study. However, to meet the practical modalities of data collection and its analysis, I also employed other research strategies (detailed discussion in chapter 4) for this thesis. For example, the study follows a combination of case study and survey research approaches in which the data has been generated by using semi-structured face-to-face interviews, structured questionnaire and relevant policy documents produced in the context of this study.

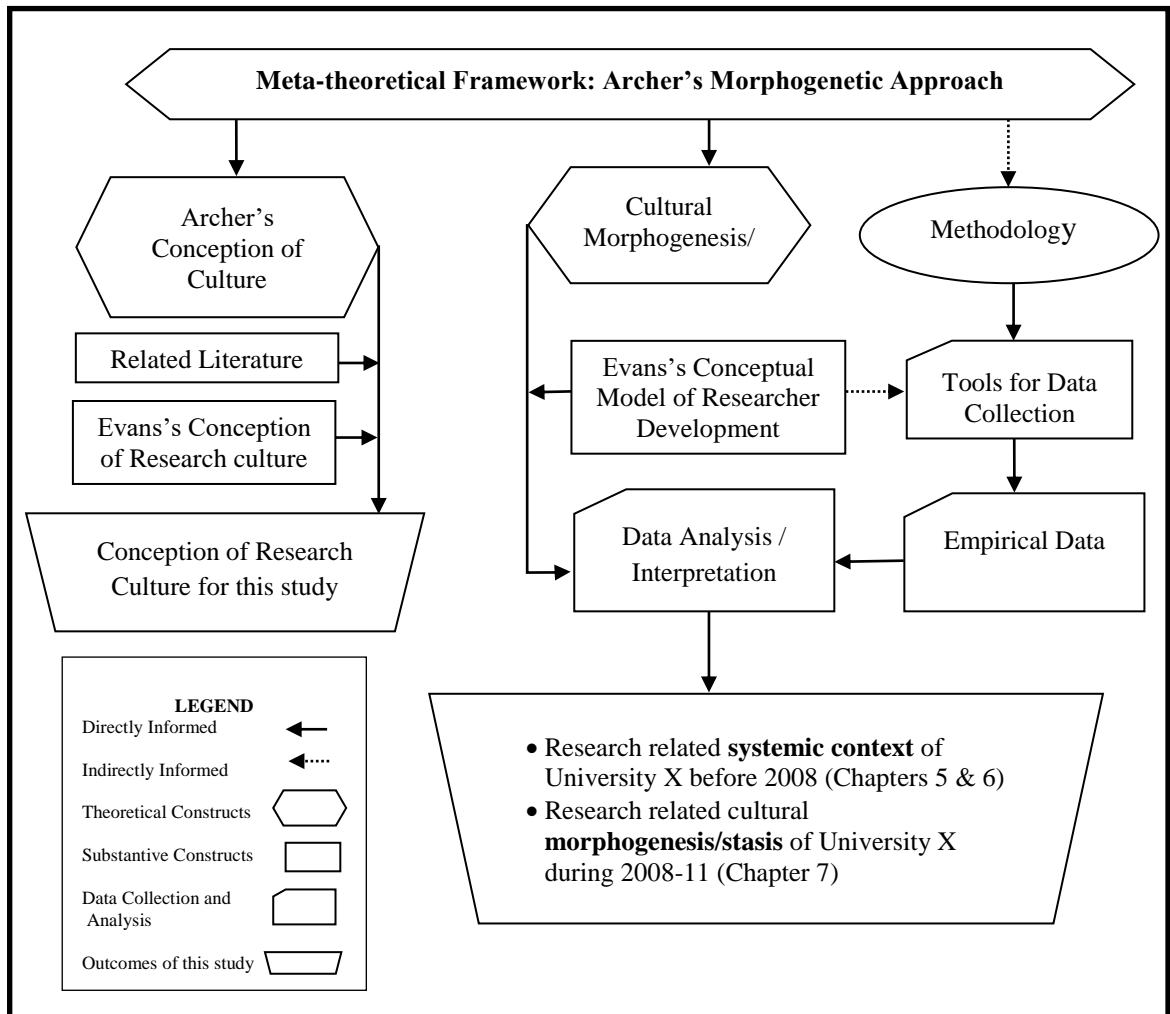


Figure 2: Organisation of the Study

Fourthly, as shown in the diagram, Archer's cultural morphogenesis has directly influenced the process of data analysis/interpretation. The detailed account of cultural dynamics offered by Archer guided me to make sense of the empirical data generated for this study. The arrangement of the findings/interpretations of my study was also informed by Archer's morphogenetic approach. Chapter 5, 6 and 7 of this thesis present the analysis and interpretation of findings simultaneously.

Chapters 5 and 6, as the starting point of the cultural morphogenetic analysis, establishes the research related systemic context of the university prior to 2008 and focuses on determining the cultural and structural conditions pertaining to research within the university. In addition, the historical developments about the promotion of research within the country are examined in this chapter so that the emergence of systemic context of the university can be understood by putting it into its wider perspective. Chapter 7, in relation to the middle and final stages of the cultural morphogenetic analysis, presents the findings of questionnaire data. It is followed by

the arguments about the stability/change of cultural system of the university during 2008-2011 by mapping the empirical data onto the logical explanation of the situation. Finally, in chapter 8, the morphogenetic interpretation of the research culture existing in the university has been presented in the form of a diagram. The chapter includes limitations of the study as well as reflections of the researcher about the metatheoretical framework used in the study. Moreover, theoretical and practical implications of the study have also been discussed in this chapter.

CHAPTER 2: THEORETICAL PERSPECTIVES

A rich research culture is considered to be an important characteristic of highly-rated universities. This is the reason why relatively new universities also show an interest in developing a research culture, as a vibrant and sustained research culture reflects the excellence of an academic institution (Jenks, 2009). Knowing, explaining and investigating the various aspects of research culture in a university are the prime focus of my research. In this regard, it is important, initially, to understand precisely and conceptualise clearly the meaning of the notion of 'research culture'. Cheetham (2007, p. 3) raises the same question, 'what is a research culture?' in his speech to the academic senate as a Pro Vice-Chancellor of Research at the University of Sydney. Recent literature seems to highlight consistently the ambiguities associated with the concept of research culture (Deem and Lucas, 2007; Evans, 2009; Hill, 1999). Similarly, the scrutiny of results, when googling the phrase 'research culture', reveals that research culture seems to be vaguely-defined in existing academic literature. Moreover, researchers have used various terms to present this notion of 'research culture', which makes it more complex. For example, Kennedy et al. (2003, p. 1) equate it with 'culture of scholarship'. Similarly, Connell (2004, p.15) considers it equivalent to 'research management'. Perhaps the problematic notion of 'research' (Hazelkorn, 2005) and the 'amorphous' concept of 'culture' (Tripathi, 2001, p. 129) are the main sources of confusion in the understanding of 'research culture'. Therefore, it is necessary to identify a clear meaning of both concepts of 'research' and 'culture', which may guide the researcher to comprehend the notion of research culture. For this purpose, along with existing literature, both etymology and dictionary meanings of the terms will also be taken into account.

2.1 The Notion of Research

The word 'research' originates from two outdated French words: '*recerche*' and '*rechercher*'. The obsolete word '*rechercher*' was used to indicate the activity of searching for anything critically, and this act of searching about something was known as '*recherche*'. It has been equated with scientific inquiries since the middle of the 17th Century (Online Etymology Dictionary, n.d.-a). However, the term was associated with universities for the first time in the 1870s in England when new reforms were introduced which made Cambridge and Oxford the 'place[s] of learning', along with teaching (Boyer, 1997, p. 15). At present, research has become an important characteristic of universities, particularly in advanced countries

(Connell, 2004). Hazelkorn (2005) argues that the conceptualisation of university research and the recognition and measurement of research activities are debatable issues, which are mainly influenced by an institutional background, mission, internal context and criteria of funding bodies. In the first part of this section, I attempt to comprehend the concept of university research, before discussing the various forms of research outputs and their assessment.

2.1.1 University Research

In the past, universities were primarily engaged in basic research (Hazelkorn, 2005) and focused on discovering and/or creating subject-specific knowledge for their own purposes, without any particular application. For this reason, academic disciplines within universities followed various traditions of research which largely depended upon the nature of academic disciplines in which inquiries were undertaken (Connell, 2004). However, the linear relationship between university research and basic research has been questioned by the emerging concept of applied research. The applied perspectives of research emphasize the creation of knowledge in the 'context of application' (Gibbons et al., 2005, p.3). Consequently, academic institutions, specifically having vocational backgrounds, started viewing university research in a wider perspective which not only emphasises the creation of theoretical knowledge, but also the particular activities to utilise existing knowledge (Connell, 2004; Hazelkorn, 2005). Usually, such kinds of inquiries are not confined to a specific discipline and are conducted beyond the boundaries of universities with the collaboration of external entities (Gibbons et al., 2005). Gibbons et al. (2005) argue that the emergence of new aspects of university research indicates new ways of conducting research, in contrast to conventional 'Mode 1' of knowledge creation. Mode 1, similar to basic research, refers to the creation of knowledge 'within a disciplinary, primarily cognitive, context' (Gibbons et al., 2005, p.1). On the other hand, Mode 2 corresponds with the production of knowledge 'in broader, trans disciplinary social and economic contexts' (Gibbons et al., 2005, p.1) which is closely associated with applied research.

Hazelkorn (2005) points out that teaching intensive universities may take research in the wider perspective and equate university research with Boyer's (1997, p.16) four scholarships: 'discovery', 'application', 'integration' and 'teaching'. These universities seem to give due recognition to all activities that emanate from their core business: research, teaching and learning (Hazelkorn, 2005). However, the report of the UK's Research Assessment Exercise (RAE), published in 2009, shows an exclusion of teaching and routine activities from university research in order to develop the research profiles of universities. Similarly, University X - the focus of my research - remains in line with the idea of teaching-research dichotomy that has

also been shared by its main funding agency, the Higher Education Commission (HEC) of Pakistan. In its vision statement (published on the university website), the university distinguishes between teaching and research activities in such a way: '[The] university intends to develop scientific, socio-cultural, economic and political leadership, through learner-centred teaching and research'. More specifically, the 'promotion of development-oriented applied research' is one of the prime goals of this university. It can be inferred from these quotations that the core business of the university is also to promote research - especially applied research - along with teaching activities.

In addition to teaching and research activities, universities are also expected to contribute to the socio-economic development of society (Jenks, 2009). This expectation has resulted in the idea of industry-academia partnership and the engagement of academic staff in professional activities (Connell, 2004). In this emerging situation universities and/or funding bodies may further widen the scope of research, and include a range of activities related to professional practices in university research, along with other forms of research such as basic or applied, etc. (Hazelkorn, 2005). However, university research has been defined, for the purpose of RAE 2009 (Annex G, p. 62), in a way that acknowledges all forms of creative activities and their outcomes. It states that research is an:

[O]riginal investigation undertaken in order to gain knowledge and understanding. It includes work of direct relevance to the needs of commerce and industry, as well as to the public and voluntary sector; scholarship; the invention and generation of ideas, images, performances, and artefacts including design, where these lead to new or substantially improved insights; and the use of existing knowledge in experiment development to produce new or substantially improved materials, devices, products and process, including design and construction.

Here the conceptualisation of scholarship for RAE is 'the creation, development and maintenance of the infrastructure of subjects and disciplines, in forms such as dictionaries, scholarly editions, catalogues and contribution of major research databases' (RAE, 2005, p.22) which seems different from Boyer's (1997, p.16) four scholarships: 'discovery', 'application', 'integration' and 'teaching' (to which I refer above).

The websites of University X and the HEC do not provide a precise definition of university research itself. However, the purposes of different departments and the nature of various projects (for example, discipline-specific research awards, support for journals, assistance in patent filing and industrial liaison, etc.) imply a wider conception of the HEC about university research that

seems to be very similar to the above-mentioned RAE's views of university research.

2.1.2 The Outputs of University Research

Hazelkorn (2005) argues that the recognition and measurement of the outcomes of research activities are important and critical issues. Traditional paper-based publications such as journal articles, conference papers, books or chapters in books, were considered by most universities and funding agencies as the output of university research (Boyer, 1997). In the literature, the terms 'research productivity' (Sax et al., 2002, p.426), 'faculty research productivity' (Bland et al., 2005, p. 225), 'scholarly productivity' (Suitor et al., 2001, p.50) and 'publication productivity' (Fox, 2005, p.134) have been used predominantly to refer to paper-based publications. However, some universities and funding agencies also include the supervision of PhD graduates in research outputs of academic staff (Hazelkorn, 2005). The development and emergence of new academic fields (for example, music, fashion, sonology, etc.) has complicated the situation because their research outputs depend upon the typical nature of these disciplines (Hazelkorn, 2005, p.75). Consequently, their research outputs may be very different from traditional paper-based publications of other fields. Moreover, the engagements of academics in activities outside of their universities, to serve the community by sharing knowledge, not only broadens the spectrum of academics' research practices, but also makes it controversial to a certain extent (Jenks, 2009). It means that there are various forms of academics' research activities and their outputs, ranging from paper-based to non-paper-based research output in general, and within the field of social sciences in particular (Nederhof, 2006). In this scenario, the adaptation of typical terminology (for example, research publication or faculty productivity) might be misleading. Therefore, I prefer to use the term 'research output' for representing all-possible forms of research activities particularly mentioned above.

2.1.3 The Assessment of University Research Outputs

There are a variety of methods that have been used for the assessment of academics' research outputs. The existing literature reveals that the most commonly used methods are 'straight'/'weighted count of publication' (Creswell, 1985, p. 3), 'peer reviews' (Scott, 2007, p. 827), bibliometrics (Wallin, 2005, p 261) and esteem indicators (Jenks, 2009, p. 18). Ming (2011) argues that any of these methods are unable to measure and give due re-organisation to various forms of research outputs. However, universities and funding agencies may chose a combination of the methods in accordance with their requirements and purposes (Royal Netherland Academy of Art and Sciences2011). Jenks (2009) stresses whatever parameters are

selected for the assessment should be communicated to the academics clearly in order for them to direct their research efforts in the right direction.

2.2 The Notions of Culture and Research Culture

The term culture has been widely used to refer to multiple and divergent constructs by social scientists, especially psychologists, sociologists, and anthropologists (Tripathi, 2001). A clear conceptualisation of culture is essential and considered a foundation for organizational cultural studies as it guides the researcher to determine the scope and nature of the study (Brenton and Driskill, 2010). The importance of the clarity of the term 'culture' for organizational cultural analysis led me to review various perspectives of culture, in order to gain a comprehensive understanding of research culture in the context of a university. Perhaps the easiest way of unpacking the concept of research culture is to understand the etymology and dictionary meaning of the term 'culture', along with a review of existing literature. By doing so, I have found three broader interpretations of culture which highlight the central elements of the phenomenon of research culture. I have related these interpretations of research culture with commonly used terminology (such as researcher development, physical and social environments, etc.) in existing literature, especially in higher education. In this process, I have kept the Archer's conception of 'agency', 'structure' and 'culture' in mind, which not only helps me to conceptualise the notion of research culture comprehensively, but also to take advantage of the theoretical foundations of Archer's social realist morphogenetic approach, while analysing and interpreting the phenomenon. Similar to Scott (2005), I also believe that meta-theory is essential for empirical research and critical reflection on a social phenomenon. For this purpose, I discuss the morphogenetic approach in detail in the next section of this chapter. Below, I examine each of these three interpretations that I have drawn from the literature. I do not suggest that these are the only interpretations of culture; rather, they are the three that, to me, stand out most prominently.

2.2.1 The First Interpretation

The first of what I identify as three views of culture, refers to the intellectual and/or physical *development, improvement or refinement* of an individual through some kind of *training* (Online Etymology Dictionary, n.d.-b). This was most likely introduced by the French in the 18th Century. In daily life, the term culture is also used to indicating a high level of 'sophistication' of a person (Schein, 2004). Jahoda (1993, p.277) applies this idea to highlight 'the qualities of an educated person' which also provides room to extend this idea to comprehend 'research culture'. 'Research culture' may be conceived as an individual's *capacity* to undertake

research practices and this capacity can be built, enhanced and refined through proper developmental activities. While exploring the literature, I realised that this sense of culture is not commonly used in academic literature to describe university 'research culture', or even organisational culture. However, I also found the notion of 'researcher development' to depict a similar interpretation. It is defined as 'the process whereby people's capacity and willingness to carry out the research components of their work or studies may be considered to be enhanced, with a degree of permanence that exceeds transitoriness' (Evans, 2011b, p. 20). The span of this broad conception of the notion also covers the scopes of other interpretations - rooted in the aims of researcher development as conceived by the councils, the learned societies and the universities themselves (see Evans, 2011). It is clear from the definition that the above-mentioned stance (academics' research capacity) of *research culture* overlaps with the emerging notion of *researcher development*, because both concepts focus on *people* and the *development* of their research capacities. Therefore, in order to remain consistent with the literature and avoid any possible confusion, I have used the term 'researcher development' instead of *research culture* to refer the capacity building of academics in relation to research. No doubt researcher development is a nascent field; however, Professor Linda Evans elaborates her definition of researcher development in the form of a conceptual framework (for details see Chapter 3). It offers an opportunity to analyse empirically the process of researcher development, which focuses on its 'behavioural', 'intellectual' and 'attitudinal' components (Evans, 2011b, p. 20). This is another reason for the adoption of the term researcher development. Moreover, Archer's conception of agency and its morphogenesis/static enabled me understand and explain the role of academics with different characteristics (academic ranks, research abilities, academics fields) in the process of researcher development, as it elaborates the role of the *people* at group level in the process of social change (Archer 1995).

2.2.2 The Second Interpretation

The second view of culture that I have identified from my synthesis of the literature is derived from the Latin word '*cultua*' that originates from '*colere*', meaning 'to cultivate' (Online Etymology Dictionary, n.d.-b). Phrases such as: 'virus culture' or the 'culture' of bacteria, etc., reflect this sense of culture. This kind of culture can be viewed in a *petri* dish. By utilising this sense of culture, research culture can be considered as 'an environment in which research grows and multiplies' (Hill, 1999, p.1). Here, the environment encompasses institutional and material aspects associated with a particular academic institution, which helps to foster research output (Sawyer, 2004). In fact, Hill's (1999) idea of research culture is a research-

specific application of Tripathi's (2001) general concept of culture. According to Tripathi (2001, p.130), culture is 'some kind of unspecified medium for human development'. However, in academic literature specific to academics' research productivity, the term 'environment' instead of (research) culture is frequently used to refer to institutions' characteristics, infrastructures, administrative policies and social systems (see Bland et al., 2005; Bland and Ruffin, 1992; Robinson, 2005; Santo et al., 2009). Therefore, I too, will remain consistent with the literature. However, in order to highlight the research focus, I, like Brocato and Mavis (2005) and Connell (2004, p. 21) use the term 'research-environment'. Moreover, Archer's notion of *structure* supplies theoretical grounds to conceptualise the research environment of the university and analyse academics' interaction with it in the process of researcher development. As Archer argues, the constituent components of structure are fundamentally 'material resources' (physical and/or human) and their relationship characterises the structural properties (Archer, 1995, p.175). She further elaborates the *interplay* of structure and people in the process of social change (Archer, 1995). After relating the unpopular views of culture with commonly accepted terms, which are also in line with the meta-theoretical framework (see 2.7 for details), I now move on to discuss the popular understanding of culture.

2.2.3 The Third Interpretation

Speaking in a literal sense, the word 'culture' refers to a set of common *ideas, customs, skills, arts, etc.*, held by a specific group of people in a particular time span and that are also transferred, *communicated, or passed* to their successors (Online Etymology Dictionary, n.d.-b). In the middle of the 19th century, Gustav was probably the first to broaden the scope of the term and apply it to represent various stages of civilization (Jahoda, 1993). By exploiting this concept of culture, Tylor not only portrays 'culture' as a blend of 'mind and society', but also uses it as an alternative term for 'civilisation' (Jahoda, 1993, p.278). Subsequently, authors from different academic fields conceptualise culture in a number of ways to serve particular purposes (Brenton and Driskill, 2010). For example, Leach (2003, p. 2) argues that 'culture communicates' information to the participants of the event; Sweder and Sullivan (1993, p. 512) view it as a 'subset of "mind"'. These broader senses of culture also provide ground for the notion of organisational culture, which has been considerably discussed and widely accepted among academics and practitioners during the last couple of decades (Silver, 2003). For example, Williams et al. (1993, p. 14) believe that organisational 'culture is the commonly held and relatively stable beliefs, attitudes and values that exist within the organisation'. Moreover, Schein (2004) identifies a list of key phrases from literature that represents the critical aspects of culture to define organisational/group culture. Hill

(1999, p. 2) applies these phrases to the terms of research, and defines a research culture as ‘a pattern of basic assumptions about research ...that has worked well enough to be considered valid and therefore, to be taught to new members as the correct way to perceive, think and feel in relation to research problems’. Here, Robin Hill uses the term ‘research’ in a limited sense and confines it to the traditions underpinning the research design only, whereas Professor Linda Evans takes a fuller range of research activities and their outputs into account, while defining research culture as ‘shared values, assumptions, beliefs, rituals and other forms of behaviour whose central focus is the acceptance and recognition of research practices and output as a valued, worthwhile and pre-eminent activity’ (Evans, 2007, p. 2). The essence of Evans’s definition is the consensual *thoughts/ideology* (shared values, assumptions and beliefs) and *action* (rituals and behaviours) of academics in relation to research. Apart from the element of *research*, it also resembles the notion of *organisational culture*, which focuses on ‘a shared way of thinking and a collective way of behaving’ (Becher, 1987, p.166). In fact, Evans has skillfully embedded the element of *research* into the notion of organisational culture. However, it could be argued that the components of the definition which refers to culture may be problematic in the context of universities (see 2.4.2).

2.3 Evans’s Interpretation of Research Culture and Salient Features of Universities

The history of organisational cultural studies reveals that the majority of researchers takes the conception of organisational culture for granted and apply it to the analysis without significantly debating the notion itself (Silver, 2003). Consequently, they generally interpret organisational culture on the basis of the degree of ideological consensus (shared values, beliefs, assumptions or myths) and behavioural consistency among the organisation’s members (Pratt et al., 1999; Sporn, 1996). They utilise the concept of sub-culture to explain the tensions among different groups within the organisation in terms of shared ideology and common behaviours of people within each sub-group (Martin, 1992). This means that organisational culture focuses only on the commonalities and by-passes the inconsistencies present in an organization (Martin, 1992; Silver, 2003). However, there are certain types of contradictions (such as ‘ideological’, ‘symbolic’ and ‘action’ inconsistencies, rooted in individual differences in thinking, interpreting and doing respectively) that are always present within the domain of (sub) culture with varying intensities (Martin, 1992, p.85-88).

Literature on higher education reveals that some authors (see Bartell, 2003; De Zilwa, 2007; Sporn, 1996) have utilised the underpinning principles of

organisational culture to study university culture, and a few of them (see Hill, 1999; Pratt et al., 1999; Cheetham, 2007) have attempted to theorise the notion of university research culture. However, contemporary critics emphasise that it is not feasible to perpetuate theoretical assumptions (shared values and common behaviour) of organisational culture in the case of universities (Silver, 2003), because they are complex social entities with unique features, making them different from business organisations (Bartell, 2003; Sporn, 1996). These salient features become more problematic while investigating research culture through the lens of organisational culture.

First, compared to a mono-dimensional mission, universities may be considered as having tri-dimensional unclear goals of teaching, research and societal service (Hazelkorn, 2005). Consequently, academics are supposed to perform an array of activities stemming from the goals of universities (Salazar-Clemeña and Almonte-Acosta, 2007). Moreover, there are also fuzzy guidelines for academics to prioritise and perform these (Sporn, 1996), particularly research and societal service. In this state of affairs, academics' behaviours are necessarily complicated and diverse (Bartell, 2003) which become prominent in research activities. For example, they (academics) typically undertake basic and/or applied research (Bartell, 2003). For this purpose, they essentially apply certain methodologies that vary not only across disciplines, but also within a particular discipline (Hazelkorn, 2005). This means that the multiple roles of academics and diverse types of activities within each role increases the chances of disparities and reduces the likelihood of uniformity in the academics' activities within a university (Connell, 2004).

Second, universities - either large or small - include an array of diversified faculties and departments. These sub-units do not only embody the traditions of their respective academic fields but are also devoted to promoting them (Becher and Trowler, 2001). This high level of commitment to disciplines/fields can easily be noticed in the case of elite/prestigious departments (Becher and Trowler, 2001). Moreover, Silver (2003) argues that faculties/departments are the proxies for academic identities, which are comparable with those of other (inter)national universities. He argues that the academic identity manifested by a department creates inevitable heterogeneity within a university. In this situation, I share Barnett's (2000, p.48) contention, that 'there could be a single binding characteristic that all constituent parts of the university share, that there could be an essence *or set of values, beliefs and assumptions*, has to be suspect' (*my emphasis*).

Third, in comparison with business enterprises, universities are labour-intensive entities which have a diversified set of internal stakeholders, such as administrators, seniors professors, mid- and early-career academics (Bartell, 2003).

Silver (2003) argues, in the light of Shils' (1983) study, that the groups of internal stakeholders have a low degree of compatibility with each other and cannot be considered a uniform set of people because of generic differences in their characteristics and interests. For instance, professors have high levels of expertise and strong affinity to their academics fields (Silver, 2003), and as a result they not only tend to delineate themselves from others, but also wish to enjoy high levels of academic freedom and autonomy (Sporn, 1996); whereas the primary concerns of academics who are in the early or middle stages of their careers, are professional development and career building opportunities (Bartell, 2003). On the other hand, managers primarily focus on the uniform implementation of administrative policies and the fulfilment of procedural demands (Bartell, 2003). Since universities have a variety of academics with conflicting sets of values and beliefs, it is not feasible to assume that universities are considerably consensual and non-conflicting entities (Silver, 2003). While the hypothetical goal of organisational culture - inherited from anthropology - is to achieve perfectly homogeneous organisation with unified shared-value systems that ensure strong and coherent behavioural pattern (Schein, 2004; Martin, 1992; Brenton and Driskill, 2010).

Fourth, universities operate in a dynamic context and are sensitive to any change in national policies for higher education, priorities of funding agencies and social demands (Sporn, 1996). Hazelkorn (2005) argues that the reconfiguration of universities within the national context is essential for their sustainability and survival. For this purpose, they may need to redefine their priorities and/or revisit their policies on a regular basis (Hazelkorn, 2005). Moreover, the rapid pace of technological development has continuously influenced academics' practices - particularly research practices (Shugan, 2004). The rapidly changing context of the university has a significant unavoidable impact on them (Bartell, 2003). However, the investigations with the perspective of organisational culture only focus on relatively stable characteristics of an organisation (Martin, 1992).

In the light of the above discussion, it can be argued that the underlying principles of organisational culture seem incapable of incorporating the complex, heterogeneous and dynamic nature of universities. As Silver (2003) argues, the application of organisational culture in the context of universities does not provide a holistic picture of the phenomenon. Moreover, similar to Dill (1983), he proposes that the concept of organisational culture needs to be redefined in order to conceptualise a university culture. In a similar vein, I argue that Evans's (2007) concept of research culture - derived from organisational culture - needs to be revisited before applying it in the context of universities. For this reason, a detailed analysis of her interpretation is presented in the following section, based on which I

also suggest a revised interpretation of research culture (see 2.5), which may not only be capable of acknowledging the unique features of universities, but also of compatibility with the metatheoretical framework (details in 2.7) of this study.

2.4 An Analysis of Evans's Interpretation of Research Culture

The bi-partite definition of *research culture* embeds the element of *research* into the *cultural* realm. In order to gain definitional clarity and precision, I logically decompose the definition into its constituent components: research and culture. In the following section, I re-conceptualised the construct by discussing the nature of each component and their implications for empirical investigation. While doing so, I kept in mind that the heuristic value of a construct depends upon its definitional precision, theoretical foundations and practical manifestations (Rotter, 1990, p 489-490).

2.4.1 The Component of the Interpretation that Refers to Research

Before going into the detail of the *research* component of the stipulated definition of *research culture*, it seems important to recall the notion of university research as discussed in the previous section. The broader conception of research entails various forms of *research*, such as basic, applied or strategic research, etc., and diverse types of *research outputs*, for example: journal articles, books and conference papers. It also includes an array of *academics' activities* in relation to research, such as the supervision of research students, engagement in professional activities outside the university, participation in advisory bodies and editorial boards. However, owing to contextual factors (national policies and criteria of funding bodies, etc.), institutional features (background, mission and vision of universities) and the nature of academic disciplines, only a subset of this conception of research is considered as university research (Hazelkorn, 2005). Furthermore, the evaluation and appreciation (in the shape of incentives, awards and honours) of academics' research activities and outputs are made on the basis of the accepted forms of university research.

In her definition of research culture, Evans describes *research* as 'the acceptance and recognition of research practice and output as a valued, worthwhile and pre-eminent activity' (Evans, 2007, p.2). It is clear from the quotation that all aspects of university research that I have discussed above are present in this definition. For example, Evans believes that all academics' practices and output - regardless of their nature, academic discipline and kind - that are accepted and recognised as research by universities operating in a particular context, and are also used to indicate academics' research performance, can be considered as research. For this reason, it can be argued that Evans's definition of *research culture* covers

the notion of *research* comprehensively. Moreover, the broader conception of the notion presented in Evans's definition shows its potential to incorporate consideration of an array of academics' research activities and outputs in any context. Therefore, I adopt it for my own research. Following this, I now look into the culture component of the definition that refers to culture.

2.4.2 The Component of the Interpretation that Refers to Culture

Evans's interpretation of research culture characterises the component of culture as 'shared values, assumptions, beliefs, rituals and other forms of behaviour' (Evans, 2007, p.2). As discussed above, the main theme of this interpretation is the *coherence of thoughts/ideologies and actions* of academics in a university. Furthermore, I also highlight that the interpretation seems unable to capture the diversified dimensions and dynamic nature of universities, which indicates its limitations in relation to describing the phenomenon of research culture. Moreover, there is also a conceptual confusion among theorists about the properties and powers of culture (Archer, 1985; 2005). For example, in one extreme (as in normative functionalism) it has been regarded as 'exclusively super-ordinate of people', and in another extreme (as in neo-Marxism) as 'utterly subordinate to them' (Archer, 1995, p.2). Margaret Archer (2005; 1996, p.6) argues that these contradictions stem from different interpretations of the 'Myth of Cultural Integration', propagated by various schools of thought. She also points out that the myth contains misleading assumptions, which are the root cause of all theoretical and descriptive vagueness in the conceptualisation of culture (Archer, 1996).

Fundamentally, the myth erroneously confuses two levels: the 'cultural system' (henceforth CS) and the 'socio-cultural' (henceforth S-C), as it can be clearly seen in the anthropological version of the myth that omits 'cultural coherence' (C.S) with 'uniform practice' (S-C) (Archer, 2005, p.18-19). The central theme of Evans's interpretation also reflects the anthropological image of the myth, and emphasizes the *coherence in thoughts/ideology* (C.S) and *actions* (S-C) of academics (Evans, 2007). It means that Linda Evans - in line with other theorists, particularly anthropologists - also conflates C.S (a logical property of the world of ideas (Archer, 2005, p.24)) with S-C (a causal property of people and their interaction (Archer, 2005, p.19)) while interpreting the notion of research culture.

The implications of this conflation for empirical investigation can be illustrated with an example of teaching. From a conflationist point of view, the conceptual principles of teaching (C.S) and academics' teaching practices (S-C) have the same properties and powers. However, Willmott (2000, p. 108) argues that it is important to investigate 'the conceptual understanding of teaching

practice[,]....the practice itself and their intertwinement', for gaining insight into the phenomenon of teaching. This argument is equally applicable to the phenomenon of *researching*. In contrast to the conflationary approach, this state of affairs indicates that the conceptual principles/ideology (C.S) and academics' practices/actions (S-C) in relation to teaching/researching cannot be mingled and considered as a unit. Archer is also in favour of making an 'analytical distinction' between C.S and S-C (Archer, 1996, p. 4) because she believes that these levels are 'analytically and empirically' different from each other (Archer, 2005, p.19). Moreover, this distinction is also necessary for rigorous investigation of cultural dynamics and statics (Archer, 1996; 2005). The arguments presented above lead me to revise Evans's interpretation of research culture in a contra-canonical way and make an analytical distinction between C.S and S-C for gaining a deep understanding of the phenomenon. However, before presenting my interpretation of Evans's definition, it is important to offset certain misleading assumptions perpetuated by the myth of cultural integration, which act as barriers in the conception of properties and powers of C.S and S-C, levels and in the theorisation of cultural transformation (Archer 1985, 1996, 2005).

2.4.2.1 **The Refusal of Contradictions within C.S Level**

The myth refuses to acknowledge the inconsistencies and existence of alternatives at C.S level because of the presumption that constituent elements of culture such as ideas, ideologies, theories, beliefs and values are homogeneous and coherently integrated (Archer, 1985; 1996; 2005). Evans's interpretation also stresses coherence of ideologies/thoughts - *shared values, assumptions and beliefs* - of academics (Evans, 2007, p.2). However, there is no rationale to preserve this canonical presumption, therefore, the existence of inconsistencies and alternatives can be theorised at C.S level (Archer, 1985; 1996; 2005). Consequently, the locus of cultural change can be pointed out because every contradiction at C.S level represents a possibility of social change, but it depends upon people's activities in the S-C level whether it (contradiction) is crystallized into tangible change or aborted in favour of a continuation of existing social practices (Archer, 1985; 1996; 2005). It means that the presence of contradictions at C.S level sets the conditions for social change, which may or may not be actualised through active mediation of people at S-C level (Archer, 1996, p.15). Therefore, while re-visiting Evans's definition of research culture, it is necessary to incorporate contradictions - in contrast to the convention of homogeneity - at C.S level along with making *analytical distinction* between C.S and S-C levels, for gaining better explanatory purchase on cultural change or stability.

This stance also has significant implications for the empirical investigation of research culture, particularly in the context of universities (i.e., the aim of my own study). First, it allows for acknowledgement of the tri-dimensional functions of a university and for explanation of their consequences on academics. It can be said that the diversified goals of universities - similar to contradictions - characterise conditions at C.S level, which allows active involvement of academics at S-C level, to change or preserve the continuation of the existing image of academics' activities. Second, in a similar fashion, due recognition of various approaches/conceptual principles/beliefs/ideologies within the domains of research can be given, and the conservation and/or modification in the existing way of their application by academics can be explained.

2.4.2.2 Unwillingness to Recognise Variations within S-C Level

Owing to the presumption that the members of a social unit are uniform in their practices, this myth also fails to incorporate consideration of recognition of differentiations in the population at S-C level (Archer, 1996; 2005). Practically, there are always varying degrees of social differences in a population, which can be observed even in a traditionalist society (Archer, 1985). In order to accommodate the myth, theorists ignore these differences in favour of shared practices or treat them as deviant, ritualistic or undesired practices (Martin, 1992). However, Archer (2005) questions this convention and argues that there is no theoretical grounding to presume uniformity of practice, therefore, the presence of a variety of practices at S-C level can be conceptualised. In this regard, Evans's definition seems close to this stance because her inclusion of the words 'rituals and other forms of behaviours' (Evans, 2007, p.2) reflects a recognition of variety in academics' practice (S-C). However, it demands certain elaboration to nullify the generic contamination of S.C. in the S-C level present in the definition. This nullification can be made by adopting the 'non-conflationary' approach (see 2.7.3) which recognises that S.C. and S-C are two distinct levels (Archer, 1995, p.6).

As discussed earlier, universities house a range of academics, each with unique characteristics, such as innovative practice, diversified career-related priorities, academic freedom, etc., which have significant implications. Indeed, these characteristics propound unavoidable variation among academics (S-C). Therefore, it can be argued that the incorporation of variations at S-C level is necessary to investigate the phenomenon of research culture because it provides opportunity to understand and explain the differences in academics' research practices.

2.4.2.3 The refusal to conceive C.S and S-C are mutually constitutive levels

One of the main corollaries of the myth of cultural integration is that the homogeneity at S-C level has been assumed as the product of coherence at C.S level, and vice versa (Archer, 1996, 2005). In other words, there is a one-way relationship between these levels; for example, organisational culture analysts (see Schein, 2004; Martin, 1992; Brenton and Driskill, 2010) consider that the central value system (C.S) of an organisation tailors the actions (S-C) of its employees. In contrast, Silver and Hannan (2003) in their study observe that academics attach high value to research (C.S) despite their active involvement in teaching (S-C). This situation raises questions on the unidirectional relationship between C.S and S-C levels, particularly in the context of a university. Archer (1996, p.16) also argues that the unidirectional relationship between the S.C. and S-C level - in either direction - is unable to explain the contribution of each level to cultural change. Moreover, these are analytically different levels and can vary independently (Archer, 1996). However, their mutual interaction and significant influence on each other is unavoidable (Archer, 1996). It can be illustrated in this way: academics consciously apply research approach/es (C.S) to their activities (S-C) for the production of new knowledge. Consequently, new and/or refined techniques of conducting research (S.C.) may emerge along with discipline-specific knowledge, which may provide guiding principles for subsequent researchers (S-C). It means the principles of conducting research (C.S) and academics' research practices (S-C) are mutually constitutive and have a significant impact on each other. Therefore, in contrast to the canonical assumption of a unidirectional relationship, it is essential to examine the interplay between the C.S and S-C levels for gaining an explanatory grip over cultural dynamics (Archer, 1996).

2.5 The Conception of Research Culture Applied to this Study

In summary, Evans's definition of research culture incorporates a comprehensive conception of university research. However, its component that refers to culture contains certain canonical presumptions. Consequently, it endorses the conflation of S.C. and S-C levels, refuses to recognise the diversity within each level and denies mutual interplay between them. Owing to these misleading assumptions, this definition is unsuitable for applicability to the unique features of universities. Therefore, I conclude that the re-interpretation of the component of the definition that refers to culture in a contra-canonical manner will not only be beneficial to offset the misleading assumptions associated with the myth of cultural integration, but will also offer an opportunity to recognise the unique features of universities. For this purpose, Archer's conception of culture seems to be a useful option because

she defines it in contrast to the myth of cultural integration. According to her, 'culture as a whole is defined as referring to all intelligibilia, that is, to any item that has the dispositional ability to be understood by someone - whether or not anyone does so at any given time' (Archer, 2005, p.24). The use of the term 'intelligibilia' makes it a more useful option because it represents *values, assumptions and beliefs*, etc., which Evans uses in her definition of research culture to represent its component that refers to culture. Consequently, it provides some room to use Archer's interpretation instead of Evans's to represent the component that refers to culture in the definition of research culture. However, the component that refers to research remains intact because it has been comprehensively defined by Evans (2007). I thus amalgamate Archer's concept of culture (Archer, 2005, p.24) with Evans's interpretation of research (Evans, 2007, p.2, italic text) and propose the following definition:

The research culture can be taken as a whole to refer all intelligibilia, that is, to any item which has dispositional capacity *whose central focus is the acceptance and recognition of research practices and outputs as a valued, worthwhile and pre-emptive activity* to be understood by someone - whether or not anyone does so at any given time. The subset of these items to which the law of contradiction can be applied is called cultural system (C.S)

(Archer, 2005, p.24; Evans, 2007, p.2, italic text)

Although conceptual clarity is important for understanding the notion of research culture, yet it is not enough for its empirical investigation. It is necessary to theorise the dynamics of cultural domain that is characterised by the interplay of properties of C.S and S-C (Archer, 1996). Fortunately, Archer continued her journey of the re-conceptualisation of culture and proposed an analytical approach to investigate the process of cultural change, which is parallel to the conception of structural change. By extending the scope of her approach, she not only explained the reciprocal influences of structural features on culture but also elaborated the role of people (agency) in the process of cultural change or stability. The interpretation of research culture in Archer's terms provides me an opportunity to utilise her explanatory framework as a guideline for conducting the empirical investigation of research culture of a university, and its connection with the (research) environmental and human aspect of the university, as well as their consequences on it. Before going into the details of Archer's framework, it seems important to discuss the need of a meta-theoretical framework for conducting an empirical examination of social phenomenon, and explain the process through which I have chosen an appropriate underpinning approach for my study.

METATHEORETICAL FRAMEWORK

I begin by reiterating Scott's (2005) suggestion, as mentioned earlier, that the deployment of a meta-theory in social inquiries is necessary because it supplies philosophical foundations to justify the conclusions extracted from empirical data. Sibeon (2004) extends this argument and elaborates the role of meta-theories and substantive one in a research. The former primarily deals with general ontological and epistemological concepts and understandings while the latter aims to generate empirical data on a specific social phenomenon. Sibeon (2004), similar to Archer (1995), believes that meta-theories are also tentative and open to 'theoretical and empirical sources of revisions'(p.13). By following Grix (2010), I believe that an explicit explanation of the philosophical underpinning upon which knowledge claims are made is crucial for my study. Hence, I went through the process described below to find a suitable meta-theory for the intellectual guidance of my research project.

2.6 The Selection of an Appropriate Framework

The starting point of the process was the identification of the existing literature on the building blocks of universities and their commonly perceived relationships. Then I examined the potential of possible frameworks to deal with these components and to elaborate their connections.

Universities are complex social organisations that operate in an even more complex and dynamic (inter)national context (Sporn, 1996). In Sawyerr's opinion, they basically consist of two main elements: 'the active' and 'the 'environmental' components (2004, p. 216) as 'structure and agency or parts and people' are the building blocks of the social world (Thursfield and Hamblett, 2004a, p. 108). The 'active' element pertaining to the human side of universities such as academics and managers etc. (Sawyerr, 2004, p. 216) is comparable to the *people/agency* in the case of the social world, while the 'environmental' features of universities, which are characterised by both social and institutional factors (Sawyerr, 2004, p. 216), are similar to the *parts/structure* of a society. Studies (see for example Santo et al., 2009; Bland et al., 2002; Bland et al., 2004; Bland et al., 2005) into higher education reveal that it is impossible for academics (*people/agency*) to do research, teaching, and other administrative/managerial duties without interacting with the given environmental conditions (*parts/structure*). However, Cheetham (2007) argues that universities' environmental conditions (*parts/structure*) are meaningless without academics (*people/agency*). It necessitates the examination of the *interconnection*

between both components to understand the dynamics of research culture in a university. This state of affairs resonates the 'structure-agency problem' that represents rival positions about *objectivity versus subjectivity, the parts versus the people*, and the properties and powers of *structural aspects* of society versus those of *human agency* in sociology (Archer, 1996, p. xi). Archer claims that 'it is impossible to do sociology at all without dealing with them' [structure and agency] and making decision about their mutual relations (1995, p. 65). This argument is equally applicable in the case of universities. I therefore believe that it is critical to take a position on the 'issue of structure and agency' for theorising and conducting the empirical analysis of university research culture. Keeping both the nature of relationship between the components of university and Archer's arguments in mind, I looked for a meta-theory, which can equally acknowledge the importance of the constituent components of universities and facilitate my examination of the reciprocal relationship between parts and people, structure and agency or constituent components of universities - academics and their environments - by giving equal weight to each of them.

During the searching process, I considered various meta-theories as a possible theoretical framework. Initially, I explored *individualist's* perspective as a possible underpinning principle. However, while inspecting their position on the 'issue of structure and agency', I gradually came to know that *individualists* conflate structure with agency. This fundamental mistake in the framework, which Archer (1996) calls the 'fallacy of conflation', did not allow me to examine the *interplay* of structure and agency which is important for my research. I therefore continued my search and luckily came across Margaret Archer's social realist morphogenetic approach (Archer, 1995; 1996; 2003). The main point of this model, which captured my attention, was that she advances her claim by 'linking structure and agency rather than sinking one into the other' (Archer, 1995, p. 65), so I started exploring its philosophical foundations and implications for empirical research, particularly in relation to my study. I became increasingly aware of a number of advantages for positioning my research within Archer's framework.

First, it assisted me in conceptualising the notion of research culture in a contra canonical manner (for details see section 2.5). Second, it supported my analytical differentiation between cultural and structural domain on the basis of ideational (beliefs, values, ideologies, theories, propositions etc.) and organisational (policies, management system, infrastructure etc.) features of university's environment. In this way, I can investigate the interconnection of research culture with the structure of university, which may enable me to gain firm explanatory grip on the phenomenon of research culture (discussed in 2.7.1). Third, it provided me an

ontologically-, epistemologically-, and methodologically- grounded sophisticated metatheoretical framework for investigating the *interplay* between constituent components of a university, which I was unable to find in other frameworks I considered previously. As Carter and New (2006, p. 15) observe, Archer's morphogenetic approach 'draws on the realist social ontology ... and ... give[s] [a] concrete methodological form to the analysis of the interplay between structure [or culture] and agency'. Owing to the compatibility of Archer's framework with the objectives of my research, I thought it is the best readily available theoretical tool which can provide adequate philosophical underpinning upon which I can yield good description and explanation of the phenomenon of research culture in University X. My choice is also informed by Archer's claims that her approach offers guidelines for explaining the social problems, whatever they may be (Archer, 2011, p. 60). Here it seems important to clarify that it was beyond the scope of my study to evaluate the validity of Archer's morphogenetic approach; her approach was used only to provide intellectual foundations to the findings drawn upon empirical data.

Nevertheless, the critics (see, for example, Cohen et al., 2007; May, 2011; Sibeon, 2004) argue that exclusive reliance on a single approach may limit or distort a researcher's vision of the social phenomenon and decrease the possibility to yield an in-depth understanding and comprehensive explanation of the problem being investigated. To avoid this pitfall, I also used Evans' conceptual framework for researcher development for the identification of both structural and cultural aspects of a university, which can influence academics' research practices (details in Chapter 3). In addition, I employed various research techniques for the collection and analysis of empirical data.

2.7 Archer's Social Realist Morphogenetic Approach

Archer's framework provides a detailed template for its application to gain insight into the process of social change and/or stability (Willmott, 2000). However, it can be delineated according to the scope (i.e. structural/cultural/agential cycle) of the problem in hand (Archer, 1995). For example, Thursfield and Hamblett (2004a) applied this model partially to their study, which aims to explain the nature and development of the ideas and practices of human resources management in an organisation because the morphogenesis/morphostasis was uncertain at that point in time. Owing to the specific aims of my research, it is also not possible for me to incorporate all aspects of the framework. Therefore, in the following section, I discuss only those components of Archer's model which I found relevant to my research agenda (i.e. cultural analysis). Moreover, a brief description of the

underpinning propositions of the model is also presented. The argument presented in the following section is largely based on two of Archer's books: *Realist Social theory: the Morphogenetic Approach* (Archer, 1995) and *Culture and Agency: The place of culture in social theory* (Archer, 1996).

2.7.1 The Separation of Culture and Structure

Society is its own kind of open system, having 'parts' and 'people' (Archer, 1995; 1996). Archer believes that *parts* consist of two distinctive aspects of social world (material and ideational) which cannot be merged in social analysis because they belong to different domains and entail different properties and powers (Archer, 1996). She argues that culture deals with 'ideational aspects of social life' (such as ideas, values and ideologies etc.), while structure represents 'organisational' or 'material' resources (Archer, 1996, pp. xi-xiv). Archer's conception of culture is parallel to structure and both can be analysed in a similar fashion despite their being different and autonomous from each other (Archer, 1995). Consequently, a researcher gains explanatory leverage upon dynamics of culture and structure separately and then explains their influences on each other. In this way, Archer brings cultural analysis on a par with structural analysis and distances herself from the common mistake to consider structure and culture as a single unit of analysis (Archer, 1996). She also theorises the relationship of culture with agency is directly parallel to the relationship of structure with agency, and argues that it can be analysed by adopting identical course of analysis. In fact, Archer disentangles culture from structure and then turns it into 'culture-agency' and 'structure-agency' - issues that can be resolved by virtue of same methodology yet they are different from one another (Archer, 1996). Therefore, I discuss structure and culture together only for elaborating various possible solutions of the 'problem of structure/culture and agency' and their implications for my study.

In order to gain deep insight and explain the loci of cultural change and stability in a university, I also need to distinguish between ideational and organisational /material aspects of university's *environment*. It can be elaborated with an illustrative example, which I tailored from Harold Silver's (2003) commentary on Hannan and Silver's (2000) results from their study of institutional culture. They found that almost every academic agreed to the importance of research and wished to do it even if they belonged to teaching-oriented or less-research-focused universities. In spite of their ambition for research, the majority of them were unable to translate it into practices owing to heavy mandatory teaching load, lack of the provision of updated literature and IT resources etc. It means that the prevailing ideas/beliefs (ideational domain) and existing policies/infrastructure (organisational/material domain) of universities are neither co-extensive nor co-

variant. This state of affairs demands for the examination of interconnection between ideational and organisational features of university environment to understand academics' practices, which cannot be explored without making a distinction between these domains. For this purpose, Archer's conception of *culture and structure* guided me to differentiate between ideational and organisational/material aspects of the university *environment*. Subsequently in 2.5, I conceptualised research culture to entail ideational domain in relation to research. On the other hand, the organisational/ material feature of universities about research can be considered as structure.

In addition, the term 'research-environment' is commonly used in literature on higher education to represent overall state of institutions including ideational aspects (see 2.2.2). This might be confusing in elaborating structure and culture by applying Archer's model. Therefore, to avoid confusion, I preferred to use 'research structure' or simply 'structure' instead of 'research environment'. From now onwards, for the sake of simplicity and to remain consistent with Archer's terminology, I have used terms 'culture' and 'structure' as alternatives to 'research culture' and 'research structure' respectively.

2.7.2 Rejecting Conflationary Thinking

Archer argues that social theorists historically have been trapped in the fallacy of conflation while theorising the connection between 'parts and people' or 'structure/culture and agency' and therefore they tend to elide both of them (1995). Logically, they can be elided/conflated in three possible ways, which is called *upward*, *downward* and *central* version of conflation. Archer criticises all three forms of confluations to build an argument in the favour of non-conflationary way of theorising the 'problem of structure/culture and agency' (Archer, 1995; 1996).

2.7.2.1 Downwards Conflation

The proponents of *downward conflation* attempt to resolve the structure-agency issue by considering people as epiphenomenal to parts (Archer, 1996, p. xv). This means that they endorse the subordination of agency and claim human behaviours are entirely modelled by society (Archer, 1995, p.5). This deterministic account of agency is also labelled as *society creates man* model (Harvey, 2002, p.166) or *society's being* (Archer, 2000, p. 5). By using the yardstick of *dependency*, *subordination*, or *neglect of agency*, Archer (1996, p. 38) and Sibeon (2004, p. 39-41) argue that a number of theorists, such as Soronkin and Parsons as *functionalists*, Levi-Strauss and Durkheim as structuralists, Lacan and Foucault as poststructuralists, Laclau and Derrida as discourse analysts, and Bourdieu as

sociologist etc., despite differences in their foci, committed the mistake of downwards conflation with varying deterministic impact on agency.

In relation to my study, I can argue that *downwards conflationary* models tend to varyingly reduce the independence of academics and stress the deterministic impact of university environment on their practices. In practice, academics generally enjoy a high degree of independence in their practice owing to ‘academics freedom’, which is a prominent feature of universities (Sporn, 1996, p. 41) because organisational environments (ideational and/or material) do not choreograph academics’ performance completely. The phenomenon of individual freedom becomes more prominent in the case of research practice, especially in the field of social sciences, because a researcher needs to play an active role throughout the research process and it becomes more important at data analysis stage. However, these practices are only guided, not determined, by the existing methods and techniques. For the sake of argument, if I apply downwards conflationary solution of structure-agency issue and assume that structure/culture (the environment) formulates the actions of academics, there should not be any significant difference among the levels of academics’ performances within the same university or faculty. But the reality is completely different; it is quite possible that two academics working in the same university and having similar backgrounds may have different levels of research performance. In short, I share Archer’s (1995) belief that the downwards conflationary solution of ‘the structure/culture-agency issue’ is not appropriate for the investigation of social phenomena (research culture) because it refuses to recognise the autonomy of agency (academics in my study). Consequently, all approaches based on the promises of *downwards* reduction are unable to provide adequate theoretical grounding for my research project.

2.7.2.2 Upwards Conflation

The supporters of *upward conflationary* thinking address the ‘structure/culture-agency issue’ by taking exactly opposite position than that of *downward* reductionists. They reduce structure/culture to agency and view it to be an epiphenomenon of agency (Archer, 1995, pp.80-84). This perspective promotes a marginalised image of structure/culture which primarily depends on or is driven by the actions of agency, in other words, they view society as an aggregation of individual actions (Archer, 1995; Sibeon, 2004). The approach which endorse the supremacy of agency over structure/culture has also been known as ‘man creates society’ (Harvey, 2002, p.167) or ‘Modernity’s Man’ (Archer, 2000, p.4) model. Archer argues that the central point of upward conflation is the delegation of inadequate autonomy to structure/culture vis-à-vis agency. By using this assumption as *litmus* test, she also claims that the *instrumentalists* and Habermas as *critical*

theorist represent two different accounts of Neo-Marxism and preserve the thesis of upwards conflation (Archer, 1996, p.56).

In the case of my study, if I apply upwards conflationary thinking to solve the ‘problem of structure/culture and agency’ then I need to assume the supremacy of academics over university structure/culture and to consider the outcomes of current academics’ actions as structure/culture which can be reduced to academics. However, it has been found that a wide range of physical and social factors (see Bland et al., 2005; Balnd and Ruffin 1992; Santo et.al. 2009) are necessary for conducting research such as libraries, IT facilities, mentoring, etc. which cannot be reduced to academics because of their distinctive characteristics. In addition, individual academics do not have entire control over their working environments; it is not common that every academic is free to choose his/her teaching and/or research workload, or financial incentives etc. according to his/her personal preferences. I thus argue that it is not possible for me to sustain upwards conflationary thinking while investigating the research culture in the university. As Archer also argues against the use of upwards conflationary approaches for social analysis because they not only marginalise structure/culture but also prevent us to gain an understanding of social stability/change by examining the reciprocal influences of one on the other (Archer, 1995, p.80).

2.7.2.3 Central Conflation

Central conflationary thinking was evolved in order to address the criticism on two extreme positions taken by theorists on the ‘structure/culture-agency issue’ and to present a new solution of the issue. The central conflation (Archer, 1996, pp.72-96; 1995, pp.87-89) considers that structure/culture and agency are mutually constitutive and treats them as two faces of an inseparable ‘duality’. In other words, this kind of elision of structure/culture and agency occurs without reducing either agency into structure/culture or vice versa. Consequently, the proponents of this stance effectively reject *upwards* and *downwards* conflationary thinking and acknowledge equal status of structure/culture and agency (Archer, 1995), believing that structure/culture can shape agency and at the same time agency can also contribute in the modelling of structure/culture. Moreover, they claim on the basis of their conception of ‘duality’, that structure/culture and agency cannot be delineated by any means (Archer, 1996, p.78). Zygmunt Bauman and Anthony Giddens are major theorists who attempted to solve the dilemma of structure/culture-and agency by taking central conflationary stance (Archer, 1996, p.72). One of the main flaws in this kind of conflationary approach is their inability to make *distinction* between structure/culture and agency which not only disregards the autonomy of both

structure/culture and agency (Archer, 1995, p.101) but also makes it unable to explain when structural/cultural transformation does or will occur.

This basic flaw in the central conflation thinking makes it inappropriate for my research in the following ways. First, the elision (although it gives equal weight to both structure/culture and agency) does not allow me to disentangle academics from their *ideational/organisational* environments, which is necessary to understand the powers and properties of each of them. Second, the investigation of research culture, which is central to my study, needs to examine the interrelationship of academics and their environments but it cannot be done without separating them whereas, the central conflationists are against the separation of agency and structure/culture.

In summary, each of the three versions of conflationary thinking is unable to provide any satisfactory solution of the 'structure/culture- agency dilemma', particularly in relation to my study. I therefore argue that all approaches which endorse any form of conflation do not provide sufficient theoretical foundations for the investigation of research culture in a university. This situation logically leads me towards some *non-conflationary* solution of the problem.

2.7.3 Embracing Non-conflationary Thinking: Analytical Dualism

Archer conceptualises the 'issue of structure and agency' in a unique way and resolves it in a non-conflationary manner by the virtue of a notion called *analytical dualism* (1995, p.70). The core of this notion is that the *parts* and the *people* are *analytically separable* from one another but this distinction can be made only on *temporal* basis. Archer also argues that the notion is in fact an explicit expression of methodological realism (Archer, 1995, pp. 70-76). Based on these postulates, she claims that the *parts* are analytically distinctive from the *people*. Thus, in principle, it creates a provision for theorising and explaining the influences of the parts on the people and vice versa. Since the differentiation is temporal, it (the distinction) can only be used for analytical purposes. Archer explicitly expresses this point that the concept of analytical dualism is advanced to entail a methodological position only, rather than a philosophical claim (For further arguments in favour of analytical dualism, see Archer, 1995; 1996; 2005; 2011). In other words, 'this [analytical dualism] can be used methodologically to examine the interplay between structure and agency and thus explain change in both over time' (Archer, 1995, p. 66). Similarly, the interplay between culture and agency can be theorised and their reciprocal influences at particular time and place can also be explained since Archer delineated cultural realm from structural domain and theorised them in the same fashion. With reference to my research, it implies that the analytical distinction

between academics (agency), research *culture* and *structure* of their university is possible, which allows me to analyse the reciprocal influences of one on the other over time. Consequently, I can gain deep insight into the phenomenon of research culture and can explain cultural change/stability of university *over time* that is the primary focus of my project.

However, Archer argues that the methodology (as an explanatory schema) deployed for empirical analysis of social world should necessarily be grounded in an appropriate ontological premise. She explains their indispensable relation in this way: ‘an ontology without a methodology is deaf and dumb; a methodology without an ontology is blind’ (Archer, 1995, p.28). If a blind and a deaf want to advance in the same direction, they have to walk hand in hand (1995). Owing to this reason, Archer articulates morphogenetic approach that not only makes analytical dualism operational for practical use but also shows its compatibility with ontological enterprises. In fact, she links stratified realist ontology with practical social theorising through analytical dualism and demonstrates that they are internally consistent. Hence, Archer’s morphogenetic approach not only holds ontological foundations but also supplies methodological guidelines that allow a researcher to examine the interplay between the people and the parts ‘structure and agency’, and ‘culture and agency’ over time while maintaining their autonomy. I compare the key features of Archer’s Morphogenetic approach with three possible forms of conflationary thinking in Table 1, which clearly indicates that I can use only the morphogenetic framework for my research because of two prime reasons. First, in contrast to any conflationary approach, it allows me to maintain the independence of academics (agency) and their both ideational (research culture) and organisational (structure) environments. Second, it offers the provision for the empirical investigation of the interplay among academics, research culture and structure that enables me to gain insight into stability/change research culture in a university over a time span.

Table 1: Comparison of conflationary and non-conflationary models

Approaches	Core concept	Is structure/culture acknowledged as an <i>autonomous</i> entity(ies)?	Is agency acknowledged as an <i>autonomous</i> entity?	Is <i>distinction</i> between structure /culture and agency possible?	Is examination of the <i>interplay</i> between structure and agency possible?
Downwards Conflation	Agency is epiphenomenal to structure/culture	Yes	No	No	No
Upwards Conflation	Structure/culture is epiphenomenal to agency	No	Yes	No	No
Central Conflation	Structure/culture and agency are mutually constructive but inseparable	No	No	Yes	No
Morphogenetic Approach: A Non-conflationary Model	Structure/culture and agency are relatively autonomous and separable over time	Yes	Yes	Yes	Yes

2.7.4 Theoretical Description of the Morphogenetic Approach

The morphogenetic approach is put forward on the basis of certain propositions which need to be sustained while analysing a social problem through the lens of morphogenesis.

Archer views the social world as stratified and believes that structure, culture and agency represent different levels of it that are characterised in terms of their own emergent properties (Archer, 1995, p.175). The properties pertaining to a particular level are *relational*, arising from the relation of constituent components of the level, and they possess causal power, which is irreducible to the powers of the components (p.174). In other words, society is made up of cultural, structural and agential emergent properties and each of them has relative autonomy, endurance, and is causally efficacious but irreducible to one another (Archer, 1995, p.175). Moreover, Archer (1995; p. 9, 12) understands micro-macro levels of a social phenomenon as relative to each other. For example, structural properties of a university could be considered a macro level while studying a particular department within the university. However, it could also be considered a micro level while studying a national higher education system. Sibeon (2004) criticizes that Archer tends to equate macro with structure and micro with agency. Similarly, Quinn (2006) found that Archer's conception of micro-macro levels was inadequate for conducting social realist analysis of staff development program in the local, national and international contexts of a South African university. She suggests using Sibeon's (2004) idea of micro-mezo-macro to overcome this issue. She applied Sibeon's idea in her research and found it compatible with overall morphogenetic approach.

Second, Archer considers that social world exists independent of our knowledge, which is fallible and corrigible about it (Archer, 1995). Therefore, the stratum-specific properties should be identified by unpacking the necessary and internal relationship between constituent components of the respective stratum, rather than by knowing what people think about them. She suggests that it is possible through transcendental arguments which can be built by raising questions about 'what else needs to be the case, what else must be present for X to be such as it is, and not what people think, notice, tell or believe is the case' (Archer, 1995, p.177).

Finally, the explanatory power of the morphogenetic framework is derived from analytical dualism. Archer makes it operational and argues that culture/structure and agency varyingly operate over different time periods because '(i) [culture/]structure necessarily pre-dates the action(s) that transform it, and, (ii) [cultural/]structural elaboration necessarily postdates those actions' (Archer, 1995,

p.168). Consequently, she puts forward morphogenetic analysis which analytically breaks the sequence of culture/structure and agency, but in society they play their function continuously, into three-part cycle involving cultural/structural/conditioning → socio-culture/ social interaction → cultural/structural elaboration (Archer, 1995, p.89) as shown in Figures 3 and 4.

The figures show that the morphogenetic cycle acts in a standard format (i.e. ‘emergence-intertwine-redefine’ (Archer, 1995, p.76)) and offers a common framework for unpacking ‘an analytical history of [the] emergence’ of culture and structure (Archer, 1995, p.91). Archer also demonstrates its workability in the case of agency. Therefore, the morphogenetic analysis of any problem in hand involves three kinds of analytical cycles corresponding to three emergent entities; culture structure and agency, each of which is relatively autonomous and yet interactive with the other (Archer, 1995, p.193). However, the use of time in the morphogenetic approach has been criticized by various researchers. For example, Horrocks (2009) maintained that the specification of time period according to Archer’s framework may be difficult to materialize when structural, cultural and agential cycles are investigated by a researcher in the same study. In addition, there has also been a lack of uniformity regarding the specification of time in various empirical studies based on Archer’s framework (see O’Byrne, 2011; Luckett, 2012; Thursfield and Hamblett, 2004b; Morén and Blom, 2003).

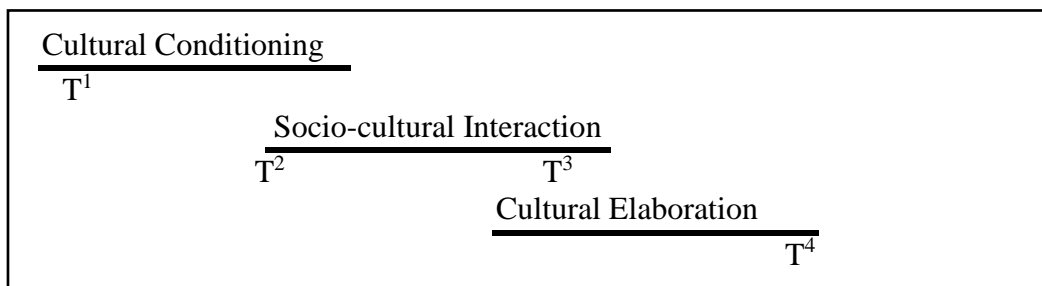


Figure 3: The morphogenesis of culture (Archer, 1995, p.193)

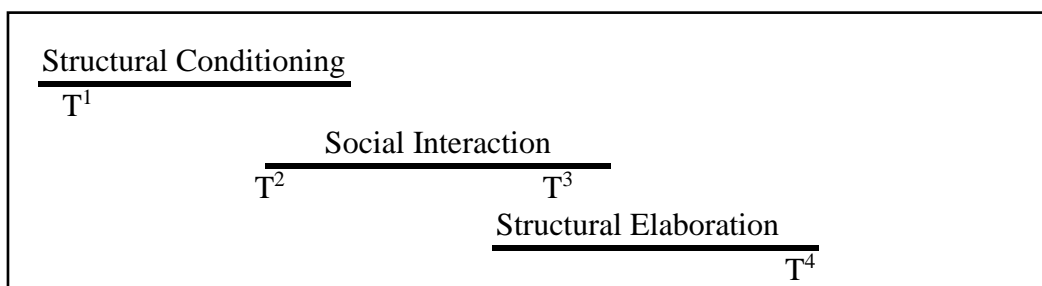


Figure 4: The morphogenesis of structure (Archer, 1995, p.193)

The starting point of morphogenetic analysis is to understand the existing situation into which agents - having different vested interests according to the position they hold - find themselves at a point in time, say T¹. The situation is

shaped by systemic properties (such as social structure, cultural system) which are viewed as emergent of a past action but they do have objective existence and their own properties as well (Archer, 1995). These properties supply the context, which only conditions the action of the agents but do not determine it. This form of conditioning opens the possibilities of 'constraints and enablements' to agential projects between two subsequent points in time, T^1 and T^2 (Archer, 2003, p.5). This is the hallmark of the first phase of a morphogenetic cycle.

The second phase of the cycle starts from a point in time T^2 to the succeeding point in time T^3 . It is characterised by the interplay between structure/culture and agency, therefore, it is called social/socio-cultural interaction (Archer, 1995, p.193). During this stage, on the one hand, systemic properties exercise their causal influences on the action of agency, which are always mediated by people (Archer, 2003). On the other hand, social agents also exert their causal power on given systemic conditions and try to transform or reproduce these conditions according to their vested interests, bargaining ability and so on. It means that the stability/change of existing structure/ culture depends upon their interaction with agency, which occurs at social/socio-cultural.

The results of this transformation or reproduction process can be viewed at a point in time T^4 which characterises the third and final phase of a morphogenetic cycle (Archer, 1995). The processes dealing with the transformation/elaboration of the given structural/ cultural conditions at time T^1 are called structural/cultural 'morphogenesis'. Whereas the process that involves the reproduction of existing structural/ cultural conditions at time T^1 is known as structural/cultural 'morphostasis' (Archer, 1995, p.166). Since structure and culture are relatively independent, a situation can emerge when structure might be in the state of morphogenesis while culture experiences morphostasis. There may be a situation in which culture is compatible while structure is incompatible with the project of the agency. Beyond T^4 , both structural and cultural morphogenesis/stasis supply conditions for next morphogenetic cycles of structure and culture.

2.7.5 Cultural Morphogenesis/stasis

Archer (1996, p. 21) questions the 'Myth of Cultural Integration' and conceptualises the notion of culture in a contra-canonical manner as discussed above in 2.4.2. She activates the principle of analytical dualism and makes analytical distinction between the cultural system (CS) and the socio-culture interaction (S-C). The former focuses on logical relations between cultural components that endorses the conception of 'culture without a knowing subject', while the latter deals in causal

relationship, which provides a provision to understand 'culture with a knowing subject' (Archer, 1995, p.108).

For Archer, culture as a whole is a collection of all 'intelligibilia' (Archer, 1995, p.180). Here 'intelligibilia' refers to any item having perceived and/or actual dispositional capabilities, such as: ideas, ideologies, theories, beliefs and values. Within this domain the subset of items to which the law of contradiction can be applied is called the 'cultural system'(CS), which acts as 'propositional register' of society in a certain point in time (Archer, 1995, p.180). Once an item becomes a part of a cultural system, it remains there, irrespective of its use, and stands in a logical relation to other items. This relationship can be *contradictory* or *complementary* depending upon the logical inconsistency or consistency between the items. The cultural system is an emergent entity and has logical relationships in its components, which can exist independently of people's knowledge (in present time) about them (Archer, 1995). At any point in time, the cultural system is the product of anterior socio-cultural interaction but, after its emergence, it acquires properties and powers of its own (Archer, 1996). Its power, stemming from contradictions and complementarities, has the ability to constrain or enable the ideational project undertaken by cultural agents (i.e. the ideas, theories, beliefs, etc. they seek to uphold) at a socio-cultural level (Archer, 1995). Therefore the cultural system can exert its causal powers to socio-cultural level but its activation depends upon the actions of the agents (Archer, 1995).

In addition to *propositions* (upon which the law of contradiction is applicable), the actions of agents may also be influenced by certain elements held by them (agents). These elements (such as: religious experiences, ideologies based on manipulative ideas, tastes, preferences, (dis)likes, affinities, animosities, patriotism, prejudice etc.) lie beyond the 'canons of logic' and have a known subject; whether it is agents or any other people (Archer, 1996, p. xix). Moreover, these elements have the ability to influence the ideational project of people, which depends upon the causal relationships between groups and individual and these relationships have their own mechanics (Archer, 1996). Owing to mentioned characteristic, these elements fall in socio-cultural level (Archer, 1995).

Once social agents launch an ideational project, their project not only activates the powers of the culture system to confront it at the level of logic but also encounters causal influences pertaining to socio-cultural interaction. As a result of this interplay, new cultural items may be added to the existing cultural system (Archer, 1995; 1996). It is therefore necessary to examine the interrelationship between the two levels for gaining a deep insight into cultural dynamics.

In reality, a cultural system and a socio-cultural level cannot exist or even work independently; they are intertwined and mutually implicative as well. However, Archer (1995) applies the principle of analytical dualism and makes analytical distinction between them. Consequently, she explains the interrelation between a cultural system and socio-cultural interaction over time and suggests cultural morphogenetic cycle (cultural conditioning → socio-cultural interaction → cultural elaboration, as described earlier). The core of the morphogenetic stance is that ‘the Cultural System logically predates the Socio-Cultural action(s) which transform it, and that Cultural Elaboration post-dates such interaction’ (Archer, 1996, xxv) as shown in Figure 3.

The question ‘how are agents able to pursue their ideational project(s) in the presence of influences exerted by their cultural system and socio-culture interaction?’ can be answered through empirical investigation. In order to undertake an empirical analysis of culture from the morphogenetic perspective, Archer suggests the following four generic steps:

1. Identify the logical relationship between components of the cultural system (CS).
2. Examine causal influences exerted by the CS on the Socio-culture (S-C) level.
3. Examine causal relationship between groups and individuals at the S-C level.
4. Identify how S-C elaborates the CS by modifying the current logical relationships and introducing new ones.

(Adapted from Archer 1995, p.169; 1996, p.106)

I need to adhere to these guidelines in order to conduct an empirical investigation of university research culture from the morphogenetic perspective. I therefore, reshape these generic steps into a specific course of action in relation to my study. I started from the identification of a range of cultural items (intelligibilia) prevailing in the university with reference to *the acceptance and recognition of research practice and outputs as a valued, worthwhile and pre-emptive activity* (as research culture is defined for this study). In order to do so, I utilised Evans’ conceptual model of researcher development (Evans, 2011b). Then I unfolded the logical relationships (in the forms of contradictions or compatibilities) between these cultural items to understand the possible (not actual) impact of these logical relationships on academics’ practice. In other words, I identified cultural emergent properties (CEPs) in the context of the university. During this process, it is essential for me to bear in mind that the contradictions or compatibilities have only conditional influence rather than deterministic effects on academics’ practices. These steps enabled me to specify the cultural system, which constitutes ideational

context of the university at a particular point in time. Afterwards, in the second stage of cultural morphogenetic cycle, called socio-cultural interaction, I needed to examine how the cultural system actually shapes the actions of academics at the socio-cultural level and how the responses of academics affect the cultural system by modifying the logical relation of its components. Finally, in the third stage of the cycle, I needed to identify the transformation or reproduction of the cultural system resulting from the interaction occurred in the second phase of the cycle (i.e. between T2 and T3). Eventually, this elaborated cultural system (which emerged from the socio-culture interaction of the academics) will act as the cultural context for new academics that will condition their action at the first phase of the next round of the morphogenetic cycle. In this way, I maintained Archer’s guidelines while explaining the change or stability of research culture in the university over time.

Archer argues that every component/element/item (ideas, theories, beliefs etc.) that belongs to the cultural system must have ‘logical relationship of contradiction or complementarity’ with the other item, whether they are mutually dependent or independent (Archer, 1996, p. 245). Logically, as she (Archer, 1996) indicates, there are four possible kinds of configurations between any two cultural elements at a systemic level. I have attempted to sum up these four possibilities in matrix form (as shown in Table 2), in which each intersection of contradictions/complementarities with dependence/independence of any two cultural elements denotes a unique logical relationship between the items. However, the critics highlighted that Archer does not clearly focus on the degree (strength/weakness) of relationships while explaining/exploring the configurations of cultural/structural items (Lipscomb, 2009). This poses a limitation on the explanatory account of a social phenomenon based on Archer’s framework as there is a possibility of variation in the strength of real world relationships among cultural/structural factors. For example, Bhaskar (1986 cited in Lipscomb, 2009) claimed that internal relations may have greater explanatory potential as compared to external relations.

Table 2: Possible logical configurations of the cultural items as identified by Archer (1995; 1996)

Logical Properties of Cultural Elements	Contradictions	Complementarities
Dependent on the others	1. <i>Constraining Contradictions</i>	2. <i>Concomitant Complementarities</i>
Independent form the others	3. <i>Competitive Contradictions</i>	4. <i>Contingent Complementarities</i>

Before describing each kind of cultural configuration, it is important to know their link with people in general terms. Any one of these configurations of cultural items comes into play only when the people at the socio-cultural level uphold its respective item. Consequently, the holders of the item are placed in a particular situational logic depending upon the logical relationships of the item with other items at the systemic level (Archer, 1995). In other words, cultural items are responsible for placing their holders into a particular situational logic (at the socio-cultural level) because the items have particular logical relationships of contradictions/complementarities with other items at the cultural system. Moreover, these situational logics shape, but do not determine, the actions of the holder during socio-culture interactions. The logical configuration of cultural items at the cultural system level Archer (1995, p. 179), also called cultural emergent properties (CEPs), characterise the ideational context that conditions the ideational projects of the people by putting them in a particular situational logic at the socio-culture level. The causal influence of CEPs on people can be explained with the help of ‘teaching-research dichotomy’ (Rowland et al., 1998, p. 134) present in universities. I can argue for the sake of explanation that these (teaching and research) two aspects of academics’ practice may entail a logical relationship of contradiction, particularly in the context of teaching- focused universities. Logically speaking, the academics who value research and want to pursue it in this context may face ideational opposition from those academics who insist on teaching solely. This problematic situation between the academics is the consequence of the competing relationship between *teaching* and *research* at systemic level.

Archer (1995; 1996) acknowledges that the cultural items at systemic level can be logically linked with a range of other cultural items in practical situation but she explains the four possible logical configurations (i.e. called situational logic as discussed in 2.7.5.1 to 2.7.5.4) between any two cultural items, say ‘A’ and ‘B’. Lipscomb (2009) also criticises Archer’s work in this regard. He argues that Archer has not provided a detailed account of situational logics (both at systemic and socio-cultural levels) which may emerge from the configuration of three or more logically interconnected cultural items (Lipscomb, 2009). Consequently, Archer’s framework lacks the capacity to capture/explain some complexities of a social phenomenon in the real world. In short, the explanatory potential of the framework (as claimed by Archer) has been compromised in this respect (Lipscomb, 2009). Moreover, Archer does not consider any ideational item (*intelligibilia*) as a cultural factor at systemic level, if law of contradiction is not applicable on it. Consequently, these ideational items may not be included in the cultural analysis at a systemic level (Lipscomb, 2009). Archer (1995) herself was aware of this issue and suggested that these items may be included in cultural analysis at the socio-cultural level.

2.7.5.1 Constraining Contradictions

As Table 2 indicates, the ‘constraining contradictions’ (Archer, 1995, p. 230; Archer, 1996, p. 148) between two cultural items (say idea A and idea B) arise at the systemic level when idea A not only has logical relation of contradiction with idea B but also idea A is dependent on a part of B. In other words, idea A cannot survive without taking idea B into account, despite idea B’s inconsistency with idea A. Consequently, idea A has to exist in a ‘hostile environment’, which is characterised by idea B (Archer, 1996, p. 148). In this case, The part of the cultural system that comprises idea A and idea B is known as ‘strain’ (Archer, 1995, p. 230).

The *constraining contradiction* creates a situation for the people at the socio-cultural level in which the adherents of A have to confront with the supporters of B because a contradiction exists between idea A and idea B at systemic level. Moreover, the supporters of A have no choice but to live with the supporters of B since the upholding of idea A also necessarily activates idea B. In order to survive in this situation, the adherents of A cannot get rid of the contradiction with B by simply de-pronouncing idea B. Moreover, they cannot allow idea B to be activated because in this case the credibility of idea A will be under siege. Consequently, the proponents of A have no option but to make a ‘correction’ of its relationship with B (Archer, 1996, p. 156). Since the contradictions between idea A and idea B cannot be fully resolved because they are logically inconsistent, therefore, the corrective measure aims to ‘repair’ the contradictions through revision of the ideas involved. As a result of this revision, new ideas may lodge in the cultural system (Archer, 1996, p. 156). According to Archer, ‘the attempt to sink the differences and affect union between the contradictory elements concerned’ is called ‘syncretism’ (Archer, 1995, p.233). In nutshell, the situational logic of *correction* is generated by the constraining contradictions, which commonly prompt *syncretism* (Archer, 1996). Logically, the correction between two contradictory but dependent ideas (A and B) can occur in one of these three possible manners (Derived from Archer, 1996, p.159-171).

1. In A←B kind of syncretism, the adherents of A attempt to reinterpret idea B, so that it becomes compatible with idea A. In order to achieve this aim, the people who are committed to A innovatively put forward a modified idea B₁ which is, obviously, different from original idea B. As a result, a new idea incorporated in the cultural system. The acceptance of idea B₁ by the proponents of B at the socio-cultural level indicates the successful completion of syncretic action of replacing idea B with its new version B₁. In such a situation, if idea B₁ is not accepted by the supporters of B, then the

proponents of A keep on working and presenting new versions of B until they furnish an interpretation, say B_n , which is agreed by the supporters of B. It indicates that the acceptance or rejection of a new version of idea B is a matter of socio-culture interaction and depends on various structural and agential factors as well. Naturally, this ($A \leftarrow B$) method of syncretism is the first choice and the most favourable solution for the supporters of A because it can save their idea A without any reinterpretation.

2. In $A \leftrightarrow B$ form of correction, both idea A and idea B have to pass through the process of 'concept-stretching' in which both ideas are re-interpreted to achieve an idea A_1 or $A_2 \dots$ or A_n that is compatible with any idea B_1 or $B_2 \dots$ or B_n (Archer, 1996, p.165). In this type of syncretism, the inconsistency present between these ideas is diluted by replacing both original ideas A and B with their new versions, which are consistent with each other and also acceptable for the supports of A and B. Owing to the addition of new ideas at systemic level, these syncretic actions lead towards cultural elaboration, therefore, it is called 'morphogenetic' syncretism (Archer, 1996, p.167).
3. In the case of $A \rightarrow B$ type of syncretism, idea A bears all the burden of *repair* and experience radical changes in order to become consistent with idea B, which remains intact. Because the supporters of A are not readily willing to give up their commitment to idea A, as a result, they resist major changes in it. As a natural corollary, before reaching a new interpretation of A (say A_n), which is consistent with B, the supporters of A may put forward various versions of idea A in this process. Obviously, it is the least acceptable solution for the proponents of A because this syncretism results not only in the transformation of the original idea A and but also in the preservation of the original idea B.

The essence of all three types of syncretism is to address the differences stemming from *constraining contradictions* between cultural items at the systemic level, which also foster a drive for 'ideational unification' within cultural agents (Archer, 1996, p.171). This *unification* drive manifests the ideational conditions but do not determine the course of action for the agents at the socio-cultural level. These operative effects associated with the *constraining contradictions* are summarised in Table 3.

Table 3: The operative effects of the constraining contradictions as identified by Archer (1996)

Situational Logic	Condition at Cultural System Level	Condition at Socio-culture Level
Correction	Syncretism	Unification

Fundamentally, the actualisation of these conditions depends upon a range of structural and agential factors present at a particular time and place during the socio-cultural interactions (Archer, 1996, p.171); neither the syncretism at the systemic level nor the influence of ideational unification conditions at the socio-cultural level can be considered as the decisive force that assures the same degree of consensus among the agents in the respective socio-cultural interactions (Archer, 1996). In short, it is not necessary that the integration at the cultural system level will essentially deflect the same extent of orderliness in the socio-cultural life. Consequently, both the cultural system and socio-culture levels can vary independently over time. This is the point where Archer differs with downwards conflationists, which claim the ‘the logical state of affairs in the cultural system causally determined the extent of socio-culture integration’ (Archer 1996, p.185). In contrast to the conflationists, I remained consistent with Archer (while defining the *notion of research culture* and *rejecting the conflationary thinking* - for details see 2.5) who delineates the cultural system from the socio-cultural level and argues that the integration at systemic level does not mirror the same degree of homogeneity in socio-cultural level (Archer, 1996). The cultural system, having *constraining contradictions*, can be associated with a socio-cultural level that is in a state of orderliness or disorderliness.

In the case of orderliness at the socio-cultural level, certain groups of people conceal the causal influence of the inconsistencies present at the cultural system level; it is a result of the ‘containment strategies’ (such as restricted awareness to cultural contradiction and limited access to material) exercised by the powerful groups for their own benefits (Archer, 1995, p. 231). However, these *containment* strategies do not work indefinitely because the contradictory items remain there in the cultural system, which can become gradually accessible to the people. At this stage, they come forward and tend to sink their differences through *syncretic* moves. As a result, the integration of ideas increases along with a decrease in socio-cultural differences, which makes the situation more integrated as compared to the use of containment strategies only, where the contradictory conditions remained intact. Here, the noticeable point is that homogeneity at the social-cultural level does not always emerge from containment strategies.

Disorderly socio-cultural relationships indicate that there are various groups having different cultural interests and powers. In this state of affairs, the use of containment strategies for the concealment of cultural differences may not be affective. Therefore, according to situational logic of *ideational unification*, the *syncretism* comes into play for making *correction* in the conflicting ideas and it needs to be recognised socio-culturally. However, it is more likely that the divergent groups cannot reach at an acceptable *syncretic* formula. Eventually, the socio-cultural disorderliness is promoted in three different ways; ‘desertion’, ‘schismatism and sectarianism’, and ‘counter-actualisation’ (Archer, 1996, pp. 199 - 201).

Desertion increases when the people, actively engaged in but failed to remove the differences between ideas during the syncretic process, decide to take exit and move to another cultural arena since, logically, they are not compelled to stay there. Alternatively, they may subtract the contradictory aspects from their beliefs, values, theories, ideologies etc. and remain there. Although, the decision of *desertion* is taken at individual level but its aggregative effects have both systemic and socio-cultural implications (Archer, 1996).

The prolonged and unsuccessful attempts for sinking the ideational difference may foster rivalries among the people at the socio-cultural level. Consequently, new groups having divergent interests may come into existence that increase *schismatism and sectarianism* at the socio-cultural level (Archer, 1996, p. 199).

In contrast to popular expectations, those people who are interested in and have the ability to, tend to exploit disorderliness at the socio-cultural level for the *counter-actualisation* of the rival proposition or idea, which, unexpectedly, becomes refined. This rival proposition or idea is considered flexible enough to gain social salience (Archer, 1996, p. 201).

2.7.5.2 Concomitant Complementarities

As shown in Table 2, the *concomitant complementarities* (Archer, 1995, pp. 234 - 237) emerge at the systemic level when idea A is logically *compatible* with idea B and at the same time, it (idea A) also depends on idea B. On the contrary, the *constraining contradictions* deal with *contradictory* but mutually dependent ideas. Therefore, the *concomitant complementarities* are the configuration of cultural items manifesting opposite features of the *constraining contradictions*. If idea A and idea B constitutes concomitant complementary configuration at the systemic level, then the initiation of idea A necessarily activates idea B (or a part of it), which is logically consistent with idea A. As a result, the idea A exists in a friendly environment to operate, which is characterised by a compatible idea B (Archer,

1995). Owing to logical consistency between the ideas, this situation encourages the discovery of the possibilities of how the existing configurations between the ideas can be refined, reinforced or confirmed etc. at systemic level. However, it discourages the exploration of new ideas that has the tendency to temper mutually beneficial relationships of the existing ideas (Archer, 1996).

The operative effect of the concomitant complementarities on people at the socio-cultural level is that the proponents of A and B have to live together in an ideationally ‘congenial environment’ because the upholding of idea A also inevitably invokes a consistent idea B (Archer, 1996, p.153). In this scenario, the adherents of A get ideational incentives such as ‘psychological reassurance, technical back-up, corroboration of theories and conformation of beliefs’ when they involve themselves in the exploration of idea B (Archer, 1995, p. 235). Moreover, owing to the problem-free ideational context, they can access anything from the part of B. Consequently, the adherents of A endeavour to maintain and strengthen the existing *concomitant complementarities* between the ideas involved at the cultural system through the process of ‘systematization’ (Archer, 1996, p. 171). Archer explains ideational systematization as ‘the strengthening of pre-existing relations among the parts, the development of the relations among parts previously unrelated, the gradual addition of parts and relation to a system, or some combination of these changes’ (Hall and Hagen, 1969, p. 36 in Archer, 1995, p. 236). In other words, the *concomitant complementarities* foster a situational logic of ‘protection’ of the compatibility, which generally leads towards ‘ideational systematisation’ in the cultural arena (Archer, 1996, p. 171), as it is summed up in Table 4.

Table 4: The operative effects of the concomitant complementarities as identified by Archer (1996)

Situational Logic	Condition at Cultural System Level	Condition at Socio-culture Level
Protection	Systematization	Reproduction

The natural consequences of the *systematization* is a gradual rise in ‘cultural density’ because readily compatible ideas progressively incorporated in the cultural system gather around the core compatibility of the ideas involved (Archer, 1996, p. 176). Eventually, this set of ideas turn into a distinctive integrated whole, in which the ideas become more elaborated, sophisticated and subtle. Moreover, particular terminologies and concepts are commonly used to describe/capture the complex and interconnected groups of ideas. Since the exploration of the *concomitant compatibility* is rewarding (as mentioned above), socio-culturally, more and more people join the process of *systematization* and intensify the cultural system through

‘cultural embroidery’ (Archer, 1996, p. 158). Logically, over a certain period, the development of strong internal ties between the ideas reaches a point wherein new compatible ideas cannot be assimilated without causing major distortion in the existing sophisticated relationships between the ideas. At this stage, the situational logic of *protection*, which is associated with the concomitant complementarities, discourages the exploration of rival or innovative ideas because of their disruptive capacity. This fosters a thrust for cultural ‘reproduction’ (that is the promotion of common practices) at socio-cultural level (Archer, 1996, p. 179), which indicates the probability of cultural morphostasis. However, in practical life the success of cultural reproduction depends on how *the concomitant complementarities* are enmeshed with structural conditions and agential factors at the socio-cultural level (Archer, 1996).

In the case of internal complementarities, there is no ideational tension at the systemic level but growing disorderliness at the socio-cultural level is the main source of cultural change. In fact, it is a result of substantial increase in *cultural density*, which increases the volume of the set of consistent ideas and enriches the complexity of their interrelationships. It thus becomes difficult for all people at socio-cultural level to gain full understanding of the set of ideas and to share it completely, therefore, a ‘hierarchy of knowledgeability’ creates three groups having diverse interests in relation to the cultural system (Archer, 2005, p. 30): the ‘elite’, the ‘masses’ and the ‘marginalised’.

First, those who are at the top of the hierarchy become cultural *elite*. They have in-depth understanding of the cultural system and its logical relationships (Archer, 1996, p. 212). Moreover, they get involved in *systematisation* at the socio-cultural level and aim to keep it in order.

Second are those who believe that the cultural system -which is protected and promoted by the *elite* - is the natural and true order of the items and the deviation from it can produce unavoidable negative implications for them. Such type of group (composing a large number of people) is called the ‘masses’ (Archer, 1996, p. 213) and lies at the bottom of the ‘hierarchy of knowledgeability’ (Archer, 2005, p. 30). Archer (1996) makes it clear that the harmony among the masses is not the product of the consistency of ideas involved at the cultural system level. In fact, it is derived from ‘naturalization strategies’ through which cultural elite present the cultural system in such a way that the masses take it as a true and natural affair (Archer, 1996, p. 214).

Third, a small group of people also come forward who has put intensive efforts to understand the cultural system in order to accumulate ideational benefits. But they are unable to gain it in accordance with their investment because the

cultural rewards become lower and lower as the cultural elite increases over a period (Archer, 2005). They are also strongly discouraged to exploit new ideas in order to increase their returns because both the *masses* and the *elite* tend to protect the existing cultural system (Archer, 1996). Consequently, this small group becomes the ‘marginals’ (Archer, 1996, p. 214). Since they have sufficient knowledge about the cultural system, the *naturalization* strategies become ineffective in their case (Archer, 1996). In addition, they are aware of the fact that the return they receive is less than their cultural investments. Eventually, with the passage of time, they become more frustrated and may start searching new ideas - which are consistent with the existing ideas - to increase their benefits and they become ‘migrants’ (Archer, 1996, p. 217). Archer (1996, 2005) argues that this is the only way by which cultural change can be induced in the case of the *concomitant complementarities*.

2.7.5.3 Competitive Contradictions

With reference to Table 2, the *competitive contradiction* (Archer, 1995, pp. 239 - 243) is a kind of configuration of cultural items at systemic level, which emerges when two cultural items are mutually *inconsistent* and both are *not dependent* on each other in any way. In other words, both ideas A and B cannot be pursued simultaneously because of their incompatibility. However, the activation of idea A does not always lead to the invocation of idea B because these two ideas have contingent relationship between them. This is the point of difference between the *competitive contradictions* and the *constraining contradictions*, despite the fact that both configurations have the logical relationship of contradiction in common. In contrast to the former, the cultural items are inevitably dependent on each other in case of the latter. Owing to this basic difference, the *competitive contradictions* create entirely distinctive situation logics as compared to the *constraining contradictions*. Table 5, below, presents an overview of the situation logics produced by the *competitive contradictions*.

Table 5: The operative effects of the competitive contradictions as identified by Archer (1996)

Situational Logic	Condition at Cultural System Level	Condition at Socio-culture Level
Elimination	Pluralism	Cleavage

Competitive contradictions are a matter of cultural system since they deal with mutually contradictory cultural items such as beliefs, theories, or doctrines. However, it requires someone (some group) to propagate B for the ‘active

opposition' with the adherents of A which makes the contingent relationships of contradictions operational (Archer, 1995, p. 239). Here, active opposition is a social activity, therefore, the *competitive contradictions* come into action when they are activated at the socio-cultural level. This is called 'accentuation' by Archer (1996, p. 230). She also argues that it 'depends on groups, actuated by interests, *making* a contradiction competitive, by taking sides over it and by trying to make other people take their side' (Archer, 1995, p. 239). In other words, the *competitive contradictions* require people to choose one idea by deselecting the other idea as it is not logically possible to uphold two inconstant/competing ideas at a same time. Here, the recognition of available alternatives depends upon people's knowledge and understanding of the competing ideas (Archer, 1995). Since the competitive ideas are not mutually dependent in case of the competitive contradictions, it is quite logical, that the adherents of both ideas A and B tend to 'eliminate' the competing ideas from cultural arena and their ideas can gain social prominence (Archer, 1995, p. 240). It is opposite to the *concomitant contradictions* where the people are forced to make *correction*, owing to necessary and internal relationships of contradictory ideas. For the *elimination* of the idea B, the adherents of A endeavour to highlight the negative features of the idea B so that it loses its social prominence and the idea A becomes salient. In order to counter this situation, the adherents of B stress the advantageous aspects of their own idea. Moreover, they also try to point out the shortcomings of idea A to *eliminate* it. This state of affairs engenders a *debate* in which people aim to insist on the differences between the conflicting/competing ideas they hold (Archer, 1996, p. 45). This *debating* process is different from the *syncretic* negotiations and discussions to sink the differences between the ideas, which are the distinguishing feature of the *competitive contradictions*. It is another point of difference between the competitive and the constraining contradictions.

Because of this debating process, it rarely happens that one of the conflicting ideas is completely discarded from the cultural arena. However, contrary to popular expectations, the arguments and counter-arguments between the competing groups at the socio-cultural level not only refine their ideas but also highlight their differences. This induces ideational pluralism in the cultural system (Archer, 1996, p. 245). Moreover, the people become more committed to their ideas because of increased awareness of the disadvantages of the competing idea and the advantages of their own idea. They also learn and develop techniques for the projection of these ideas. This state of affairs promotes 'polarization' (also called 'cleavage') in the respective population at the socio-cultural level (Archer, 1996, pp. 256 - 257).

2.7.5.4 Contingent Complementarities

As shown in Table 2, *contingent complementarities* (Archer, 1996, p. 243) indicate a distinctive relationship between cultural items in which ideas are logically consistent/compatible but are not dependent on each other in any way; that is the activation of idea A does not necessarily call upon idea B or any part of it because they are connected contingently. However, the adherents of A are free to take the advantages of compatible idea B or any part of it. The contingent complementarities not only create situation logic of 'opportunity' for them but also grant them the freedom to avail it or not (Archer, 1995, p. 244).

Contingent complementarities are the systemic stuff and direct counterparts of the competitive contradictions, but it is required for their existence that the contingent complementarities at the cultural system are known to the people. Therefore, they can engage in 'ideational synthesis, that is, the building up of *separate* elements - concepts, propositions data - into a connected theory or system' (Archer, 1995, p. 258). Indeed, it is not a simple aggregation of ideas developed in another context; rather, it requires a lot of innovative effort and intellectual investment by people (Archer, 1996); for example, the use of an emerging technology in teaching or research to increase productivity requires a lot of intellect work on the part of teachers/researchers. The generic result of ideational *synthesis* is the rise in 'cultural variety' (Archer, 1996, p. 260) owing to the addition of new items in the cultural system. Consequently, new forms of 'specialization' are put forward (Archer, 1996, p. 263). This, for example, may be a new academic discipline, research framework or innovative application of theories/concept, etc. The emergence of a new stock of ideas (area of specialisation) generates more *opportunities* for the people, which stimulate them to work upon it. Cultural variety at the systemic level stimulates the generation of an additional variety (Archer, 1996, p. 265). Eventually, it (specialisation) becomes consolidated and gains social recognition as a distinctive body of knowledge which also results in its 'institutionalisation' (Archer, 2005, p. 32). The influence of contingent complementarities at the socio-cultural level is that people re-group themselves in relation to the areas of *specialisation*, therefore, the number of sectional groups increases that promotes 'sectionalism' in the respective population. In short, the contingent complementarities foster a loose situational logic of opportunity, which has implications for the systemic and the socio-cultural level (as presented in Table 6) and encourages cultural change (morphogenesis) at both levels.

Table 6: The operative effects of the contingent complementarities as identified by Archer (1996)

Situational Logic	Condition at Cultural System Level	Condition at Socio-culture Level
Opportunity	Specialization	Sectionalism

Here it seems important to explain the differences of *cultural variety* and *cultural density*, and of *sectionalism* and *cleavage*, which may enable us to understand the distinctive effects stemming from the contingent complementarities at both systemic and socio-cultural levels. Cultural variety - arises from ideational *synthesis* in the case of contingent complementarities - entails loose or ill-defined link between cultural items and has a tendency to extend the cultural arena. Cultural density- comes out of *systematization* in the case of necessary/concomitant complementarities - represents certain or over-defined ties of cultural items and systematically tries to beautify the *house* of cultural items. Moreover, at socio-cultural level, *systematization* stimulates the reproduction of existing set of ideas, while *specialization* fosters ideational diversification in people (which ensure *sectionalism*) (Archer 1996, p. 267). The *sectional* groups - resulting from the contingent complementarities - have very little to share within themselves, yet they are not conflicting to one another either, while *polarized* groups - stemming from the competitive contradictions - are always competing with one another as their development is based on socio-cultural rivalries. Therefore, the contingent complementarities, like other cultural configurations, create distinctive ideational conditions that also have unique implications for people.

In summary, the principle of analytical dualism makes it possible to distinguish between the cultural system and socio-cultural levels. The cultural system deals with ideas, beliefs, theories or ideologies etc. which may have four kinds of configurations depending upon their relationships of contradictions/complementarities and mutual dependency/independency (see Table 2). These cultural configurations create unique situational logics that have *syncretic*, *pluralist*, *systemized* and *specialized* forms of causal influences on cultural actions and ensue different patterns of ideational development (see Tables, 3, 4, 5 and 6). Concisely, they characterise the ideational context, which conditions but do not determine people's cultural actions. Moreover, people are able to carry out independent actions based on their own powers and interests. As a result, they can reinforce or resist the conditional influences of the cultural system. People, for example, can use their cultural power to maintain uniformity at the socio-cultural level in a particular period (despite the presence of inconsistencies at cultural

system), if they live with the situational logic of correction or protection. Consequently, the existing cultural system does not change, which shows the state of cultural morphostasis. However, if people are not conditioned by the situational logic of correction or protection, they would be unable to keep orderliness at the socio-cultural level by using their culture power in spite of presence of the consistencies at the systemic level. Eventually, the development of groups with different interests and powers may question the status quo. Therefore, the examination of interplay between CS and socio-cultural levels in a particular context enables a researcher to explain the cultural change and stability in a specific time period.

2.7.6 Structure

I have already introduced the basic concept of structure along with the concept of culture while describing the core principles of the morphogenetic approach (in 2.7.4). In brief, Archer approaches both *structure* and *culture* in such a way that they can be analysed with the help of a common framework despite their differences. *Structure* primarily deals with physical and human material resources, while *culture* is concerned with ideas, beliefs, theories, or ideologies etc. For Archer (1995, p. 175), structure, similar to culture, is also characterised by its emergent properties (called as structural emergent properties SEPs) originating from the relations of its constituent components (physical and human material resources). These SEPs also have causal powers, which are irreducible to the components. The SEPs can exist even without the knowledge of people about their existence. Archer (1995) also argues that empirically SEPs cannot be spotted out through direct observations but these can be identified owing to their causal influences on people's actions. Archer makes analytical distinction between *structure* and *people* by the virtue of *analytical dualism*. Consequently, she proposes structural morphogenetic cycle (structural conditioning → social interaction → cultural elaboration) to explain the interdependency of structure and people over time. Structural cycle, similar to cultural cycle, is also grounded in a basic morphogenetic principle 'that structure necessarily predates the actions which transform it; and that structural elaboration necessarily post-dates those actions' (Archer, 1995, p. 90) as shown in the Figure 3. In other words, the systemic properties of structure - are the outcome of past actions - manifest the structural conditions at a particular time T^1 . Subsequently, it facilitates or hinders agents' actions by exerting its causal powers. Moreover, the agency has its own powers to sustain or change these conditions for the perseverance of their interests. The interaction of structure and agency occur during the second phase of the cycle (T^2 - T^3) in which both exercise their influences on each other. The consequences of this interaction can be viewed after a point in time T^3 , and in the

forms of structural elaboration or reproduction. This highlights that the structural change and stability depend upon the interplay of structure and agency in a particular context as it was in the case of cultural change/stability.

According to Archer (1995), there are four types of configurations of structural factors at the systemic level. In Table 7, I attempt to sum them up.

Table 7: Possible logical configurations of the structural items as identified by Archer (1995)

Logical Properties of structural factors	Incompatibilities	Complementarities
Internally and necessarily linked with other	1. <i>Necessary Incompatibilities</i>	2. <i>Necessary Complementarities</i>
Externally and contingently linked with others	3. <i>Contingent Incompatibilities</i>	4. <i>Contingent Complementarities</i>

2.7.6.1 Necessary Incompatibilities

The ‘necessary incompatibilities’ emerge at the systemic level when mutually incompatible structures internally and necessarily link with each other (Archer, 1995, p. 222). Archer (1995) argues that this kind of configuration conditions agents to act in a way that the existing compatibility can be addressed. The situational logic generated from these relations is called ‘containment or compromises’ which may result in the structural morphogenesis (Archer, 1995, p. 224). With reference to this study, the ‘research related management structure of the university’ (see 5.2.1) can be considered as a necessary incompatibility regarding research in the field of social sciences.

2.7.6.2 Necessary Complementarities

As shown in Table 7, if mutually compatible structural factors are internally and necessarily linked with each other, then the emerging configuration will be called ‘necessary complementarities’ (Archer, 1995, p. 219). In such contexts, agents try to maintain the existing structures because any disruption in the context may not be beneficial to all of them. Thus, the situational logic associated with this configuration is ‘protection’ which leads towards morphostasis (Archer, 1995, p. 220); for example, in the context of my study, research related policies largely fall in the category of necessary compatibility (for more details see 5.2.2).

2.7.6.3 Contingent Incompatibilities

Contingent incompatibilities arise when structural factors are not internally linked at systemic level and are contradictory as well (Archer, 1995, p. 225). In this scenario, agents tend to eliminate the contradictory structures owing to the contingent relations among structures. So the situational logic associated with this configuration is 'elimination' (Archer, 1995, p. 225).

2.7.6.4 Contingent Compatibilities

In the case of 'contingent compatibilities', structural factors are not internally linked but are mutually compatible (Archer, 1995, p. 226). The compatibility enables agents to get benefit from the available compatible structures. These relations generate the situational logic of 'opportunism', which generally results in structural morphogenesis (Archer, 1995, p. 226).

2.7.7 Agency

Archer (1995) argues that people are stratified in a social set up. Every stratum of people has its own unique features, which cannot be reduced to the individuals or members of that stratum (Archer, 1995). Similar to structure and culture, people also have emergent properties. However, these emergent properties of people are not a construct but those of structure and culture are; in fact, people emergent properties are real because people and their actions are real (Archer, 1995). Archer also argues that people mediate the causal powers of structure and culture where every stratum of people responds differently (Archer, 2003). In this process, which is called 'double morphogenesis' of agency, people not only shape their own context but also re-organise themselves (Archer, 1995, p. 253). Within this situation, groups of people pursuing their interests in a specific time and reshaping the context for all people according to this interest are called 'corporate agents' (Archer, 1995, p. 260). In contrast, those groups which do not articulate their interests or organise themselves to pursue those interests in a certain period are termed 'primary agents' (Archer, 1995, p. 258). They also fail to reshape their context according to their interest (Archer, 1995).

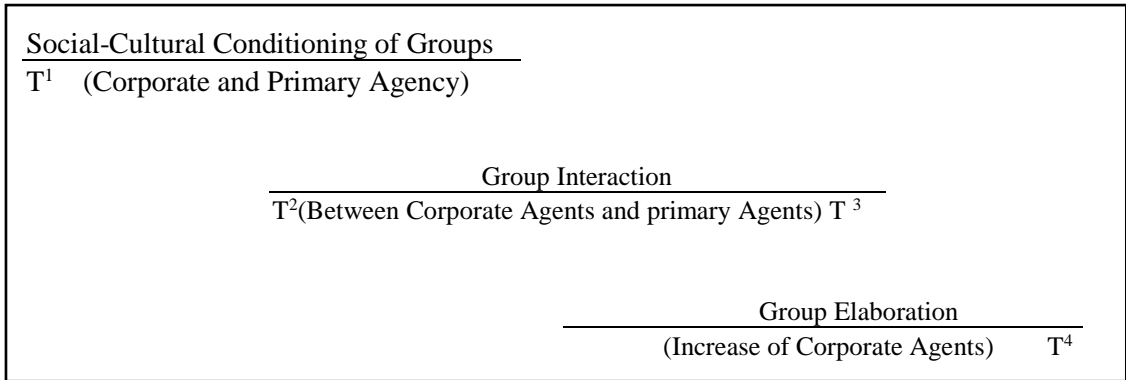


Figure 5 The morphogenesis of agency (Archer, 1995, p. 194)

In the first phase (before T²), the morphogenetic cycle for agency as shown in figure 5, agents not only condition the existing structural and cultural contexts but also develop interests to change or maintain the grouping of primary and corporate agents (Archer, 1995). Between two subsequent points in time, T² to T³, the mediation process provides an opportunity to corporate agents for the advancement of their vested interests which were developed in pervious context (Archer, 1995), and as a result, they modify the structural and cultural context in which all agents live (Archer, 1995). Primary agents also interact with this context and consequently modify the context which corporate agents control or formulate (Archer, 1995). This emerging context not only creates challenges for some existing corporate agents but also opens opportunities for new groups of corporate agents (Archer, 1995). These groups of corporate agency are differentiated based on their characteristics such as, 'material' or 'ideal' interests and 'promotive' or 'defensive' actions (Archer, 1995, p. 275). This regrouping of primary and corporate agents after the interaction over a time period is called 'morphogenesis' of agency (Archer, 1995, p. 261). In morphostasis of agency, in contrast, corporate and primary agents maintain their grouping during and after the interaction as they were before it.

CHAPTER 3: CONCEPTUAL MODEL OF RESEARCHER DEVELOPMENT

Archer's realist social theory, reviewed in detail in the previous chapter, is an explanatory programme, which provides guidelines for conducting empirical social analysis by exploring interrelationship of structure, culture and agency. We saw that the guiding principles set by Archer's theory may help a researcher to explain substantive problems that fall in the domain of social sciences (Archer, 1995, p.12). This is why the theory provides a meta-framework for this study. However, a researcher also needs to use a substantive theory in conjunction with the morphogenetic approach for specifying the relevant factors, associations and dynamics ascribing to the problem under investigation (Archer, 2011), since substantive theories, particularly in the context of the social sciences, are designed 'to generate new empirical information' about a specific social phenomenon (Sibeon, 2004, p.30). Archer, does not suggest using any specific substantive theory for empirical analyses; rather, she argues that her explanatory framework is 'compatible with a wide range of social theories' in substantive terms (Archer, 1995, p.159).

In this situation, I needed to find a theory which enabled me to specify various aspects of research culture prevailing in the social science faculties of universities in general, and of Pakistani state universities in particular (i.e the aim of this research). Any such theory should be consistent with Archer's framework, allowing me to make sense of the empirical data by utilising the guiding principles of social change and stability provided by the metatheoretical framework. In short, although Archer's framework would provide me with a general recipe to understand and explain a broader social phenomenon (research culture), I also needed heuristic tools/a substantive theory to highlight/specify and understand certain particular aspects of the social problem/phenomenon under investigation. This is in line with research traditions in the field of social sciences; a researcher may choose her/his own heuristic research tools since these are the 'conceptual devices that help the researcher to obtain specific information' about a social phenomenon (Grix, 2010, p.167). The purpose of this chapter is to explain my selection of heuristic tool for identifying various aspects of the research culture being investigated.

3.1 Selection of Appropriate Heuristic Tool

Initially, I began searching the accessible academic literature with an aim to find a readily available theory about university research culture, which may also have

compatibility with Archer's morphogenetic framework. However, this search fizzled out, as I was unable to find any comprehensive theory/ framework/model aiming particularly at explaining the phenomenon of research culture in universities. In this regard, academic literature produced in the context of Pakistani universities was no exception. Suffice to say, it is an unsettled field of study in the broader embed of higher education. In this fizzy scenario, I broadened the scope of my search to the available literature on researcher development. A survey of the limited amount of literature on the topic of researcher development produced a long list of terms (describing researcher development) with varying interpretations that lead to different practical implications. After an initial scrutiny, two models; *the Vitae researcher development framework*(Vitae, 2010) and *Evans's conceptual model of researcher development*(Evans, 2011a; 2011b) appeared to me as possible options for this study. In the coming sections, I first intend to briefly introduce both models and then describe the reasons why Evans's conceptual model is more appropriate for this study.

3.2 The Vitae Researcher Development Framework

The Vitae researcher development framework (RDF) intends to support/ promote the research development by providing structural framework for ongoing personal and career development of researchers in the particular context of UK (Bray and Boon, 2011). The framework benefits post graduate students and early-career researchers including research staff. However, it 'is not a framework for academic practice, and so for those researchers employed in combined teaching and research roles, it does not cover the descriptors relevant for teaching success'(Vitae, n.d., p. 8). Therefore, the RDF is not considered suitable/applicable for job description, academic promotion and performance appraisal up till now.

3.2.1 Description of the Framework

The Vitae framework comprises 63 descriptors entailing various characteristics of excellent researchers. These descriptors are divided into four domains: 1) knowledge and intellectual abilities; 2) personal effectiveness; 3) research governance and organisation and; 4) Engagement, influence and impact (Vitae, 2010, p.2). Moreover, each of these four domains has three sub-domains as shown in Figure 6. Each descriptor contains three to five stages of development which enable researchers to assess their current performance and develop action plans for further targets in order to reach their excellence in particular skills/domains (Vitae, 2010). To make it more realistic, the framework has been incorporated into a downloadable professional development planner and can be used as a training module to assist

researchers in identifying working areas and setting goals for personal development in future (Bray and Boon, 2011). However, the descriptors enlisted in the framework are generic in nature and do not cover any specific knowledge or skills.

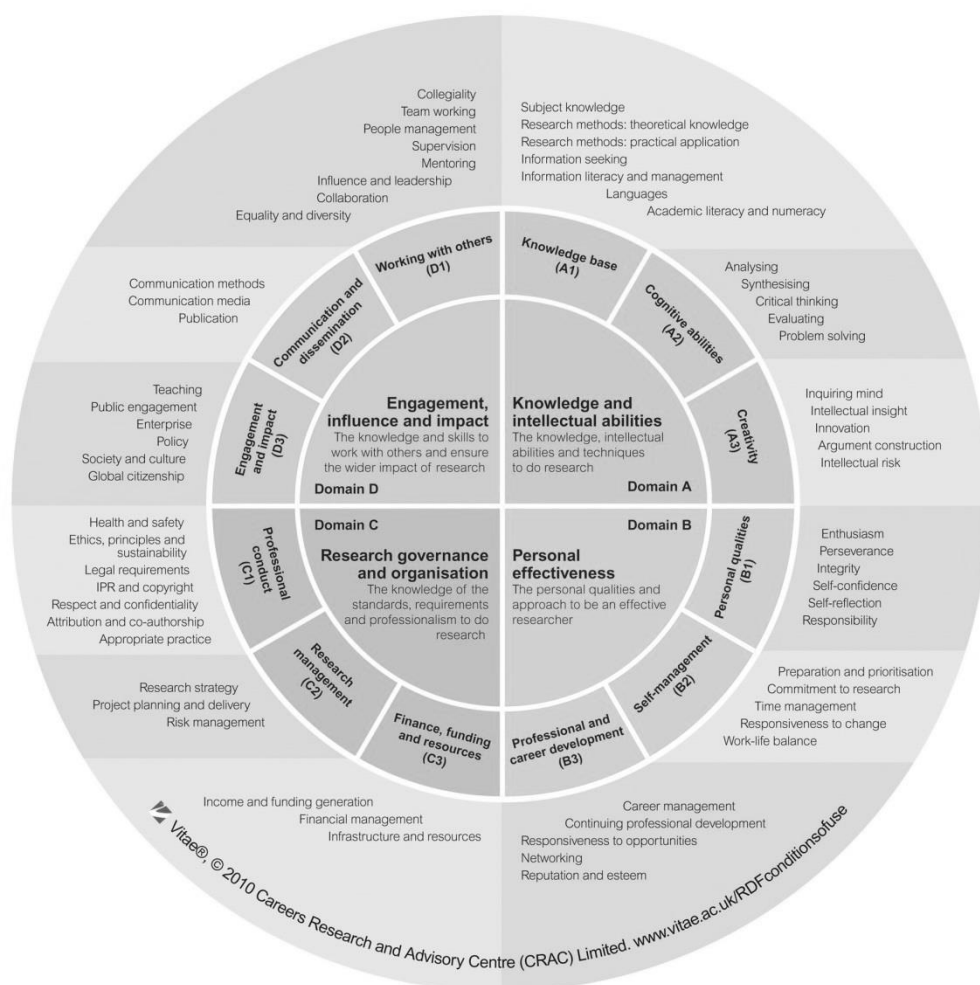


Figure 6: The Vitae researcher development framework (Vitae, 2010)

3.3 Evans’s Conceptual Model of Researcher Development

In addition to precisely defining the concept of researcher development (as discussed in 2.1.2), Evans (2011b) also translates it into a dimensionality-based theoretical model which includes eleven dimensions/sub-components grouped into three constituent components of researcher development. These components are labelled as *behavioral*, *attitudinal* and *intellectual* components as shown in Figure 7 below (Evans, 2011b, p.22).

The *behavioural* component refers to academics’ ability to perform all physical activities that are recognised as research practice. The *attitudinal* and *intellectual* components of researcher development refer to academics’ capacity to engage in various mental activities that are necessary for doing research, irrespective

of the kind of research and its stage (Evans, 2011b, p.22). The following explanation of the components of researcher development has been taken from Evans (2011a; 2011b).

3.3.1 Description of the Model

Evans describes *behavioural* component of researcher development with its four sub-components/dimensions including *processual*, *procedural*, *productive* and *competential*. The *processual* dimension represents the processes in which researchers involve themselves while conducting research. The *procedural* dimension indicates the capacity to handle various kinds of procedures for doing research either formulated by their institutions or imposed by their academic disciplines. The *productive* dimension includes research outputs, productivity and achievements of researchers. The *competential* change refers to increase in research-related skills and expertise required to do research.

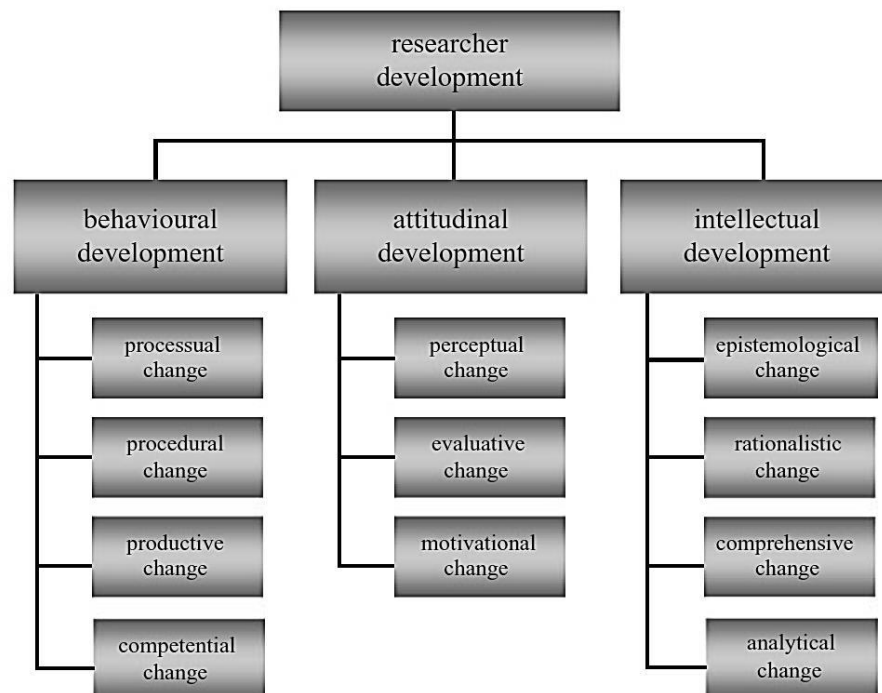


Figure 7: Evans’s Conceptual Model of Researcher Development: the componential structure (Source: Evans, 2011a, p.84; 2011b, p.22)

Evans argues that the *attitudinal* component of the researcher development can be explained in terms of three sub-components/dimensions: *perceptual*, *evaluative* and *motivational* dimension. The *perceptual* dimension involves academics’ mind-sets and their perceptions/beliefs about research practices. It also includes the perceptions of academics about their own research. The *evaluative* dimension focuses on academics’ *research-related values* that particularly underscore academics’ research activities. Moreover, it includes entities/objects that

academics consider highly significant for conducting their research practices. The *motivational* dimension indicates academics' level of motivation, morale and job satisfaction with respect to research-related activities.

The *intellectual* component of researcher development comprises four sub-components/dimensions: *epistemological*, *rationalistic*, *comprehensive* and *analytical* dimensions. The *epistemological* dimension refers to base of knowledge that academics possess, especially their research-related knowledge structure including theoretical and conceptual framework that they adopt within their research. The *rationalistic* dimension represents academics' understanding of the nature and degree of reasoning behind their research-related activities. The *analytical* dimension involves the nature of analytics/logic applied to research. The *comprehensive* dimension deals with the development of people's research-related knowledge and understanding.

These eleven sub-components provide a structure that facilitate me to collect data about academics' research practices.

3.4 Why I Preferred Evans's Conceptual Model of Researcher Development

I preferred Evans' conceptual model of researcher development over the Vitae for the following reasons:

First, Evans's conceptual model of researcher development can be used in a wide range of contexts. Since the application of model is not restricted to a particular institution or country, it was convenient for me to use it for the context of my study without any major modifications. In contrast, the Vitae researcher development framework (RDF) is designed particularly for UK-based academics (see heading 3.2.1). The context of higher education in United Kingdom is significantly different from the context of higher education in Pakistan (the context of my study). There are various aspects which can be enlisted here to highlight this difference including; research traditions, organisational structures of universities and landscape of higher education at national level. This makes the Vitae framework a less preferable choice as compared to Evans's model for the purpose of this study.

Second, Evans's idea of researcher development is inclusive in nature as it focuses on transforming people (from various occupations) into researchers and not only on improving/developing the research capacity of already professional researchers. This will help me to investigate the presence/absence of research tendencies among new as well as senior academics of the university.

Third, Evans (2011b) also considers research capacity development an individual-based or 'subjectively determined' (p. 20) area, which provides me an incentive for a detailed qualitative investigation of the research needs and interests of the academics in the university. Similarly, Evans' (2011b) emphasis on enhancing 'people's capacity and willingness to carry out research' (p. 20) instead of developing mere specific research skills would enable me to investigate a wide range of intellectual, attitudinal and behavioural attributes of the academics.

Finally, another distinguishing feature of Evans's conceptual model of researcher development is the flexibility of its 'componential structure' (2011a, p.89). Evans (2011b) has presented her model as 'propositional knowledge' in the 'public domain' and expects it to be amended, refined and extended further by other researchers so that the field of researcher development may be enriched (p. 29). This special feature would help me to adapt Evans' framework in line with my research purpose and reorganise its dimensions. This would also enable me to add new dimensions or sub-components to this framework; for example, as we know, Evans' model was not developed according to Archer's morphogenetic approach, therefore it did not identify the structural and cultural aspects of a social phenomenon. In this study, I, as a researcher, highlight and investigate these aspects of a research culture.

3.5 Meaning of Evans' Conceptual Model of Researcher Development for This Study

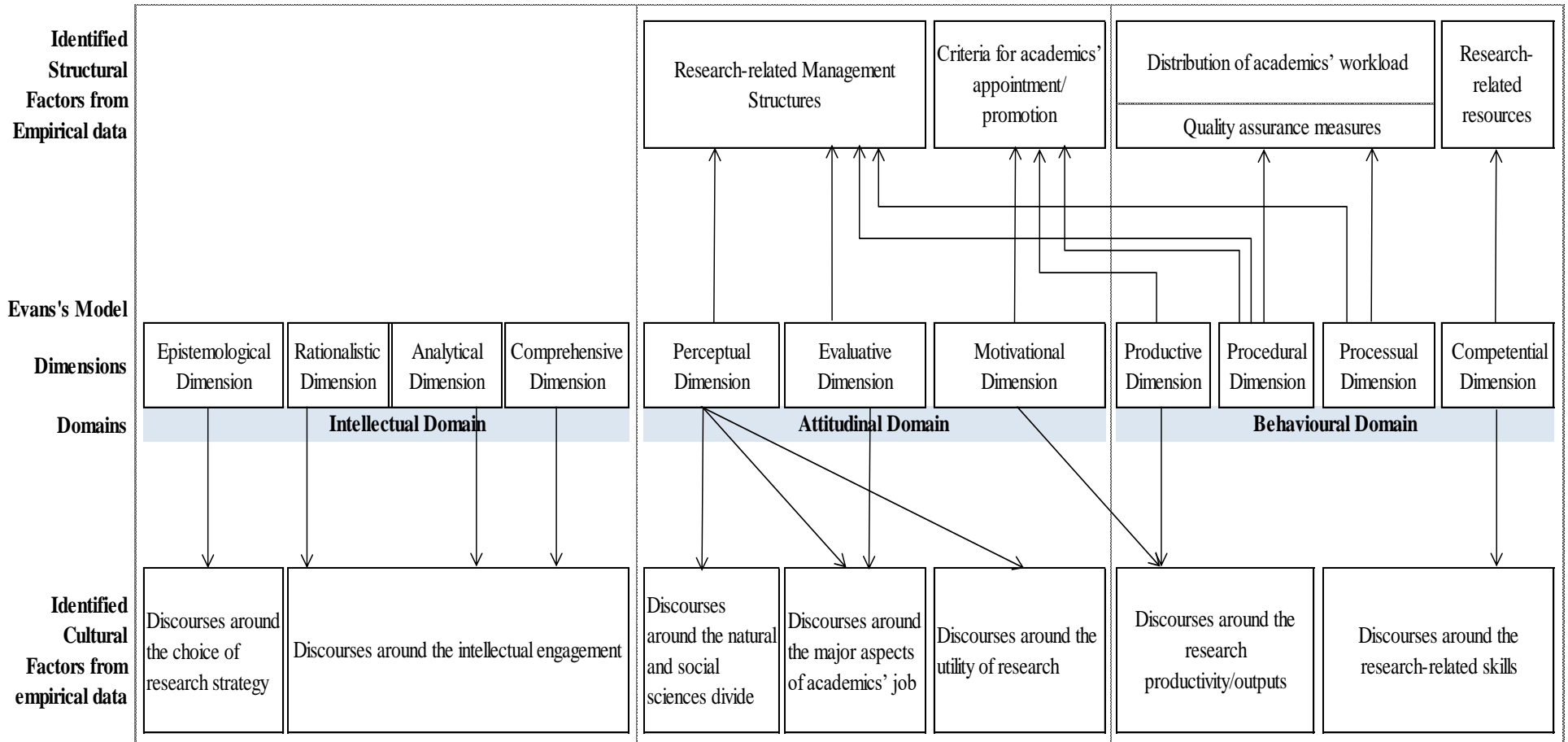
In this section, I not only explain the meanings of various components of Evans' conceptual model of researcher development model (CMRD) for this study but also identify them in line with the structural and cultural conditions of Archer's framework in the light of empirical data collected for this study (also shown in Figure8). For example, as referred to above, intellectual domain of Evans' CMRD refers to people's research-related ideas, understanding and knowledge. The *epistemological* component of the intellectual domain is discussed within the 'discourses around the choice of research strategy' in the data analysis section of my study (see 5.1.4). Since it deals with research-related knowledge and ideas of people, I consider it a cultural systemic condition, in line with Archer's framework, of university's research culture. Similarly, other three components of the intellectual domain (Rationalistic, Analytical and Comprehensive) are considered as cultural systemic condition and will together be discussed within the 'discourses around the intellectual engagement' in this study (see 5.1.6).

Three components of the attitudinal domain - *perceptual*, *evaluative*, *motivation* - of Evans's CMRD may be both cultural systemic as well as structural conditions in the light of Archer's framework. As cultural systemic conditions, the

perceptual (dealing with people's beliefs and perceptions about research practices) and *evaluative* (related to values about research) dimensions are discussed within the 'discourses around the major aspects of academics' job' in this study (see 5.1.1). The *perceptual* dimension will also be reported and analysed within the 'discourses around the natural and social sciences divide', 'discourses around the utility of research and 'discourses around the research productivity/outputs' (see 5.1.2, 5.1.3 and 5.1.7 respectively). As structural conditions, the perceptual and evaluative dimensions will be discussed within the 'research related management structures' of the university. The *motivation* dimension of attitudinal domain is discussed within 'discourses around productivity/outputs' as a cultural systemic condition (see 5.1.7), whereas it is discussed within structural domain as the 'criteria for academics' appointment/promotion of the academics' (see 5.2.2.3).

The *competential* (related to the betterment of research related competence) and *productive* (related to research output) components of the behavioural domain of Evans' CMRD are considered as both cultural systemic and structural conditions in this study. As a cultural systemic condition, the *competential* component is discussed within the 'discourses around the research-related skills' (see 5.1.5), whereas, as a structural condition, it is reported within the 'research related resources' (see 5.2.3). The cultural and structural conditions of the productive dimension are analysed within the 'the research productivity/outputs' (see 5.1.7) and 'criteria for academics' appointment/promotion of the academics' (see 5.2.2.3) respectively. The *procedural* component of behavioural domain is considered as a structural condition and discussed in research related management structure (see 5.2.1) and policies (see 5.2.2).

Figure 8: Identification of research-related cultural and structural factors from empirical data generated in the light of Evans's model



CHAPTER 4: METHODOLOGY AND RESEARCH DESIGN

In chapter 3, I outlined the theoretical foundations of this study based on Archer's morphogenetic approach. This was followed by a discussion aiming at the specification of various aspects of substantive issues under-investigation, e.g., research culture in a university, by utilising Evans's conceptual model of researcher development. This process was theoretically informed by Archer's approach. In chapter 4, I discuss the methodology chosen for this study. Since Archer's approach provides only generic overarching explanatory methodology for analysing a social issue, an investigator of a particular social issue also needs to employ other research strategies to deal with the modalities of data collection pertaining to the problem in hand and its analysis. In this case the conscious choice of an appropriate research methodology may be made on the basis of a fundamental rule, suggested by Danermark et al. (2002) and some other critical realists, that it (methodology) should not only be compatible with meta-theory but also matches the needs of one's research project. In the light of this basic principle, I will discuss (section 4.1) how Intensive-extensive research methodology is well suited to my critical realist perspective and matches the objectives and focus of my project. Further, I will also explain the selection of site and sample, the appropriateness of data collection instruments and the procedures for the collection and analysis. Finally, I will discuss the measures related to the potential ethical issues related to this study.

4.1 Critical Realist Intensive-Extensive Research

According to Danermark et al. (2002), 'qualitative and quantitative methods are traditionally linked to different metatheoretical perspectives of which critical realism is skeptical'(p. 175). Owing to this reason, the use of qualitative and quantitative design in a critical-informed study (as in my case) might be confusing, alternatively, intensive and extensive methods are recommended (Danermark et al., 2002; Sayer, 2000). Following this suggestion, most of the practical social realists use intensive and extensive research strategies as it was noticed by Ackroyd and Karlsoon (2014). This recommendation was also relevant to my project since it was mainly informed by Archer' realist model. Therefore, I also used intensive and extensive terms instead of qualitative and qualitative in this study.

Intensive realist research focuses on a particular phenomenon and discovers generative mechanisms operating at its real level for the purpose of causal explanation of the phenomenon. On the other hand, extensive research aims at identifying patterns, common features/properties at its empirical level (Danermark et al., 2002; Sayer, 2000).

This study is primarily interested in explaining the phenomenon of research culture by identifying the factors influencing it. The critical realist stance used in this study (based on Archer's framework) endorses that the influences of these factors may emerge from the underlying causal relationships between them. In this respect, my study embodied key features of intensive realist research i.e. uncovering underlying generative mechanism (of research culture in a university). Moreover, extensive research was also relevant to my study as I was interested in exploring aggregate pattern of academics' views about some distinctive features of the university and its research culture. This information was useful to reflect on the context in which the phenomenon existed and meant to be explained. This also gave some clues about underlying causal relations of the factors related to research culture by highlighting their important empirical manifestations in the context. Therefore, I employed both intensive and extensive research strategies to address the specific objective of my project. This decision was also informed by Danermak et al.'s concept of 'critical methodological pluralism' (2000, p. 176) which assumes that intensive and intensive designs are complementary to each other and both are consistent with a critical realist's understanding of stratified social reality.

4.2 Critical Realist-informed Research Design

Ackroyd and Karlsoon (2014) argue how different research designs (e.g. case study, survey) can be utilised to conduct critical-realist intensive and extensive research. They define critical realist case study as an intensive research (interested in the identification of mechanisms underlying a phenomenon - as discussed above) in which the context of the study is given, however, the researcher remains detached from the subjects or phenomenon under study (Ackroyd and Karlsoon, 2014). While, critical realist survey mainly focuses on examining and understanding the context in which mechanisms underlying a phenomenon operate. Similar to the critical realist case study, the researcher also tend to remain detached from subjects or phenomenon in an extensive survey research (Ackroyd and Karlsoon, 2014).

It has been argued in the previous section that this critical realist-informed study embodied the characteristics of intensive and extensive research. Therefore, both research designs (case study and survey) can be employed in this study if, as a researcher, I manage to remain detached from subjects or phenomenon. Since it was not a part of my research design to influence the phenomenon under study through any interventions, the investigation in this study may be considered as a detached one. Even my interaction with the participants of this study, which may possibly be considered as a source of influence on the phenomenon of research culture investigated in this study, was not intense enough to produce any visible and enduring change in the existing research culture. Social realists view that a social

phenomenon is (re)produced by the actions of people involved in it but they, owing to different social roles, do not have equal influences over outcomes (Ackroyd, 2010). As I did not hold any managerial or influential position in the university which could possibly influence the participants of the study, I may claim to have maintained a detached stance at the level of overall research design. However, the implications of my position on the process of data analysis and interpretation are discussed in section 4.7. Consequently, both research designs appeared relevant to my study. I, therefore, could get benefit from the basic features/principles of both research designs in the specific aspects of this study.

In order to make sense of the data, this study used various modes (*abduction*, *retroduction*, *deduction*, etc.) of inference (as discussed in 4.5.2). However, similar to other critical realist studies, especially informed by the Archer morphogenetic approach (for example see Quinn, 2006; Vorster, 2010), this study primarily relied on both *abductive* (for re-contextualization of empirical data in Archer's terms) and *retroductive* (for identification of logical relations between research-related factors which characterized the conditioning context) logics of discovery. According to Ackroyd (2010, p.61) and Ackroyd and Karlsoon(2014, p. 27), *abduction* is one of the distinguishing features of a critical realist case study whereas the *retroductive* mode of inference is a key feature of a survey informed by critical realism. Therefore, my study embodied an important feature of critical realist case study in the form of *abductive* reasoning for meeting the *intensive* aspect of the study. However, the use of *retroductive* mode of reasoning to address *extensive* aspect of the study made this study different from critical-realist as well as other case study research designs.

The objective/scope of this study also indicates that it is not a complete critical realist case study of the research culture of University X. As it has been stated earlier that this study aims to explain the existing situation of research culture in University X. It has been noticed that most critical realist informed empirical studies (for example see Quinn, 2006; Vorster, 2010; Horrocks, 2009) are interested in explaining a social phenomenon by considering its *cultural*, *structural* and *agential* components. Usually, they analyse cultural, structural and agential morphogenetic cycles and provide a detailed account of the phenomenon. Unlike other critical realist empirical case studies, this study was primarily interested in analysing the *ideational* domain (cultural morphogenetic cycle) only. Other two domains (agential and structural) were paid little attention; only to understand their contribution in the change/stability of the prevailing cultural system during the socio-cultural interaction (i.e. second phase of cultural morphogenetic cycle). Since a case study aims to produce 'a ...complete, literal description of the incident or entity being investigated' (Merriam, 1998, p.29-30), this study cannot be considered a complete case study of the research culture of University X as it did not produce a comprehensive account of the university. Moreover, this study focused only on social sciences faculties rather than the whole university (see details in section 4.3.2).

In line with critical realism, this study also views social world as an open system. One of its important implications is that there might be numerous factors that belong to a cultural system. However, the identification of all cultural items in order to describe a cultural system completely at any given point in time is not possible (Archer, 1996). Even if it is possible, the cultural items which were not upheld by anyone become irrelevant for cultural analysis as these items can exert causal influence the actions of people only when they are upheld by them at the socio-cultural level (Archer, 1996). Consequently, this study focused only on those cultural items which were manifested in the discourses of participants (academics and managers) collected through interviews. There is a possibility of other cultural items existing through other means. Therefore, the results presented in this study cannot be considered a complete description of the studied phenomenon. Horrocks (2009) has also presented a similar argument in his empirical study. Overall, my study do not make any 'claim to holism' (Ackroyd and Karlsoon, 2014, p.29) which is an essential feature of pure case studies as they aim to provide a 'holist description' of the phenomenon of interest (Merriam, 1998, p.29).

Merriam (1998) recommends that a researcher needs to use as many as possible sources to enrich the data in a case study. Yin (2003, p.83) adds that a case study usually uses various 'sources of evidence' which converge on the 'same set of facts and findings'. My study has also used multiple sources of data collection but, unlike other case studies, they were based on different grounds. These sources of data were used to provide data about different aspects of social reality, e.g. the questionnaire provided information related to the *actual* level of the phenomenon while interview data was largely used to produce information about its *empirical* level. Document analysis enabled me to look into the historical developments of higher education in the country (see details in 4.4).

Moreover, the interviews and participant perceptions collected through survey provided me an indirect access to research culture in the university. A fully detailed and direct investigation into the research culture could possibly yield different results. This factor also makes this study fall short of a pure case study.

4.3 Setting and Participants

This section presents the procedures adopted for the selection of relevant research site and participants for this study.

4.3.1 Site Selection

Stake suggests that the selection of a case for developing an understanding about a phenomenon primarily depends upon its potential to provide learning opportunities rather than upon its potential to represent similar kind of cases (2005, p. 451). Therefore, I also

considered some key features of higher education institutions (HEIs) to find an appropriate empirical context for explaining the phenomenon of research culture emerging in a Pakistani university.

At a broader level, state-run universities appeared to be a suitable option as they have been playing dominant role in the higher education sector of the country since its birth. These universities always remained the focus of government policies. Therefore, frequently changing policies and unfinished implementation of these policies (specifically prior to the HEC) resulted in uneven and fragmented academic and research developments within state-run universities (as discussed in detail in context section 1.4). In this scenario, the state universities, which existed before the establishment of HEC, may serve as an appropriate site to trace the historical aspects of research activities and culture in Pakistani context as these may contain cultural/structural factors related to research which emerged from previous policies. An insight into these factors could increase the possibilities of explaining the phenomenon of research culture in a better way. It could also increase the chances to understand the conditioning context in which academics work (i.e. an important requirement of the theoretical framework used for this study). I, therefore, limited my search for the identification of an appropriate empirical context for this study to state-run Pakistani universities which existed before the inception of the HEC in 2002. As I was interested in explaining the phenomenon of research culture, specifically, with reference to the field of social sciences, the search of an appropriate site was further narrowed down to general universities which offer degree courses in various academic fields including social sciences. Other universities belonged to the specialized fields (science, technology, medicine, agriculture, engineering, etc.) and have a little possibility of the existence of research culture in the domain of social sciences. Therefore, general universities appeared to be a more suitable site for understanding and explaining the phenomenon of research culture in relation to social sciences.

Moreover, these general universities also remained the focus of HEC's policies as compared to other HEIs. In this scenario, it may be argued that an older state-run general university may be more useful for this study as it could show the imprints of both pre-and post-HEC policies. Therefore, twelve general state-run universities, which existed before the formation of the HEC, were identified for this study. These universities were located at different geographical regions of the country. While I was planning this study, there was a serious law and order situation in various areas of the country owing to war against terrorism in the region. Because of security reasons, obtaining access to and working in an environment to which I was not familiar could be a difficult and risky task. Keeping in mind these realities on ground and issues of access for doing fieldwork (which include survey, interviews and documents collection), I chose my own university as the research site, which was one of these twelve short listed general universities. In addition, this choice also created the possibility of

an easy access to the policy documents of the university which could have been a difficult task in case of any other university. Being a lecturer in the university, my personal awareness of the context may be considered as an additional advantage for developing a deep understanding of the phenomenon of research culture. Further pros and cons of bringing insider perspective in this study are discussed in the section 4.6.

In addition, some important features of the university have also made it more appropriate context for investigating the emerging phenomenon of research culture in Pakistani context. For example, being one of the oldest universities in the county, the internal state of affairs of the university are relatively stable and its context has the potential for containing the factors which may reflect the impact of inconsistent pre-HEC policies as well as of relatively purposeful post- HEC policies. Another important feature of the university is that its administrative structures are also shared with other state-run universities, which used to be its constituent colleges in the past. Therefore, the richness of the context also made this university suitable for this study.

Another important feature of the university is this that it has been striving to promote research activities among academics in order to keep itself in line with the changing context of higher education at national level. The research developments within the university can be evidenced with the fact that the national ranking of the university has improved by five steps during four years and it became one of the top five HEIs of the country in 2010 (when this study was planned). Since then, the university has maintained its place in top five national universities. In 2005, the university produced less than eighty research publications in total, which increased nearly seven times within five years. One fifth of these publications came from the faculties of social sciences despite the fact that six out of thirteen faculties in the university belong to social sciences and comprise forty percent of the total full time academics (University X, 2011a). This uneven development of research within the university increased the possibilities of exploring the constraining and enabling factors related to research in social sciences.

In the light of above reasons, it can be argued that my own institution, being an old state-run general university with an uneven increase in research publications, can provide useful information for understanding the complex phenomenon of research culture with reference to social sciences faculties in the higher education context of Pakistan.

4.3.2 Rational for Choosing Two Faculties

As I was the sole investigator, it was not feasible to collect rich data from all six social sciences faculties of the university in the limited time available for this study. Without in-depth data, it is impossible to present an explanatory account of the phenomenon from a critical realistic perspective (Archer, 1995). Therefore, I decided to confine my study to only

two faculties from social sciences. In order to shortlist the faculties, I considered the level of research productivity of each faculty. For this purpose, the total number of research publications produced in 2010 were considered as a measure for research productivity (Owing to ethical issues discussed in section 4.8, the name and exact number of publications of each faculty have not been revealed). It was noticed that fifty percent of total publications of social sciences in the university were produced by only two faculties. On the other hand, there were a couple of faculties which were relatively less productive and each produced less than a dozen research publications. Brew and Bound (2009) suggest that the group of academics who are less productive in research can tell us more about the research environment and research practices. I, therefore, following this suggestion, chose two faculties (pseudonyms E and F); one productive and the other relatively less productive faculty. This increased the possibility of exploring a variety of factors that shape up the research activities of the academics in the context. The faculty to which I belong lies between these two extremes, therefore, I did not include it in the study.

In addition to the level of research output, it was also considered that there should be a wide range of full-time permanent academics with different research experiences and academic ranks in the faculties chosen for this study. The variety of respondents, in terms of research experiences, also increased the possibility of identifying the factors that characterise the context within which they have to live.

4.3.3 Participants

This section presents details of how I identified and selected interviewees. This is followed by the description of the respondents who filled and returned the questionnaires designed for this study.

4.3.3.1 Selection of the Participants for Interviews

This study follows non-probability sampling for conducting interviews and selected those participants who could provide important information about the research culture in the university. In selecting the sample, I chose the academic position of participants as a key measure. In addition, their research outputs were also considered because I needed to collect a variety of academics' views in order to address the study's research questions.

I collected information about the managers and academics of two selected faculties (Faculty E and Faculty F) from the latest available official directory of University X. The organisation of the information about total 115 academics in both faculties created a pool of prospective participants for the study. From this pool, I initially intended to select 22 participants (11 from each faculty) to include four participants from each cadre (chairperson/director, lecturers, assistant professors, associate professors, and professors). I

also decided to include the deans of both faculties in the sample. To protect the identity of deans and chairpersons/ directors, I refer to them as managers. In choosing the academics, I ensured that at least one participant from each academic rank, who has been frequently engaged in the research activities in recent years (i.e. 2008-09), was included. The academics' profiles published on the official website and on the annual report of University X provided me a fair idea about their involvement in research activities in terms of total number of their journal articles published in various national and international journals. In this way, the diversity of the participants of this study was ensured.

During my fieldwork, I found only three, out of five, associate professors willing for interviews and one of them was also the head of a department. This situation was not surprising for me because I could anticipate this problem and had a plan to overcome that situation. Consequently, I included two participants, a senior assistant professor and a senior lecturer, in the sample. Although, these participants were different in many respects from associate professors but, still, appeared to me a good alternative rather than reducing the sample size. As measure to protect the identity of the interviewees, I refer to lecturer and assistant professor as junior academics while remaining were refer as senior academic. A list of the participants who took part in this study as interviewees and their relevant information is summarised in Table 8.

Table 8: The interview sample and its relevant information

Serial No.	Pseudonym	Academic Role	Highest Qualification	Total number of publications in		Is any research paper published in/after 2008 ?
				National journals	International journals	
1	FA	Junior Academic	Masters	0	0	No
2	RA	Junior Academic	M. Phil	5	0	Yes
3	CA	Junior Academic	Masters	0	0	No
4	HA	Junior Academic	Masters	3	0	Yes
5	AA	Junior Academic	M. Phil	13	0	Yes
6	LA	Junior Academic	Masters	0	0	No
7	BA	Junior Academic	M. Phil	2	0	Yes
8	MA	Junior Academic	PhD	5	0	Yes
9	SA	Junior Academic	PhD	0	2	No
10	KA	Junior Academic	PhD	2	0	No
11	TA	Senior academic	PhD	14	4	Yes
12	ZA	Senior academic	PhD	13	6	Yes
13	DA	Senior academic	PhD	15	0	No
14	JA	Senior academic	PhD	30	0	No
15	UA	Senior academic	PhD	39	78	Yes
16	IA	Senior academic	PhD	32	2	Yes
17	BM	*Manager	PhD	21	29	Yes
18	CM	Manager	PhD	16	27	Yes
19	DM	Manager	Post Doc	15	12	Yes
20	EM	Manager	Post Doc	37	16	Yes
21	FM	Manager	PhD	33	6	Yes
22	GM	Manager	PhD	32	0	Yes

**Here the term manager stands for both the dean of a faculty and the head of a teaching department/centre/institution etc.*

4.3.3.2 The Questionnaire Respondents

I was aware that the academics having managerial positions at University X had relatively busy schedule, therefore, I naturally thought that it might be difficult for them to spare time for both activities of data collection; interview and the filling of questionnaire. Therefore I decided to conduct their interviews only since interview was the main source of data for the study and I did not want to take any risk of reducing the chances for finding willing academics for interview, particularly those who hold any formal managerial position as they were small in number.

Overall, I invited 103 academics from both faculties E and F to complete the questionnaire. I got 70 out of 103 filled questionnaires from the academics. This represents a

68 % response rate, which is quite overwhelming. The characteristics of the questionnaire respondents are summarised in Table 9. The table indicated that the number of female (59%) respondents was greater than their male counterparts. It was also noticed that the age of the majority of respondents was less than 45 years, which indicates that they were at an early or middle stage of their careers. This may further be supported by the fact that most (91 %) of the academics had junior academic ranks i.e. lecturer and assistant professor. Moreover, the data revealed that nearly three quarters of them had a research degree i.e. M. Phil (40%) and PhD (33%). Here, it may be important to recall that the academics with managerial positions (who were small in numbers) were not invited to complete the questionnaire owing to above discussed reason and all of them were senior academics i.e. professors or associate professors.

Table 9: The questionnaire respondents

Background Variables	Frequency	Percentage
Age Ranges		
25-35	31	44
35-45	28	40
46-55	11	16
Gender		
Male	29	41
Female	41	59
Qualification		
Masters	19	27
M. Phil	28	40
PhD	23	33
Academic Rank		
Lecturer	38	54
Assistant Professor	26	37
Associate Professor	2	3
Professor	4	6
Total Sample	70	100

4.4 Data Collection Instruments

I used multiple instruments to produce rich data about various aspects of the complex phenomenon of research culture as my intention was to gain a deep understanding of it in University X. One of the main reasons behind the decision of using multiple instruments was the scarcity of documented data which could provide me with a deep insight into the setting of University X as I am not aware of any study investigating the situation of research culture in the context of Pakistani universities in general and in relation to University X in particular. Therefore, it appeared pertinent to collect relevant data about the setting of University X

within which academics live, as well as about the way they interact with the context and its research culture.

The decision to use multiple tools for data collection was also consistent with Archer's morphogenetic approach which provided the theoretical foundations for this study, as the morphogenetic analysis of a particular phenomenon requires rich data to provide its explanatory account in the form of tripartite cycle conditioning-interaction-elaboration (Archer, 1995). Each stage of the analysis requires a particular kind of data about the phenomenon under investigation. Therefore the use of multiple instruments for collecting relevant information about the phenomenon was obvious for conducting the analysis with morphogenetic perspective. Furthermore, the literature on case study approach also support the use of more than one data collection methods to get a deep understanding of a complex phenomenon in a particular context (Gillham, 2000). Therefore my choice of using multiple instruments for collecting rich and relevant data was in line not only with the need of carrying out the morphogenetic analysis of a phenomenon but also with a prominent feature of the case study approach. The main data collection instruments I chose were:

1. semi-structured face-to-face interviews
2. structured questionnaire
3. documentary analysis

Through the use of these methods, different kinds of data were generated which provided me insight into various aspects of research culture in University X. Table 10 summarizes information about the type of data a particular research instrument generated and the purpose for which it was collected.

Table 10: Key data collection instruments

Data collection instrument	Type of the data generated	Main Purpose of the data
Structured questionnaire completed by academics (except managers)	Quantitative data	<ul style="list-style-type: none"> • To examine and understand the context of the phenomenon of research culture. • To get an insight into the actual level of the phenomenon.
Interviews with academics and managers	Text in the form of transcriptions of interviews	<ul style="list-style-type: none"> • To uncover the cultural context pertaining to research in University X • To understand some aspects of the structural context regarding research in University X • To examine academics' research practice within University X • To get an insight into the empirical level of the phenomenon.
Analysis of publically accessible documents (e.g. annual reports, website etc.) of University X and Higher Education Commission (HEC) of Pakistan	Text containing relevant information	<ul style="list-style-type: none"> • To understand research related structural context of University X. • To identify research related enabling and constraining factors which emerged from the historical developments in the higher education sector of Pakistan.

In the following sections, I present the justification of this selection and explain the benefits of each instrument in detail.

4.4.1 Interviews

I used semi-structured interviews as a primary data generation tool. One of the key reasons for this decision was that it provided me an opportunity for conversation with the participants. This type of conversation, as Tim May (2011) suggests, allowed me to ask questions in a flexible fashion which enabled me to explore the perceptions, values, meanings, beliefs, or assumptions etc. about research held by the participants. It also allowed interviewees to express their views, feelings, opinions and experiences regarding research freely in response to interview questions. In this way, the interview data facilitated me to gain

deep insight into academics' views as well as to spot out research related cultural items expressed in their conversation. It appeared naturally that the holders of these items were also present in the context. In this way, the extraction of cultural factors from interview data fulfilled one of Archer's basic propositions about cultural items that there must be bearer of every cultural item (Archer, 1995) (for details see 2.7.5). In addition, the dialogue with interviewees also enabled me to uncover views of the participants about the influences (i.e. constraining or/and enabling powers) of the cultural items on their research practices. Moreover, interviews also provided me an insight into how participants' research experiences within University X contribute to the shaping up of their research related views.

Another advantage of collecting data through interviews was that it provided me a chance to know the opinions/views of the participants about the structural setting of the university and its influences on their research practices. However, according to Archer, a structural factor can exist and may exert causal power on the action of the people, whether they know it or not (Archer, 1996); for example, the criteria for academics' promotion can exist in a university even in the absence of their knowledge about it. In the light of this claim of Archer, I thought that interview data only provided me partial information about the structural setting of University X for analysing research culture with the morphogenetic perspective since it revealed information only about those structural factors which were known to the participants. Therefore, I also analysed selected documents to unveil the structural factors (which might be (un)known to the participants) pertaining to research culture present in the university (for details see 2.7.6)

For conducting interviews, I contacted and met with the prospective participants in their offices. After briefly introducing my study and myself, I invited them to participate in the study. Within a few minutes, they agreed/disagreed to participate in the interview for the study. After knowing the consent of willing participants, I scheduled the interviews according to their availability and convenience. Before conducting interviews at the scheduled time, I again explained the purpose of the study in both oral and written forms (information sheet). I explicitly informed interviewees that their participation in the study was voluntary and they may withdraw from it at any time. I also told them that their identities and responses would be kept confidential and would be used only for research purpose. After getting their verbal permission for the audio recording of interviews, I obtained their signature on a prescribed informed consent form and then started the interviews.

While conducting interviews, I used 'laddering technique', which helped me unfold the respondents' beliefs, values, perceptions and assumptions etc. underscoring their research practice. This is a simple process of asking a general question on a particular topic followed by *why* and *how* questions with the aim to unveil 'individuals' core set of constructs on how they view the world' (Hawley, 2009, p. online). By following this technique, I first asked

questions about interviewees' engagement in research activities. Then, in the light of their responses, I posed 'why' questions, followed by 'how' questions to get deeper insight into participants' beliefs system that underpin their research practices. In addition, I also used prompts, when required, because it helped participants to respond to questions in a focused manner.

I conducted face-to-face interviews because it increased the chances of high response rate for the study (Grix, 2010). It also enabled me to gauge the body language of the interviewees that might be helpful in decoding and interpreting respondents' verbal messages. Consequently, it facilitated me to get a deep insight into the phenomenon under investigation. I also decided to conduct all interviews in English language, because it could be assumed, on the basis of my knowledge and personal interaction with the academics and managers in University X, that the selected participants had enough English language skills to express their ideas in this language. However, I also told the interviewees that they can reply in their national language (Urdu), if they thought an idea could be expressed better in it or felt that English was a barrier to the expression of their views. This was done to ensure that interviewees express their views freely, frankly and in detail and a language barrier may not affect the quality of their views.

In order to remain focused during all interviews, I used an interview schedule (see Appendix F) which was primarily derived from Evans's conceptual model of researcher development (Evans, 2012). The interview schedule included open-ended questions to get in-depth views of academics and managers about their research practices as well as their understandings of the contextual factors affecting their research practices. In this manner, I interviewed 6 managers and 16 academics. The average length of an interview was approximately 35 minutes, though it ranged from 29 to 50 minutes.

4.4.2 Structured Questionnaire

In addition to interview, I also used structured questionnaires for gathering useful information from the context. The main benefit of the questionnaire survey was that it allowed me to collect the perceptions/views of the respondents about some research related aspects of the university in a standard fashion. The pattern of responses enabled me to identify broader groups of the respondents which share similar views about academics' research practices and the setting of the university. In this way, the questionnaire data was used to capture an overview of the existing (dis)orderliness among academics at University X, particularly with reference to research and academics' research practice. The examination of the (dis)orderliness of people at a particular place was not only an important step in the cultural analysis but was also imperative for explaining the phenomenon of cultural change/stability as suggested by Archer (1996). Therefore, in order to analyse the situation of research culture, the questionnaire data provided necessary and useful information about the research

context which was used to analyse and explain the situation of research culture at University X. Thus my decision to use a structured questionnaire was not only based on the needs of my study but also fulfilled the requirement of Archer's framework. Moreover, this decision was also supported by the literature on case study research design. For example, Gillham (2000) argues that the use of questionnaire data, specifically quantitative one, along with other data sources was an important way to increase the explanatory power of an investigation as it may enrich the evidence /data about the phenomenon under question.

Besides the benefits of data collection through a structured questionnaire, there were also certain limitations associated with this kind of data which could possibly have implications for my study; for example, it only enables a researcher to collect opinions/perceptions of the respondents through predefined variables pertaining to a phenomenon (Cohen et al., 2007). This feature did not allow me to develop an understanding of other than predefined factors. Second, the questionnaire data do not provide deep insight into respondents' views. This showed its inability to facilitate me for gaining insight into research related views/ideas held by the academics and were imperative for analysing research culture through the morphogenetic perspective. By keeping both benefits and limitations of questionnaire data, I thus decided to use structured questionnaire for generating data about a certain aspect of the phenomenon i.e. orderliness or/and disorderliness among academics.

Cohen et al. (2007) argue that designing a structured questionnaire may be a time consuming process. I adapted a questionnaire, with the permission already granted (see Appendix E), from a recent study of Santo et al. (2009), which aimed to find out the individual, environmental, and leadership factors influencing the research productivity of academics in a school of education. I had chosen Santo et al.'s (2009) instrument for the following reasons: first, it was developed for the academics of social sciences and the sample of this study also belonged to the same field; second it was devised for the aim, as mentioned above, similar to the purpose of this study. In addition, the speedy analysis of numeric data also saved my time at the data analysis phase.

For collecting data through questionnaire, I conducted a survey on all academics belonging to both faculties (E and F) which were the target population and sample of this study. For this purpose, I distributed the questionnaire and information sheet along with a self-addressed envelope to each participant by meeting with them personally. They were requested to return the filled questionnaire in the envelope to their department's administrative office. I collected the completed questionnaires from their respective departments' offices after a week. After two weeks, I again visited those academics who had not filled and returned the questionnaire by that time, to remind them to fill in the questionnaire, and I provided them with another copy of the questionnaire, if they needed.

Overall, I was able to collect 70 filled questionnaires (see Table 9). Before opening these envelopes, I shuffled them. In this way, I was not able to identify the respondents from the completed questionnaires.

4.4.2.1 **Piloting of the Study**

Before the administration of the final version of the questionnaire, I conducted a small pilot study testing the adapted questionnaire in the context of this study. Initially, in order to contextualize the instrument, I made modifications to the adapted questionnaire based on my knowledge and experience as an academic in University X; for example, I eliminated four items which were included to collect feedback about a particular research group operation in the context for which the instrument was originally designed, and I included a section comprising eight items, which aimed to seek quantitative information of respondents' research works.

I also took expert opinion of my supervisor. Following the supervisor's suggestions, I also added two new items (i.e. sub-items 'e' and 'h' of question no 8.) to the instrument. Moreover, some items were rephrased in the light of supervisor's comments so that they can be easily understood by the respondents. Finally, the layout of the questionnaire was also changed in order to make it more respondent-friendly. After incorporating these changes, the questionnaire was ready for piloting.

For the piloting of the questionnaire, I identified a group of 10 lecturers who belonged to various Pakistani public universities and were resident in the UK. Similar to the target sample, they also belonged to the field of social sciences, so I contacted this group for conducting the pilot study. The feedback of these respondents was positive in general, but they recommended some minor corrections that were carefully analysed and incorporated in the final version of the questionnaire (see Appendix A).

Piloting, as compared to quantitative research, is a debatable matter in qualitative research owing to the learning experience a researcher may gain during the process of data collection and analysis (Van Teijlingen and Hundley, 2002). A researcher may polish and improve her/his interview guide and questions regularly during the process of data collection as s/he gains research experience and detailed insights into the issue under investigation (Van Teijlingen and Hundley, 2002). Therefore, the interviews conducted at the end of a piece of fieldwork might be more insightful /informative as compared to those conducted earlier. Based on similar reasons, Holloway (1997, p.121) suggested that separate pilot studies may not be necessary in qualitative investigations conducted under the interpretive perspective. Since critical realists 'share some common ground with the interpretive approach to interviewing' (Smith and Elger, 2014, p.111), this argument may be extended to my study which is informed by a critical realist perspective. In addition, the semi-structured format of

interviews conducted for this study also provide some space for using an interview guide without proper piloting (e.g. piloting the questions on people as close to the respondents as possible). Apart from the provision of flexibility in the sequence and wording of questions, the interview guides in semi-structured interviews provide enough space to the investigator to cover all relevant aspects in their conversation (Kajornboon, 2005) and to probe necessary details which may emerge during the interview process. Perhaps, because of these reasons, some critical informed studies, even doctoral studies (for example see Quinn, 2006; Vorster, 2010), did not pilot interview guide while collecting data through semi-structured format.

With an aim to learn from the fieldwork, I scheduled the interviews with junior academics in the beginning while those with senior academics at the end of the field work. In this process, I also learnt that the wording of the questions should be retrospective to senior academics so that they can share their research experiences in detail. While other participants who had little experience in publishing research works were asked questions to know about the problems/ hindrances they have to face while carrying out a research project.

The interview guide (used for this study) was not piloted in line with the design of this study. However, the interview guide was used previously to investigate a similar topic for a conference paper (Lodhi, 2012) For this paper, the data was collected from a couple of people similar to the sample of this study. However, the interview data was analysed by following a non-realist perspective (Lodhi, 2012). This small-scale study, despite its different technique of data analysis, helped me polish my interview guide for this dissertation as it covered various possible aspects of the phenomenon of research culture. This may be considered as one of the reasons of why I did not conduct a full-fledged piloting for this study.

Further, prior to the fieldwork, the content of interview schedule was critically reviewed by my supervisor and a professor serving in the school of education, University of Leeds. Both senior academics validated the content of the schedule and considered it useful for the purpose of this study. Having said this, I fully recognize that above measures/arguments may not completely compensate for a full-fledged piloting of the interview guide used for the study. Therefore, this may be considered a limitation of this study and readers may keep this in mind while interpreting the findings of the study.

4.4.2.2 Description of the Questionnaire

The final version of the questionnaire, used for the study, consisted of four parts. The first part comprised 85 closed-ended items designed to collect the responses of the participants about individual, institutional and leadership factors. The responses of the participants about these items were collected on five point Likert scale ranging from strongly disagree (SD) to strongly agree (SA). Some items also had an additional (Not applicable) option. The second

section comprised 15 policies/ practices statements and one open-ended question. Overall, this section asked respondents to choose any five of the given 15 statements about the measures for promoting research and also suggest any other measure, in response to the open-ended question, they consider important to promote research culture. The third section consisted of 18 items to collect information about the research outputs of the academies such as number of publications and conferences attended etc. Finally, section four gathered personal details of the respondents about age, gender, level of education and academic rank by asking four closed questions.

4.4.3 Documents

In addition to interviews and questionnaire, I used a number of public documents to generate data for the study. These included:

- National educational policy papers
- Reports and policy documents of the higher education commission (HEC) of Pakistan
- Reports and public document of University X

(A complete list of the documents I reviewed is presented in Appendix G)

I examined the previous national educational policies in order to understand the key developments in Pakistani higher education sector, particularly, in relation to research. It allowed me to understand the emergence of cultural and structural conditions at University X in a better way by putting them in the context in which the university operated. I also reviewed HEC's reports and policy documents that provided me knowledge about the recent measures (in terms of resources or/and policies) taken by the commission to support research activities in Pakistani universities. Importantly, it also enabled me to identify the research related structural factors (such as new rules, regulations, standards, incentives etc.), specifically, which resulted from the new policies articulated by HEC for the universities (University X was one of them) in the country, irrespective of the fact that these factors were known by academics or not. In this way, the analysis of policy documents compensated the limitations associated with interview data, for example, it provided insight into those structural factors which were unknown to the interviewees. Here, it is important to reiterate that the structural settings can shape people's actions whether these setting were known to them or not (Archer, 1995).

I also examined reports of University X and other relevant information available in the form of public documents such as fact book, information published on the university website, etc. One of the major advantages of analyzing these documents was that it provided useful information about evident existing research related resources, facilities, policies and the governing system of the university. These sources of information about the university also

improved my understanding not only of the properties and powers of some of the structural and cultural factors pertaining to research reflected in these texts but also of interviewees' interpretations about the cultural and structural setting of the university.

My experience and knowledge about the context, I acquired as an academic in this context, also served as a valuable data source. Such involvement of a researcher in the research is an acceptable practice in the field of social sciences as it provides opportunities to understand and interpret data in its context (Maxwell, 2005). One of the biggest benefits of my personal reflection was that it enabled me to examine/interpret the cultural and structural emergent properties as well as their powers (i.e. essentials of the morphogenetic analysis) in a better way. I was also aware of the possible negative consequences of my involvement in the research, particularly, on the validity of the findings and interpretations. Since in case of qualitative research, 'validity means that the researcher checks for the accuracy of the findings by employing certain procedures' (Creswell, 2009, p.190). Similarly, I also employed several strategies for data analysis/interpretation (see section 4.5.2) and ethical procedures (section 4.6) to deal with the potential threat to the validity of the findings and interpretations of this study.

4.5 Data Analysis and Interpretation

I used multiple tools for data collection which generated various types of data including: audio recordings of interviews, numerical data of questionnaires data, and the written text in form of relevant documents. In order to make sense of these data, I processed them through the following procedures.

4.5.1 The Preparation of Data for Analysis

I transcribed all interview audio tapes by using qualitative data analysis software NVivo 9, apart from the one interview which had been conducted in Urdu; this was first transcribed and then translated in English. In this way, I not only converted interview data into texts but also became familiar with it. NVivo 9 helped me in many ways but I found these two key features more useful: 1) it offered me certain facilities (such as control over volume and speed of audio recording) which were very helpful in the process of transcription; 2) it also facilitated me in coding the content of these transcriptions. For example, it made available all pieces of texts which were coded under the same category/theme at one place. This assisted me in developing a deep understanding of the data.

Second, I identified relevant public documents as a potential source of data for my study. I preferred to examine and analyse these documents manually as the educational policy papers, the reports and policy documents of the HEC and University X generated a large amount of written text.

Third, I used SPSS 19 for organising and analysing the numerical data collected through structured questionnaires. It was used also to carry statistical analysis for making sense of the data.

4.5.2 Strategies for Data Analysis/Interpretation

A large amount of written text was produced in the form of interview transcriptions and documents selected for this study. Initially, I analysed the data with an aim to identify and select text chunks which I found pertinent to and useful for explaining the phenomenon of research culture. In other words, I was engaged in what Miles and Huberman (1994, p. 11) call 'data reduction'.

During this data reduction process, I paid attention only to research related factors and influences manifested in the data in order to develop an in-depth understanding of the complex phenomenon of research culture (that was the central focus of my study). For this purpose, I separated related aspects from others by using available conceptual guidance (e.g. Evans's conceptual model of researcher development). This was exactly what Danermark et al. (2002) referred to as 'conceptual abstraction'. My choice of maintaining conceptual abstraction during this study was informed by Danermark and associates' (2002) argument that it (conceptual abstraction) is one of the most beneficial tools which enables a researcher to gain deep insight into forces/configurations/mechanisms operating underneath a social phenomenon (research culture in my case) through isolating pertinent aspects of the phenomenon *in thought* (Danermark et al., 2002, p. 43). They also clarify that the purpose of this 'isolation' is to remain focused on the relevant aspects of the phenomenon rather than to manipulate these aspects for producing predetermined results (Danermark et al., 2002, p. 43).

As a part of examining interview transcriptions and documents, I employed the technique of critical discourses analyses (CDA) in order to identify the chunks of text that entailed: perceptions, beliefs and ideas etc. pertaining to research; material/organisational setting of the university regarding research; and/or reciprocal influences of these factors on academics' research practices. This decision was informed by Fairclough and his colleagues' suggestion that CDA offers a means for analysing a social phenomenon with critical realists' perspective as both clearly emphasise on understanding a text in its context (Fairclough et al., 2002, p.32). However, in the light of the aim of the study (i.e. to examine the situation of research culture in University X), I thought that a close examination of the text through CDA was not required. I therefore utilised only the basic principles of CDA as general guidelines while reviewing the data; for example, following the suggested guidelines of Fairclough et al. (2002, p. 31) for CDA, I focused on the identification of:

1. the prevailing discourses around research related factors;
2. the competing and/or succeeding discourses around these factors;

3. the influences of these discourses on academics' research practices and vice versa.

In order to arrange the selected chunks of text from the interview transcriptions (the main data source for this study), I classified them according to their relevance to a particular aspect of the phenomenon of research culture by using open coding through NVivo 9. These codes were largely based on various dimensions of Evans's conceptual model of researcher development and some of them were informed by my own understanding of the literature and context. In this process of data agreement, I also kept in mind Archer's distinction between the *parts* (culture and structure) and the *people* (academics) and between cultural (ideational) and structural (material/organisation) domains (see details in 2.7.1).

Following Archer, I believed that the relationships between the factors entailed constraining/enabling conditions for the actions of the people (academics' research practices) and these conditions can exist irrespective of people's knowledge about it. This implies that the understanding of these conditions based only on the opinions of the interviewees may be partial/misleading. Archer therefore suggests that the identification of these conditions should be made on the basis of *transcendental arguments* (1995, p.177). In line with her recommendation, I also developed transcendental arguments for uncovering the constraining/enabling conditions emerged from research-related historical developments in the country as well as within University X. For this purpose, I attempted to explore the key question, as recommended by Archer (1996, p. 177), what conditions make Z (i.e. research practice) possible as it is. In other words, I aimed to address the question: what factors and their configurations (competing/succeeding and necessary/contingent) must exist to shape research practice as it is? Such mode of reasoning for developing transcendental arguments is referred to as 'retroduction' (Danermark et al., 2002, p.206). Moreover, Danermark et al. (2002, p. 1) suggest that the use of this method (retroduction) is beneficial for gaining inference about 'the basic conditions' of a phenomenon/event/action (e.g. research practices in my case). The identification of such conditions is the basic step of the morphogenetic approach (which provided theoretical foundations for the study). Therefore, my decision of using *retroductive* mode of reasoning for transcendental argumentation was consistent with Archer's views of critical realism.

For analysing the questionnaire data, I calculated the percentage and mean value of the responses to every item with the help of SPSS (version 19.0). Afterwards, I arranged these items into groups based on their relevance. In spite of the fact that the classification of the items into (sub)groups was mainly adapted from previous studies conducted on the topic in different contexts, particularly by Bland, C.J. et al.(2005), the internal consistency of each (sub)group was calculated to ensure that individual items were placed in the most pertinent (sub)groups. Since the 'alpha coefficient' is generally considered the standard measure of internal consistency in a Likert scale, it was computed for the entire scale (i.e 85 Likert scale

items in part 1) as well as for each (sub) group as presented in Table 11. It is clear from the table that the value of alphas for the entire scale and each (sub) group is greater than the commonly acceptable benchmark value of alpha, i.e 0.6, for social sciences (Pallant, 2011).

Table 11: Reliability analysis of the scale

	Total Items	Item's number in the questionnaire	Cronbach's Alpha
Overall scale	85	1 to 29	0.965
Individual features	17	4, 5, 6, and 8	0.854
Content knowledge and research skills	10	4.a, 4.b, 8.a, 8.b, 8.c, 8.d, 8.e, 8.f, 8.g, and 8.h	0.8110
Personal Motivation and commitment	7	5.a, 5.b, 5.c, 5.d, 6.a, 6.b, and 6.c	0.767
Leadership features	10	18,19, 25, and 27	0.941
Research friendly leadership	6	18.a, 18.b, 18.c, 25.a, 25.b, and 27	0.909
Scholar/ orientation	4	19.a, 19.b,19.c, and 19.d	0.924
Institutional features	58	1, 2, 3, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 20, 21, 22, 23, 24, 26, 28, and 29	0.957
Communication with professional network	11	15.a, 15.b, 16.a, 16.b, 16.c, 17.a, 17.b, 17.c, 29.a, 29.b, and 29.c	0.853
Milieu	16	10.a, 10.b, 10.c, 10.d, 11.a, 11.b, 11.c, 11.d, 12.a, 12.b, 12.c, 12.d, 14.a, 14.b, 14.c, and 14.d	0.927
Mentoring	11	2.a, 2.b, 2.c, 3.a, 3.b,3.c, 9.a, 9.b, 26.a, 26.b, and 26.c	0.829
Research Emphasis	6	13.a, 13.b, 13.c, 13.d, 24, and 28	0.825
Resources	8	20.a, 20.b, 21.a, 21.b, 22.a, 22.b, 23.a, and 23.b	0.855
Sufficient work time	6	1.a ,1.b, 1.c, 1.d, 7.a, and 7.b	0.672

Moreover, the alpha values of nearly all (sub)groups were considerably higher than the acceptable limit of the alpha score which indicates a high level of internal consistency between the items within each (sub)group. In other words, the mutually related items were placed in a particular (sub)group.

The chi-square test was applied on the questionnaire data in order to examine the association of respondents' personal characteristics with their additional research work. One-sample t-test, which compares the mean value of each statement with the midpoint of the five point Likert scale (i.e. 3), was also used to find out the (dis)agreement of respondents based on their personal characteristics (e.g. gender, experience of research publications).

In order to comprehend the data and to draw conclusions, I conducted the reinterpretation/ re-contextualisation of the empirical data in terms of theoretical concepts/constructs (rendered from Archer's morphogenetic framework) applicable to the data. By doing so, I was able to develop an in-depth understanding of the phenomenon of research culture which led me to draw its rich explanatory account. This type of reasoning, in which a researcher re-describes/ re-contextualises empirical evidences in terms of a conceptual/meta-theoretical framework(s) and comes up with new in-depth explanations of a social event/action/phenomenon, - 'abduction' - is commonly used in the studies conducted with a critical realist perspective (Danermark et al., 2002, p.110). In short, a combination of various interconnected strategies for analysing data enabled me to make sense of the data.

4.6 Role of the Researcher

Generally, the researcher's role as an insider or outsider is differentiated based on a researcher's membership to the organisation or community under study (Breen, 2007). Though these aspects of a researcher's role are considered mutually exclusive (Mercer, 2007), it may not always be possible to delineate the insider and outsider role clearly owing to the dependency of researcher's status on the intersection of different features inherited by the researcher or gained with the passage of time - e.g. gender, ethnicity, age, experience, etc. (Mercer, 2007). Therefore, the simplistic insider/outsider distinction is not enough to capture the position of a researcher (Breen, 2007), especially, in case of educational researchers studying the organisation where they work (Mercer, 2007; Hockey, 1993). In my study, for example, I investigated the phenomenon of research culture in the university where I have been working for almost three years as a full-time academic before undertaking it. However, during the study and its planning, I was on leave from the university and living in the UK. Moreover, I was not a part of the faculties investigated in this study. In this situation, though an insider being the member of the organization where the study was conducted, it may be difficult to decide clearly about the extent of my insiderness in the organisation. Knowing the extent of one's insiderness may be important to discuss its possible impact on the outcome of the study (Galea, 2009; Breen, 2007). To deal with such a situation, it has been suggested (e.g. Breen, 2007; Mercer, 2007; Hockey, 1993) that the position of a researcher may be understood in a better way if it is conceptualised on a continuum with insider and outsider at opposite endpoints rather than in the form of a simple either-or option.

Based on this, I also analysed my position as an insider researcher in this study on a continuum rather than explaining it in an insider/outsider dichotomy. In addition, the elements of time, place, participants and topic of the study were also considered in this regard as Mercer (2007) suggests that these factors may also influence a researcher's status and, accordingly, its position fluctuates on the continuum of possibilities.

For describing my inside/outside status in the study, I used the structure of Galea's (2009, p.7) framework of insider research as a guideline, which identified three interdependent elements of insider research; 'the organisation, the people and the insider'. These elements also embodied the arguments about 'familiar settings' and 'peers', which were identified by Hockey (1993) to discuss their implications on a researcher's status. Another benefit of using this structure is that it may provide a useful way to highlight the pros and cons associated with my position in relation to this research. This application is in line with Galea's (2009) suggestion that these three identified elements can be beneficial in understanding the methodological implications of insiderness. It seems important to mention here that the distinction between these elements was made only for the purpose of analysis in order to understand the complex nature of insider research (Hockey, 1993). However, in reality, these elements are dynamic and reciprocal in nature and their boundaries are unclear (Galea, 2009). In the following sections, I have explained my insider position in relation to these elements. This will also include the possible pros and cons of my position and strategies used to minimize/overcome any disadvantages emerging from my position.

4.6.1 Role with Reference to the Organisation

Though this study was conducted in two faculties operating within the university where I worked, I was not the faculty member of any of these two faculties. I, therefore, consider it pertinent to take into account both aspects to explain my status as an insider researcher within the organisation.

My role can be seen as that of an insider in relation to the university owing to my affiliation with it. However, I may not be viewed as a complete insider because of two factors. First, I was not serving the university actively while conducting and even planning this project. Second, the element of outsidership resulting from my non-membership of the faculties studied may also reduce the degree of insiderness up to a certain level.

On the other hand, the role at faculty level also cannot be seen as an outsider completely as the faculties studied are a part of the university and follow university policies, particularly, in research-related matters. Moreover, these policies also remained in focus while understanding the context in which academics had to carry out their research activities since the aim of the study was to identify the factors that characterised the phenomenon of research culture prevailing in the university rather to make any comparison between the

faculties. Consequently, the degree of outsidership was significantly reduced at the faculty level.

Overall, owing to particular purpose of the study, the element of insidership remained prominent. Therefore, my role as a researcher in relation to organisation can be positioned somewhere near insider-end on the insider-outsider continuum. The following section discusses the ways in which I took benefits from the dominance of insidership in my role and the strategies to minimise disadvantages associated with it by utilising the element of outsidership.

4.6.1.1 Access to Research Site

At the time of data collection, the educational institutions, especially, universities in Pakistan took extra security measures in response to serious security threats in the country. In this situation, any outsider researcher would have to go through security clearance in order to enter in the university. It would have been extremely difficult for him/her to gain access to the university and its departments in order to conduct fieldwork. In such circumstances, the element of insidership enabled me to get entry into the university without undergoing a strict security clearance process. It also facilitated me to gain access to the selected faculties and potential participants without any serious difficulties. This led me to conduct fieldwork within a short time which would have been difficult, if I were an outsider. Mercer (2007) also suggests that it is easy for insider researchers to gain access to research site as compared to outsider researchers. The ability to get entry into the organisation for conducting research is referred to as a 'primary access' (Coghlan and Brannick, 2005, p. 67), which I managed easily. However, Coghlan and Brannick (2005, p.67) also argue that insider researchers may face challenges in order to gain 'secondary access' to the organisation (access to the organisational documents, data and meetings, etc.) owing to their position in the organisation. In my research, I analysed only those documents which were available publically. Therefore, I did not face any serious challenges to gain secondary access as well.

4.6.1.2 Familiarity with the Context

Another advantage of my insider role at university level was in form of my initial familiarity with the formal hierarchy and research related policies and procedures of the university. My initial understanding of the context enabled me to identify some factors, especially, structural factors that emerged from the institutional research related policies. This does not mean that I knew about the context and research related factors completely, it only enabled me to gain an understanding of the complexities of the context that is necessary for examining the structural and cultural factors of the university. On the contrary, an outsider researcher may have to spend a lot of time in order to understand the complex organisational processes and policies of an unfamiliar research site (Galea, 2009). My prior-knowledge

about the university was also useful to overcome the anxiety-provoking effects of field-work which could be dominant at an unfamiliar site. This advantage of the insider position has also been highlighted in the relevant literature (See Mercer, 2007; Hockey, 1993).

It is usually argued that insiderness of the researcher may alter various processes in research setting depending on his formal position within the organization (Mercer, 2007), especially, when he continues to perform his/her normal duties even during the research process (Hawkins, 1990 as cited in Mercer,2007). As explained above (see section 4.1), my presence in the organization, during the fieldwork, was not prominent and visible enough to intervene in the normal activities in the university. I was also not performing my normal roles in the university during the data collection and analysis process. Therefore, it may be expected that my insiderness may not have altered research setting/process to a great deal.

Owing to prior-knowledge about the context, the insider researcher may make certain assumptions about the policies and working of the organization. S/he is more likely to confirm such assumptions in the data analysis without any detailed critical debate. This might result in a thinner explanation of some important findings of the study. It is also possible that an insider researcher may overlook some commonly occurring things in the context. Consequently, objectivity, especially at data analysis stage, might be compromised (Hockey, 1993). In order to meet this challenge, I have employed some measures. First, one of the most important measures was the theoretically driven nature of the process of data analysis. According to Hockey (1993), the use of theoretical framework in insider research reduces the influence of the prior knowledge of the insider researcher about the research setting. Second, I was in the UK at the stage of data analysis and writing up of this study, which is physically away from Pakistan where I conducted the fieldwork. Hockey (1993) argues that physical distance from the field reduces the impact of fieldwork on the minds of insiders and enables them to interpret/analyse data impersonally. In this way, my physical location at the write-up stage of the thesis may be considered as an additional measure to overcome the potential bias of my initial understanding of the context.

4.6.2 Role with Reference to the People

The informants of the study belonged to the university in which I am serving as a lecturer in one of the social sciences faculties. They also belong to the field of social sciences as the study was conducted in two faculties of social sciences. Owing to the membership of the same university and wider academic field, my position as a researcher can be viewed as an insider. However, I had no working relationship with the informants as I was not the part of their particular faculties, which created an element of outsidersness in my relation with the informants.

This unique position as a researcher not only enabled me to gain easy access to the informants but also minimised the disadvantages associated with research on peers. For example, one of the biggest challenges for insider researchers is to avoid the overlapping of formal (researcher) and informal (friendship) roles in the field, especially while conducting interviews of their peers. In spite of the element of insiderness present in my relations with the informants mentioned earlier, I maintained my formal role as a researcher with the interviewees. Because of an academic in the same university, some of the interviewees were socially known to me but not to the degree of friendship. I used this university link only to establish a quick rapport with them which would have been difficult in case of an outsider status as a researcher (See Hockey, 1993; Mercer, 2007). Moreover, the similarity of my broader academic field with that of informants (social sciences) provided me with an opportunity to understand the opinions of interviewees by putting them in their proper perspectives.

However, the informants may be hostile, openly or covertly, to a researcher's discipline/area of study if they belong to a different discipline (Hockey, 1993) and may conceal relevant or reveal irrelevant information. In the case of my study, all informants belonged to the faculties of social sciences which might have decreased the chances of the existence of such a bias. Still, we cannot deny the possibility of an inter-subject bias within social sciences. Further, Mercer (2007) argued that the informants may potentially distort information/opinions, if they are being investigated by an insider researcher, in order to avoid any risk in future. In this regard, the informants were ensured prior to data collection that their identity will not be revealed to anyone in the organization.

4.6.3 The insider Perspective

Literature suggests that the status difference between the interviewees and the insider researcher may affect data collection, especially when any one of them occupied a higher position (Hockey, 1993; Mercer, 2007). In this study, the managers (the informants) occupied a higher position, as compared to my position, in the university which indicates a status difference. However, some elements of the research design of this study and the measures I took helped me to minimise its potential impact on data collection. First, I was not the subordinate of any of the managers. This enabled me to reduce the power distance with them. Secondly, I highlighted common interests with the informants, especially managers, while getting their consent for the interview. This strategy proved to be useful in my case. For example, one of the managers was an alumnus of the University of Leeds and became happy to know that I belonged to the same institution. The manager warmly welcomed me and started talking with me informally after knowing this. However, I did not share/publicise my frank views or stories about my research topic as this could possibly 'contaminate' the data (Mercer, 2007). Despite these measures, we need to acknowledge, there are certain factors,

for example, a researcher's identity (gender, ethnicity, etc.), the time and space of the research, the personalities of the researcher and informants, which may potentially influence an insider research (Mercer, 2007, p. 4). Moreover, the insider researcher cannot escape her/his history in the organisation where he has been working.

Overall, I acknowledge my insiderness in this research. Because of this position, I experienced some advantages (e.g. familiarity with the context, access to informants) during the collection and analysis of data. However, some biases are naturally linked to the insider position which may also emerge from the mismanagement of its advantages. In this regard, I took certain measures (mentioned above) to minimize the impact of these biases so that they may not contaminate the results of this study to a great deal. Readers and future researchers may consider the possibility of some insider biases while interpreting the results of this study.

4.7 Ethical Issues

Before seeking their consent to take part in this study, the purpose and important details about the study were shared with all participants in both oral and written forms. For this purpose, an information sheet which contained a detailed synopsis of the study was prepared and given to all participants (See Appendix D). It was written explicitly in the sheet and also revealed verbally to them that their participation in the study is voluntary and they are free to withdraw from it at any time. In addition, the informed consent form was used to ensure that the participants make the decision to participate in the study as interviewee after understanding its purpose and the details pertaining to their participation in it (see Appendix B). Apart from information sheet, some statements about the purpose of the study and the voluntary participation were included at the top of the questionnaire (see Appendix A), so that the respondents' consent to participate may also be implied from returning the filled questionnaire.

4.7.1 Protecting Identity of the Participants:

The identity of questionnaire and interview Participants was protected by taking different measures because of particular ethical concerns associated with each mode of participation. The details of these measures are the following:

4.7.1.1 Protecting the Identity of Questionnaire Respondents

The respondents were not asked to write their own or their department/faculty name on the questionnaire. Moreover, the completed questionnaires were collected in sealed envelopes from the respective department offices of the participants. In this way, the

respondents could reply the questionnaire anonymously and confidentially. The envelopes collected from different departments were also shuffled before opening them which served as an additional measure to hide the identity of the respondents because it prevented me to recognise or guess who filled a particular questionnaire. These measures were in line with the promise made to the questionnaire respondents, prior to data collection, that their participation in this study would remain anonymous. It is worth mentioning here that the respondents were also explained about the measures to be taken to safeguard their identity, in advance, at the time of the distribution of questionnaires.

4.7.1.2 **Protecting the Identity of the Interviewees**

To ensure the anonymity of the participants, I took a number of measures so that the ethical issues arising from my insiderness can be addressed. First, in this write up, I used fictitious names of the participants instead of their original names. However, one of the implications of my insiderness was that there was a risk that readers may recognise participants by identifying the university in which the study was conducted. Although it has been argued above that - because of the scarce information available about them in the thesis - there were least chances to identify the faculties, I used the fictitious names of these faculties in the write up. Moreover, the large size of the university and faculties may reduce the risk of the identification of respondents even if a reader is able to identify the university and faculty. However, the risk of mutual recognition of the participants remains there because some details about participants (e.g. gender, age, experience, etc.) may enable the participants as readers to identify other participants. To deal with this ethical dilemma, one of the measures suggested in literature is that the details of the participants can be altered but it should be made cautiously so that the alteration of critical details may not affect the findings of the study (Floyd and Arthur, 2012). Following this suggestion, I also have not mentioned the original gender of the participants in the write up as gender of participants appeared less important in this study (the analysis of questionnaire data also confirmed this assumptions to a greater extent). In addition, even the details of the participants which were important for interpreting their opinions were used only in relative/general terms instead of absolute terms, so that the readers can make sense of data without recognising the interviewee. For example, the exact numbers of the publications of participants were altered with general expressions (e.g. more than hundred, less than dozen, etc.). Secondly, the academic status of the interviewees in the university was expressed by using the term 'junior' for lecturers and assistant professors and the term 'senior' for associate professors and professors. The term

manager was used instead of exact managerial positions of the participants such as dean, chairperson, and director so that the reader cannot identify the participants from the positions they hold. These measures can be considered as safeguards against the risk of mutual recognition of the participants. The expected gap between data collection and the final write-up available for public would be nearly four years, which can also be considered as an additional safeguard against the possibility of any leakage of participants' identity (See Lucas, 2006). By adopting the above discussed steps, I tend to protect the identity of the participants of this study.

Additionally, in order to comply with the code of ethics for researchers approved by the University of Leeds, I had sent an application to the Social Sciences Research Ethics Committee of the University for seeking ethical approval for this study. The requested ethical approval was granted to me by the said committee (see Appendix C) after a detailed review of the procedures adopted in my study.

CHAPTER 5: SYSTEMIC CONTEXT-I

The starting point of a morphogenetic analysis is to understand the contextual systemic conditions at a particular time within which people have to interact to pursue their ideas and/or interests (Archer, 1995). Archer emphasises that the systemic conditions always emerge from the actions of the previous generation and exist prior to the actions of the present generation (1995). In chapter 1, a brief review of the historical development of higher education in Pakistan and contextual details of University X has already been presented. This chapter thus establishes, describes and analyses the systemic context prevailing at University X prior to 2008. (when radical measures for promoting research practices in University X were introduced by the new leadership).

5.1 The Cultural Systemic Conditions Pertaining to Research at University X prior to 2008

This section presents the cultural systemic context regarding research practice prevailing in University X, especially, in the faculties of social sciences prior to 2008. For this purpose, by following Archer (1995), I identified the cultural items (any idea, belief, ideology, assumption, etc.) pertaining to research, which were expressed in the dominant discourses at social sciences faculties within University X and also had the causal powers to influence academics' research practices. This is followed by the examination of a contextual relation between these cultural items i.e. whether the relevant items were contradictory or complementary, and necessary or contingent with each other in the context of University X. Here it seems important to recall that, for Archer, any cultural item is not merely a simple idea, thought, proposition, etc. (manifested in the discourses) but it also has a causal influence on the action of its holders (1996). Moreover, the context-specific relations between these cultural items shape the cultural context of a particular setting at a particular time in which people have to live (Archer, 1996).

5.1.1 Discourses around the Major Aspects of Academics' Job

According to the ordinance under which University X is constituted, core functions are to provide teaching and to promote research in various academic fields. In addition, the university, being an autonomous entity, is also responsible for the management of its internal affairs (Government of the Punjab, 1973). These provisions suggested that teaching, research and administration were the three major aspects of academics' job in the university. Thus the competing and succeeding discourses around research as a job component of academics are examined in this section.

5.1.1.1 Discourses around Research and Teaching

A senior academic whom I interviewed, also holding a managerial post, referred to the trichotomy of academics' job components (mentioned above) in this way:

Being a head of the department...administration [/management], teaching and research, I have three responsibilities.... As far as teaching is concerned, I value that role basically and teaching is always internally rewarding for me. I place a lot of value on teaching (Interviewee DM).

Overall the participants of this study, similar to this participant, were fully aware of these three roles. Interestingly, this senior academics considered teaching more valuable and satisfying than research, which reflects the overall situation of Pakistani universities where teaching is still a dominant and profitable/lucrative tradition (World Bank-UNESCO Task Force, 2000). The data also revealed that the majority of respondents (having varying academic ranks) echoed this dominance of teaching tradition as they attached high value to teaching and, sometimes, even preferred it over research because of their professional reasons; for example, an early-career academic appreciated the importance of teaching in this way:

One thing has to be clear that ...we are here [in the university] for teaching the students, so our performance should be judged on the basis of teaching (Interviewee LA).

The dominance of teaching could also possibly be because of the historical absence/lack of strong research traditions/activities in Pakistani universities. However, the respondents were also aware of the importance of research for a university and academics as they highlighted it in various ways. A senior academic, who is one of the members of 'the Social Sciences and Humanities Research Council of Pakistan', emphasised the research and considered it a primary purpose of a university as it helps in the creation of new knowledge which should be coupled with the spread of previous knowledge.

University is an institution which is created to generate the knowledge and disseminate that knowledge...so research...is a core function of the university (Interviewee JA).

Similarly, another respondent, a mid-career academic, expressed the importance of research and emphasised that teachers should also focus on research along with their teaching assignments:

University teachers should be involved in research activities rather than only involving in teaching activities (Interviewee, AA)

This interviewee expressed the value of research for academics at another instance during interview in these words 'a university teacher cannot be a university teacher without doing

research' (Interviewee, AA). Participant seems to suggest that research activities of a university teacher might complement or enhance her/his teaching skills.

On the basis of this evidence, it may be argued that the academics in University X consider both research and teaching an essential part of their job. However, research is viewed less important in relation to teaching, which is believed to be the primary job as a teacher. The following remarks of a senior academic, who has good research profile along with managerial responsibilities, reinforce this view and suggest that the teaching assignments should not be sacrificed for the sake of research.

I think there should be right balance between these things because we have been hired or say employed teacher ...but this generation of knowledge [research]... is also very fundamental and important role....My advice would be work on your research project but not at the cost of teaching assignments (Interviewee, BM).

This interviewee's emphasis on the need to keep balance between research and teaching also indicated the presence of a tension between the teaching and research aspects of a teacher's job in University X. I noticed that this confrontational situation emerged in the discourses of a majority of junior academics participated in this study. However, individual academics expressed various structural factors (e.g. rewards associated with teaching, heavy teaching workload, etc.), which led to the rise or indicated the presence of this situation during the performance of their professional work as a teacher; for example, it was captured in the following statement of a senior academic, who considers teaching as primary job, as it is monetarily more rewarding, and research just an extra activity.

In Pakistan, the universities are basically...teaching as well as the research universities. If I want to run my house, then I need pay and it only comes by teaching my classes or the extra classes and research is an extra activity (Interviewee IA).

Similarly, another participant also describes financial constraints/needs as a reason for taking more teaching assignments/workload despite her/his desire to do some research work.

In our university,...the problem is that as junior academics particularly we have to teach three credit hours courses and salaries are so meagre that we have to teach extra classes. So, when you teach such a large number of courses and you are also involved willingly or unwillingly in administrative[/managerial²] work, then you find very little time for research (Interviewee ZA).

²In Pakistani context, the terms administration and management are used alternatively

Overall, I found that financial needs compel academics in University X to undertake more teaching work, which consequently leaves little space and time in their schedules for research. In the above statement, it was also a noticeable point that the interviewee KA had to engage in the managerial work, which also made it difficult to uphold the research component of job.

5.1.1.1.1 *Situational Logic*

Overall, the data reveal that the discourses around teaching appeared dominant and problematic in contrast to those around research in the context of University X. However, both teaching and research were needed to be appreciated at the same time as these are essential aspects of academics' job. Therefore, I argue, as Archer suggests, that at systemic level the discourses around teaching and research entail 'constraining contradictions' which condition or exert casual influence on academics' research practices at University X.

5.1.1.2 **Discourses around Research and Managerial Work**

As mentioned earlier, academics in University X are also engaged in managerial work along with research and teaching. The discourses around the managerial aspects of academics' job revealed that these also make it difficult for the academics to conduct research. Overall, the majority of participants seemed to have shown more inclination towards research than managerial jobs; for example, a manager of an academic department considered research and research-related activities more valuable as compared to managerial responsibilities. The manager said:

I think administration/[managerial] is only [a] kind of clerical job. It doesn't give you much kind of satisfaction which you get [from] research and supervision and also being in touch with students (Interviewee EM).

Research seems to provide more satisfaction to these academics also because of its increasing role in their selection and promotion after the implementation of the HEC's policies (see 5.2.2 on structural changes). The participants argued that managerial duties constrain their freedom/ability to conduct research as these consume their efforts and time which may be used to pursue research activities. In this regard, the interviewee FM, another manager of a teaching department, highlighted the difficulties faced while performing both aspects (research and managerial responsibilities) of job at the same time:

Being the chair and doing research becomes a very tough job.... research now a days has gained a lot of importance and that's cannot be neglected. Therefore, I have to really put in double efforts to carry on my duties along with my research (Interviewee FM).

This participant seemed to understand the importance of research for career and therefore prefers it over managerial duties. However, participant seemed unable to put desired efforts to pursue it because of the managerial work of department. The conflict between research and managerial roles can also be viewed clearly in the following remarks of a senior academic, who previously acted as a manager of a teaching department and a member of various committees at the university level:

From 2000 till 2010 I was only doing administration/[managerial] [and] no research [because] there was no time. ...I was the director and...highly involved in university committees outside the department so there was, frankly speaking no research (Interviewee JA).

This participant seemed to represent an extreme case where the managerial duties appeared to have left no time for an academic to do any research work. Similarly, this problematic relation between research and administrative/ managerial activities was also evidenced from the discourses of relatively young academics. For example, a junior academic, also pursuing research degree, remarked:

I am teaching in the department [and] organising some administrative jobs. Like...coordinator of one [teaching] programme and students' advisor. So, I have no time here [in the office] to spare for my own research (Interviewee RA).

This statement suggests that an academic who does not even hold any formal managerial position may have to perform some administrative/ managerial activities at her/his department/faculty level. My own experience as an academic in University X supports the view that it is very difficult for even new/less experienced academics to avoid managerial assignments.

5.1.1.2.1 *Situational Logic*

It is clearly evidenced that the managerial component of academics' job was perceived conflicting with that of research; academics had to deal with both at the same time. Therefore, in Archer's terms, the discourses around managerial work and research at systemic level entail 'constraining contradictions', which conditions academics' research practice at University X.

5.1.2 Discourses around the Natural and Social Sciences Divide

Historically speaking, Pakistani governments have paid more attention to the development of natural sciences (although these may still need more resources and attention) as compared to social sciences (see section 1.4.1). Owing to this imbalanced treatment by successive governments, the research in the field of social sciences remained underdeveloped and failed to gain a desired status/value or public acceptance in the Pakistani society, including

universities. Syed Akbar Zaidi analysed the overall condition of social sciences in Pakistan before 2002 and presents his findings under the heading 'dismal state of social sciences in Pakistan'. The title of this article itself indicates the poor situation of social sciences in Pakistan. Other researchers (e.g. Inayatullah, 2001; Saigol, 2005; Yousuf, 2003) also portray a similar picture of social sciences research in Pakistan, before the inception of the HEC. However, the HEC introduced policies to promote research in social sciences along with natural sciences but its major focus remained on natural sciences (Jahangir, 2008). Consequently, the divide between the social and natural sciences is becoming more visible in the higher education sector. Another implication of these developments was that the research and researchers in natural sciences were appreciated more than those of social sciences. It becomes evident from the fact that the top management positions of the HEC, since its inspection, were predominantly held by those belonging to natural sciences.

The discourses prevailing within University X also indicated the natural versus social sciences divide and also seemed to undermine the value of research in the social sciences. A senior academic described the natural versus social sciences divide in this way:

In fact, this [research tradition] varies from discipline to discipline. In [the name of university], science discipline has very sound research traditions whereas social sciences, and that is the case even in the entire country (Interviewee JA).

The statement implies that the research in the field of natural sciences has a dominant or prominent place in the Pakistani higher education scenario including University X. One of the junior academic criticised the mind-set of the top management of the university, as it predominantly favoured natural sciences, and also held it responsible for the poor situation of research in the social sciences in these words:

Social sciences have been neglected throughout the years. They [top management] considered [it] something inferior to the pure sciences and all the people which are sitting here [at administrative/[managerial] positions] they are from the pure sciences. They do not understand what are the issues in the social sciences research (Interviewee, LA).

The statement shows not only the lop-sided composition of the university administration/management but also its inability to recognise the particular challenges associated with social sciences. It may be assumed here that one of the reasons for the lack of promotion of research, especially, in social sciences could be the minimum representation of the people from social sciences in the top management of the university. Similarly, another junior academic also pointed out in detail the preferential attitude of the university management towards natural sciences:

There is a gap between doing research in social sciences and pure sciences or physical sciences and there are discrepancies what we are seeing in social sciences....I think lack of financial resources is there because what we have only PKR. 100,000 [equivalent to GBP 625] budget for this departmental library.....[while] there is a huge amount of funding in natural sciences. They can buy books, they can go for the laboratory works and in social sciences we rely on our own (Interviewee SA).

The comment clearly reveals that the biased attitude of the top management of the university towards social sciences also results in the allocation of meager resources for its research and academic resources. Therefore, the academics of social sciences find it really hard to get financial support for their research from the university as compared to those from the natural sciences. In contrast to the discriminatory attitude of the top management of the university, the participants of this study considered the research in social sciences necessary for the overall development of society and attached high value to it. For example, the interviewee MA said:

Social sciences in Pakistan, like every country, are very much important and significant. As social sciences develop, the human beings create harmonious/tolerant society.

Interviewee emphasized the importance of social sciences by highlighting their role in the development of human values in the society:

Social sciences guide how to live in society, how to tolerate in society, [and] how to develop our society. On the other side, mechanical and physical sciences just only develop mechanics (Interviewee MA).

Similarly, another interviewee viewed that the research on social sciences is extremely useful for the developing societies including Pakistan:

I think social sciences are the basic necessity or the basic requirement for the survival of the societies especially like Pakistani society or any developing society (Interviewee IA).

5.1.2.1 **Situational Logic**

The discourses about social sciences indicated that academics considered social research valuable for the Pakistani society. However, the research in natural sciences was more dominant than social sciences owing to the friendly mindset and financial support of the university's top management. In addition, the research on social sciences historically has inherited a disadvantaged position as compared to the natural/pure sciences in Pakistan. Recently, the HEC policies aiming at the promotion of natural sciences might also have added to the disadvantage of social sciences. Therefore, any effort to value social sciences

research might face a confrontation from the prevailing mindset in the favour of natural sciences.

It can be argued here that the priority given to natural sciences research by the HEC policies [as the promotion of natural sciences is one of its primary objectives (Steering Committee on Higher Education, 2002)] necessarily undermines the value of social sciences. However, such a necessary conflict did not exist -though a contingent conflict could be seen - within the university as it had no clearly stated priorities about natural or social sciences. The varying emphasis on natural and social sciences in the university seemed to be rooted in the prevailing mindset of its top management (that belonged to natural sciences) as well as in the uneven development between natural and social sciences in the past. Therefore, within the context of University X, by following Archer, I argue that the discourses around social-natural sciences divide characterize 'competitive contradictions' at the systemic level.

In the following section, all the discourses are discussed with respect to social science research.

5.1.3 Discourses around the Utility of Research

According to (Hazelkorn, 2005) the purpose/utility of research in the context of a university is a debateable area and primarily depends upon the university and the broader context in which it operates. The discourses existing in University X revealed mixed views about the purpose/utility of social science research in Pakistan.

A senior academic described his views about the basic idea of research which emphasises on the generation and dissemination of knowledge. Participant also suggested that the generation and dissemination of knowledge is also a key function of a university. Interviewee stated that research is:

not only generating and creating knowledge rather also disseminating that knowledge. So that is the complete definition of research to me and universities are known for research this is one of their key roles to promote knowledge and disseminate knowledge (Interviewee DM).

This implies that research activities should be a key component of universities. In the opinion of another interviewee, the main intention of doing research is to enrich the subject-specific theoretical knowledge base through refining and/or contributing to the existing knowledge:

It [research] is an extension of some theory you are creating, something new that you are contributing to your field of study (Interviewee LA).

Another respondent shared similar views about the aim of research as participant also believed that it may be a revision of the existing knowledge or any addition to it; 'It is something revised and/or a new aspect in some way. It may be revising some old theories'

(Interviewee BM). This interviewee further pointed out the significance of research for the growth of any academic field:

The base of any development is research. So, in every field as we see that the more research is there the more development is in the field (Interviewee BM).

So far, these discourses about the utility of research depicted the traditional view of research in the context of a university, which mainly emphasises on the creation of new knowledge primarily for academic purposes (Hazelkorn, 2005). The ideas about the use of research held by the academics in University X were near to the ‘basic research’ or ‘mode 1 of knowledge creation’ (for details see 2.1.1).

The data suggested that, within University X, there was another set of discourses which viewed research in the light of its application and suggested that research should be aimed to address social issues rather than to create knowledge only for academic purposes. As interviewee SA remarked:

Research is to solve some problems either it is social problem. Every research is aiming at solving a puzzle either this puzzle is economic or it is technology or [anything] else. But if it is not solving anything at the societal level, then there must be a gap and unfortunately there is a gap (Interviewee SA).

The interviewee seemed to argue that the real application of a research should involve the purpose of addressing any social problem. If it is not doing so, there must be a deficit in the application of a research activity. Interviewee also hinted about the existence of this deficit in Pakistan and, therefore, highlighted the need to create knowledge, which directly addresses the social issues prevailing in Pakistani context. This utility of research seems to represent applied or mode 2 of knowledge production (for detail see 2.1.1). A senior academic (also an administrative manager of a teaching department) shared similar ideas and stressed on the promotion of research which seeks solutions of context-specific issues. Participant said:

Any research which is more generic it's not going to give any benefits to Pakistan. We need research which is more related to our local issues, which is more rigorous and which has more relevance [to] social sciences particularly (Interviewee DM).

Interviewee also furthered the point regarding the socio-contextual application of the knowledge produced by a research work as she believed that doing research without any social utility (i.e. similar to the basic or mode 1 of knowledge production) will not benefit today's Pakistani society. Another senior academic, who is also a member of the ‘Social Sciences and Humanities Research Council of Pakistan’, pointed out that the

government/public sector need to conduct and utilise research for solving the concrete problems of Pakistani society:

I would say society of course within [the] society, it is the government which is the user of the research findings, it is the public sector which should be the users. I don't think they put much value on it (Interviewee JA)

This comment seems to stress conducting such inquiries that aimed to give suggestions to the government or public sector for policy-making. This type of applied research can be termed as policy research (Inayatullah, 2001). At the same time, the interviewee showed disappointment regarding government/public officials' negative mindset towards the significance of research and lax attitude related to the application of research in policymaking. Inayatullah (2001, p. 31) also points out this negative attitude and called it the 'anti-intellectual bias' of Pakistani bureaucrats towards the use of the findings of studies conducted by academics. He further argued that this situation may be because of the reason that public officials believe that the knowledge they gain through practical experiences is sufficient for addressing the social issues and policy-making matters (Inayatullah, 2001).

The interviewee CM also acknowledged the significance of research in the articulation of policies and described the current situation in Pakistan in this way:

It [research] is beneficial for the policy-maker. There is no such culture in Pakistan. Unfortunately, the government is never giving any project to the university even they didn't have experience with the academia. Academia even never ever had this chance to give something new to the government. May be in future we able to have this sort of linkages (Interviewee CM)

The discourses around the utility of research broadly indicated two ideas: The first reflects that the prime use of research is the production of knowledge irrespective of its utility while the second promotes that a research work should have a practical/social utility, i.e. aimed at the solution of a particular social issue. However, the data also indicated certain bureaucratic hurdles affecting the application of research findings for addressing concrete social issues.

5.1.3.1 **Situational Logic**

The data and above-cited contextual literature clearly indicates a division in the discourses about the value or utility of research in the Pakistani context including University X. Some researchers and academics support the idea of basic research aimed at the creation of new theoretical knowledge, while others suggest conducting applied research aimed at solving social issues or problems. Inayatullah (2001; 2003a) argued that it was commonly perceived by both academics and policy-makers that basic/pure research, particularly in social sciences, is a sort of luxury of developed/rich countries, which cannot be afforded by the under-

developed/poor countries like Pakistan. Therefore, they (academic and policy-makers) encouraged applied research which might enable them to address current issues of the society. Similarly, one of the core objectives of the HEC is to ensure and promote that the research conducted in universities should have a direct relevance to the needs of the society (Higher Education Commission, 2009a, p.26). Moreover, University X is also in the favour of applied research for the development of the society as it is one of its prime goals (for details see 2.1.1).

The relation between these two ideas is contingent as the activation of one does not necessarily invoke the other. For example, an applied research may be based on a basic/pure research but it may not always require doing a basic research first. Overall, it may be argued that the discourses around the utility of research (basic and applied) within University X reflect an *opposing* and *contingent* relationship, which can be termed as ‘competitive contradictions’ at systemic level in Archer’s language.

5.1.4 Discourses around the Choice of Research Strategy

Tuli (2011) argues that social sciences research, owing to the complex and diverse nature of social phenomena it usually involves, demands diverse research strategies depending upon the purpose of the study. Hence, the choice of an appropriate research strategy is a crucial issue/point in case of a social sciences research and needs some expertise or skilful knowledge on the part of a researcher. Generally, the research strategies may broadly be grouped into quantitative and qualitative research methodologies and the following presentation and analysis of the data aims to reflect participants’ understanding and choices of these methodologies.

The discourses about the choice of research strategies among participants revealed a presence of this (qualitative/quantitative) grouping within University X. A junior academic expressed his views in this way:

Some [colleagues] focus on quantitative research, some focus on qualitative research. But I personally feel our focus should be more on quantitative research because we are lacking quantitative data. The main reason of the increasing trend in foreign universities for conducting qualitative researches is that because they have a huge quantitative data and they trying to fill the gaps by the mean of qualitative research or they are seeking interpretation through qualitative researches. Unfortunately, we have not enough bases of quantitative data so they may serve as benchmarks (Interviewee KA).

The comments clearly indicate that academics in University X are engaged in both forms of research. However, the interviewee gave priority to the quantitative research over the qualitative approach despite of awareness about the increasing trend of using qualitative methods in the contemporary social sciences research in developed countries. Interestingly,

preference for the quantitative methods was not based on personal reasons or liking for it but on the realisation of the lack of availability of quantitative research in the local context that can be used for further interpretation. Participant seemed to carry a view that the quantitative research may serve as a base to accumulate basic knowledge about various issues which may further be investigated in detail through the qualitative methods. The interviewee also hinted at the lack of research in the field of social sciences in the Pakistani context. In this statement, the arguments about the use of both research strategies may be contested, however, it clearly informs us interviewee's choice of quantitative research strategy and the reasons behind it.

The remarks of another academic (AA) also reflected the use of quantitative methods as a dominant trend of research within Pakistan including University X. However, the reasons this interviewee cited for liking quantitative research methods were entirely different from those expressed by the previous interviewee. Participant not only believed that doing a research quantitatively is easier than doing it qualitatively but also seemed to argue that qualitative research traditions are not strong in Pakistan.

Qualitative is bit difficult as compared to quantitative. We don't have qualitative researches even in Pakistan, we have a few, very few researches in Pakistan (Interviewee AA).

The statement clearly shows the stance that conducting qualitative research is relatively a challenging task, which may possibly be based on a belief about the lack of qualitative research work in Pakistan. In other words, this shows participant's choice for a less arduous but dominant quantitative research strategy/tradition. Similarly, a senior academic (EM), who also had some research experience in a foreign university, believed that analysing the qualitative data 'is much difficult than quantitative data handling'. Interviewee FA described the situation of department in these words:

Mostly research in our department is being done [through] survey method so there is less opportunity for a person applies other things: like if I want to do experimental research, if I want to apply certain test. We are not been trained in that way (Interviewee FA).

This statement reveals a similar situation in which it appears that the use of other than the dominating research methods might be extremely difficult for the academics of University X. The interviewee reveals that the lack of knowledge and training in the alternative research methods may be a major cause for the prevalence of a particular research method – quantitative survey. Interviewee also seemed to imply that he/she might not get any support from his/her department / colleagues, even if he/she wished to learn about or use other research methods. This may also be seen as his/her department's lack of care about its academics' research training.

Overall, these statements and discussion reveal a prevailing mindset in the university which favours quantitative research traditions/strategies. This might be a consequence of the dominance natural sciences research, laden with quantitative methods (as discussed earlier), in the university and supports Inayatullah's (2001) contention that the development of social sciences research, in Pakistani context, was mainly influenced by the research traditions of natural sciences which basically rely on quantitative data. A senior academic's historical overview of previous and present research conditions in the university testifies this argument as stated:

I must say that previously there [were] more trends toward quantitative research yet people believe in that research without numbers is nothing (Interviewee DM).

The statement shows how academics from social sciences in University X used to rely heavily on quantitative methods for their research works in past years when it was difficult for them to imagine a research without the numerical data. However, interviewee further argued, there is a growing realisation among social sciences researchers of the utility and need of qualitative research methods in order to gain a deep understanding of the social phenomena. It is mentioned it in the following way:

Gradually, trends are changing from quantitative to qualitative paradigms and we are also striving towards more in-depth studies and that is in the form of case study (Interviewee DM).

This shows that a kind of qualitative research, case studies, is gaining currency in the university. On the other hand, a senior academic EM highlighted some misperceptions of the academics about qualitative research as it is stated that 'sometimes people do understand that it is easier, it is very casual, [and] it is very informal, so it is easy which is not true'. Therefore, it may be inferred that the recent inclination towards qualitative methods may not be entirely genuine and be based on the some misplaced perceptions (easy and informal) about it.

It may also be argued that, despite a recent tendency among some academics to use qualitative research to gain in-depth understanding of social issues, within University X it can still be difficult for academics to conduct qualitative research as it is overall considered inferior to the quantitative one.

5.1.4.1 **Situational Logic**

The dominating discourses in the favour of quantitative research seem to oppose the choice of qualitative research in University X. In addition, this relation may be seen as contingent because the choice of an appropriate research strategy (e.g. quantitative) does not necessarily invoke the other option (e.g. qualitative). This is so because the selection of an appropriate

research strategy in social sciences largely depends upon the purpose of a study instead of the mutuality of these research strategies. Therefore, the discourses existing in University X about choices of a research strategy may be termed as ‘competitive contradictions’ at systemic level in terms of Archer.

5.1.5 Discourses around the Research-related Skills

The discourses present in University X indicated that academics considered a range of skills to be important for conducting research in social sciences. Simultaneously, they also identified varying level of their deficiencies in these research skills.

The ability to write what one knows is one of the research skills considered important by the study’s participants. Interviewee BM highlighted the value of writing skills in this way; ‘whatever you know, you cannot express it, unless you can write it’. The writing skill was also considered as an essential element for doing research by an academic who had recently completed his research degree in University X as he stated; ‘no doubt, without knowing the better techniques for writing up, and communication skills, one cannot produce a research’ (Interviewee ZA). Similarly, an early career academic recognised the importance of reading and writing skills for a researcher in these words:

He or she [the researcher] must be good in writing and reading aspects because unless and until you have the combination of all these capabilities, you cannot conduct research in [a] proper manner (Interviewee HA).

Similarly, another interviewee (RA) also considered reading skills, along with writing abilities, necessary for researchers as in participant’s opinion ‘for writing, reading is the first step’. Interviewee further explained that reading skills enable us ‘how we can get the relevant points [from] the relevant literature for our research’.

A senior academic (GM) shared his observation and pointed out a deficiency regarding academics’ attitude toward reading as it is said that ‘people are not having good reading habits’. Similar views were also expressed by another senior academic who has a rich research profile (author of over 100 research articles and 5 books). Participant said:

Based on my interaction with my colleagues, friends and students, I have reached this conclusion that the majority of people are confused about how to read a research article for their own use (Interviewee UA).

The statement seemed to suggest that some academics in University X may face difficulties in reading and interpreting a research article in line with their own research needs. Further, this interviewee also pointed out that there were some misunderstandings about academic writing among the academics. In participant’s opinion, ‘generally, the people perceived they

cannot write research article until they are capable enough to produce an idiomatic piece of writing in English' (Interviewee UA).

This participant seemed to imply that some academics cannot differentiate between the skills needed to write a research article and those needed to write a literary piece of writing. Similarly, another misconception about writing a literature review for academic purpose was highlighted in the comments of a senior academic BM, who had more than 50 publications and was recently appointed as a manager of a teaching department. According to the interviewee:

Usually, people make a lot of misunderstandings in how to review literature. [They thought] it is just [an] enlisting of literature [and] not [a] review of literature (Interviewee BM).

The presence of such confusions about academic reading and writing implied academics' deficiency in these language skills. It also signalled a lack of critical thinking in the context (for detail see 5.1.6). I therefore argue that the existing discourses about the deficiency in language skills appeared contradictory to the discourses depicting that language skills were necessary for doing research.

Second, the discourses of the academics also revealed that the skills to use computer/information/technologies were perceived to be important for research. In general, the term 'technical skills' is used to represent these abilities (Dorner and Gorman, 2006). However, Ameen and Gorman (2009, p.102) used the umbrella term of 'information and digital literacy' (IDL) to capture the specific application of these skills in searching, accessing, managing, and using digital library resources for teaching at higher education level. This term may also be extended to the technical skills needed for research. Therefore, I have used IDL to refer to the discourses around the ability to use computer/ information technologies in research. The facilitating role of IDL at various stages of research process was recognised by a senior academic in these words:

[IDL] is very important because it connects you to the world of learning. So more digital/information literate you are, you are in a better position to get the needed information....It is a skill, it is not an intellectual work but it.... help[s] you to enhance your efficiency in writing, recording and data keeping (Interviewee BM).

It is a noticeable point that the participant considered IDL as an important skill, which may be helpful for a researcher in different important aspects of a research work. The participant appears to differentiate it from the 'intellectual aspects' of doing research (for detail see 5.1.6). The importance of IDL in research was reflected in the remarks of another interviewee in the following way:

This is the world that is called [a] digital world. It means that we have latest technologies.... we have different types of software and we must [have] command on power point and all these things, so we can better utilise these technological advancements (Interviewee RA).

This interviewee seemed to be fully aware of the importance of latest technologies in the contemporary fields of research and emphasized on the need to get command over them in order to utilise them properly. However, the academics in University X appeared to lag behind in the use of IDL as a senior academic, who, recently promoted to this post, stated that ‘the weakest side of the university, especially in social sciences, is the lack of technical knowledge, especially computer skills’ (Interviewee IA). Similarly, another interviewee (MA) highlighted the need for training academics so that they may acquire an adequate level of IDL to take advantage of the available online resources and technological advancements for the purpose of research and teaching:

University provides me the logistic support in the shape of computers, in the shape of laptops, and in the shape of connectivity of internet but the problem is the use of those techniques or the use of those facilities properly. I think there is a need of proper guidance, proper training for teachers [and] for researchers (Interviewee MA).

Overall, an emphasis on the need for academics’ IDL training in the above statement implies not only academics’ awareness of the important role of IDL in research but also a realisation of their existing deficiency in IDL. This situation may also be supported by the findings of Kanwal Ameen and Gorman’s study (2009) about IDL in the context of University X prior to 2008. They concluded that owing to insufficient level of academics’ IDL, the available digital resources (such as digital library of the HEC) remained under-utilised in the university. It may therefore be argued that the discourses about academics’ lack of IDL knowledge were dominant within the university.

Third, the data revealed predominant perceptions about the need to develop academic’s skills to find out publishers in University X. Based on the difficulties the interviewee actually encountered while publishing his research work, a senior academic suggested:

There should be a certain mechanism developed by the university or there must be a committee which may try to introduce or may try to focus on this whole process or procedure which can help out the researchers so that where they can publish their articles, what are the basic requirements in the higher level journals which have the impact factor, which may have the indexing (Interviewee IA).

Similar views were also expressed by a junior academic (HA):

There should be proper guidance, there should be training programmes at the university level to guide the lecturers that what the research actually is and how it should be conducted and how can they make their papers published in different journals and conferences.

The prevailing demand for the training about publishing skills in the discourses indicated that the academics were aware of the importance for the successful publication of their research work. Simultaneously, these discourses also revealed academics' realization of their own existing deficiency of publishing skills. Another early-career lecturer (FA) described the situation of these skills in his department in this way:

I don't know and not aware of it. The unfortunate thing is that we don't have such a culture in our department to publish and to write papers and I have been affected with that (Interviewee FA).

This indicates that the lower level of academics' involvement in research might be one of the reasons of their lack of publishing skills.

Overall, the discourses reflected that three types of research-related skills - language, IDL and publishing - were considered vital for conducting research by the academics. Further, it was also predominantly believed by the academics that there was a deficiency of all these skills in University X.

5.1.5.1 **Situational Logic**

The discourses about research-related skills reflected that the language, IDL and publishing skills were believed to be important for a researcher as an expertise in any of these skills would facilitate her/him in conducting research. On the other hand, the data clearly revealed that, according to the prevailing perceptions, there was a scarcity of these skills among the academics of University X. Logically, it manifests a conflicting state of affairs between the discourses of deficiency/scarcity and the discourses of importance of the research-related skills. This conflicting relation appears to be contingent as the discourses about the importance can exist independent of the discourses about the deficiency of these research-related skills. This contingent relation can further be strengthened by the argument that the development of an expertise in these skills reduces the deficiency but the importance of these research skills may still remain intact. Overall, there was a conflicting and contingent relationship between the discourses around the importance and the deficiency/lack/scarcity of research-related skills, which may be pronounced, in Archerian language, as 'competitive contradictions' at systemic level within University X.

5.1.6 Discourses around the Intellectual Engagement

Inayatuallah (2001) states that the field of social sciences emerged and developed in the West and afterwards it was transported to the third world countries. The pace of its development was relatively slow in the United India, particularly in the region now called Pakistan. He argues that the unconducive environment for debate, critical endeavour and questioning, in which it was transferred, was one of the major hurdles in its growth (Inayatuallah, 2001). In fact, this context was the outcome of the long history of Muslim imperialism and British colonialism (Yousaf, 2003). After the inception of Pakistan, both the military and civil rulers not only continued this colonial legacy but also strengthened it by imposing, from time to time, restrictions on the freedom of expression, dissent and debate (see 1.4.1.1).

Consequently, the diffusion of social sciences in Pakistan took place without a proper critical examination of its intellectual foundations and its relevance to the indigenous conditions. This state of affairs ultimately fostered a trend among Pakistani scholars of borrowing / imitating/adopting theories, models and methodologies developed in the Western intellectual centres (Inayatuallah, 2001). Pakistan similar to other third world countries remained the ‘intellectual periphery’ of the West (Inayatullah, 2001, p. 19).

The discourses of academics reflected that University X was also not an exception in this regard; for example, an interviewee, who was also a member of ‘Social Sciences and Humanities Research Council of Pakistan’, criticised the common trend of replicating/ adapting studies conducted in the developed countries. Participant also pointed out the issue of the lack of creative / critical inputs on the part of researchers in the process of adaptation which results in the generation of knowledge incapable of addressing local needs / issues / problems directly. According to the interviewee:

Since there is no baseline research in Pakistan, What is being done is that students and young researchers are relying on the studies conducted outside. They are doing replication and while replicating the studies, unfortunately the cases I have seen, they don’t creatively adopt those research [woks]. But they simply replicate and just confirm the results which have been confirmed in other jurisdictions. So this is a trend which I think would be very damaging instead of creating new indigenous knowledge and relevant knowledge (Interviewee JA).

A junior academic (LA) also highlighted this dominating trend of imitating the Western knowledge base without evaluating its compatibility with the Pakistani society. Participant stated that:

I have seen too many papers they are just replicating the research from abroad which is not relevant to our society....they are just picking up the theories from west [and] testing [them] here. It is, you know, legal. They are allowed to do it but it has, you know, no impact on our society (Interviewee LA).

In the opinion of another interviewee, GM, the overall attitude of people to get degree or financial incentives with minimum intellectual efforts, which Saigol (2005, p. 480) calls 'intellectual laziness', is considered one of the major barriers in the creation of indigenous stock of knowledge. Consequently, similar to other Pakistani social scientists, the academics in University X also remained intellectually dependents. The interviewee stated:

They always search for shortcuts such as our students also try to find some shortcuts to obtain the degree. So we recommend them don't go for shortcuts, don't go for plagiarism. Here, it is a common practice that quote 100 or 150 books in social sciences and think that it is original research work. In fact, it is [a] research of someone else which is being quoted so we want them to produce originality to make substantial contribution towards the existing knowledge. It's not fair that they reproduce already existing work of others, just polish it or reproduce it in another form. We tell them to produce original work to make substantial contribution towards [the] existing knowledge (Interviewee GM).

In addition to intellectual dependency or lack of originality in their research works, the academics in University X were also perceived, by the study's participants, as lack in the desired critical thinking ability to formulate and express their independent opinion on a particular social phenomenon. In this respect, the cultural system of University X was not different from the overall situation in the country. As it was indicated in the remarks of interviewee DM - a manager of a teaching department - who was appointed as a researcher and a supervisor in the context of University X on the basis of his experience:

People some time they do not feel comfortable when we ask them in-depth opinions. And particularly in Pakistan where we do not have very much open culture, so generally, people are not very co-operative... I have noticed that they love to talk but when we ask them to be more opinionated on certain phenomena, then they resist.

Participant added:

I remember one of my students. she selected University X as a case study because she thought it might be easier for her to gain information from the university, as she [being a student] was the part of the university but she faced the biggest resistance from [the respondents] her own friends, from her own colleagues and she realised that probably that was not an easy bet. So, ultimately, we reached to the conclusion that generally people are not very open. (Interviewee DM)

These statements reveal that academics in University X either lack critical thinking to develop a detailed understanding of social issues or they lack confidence/will to express them openly and frankly. However, both of these attitudes are detrimental to a healthy research

environment. A junior academic pointed out that the lack of critical thinking among the academics is actually fostered through the education system of Pakistan:

Critical thinking is really lacking right from grade one till the masters. There is [an] emphasis on learning by heart without any critical evaluation of the subject in hand and that is really an impediment ... So what we normally do here is that till the masters level the things are really taught and students are supposed to learn these things by heart and reproduce in the question papers which is really hampering the student to come up with the natural flow of their own. (Interviewee SA)

In fact, the education system in Pakistan is a continuation of the colonial education system which was designed to promote only basic competencies in the students so that they follow the policies of their rulers without criticising or questioning them (Yousaf, 2005). Consequently, the elements of intellectual development of learners remained absent to a large extent in the syllabus, medium of instruction and dominant teaching methods.

Apart from the discourses depicting a dearth of intellectual engagement of academics while doing research, the data also revealed that intellectual inputs on the part of researchers were considered important for conducting research; for example, the interviewee SA suggested new researchers to enhance their intellectual competence through inquiring about things with interest and without any fear. The participant stated:

A new entrant should develop critical evaluation in his thoughts. He should not look at his teacher that he is sending [him] a revealed knowledge which should be learnt by heart and should be reproduced in the books, he should question them. Question them without any fear (Interviewee SA)

5.1.6.1 **Situational Logic**

Similar to the situational logic entailed by the discourses around the importance and the deficiency/lack/scarcity of research-related skills, the discourses around the importance and dearth of intellectual engagement manifested a conflicting and contingent relationship, which may be pronounced, in Archerian language, as ‘competitive contradictions’ at systemic level within University X.

5.1.7 **Discourses around the Research Productivity/Outputs**

After the creation of the HEC, a dramatic rise in the research outputs of academics - such as research publications and conference papers etc. - at national level (see 1.4.1.2) as well as at University X (see 1.4.2) reflected the growing inclination of academics toward research. The discourses around research outputs at University X reflected that the need to fulfil the requirements for their subsequent promotions in professional career is the dominating catalyst which motivates academics to participate in research activities. This was clearly indicated in the statement of interviewee LA:

The majority of the people is doing [research] out of compulsion, ok. Because there are certain requirements for getting promotions so people who were never interested in research they are now coming out for this (Interviewee LA)

Such discourses seem to be rooted in the structural changes i.e. new/revised rules for academics' promotion (see 5.2.2.3) which were formulated by the HEC and implemented in all Pakistani higher education institutions including University X. A senior academic IA also referred to these changes in the rules/policies, in the following statement, and commented about how it has affected academics' priorities in the favour of research practices; 'I think due to change of policy now people [have] started [to take] much interest in research activities'. In a similar tone, an early career academic HA also expressed the value of a research degree and research work for excelling in his career as an academic within University X:

Everybody realises, with the passage of time, that without conducting the research we don't have any scope in this particular profession or without doing an MPhil or without doing a PhD. Definitely if there is no scope then we cannot survive. So in order to survive in this particular profession, it is very important to be the part of this research culture (Interviewee HA).

This implies that the main idea behind academics' increasing involvement in research activities or earning a research degree is to fulfil the basic requirements for professional/job promotions. The similar idea was also echoed in the comments of another junior academic BA while talking about the motivational force behind her interest in research. Interviewee believed that 'there are many sources [which stimulate me] but the main source of course [is] my promotion'. At another instance, the participant said that 'I have only done my M. Phil. due to / just for [the] promotion'. This statement also reinforced his motive of career promotion as an incentive for doing research which may be seen as a *strategic/pragmatic* purpose, instead of his natural desire for research. Moreover, senior academic EM, the head of a teaching department, also witnessed the dominance of such ideas among the academics at University X. According to the participant:

Since the university and the HEC have made [it] compulsory for people to publish in order to get promotions, so I find that people are quickly picking up this research kind of culture (Interviewee EM).

Another senior academic, CM, pointed out the overall awareness and prevalence of these utilitarian grounds, among academics, for doing research:

The fact is that the laws and rules have been changed by the higher education commission of Pakistan and Government as well that unless you are a PhD, you cannot be promoted, you cannot be debarked for so many facilities so one of the reasons is this (interviewee CM).

The data also revealed that the growing trend of doing research only for career promotion was disapproved by some interviewees; for example, a junior academic SA argued that the tendency of doing research for pragmatic purposes within University X may have negative consequences for the quality of research outputs. The participant expressed his concerns in this way:

I feel over here is that people are really crazy about publications without assessing the quality of publication or without the quality of journals which they are aiming at... I have seen some journals over here which don't have editorial board, they don't have abstract and indexing services but they just go for publication for the sake of publication that should be discouraged (Interviewee SA).

Overall, though the discourses indicating strategic/pragmatic interests of the academics for taking part in research activities were dominant in the data, there were some discourses which showed the intrinsic stimulus behind academics' involvement in research; for example, junior academic AA revealed that the pleasure of doing research i.e. creation of new ideas/application/knowledge was more satisfying for him as compared to the enjoyment of monetary benefits. According to the interviewee:

If you create something new, if you do something newer that especially gives me more satisfaction than earning the money (Interviewee AA).

Similarly, it appeared that academics' desire to promote their academic discipline through research was also one of the main factors which motivated them to do research. As it was clearly expressed by interviewee RA in this statement, 'I move myself towards research that is my own commitment with the research that I must contribute within my discipline'.

The recognition of research work at various levels was also considered a reward by the academics. It seemed to be another intrinsic motivating factor for them. A senior academic EM, for example, talked about the value of the acceptance of one's research work within the academics' circles. The participant stated that 'the efforts [to do research] will actually pay you off when you get international recognition, you will get your publications to your credit, and you will be known as somebody who is sound in profession'.

The discourses at University X pointed out another intrinsic factor, personal interest in research, which tended to stimulate academics for research activities. This may be viewed in the comments of a senior interviewee FM:

It [research] has become my habit. I usually get upset when I don't have any research to do.... So I think it is developing the habit for research (Interviewee FM).

The discourses around the research productivity at University X also suggested that diverging/ different purposes of doing research (pragmatic gains versus personal interest/motivation) may complement each other in the case of some academics. This, for example, was echoed in the statement of interviewee LA:

When they entered in research field, it may be out of obligation but once there are in the field sometimes they start enjoying this work and it really contributes to the personality of the individuals as well as to the institutions (Interviewee LA)

Another interviewee ZA who had more than two dozen publications, reinforced the complementary relation between the pragmatic and intrinsic purpose of doing research in these words:

Initially, you can say, motive for conducting research was the requirement/ necessity because without research we cannot be promoted beyond the post of assistant professor but once you start doing research then you become used to it (interviewee ZA).

A senior academic EM expressed similar views in the form of a suggestion for her junior colleagues:

My suggestion is that don't be afraid of research. Research is a very very interesting thing when you get into it. You addicted to it (Interviewee EM).

From these statements, it may be inferred that in the context of University X the pragmatic purpose may eventually foster intrinsic motivation for doing research among academics.

5.1.7.1 **Situational Logic**

The discourses around the research productivity/outputs indicated that the idea of doing research for pragmatic/strategic motives was dominating at University X. Pragmatic motives also appeared compatible with the intrinsic stimuli (e.g the desire to create knowledge, personal interest, and recognition of research work) echoed in the discourses of the academics. Logically, however, I argue that pragmatic motives may not always foster intrinsic stimuli. If they do, then academics should remain research active even after achieving their pragmatic aims (e.g promotion, certain administrative powers) but in practice I have seen many senior academics who do not remain active researchers after getting higher academic ranks or additional responsibilities. The participant JA is a typical example in this regard who confessed that owing to different factors, such as lack of time, he was unable to remain as a productive researcher as he was before getting the promotion and/or taking the administrative responsibilities of a teaching department. Therefore, in the context of University X, I classify the link between pragmatic and intrinsic motives of doing research as contingent rather than necessary. According to Archer, the contingent relation between two

mutually compatible/consistent/complementary ideas is called ‘contingent complementarities’ (Archer, 1995, p. 216). In Archerian language, the relationship between the discourses around the pragmatic and intrinsic purposes of research productivity/outputs at systemic level can be termed as ‘contingent complementarities’ in the context of University X.

5.1.8 Overview of University X’s Cultural Systemic Conditions

The discourses containing particular cultural items, prevailing at University X, and their logical relations in Archerian language are summarised in Table 12.

Table 12: Overview of the cultural systemic conditions in University X

Discourses around:	Situational Logic
Aspects of Academics’ Job Research and teaching Research and administration	Constraining Contradictions
Natural and Social Sciences Divide	Competitive Contradictions
Utility of Research	Competitive Contradictions
Choice of Research Strategy	Competitive Contradictions
Research-related Skills	Competitive Contradictions
Intellectual Engagement	Competitive Contradictions
Research productivity/outputs	Contingent Complementarities

It shows University X’s Cultural System regarding research had a number of contradictory cultural items i.e. ideas/views/beliefs with an exception of the cultural items present in the discourses around the research productivity/outputs which seemed to be mutually complementary. The dominance of the opposing ideas about social sciences research indicated that the pursuit of research in social sciences might face resistance, opposition or incompatible at systemic level within the context of University X. Moreover, these items were contingently linked with other relevant items except those related to the aspects of academics’ job as they were necessarily opposing because of certain structural factor i.e. University X’s policies. Therefore, the resistance for the pursuit of the social sciences research remain contingent rather necessary.

For Archer, the existence of constraining and/or competitive contradictions in any cultural system indicates its low level of integration (Archer, 1995). In the same vein, I argue that the overall cultural system at University X seems to be in the state of low level of integration owing to dominance of contradictory cultural items (except in case of the research productivity/outputs). However, the contingent nature of relationship (except in one case

‘Aspects of Academics’ Job’) between them can be exploited by the academics for the pursuit of their research interests. It means despite the unfavourable systemic conditions there might be slim chances for the academics to carry out research in social sciences within University X.

5.2 The Structural Systemic Conditions Pertaining to Research at University X Prior To 2008

This section presents the research-related structural systemic context existing in University X prior to 2008. Before mentioning the details, it seems important to remind that the main purpose of my study was to examine and explain the existing situation of research culture in the university but I cannot achieve this objective without introducing relevant structural context. Since, Archer (1995, p.324) suggested that owing to the involvement of structure and agency in the process of cultural stability/change, a researcher cannot analyse culture without addressing the structural setting despite the relative autonomy of the cultural domain. Therefore, I identified some key structural factors (e.g. policies, recourses etc.) related to research existed in the university which also had generative powers to set possibilities and limitations for academics’ research practices owing to their mutual relationships. This section explores structural/material factors which contribute to the prevailing situation of research culture in the university (i.e. first research question) as well as examine the ways in which these factors exert enabling/constraining influences on academics research practices (i.e. second research question). In relation to first and second research questions, the cultural/ideational factors and the nature of their influences were discussed in section 5.1.

Here it seems important to mention that, following Archer (1995), I viewed these structural factors as the product of policies/procedures/practices (actions) of policymakers/leadership (actors) prior to 2008. Moreover, I was aware of the possibility that these factors can exist even when people do not know about them (Archer, 1995). Owing to a complex relation between University X and higher education commission (HEC) of Pakistan as a regulatory authority over universities in the country (for detail see 1.4.2), these structures emerged from separate actions of both the HEC and the university. Similar to cultural domain, I identified the pertinent structural factors for this study first and then examined their contextual configurations. Similar to cultural context, the structural one was also characterised by the relationships between structures that can be: ‘necessary complementarities’; ‘necessary incompatibilities’; ‘contingent compatibilities’; and ‘contingent incompatibilities’ (Archer, 1995, pp. 219-216). Accordingly, I considered all mandatory requirements pertaining to academics’ research practices as ‘necessary’ conditions (e.g. 5.2.1) as well as all optional provisions related to research practices as ‘contingent’ conditions (e.g. 5.2.3) irrespective of the fact whether these requirements/provisions resulting

from the policies of the university or the HEC since the university largely adopted HEC's policies articulated for universities in the country (for details see section 5.2.2).

In the following section, I discuss three broader clusters of research related to structural factors and their enabling or constraining influences within University X.

5.2.1 Research related Management Structures

All activities of University X were managed through different governing/regulatory bodies in accordance with their prescribed functions in 'the act of University X' as discussed in section 1.4.2. The review of mandate given to various bodies in 'the act of University X' revealed that there were two key bodies which were directly involved in research related affairs within the university:

1. 'the board of studies' for each academic discipline
2. 'the advanced studies and research board' (ASRB)

(University X, 2002 , pp.303-308)

The discipline-specific boards of studies -apart from other duties- were responsible for making recommendations to the ASRB regarding various matters about research degrees in the concerned academic discipline (University X, 2002). It operated at the level of department/centre/institution. The ASRB was primarily involved in regulating activities related to research degrees offered by various departments of the university. For example, its key functions were to propose new regulations for the award of research degrees; to evaluate topic and synopsis of thesis for research degrees; and to appoint supervisors and examiners for thesis evaluation after considering the recommendations of the relevant board of studies (University X, 2002, p. 308).

Owing to the growing numbers of research degree programmes at the university in different academic disciplines, there was a need of formal arrangements for effective coordination between discipline-specific boards of studies operating in the university. For this purpose, the 'doctoral programme coordination committee' (DPCC) was established in 2001 (University X, n.d.). It was also responsible for monitoring the entire process, from admission to the completion, of research degrees offered by various departments and also for ensuring the quality of research conducted in this regard (University X, n.d.). In addition, if the board of studies of a respective department fails to forward suggestions - about the synopsis submitted as a part of a research degree and/or the panel of thesis evaluators to the ASRB for further action within the stipulated time period- then the DPCC may take action and directly send the synopsis and the panel of evaluators to the ASRB for evaluation/approval (University X, n.d.). In this way, the DPCC acted as a facilitator for research students by reducing the possible procedural delay on the part of the board of studies.

In principle, the presence of these governing bodies for the decision making of research related matters can be viewed as facilitating factors because these provide an opportunity to pertinent people for an active involvement in the decision-making process (World Bank-UNESCO Task Force, 2000). However, owing to certain contextual elements, the existing research related management structures, particularly the ASBR of the university, remained problematic in the case of social sciences.

Every decision of the ASBR was made by a 'simple majority' according to the stipulated rules for the board (University X, 2002 , p. 308). All 13 deans in the university (irrespective of their academic field) were the members of the ASBR and were involved in the decision-making process. This means that, while evaluating matters related to research in social sciences at the ASBR, the opinion of a member who is expert in social sciences carried the same weight as of others from different academic fields. Since the majority of academics in the university gave relatively less value to the research in social sciences as compared to natural sciences (as discussed in section 5.1.2), I viewed the existing composition and the way of decision-making at the ASRB in the context of University X as a barrier to the pursuit of research in social sciences.

The comments of an interviewee (who did research degree from University X) about the existing composition of the ASBR and its implications on one's desire to do research in social sciences also support my argument in this regard. The participant explained in these words:

The members of advanced studies and research board belonged to different faculties. It means a PhD proposal presented by a student from the field of social sciences has to be examined by those people who have expertise in other fields instead of the pertinent field....Consequently, the decisions/advices of the board do not provide detailed, in-depth or constructive feedback (Interviewee KA).

Moreover, a senior academic CM who was also a member of the ASBR expressed his practice while making decision about the synopses for PhD presented to the board for approval when the synopses did not fall in his area of expertise. In such cases, the participant stated 'I just see and listen. Sometimes the topic is more societal, then I interact' (Interviewee CM). It clearly highlighted the issue of the involvement of such members of the ASBR in the decision making of discipline-specific matters irrespective of the fact that they were not expert in that particular discipline. In this way, it may support my argument about the constraining influences of the ASBR resulting from the way of decision making by the board.

5.2.1.1 **Situational Logic**

According to the rules of University X, it was mandatory that an issue related to research degree should be presented to and approved by the central body called the ASBR (University

X, 2002). I have already argued that the ASBR entailed constraining conditions for research matters related to social sciences. From Archer's perspective, the structural configuration in which incompatible structures are necessarily and internally linked is known as 'necessary incompatibility' at systemic level (Archer, 1995, p. 222). Therefore, in terms of Archer, the research related management structures of the university can be considered in a state of 'necessary incompatibility' with reference to the research in the field of social sciences.

5.2.2 Policies

This section discusses three kinds of structures resulting from University X policies about the distribution of academics' workload, quality assurance measures and academics' appointment and promotion. It also discusses their conditioning impact on academics' research practices at University X.

5.2.2.1 Distribution of Academics' Workload

The examination of policy documents of the university revealed that there was clearly allocated time, in terms of total working hours during an academic year, for different components of an academic's job, such as teaching, research and managerial activities. Overall, the academics with higher ranks (e.g. professors, associate professors) were allotted more time for research and managerial activities and less time for teaching assignments which is in contrast to the time allotments made to the academics with lower ranks (e.g. assistant professors and lecturers). Perhaps the distribution of the workload was made on the assumption that the academics with higher ranks are relatively more responsible or suitable for research and managerial activities as compared to those with lower rank. According to their prescribed workload, for example, a professor is supposed to spend 400 hours on teaching, 600 hours on research, and 400 hours on managerial activities during an academic year, i.e. of 36 weeks (University X, 2002). A lecturer is expected to spend 700, 500 and 200 hours per academic year on teaching, research and managerial activities respectively (University X, 2002). Apart from the allocation of annual workload in hours for the academics, I was unable to trace any evidence of existing mechanism for documenting the time spent on research and managerial activities by the academics. Moreover, the interview data indicated that all interviewees including senior academics and managers were not aware of the provision of time for research. This lack of awareness among academics also implied that it was out of practice to engage in research and managerial activities in accordance with the stipulated time by the university in this regard. However, the workload for teaching was ensured in the university by allocating specific number of courses and scheduling in the timetables of academics' respective departments. Therefore, the structural factors seem to favour teaching activities as compared to research in the university.

Saigol (2005) analyses overall situation of research in the country and concludes the heavy teaching workload is one of the major barriers in the promotion of research in Pakistani universities. Higher education commission of Pakistan also considered this issue and proposed maximum limit for teaching workload that was 6, 10 and 12-14 credits hours per week for professors, assistant professors and lecturers respectively (Higher Education Commission, 2006a). Later on, this was adopted by University X as a part of the introduction of the semester system under the pressure of the HEC. Consequently, the teaching workload was significantly decreased and became nearly half of the previous one. For example, the previous teaching workload for a professor was nearly 11 hours per week [i.e. 400 hours per academic year of 36 weeks (University X, 2002)] was reduced to 6 hours. In this way, the revision of policy regarding academics' teaching workload introduced new structural factors at University X which may produce enabling conditions for research. However, its visible influence remained dependent on academics' ability to manage their managerial activities since there was no formal mechanism in practice within the university to ensure the workload in this regard. Therefore, in Archer's terms, the structures about the distribution of academics' workload at systemic level were in the state of 'contingent compatibilities' with reference to research practices at University X.

5.2.2.2 Quality Assurance Measures

The analysis of available policy documents produced either in the context of University X or in the broader national context indicated that prior to 2002 there was no precisely defined system at both the university and national level for the evaluation of academics' outputs, especially, in research. In this regard, in order to improve the declining standards of higher education in the country, the task force on higher education in 2002 suggested that there should be a proper system/mechanism/body at national level for ensuring the quality of academic work in universities (Task Force on Higher Education, 2002). Consequently, as a part of the HEC, the quality assurance division was established in September 2002. It articulated various overarching policies and guiding principles for evaluating the academic work of academics in measurable terms. In this way, for the first time in the history of the country, the mechanism for the evaluation of academics' performance was introduced. Initially, University X, similar to other universities in the country, resisted these changes. However, later on, the university adopted it owing to negotiations with and regulatory influence of the HEC. Therefore, the compliance with these policies became obligatory for the academics at University X.

Before 2008 the HEC managed to outline various policies/procedures and placed for uniform recognition of academics' research work and evaluation of its quality across the universities in the country. Consequently, certain structural changes took place in University X. In order to examine their context-specific conditioning and influences on academics'

research activities, I have discussed structural factors (policies/procedures) around these two aspects separately.

In general, the HEC acknowledges various aspects of academics' research practices, for example, research articles, conference papers, supervision of research students, research grants obtained etc. However, it only considers research 'publications' along with research degrees and years of experiences for the promotion and award of tenure to academics (Higher Education Commission, n.d.-a). In relation to social sciences, the HEC recognises only books, journal articles, and chapters/articles of books/encyclopaedias as research publications (Higher Education Commission, 2009b). While chapters in edited books, reports for World Bank, IMF and UNESCO are not credited as publications but considered as *additional research works* (Higher Education Commission, 2009b). Moreover, other forms of research related activities/indicators, specifically, the supervision of research students, research grants obtained, papers presented in national and international conferences, number of citations of the publications, editorship/reviewer of a journal, number of keynote speeches and academic awards also remain irrelevant for the award of tenure and subsequent promotion in the university (Higher Education Commission, n.d.-b). However, the HEC considers these indicators along with number of publications for the assessment of an individual academic's profile for national research awards such as: best young researcher awards, lifetime academic achievement awards (Higher Education Commission, n.d.-b).

One of the most important implications of these clearly defined set of rules in the context of University X was that they appeared as a legal barrier against the subjective judgment of university management about what should be counted or not as a research publication for the decision about tenure, appointment, and promotion of the academics. It can also serve as a tool to facilitate academics in prioritising different aspects of their research practices. In other words, academics can choose appropriate research activities according to their goals. For example, in order to get promotion in the university, they need to focus on publishing journal articles or books rather than to engage only in presenting papers in conferences.

Owing to these reasons, I argue that the structural factors emerged from new guidelines of the HEC about the recognition of different kinds of research outputs created enabling conditions for academics' research practices at University X. In terms of Archer's morphogenetic approach, it can be regarded as '*necessary compatibility*' at systemic level as academics necessarily comply with these policies.

Second, the HEC also introduced another important structural change in the university through the formulation of a method for the evaluation of research publications. According to this method, the quality of an individual article is linked with the quality of the respective journal. For this purpose, the commission determines the quality of (inter)national journals on

certain parameters (e.g. peer review system and impact factor etc.) and classifies them into four categories named as 'W' 'X' 'Y' and 'Z' (Higher Education Commission, n.d.-c). The category 'W' represents only those journals which either have an impact factor or are included in the journal citation report (JCR) released by the institution for scientific information (ISI) (Higher Education Commission, n.d.-d). Since the journals belonging to 'W' category are ranked as high quality journals by the commission, the quality of an article published in these journals is also considered high. On the other hand, it is considered the lowest in case of 'Z' category. In addition, the HEC also made it mandatory for universities that they only count articles in 'W' 'X' and 'Y' category as publications for the purpose of appointment, promotion as well as for awarding tenure to the academics (Higher Education Commission, n.d.-c).

These policies encourage academics to undertake quality research as it is the only way through which they can excel in their career being an academic in the university. On the other hand, an aspect of these policies can be considered as a constraining factor with reference to the research practices in social sciences in the university. The close examination of the relevant documents revealed that the HEC rely only on information (e.g. impact factor, JCR) collected by 'Thomson Reuter's Web of Sciences' database while classifying a journal in 'W' category. Since this database covers considerably low percentage (22%) of journal articles in social sciences (Hicks and Wang, 2011) as compared to high percentage (well above 80%) of those in sciences (Nederhof, 2006). Owing to the low coverage of social sciences research in this database, it is relatively difficult for the academics from the field of social sciences to publish their research in those journals which are listed in this database. In this regard, the academics from University X are no exception.

Therefore, I viewed HEC's policies regarding the evaluation of research work as enabling structural conditions for increasing the quality of academics' research practices in the context of University X. However, a part of it - i.e. the mechanism for defining 'W' category journal - seems to be a constraining structure, especially, for social sciences research in the context of this study. From the perspective of morphogenetic approach, these structures were largely in a state of '*necessary compatibility*' but also partly entailed '*necessary incompatibility*' at the systemic level since the compliance with these policies became mandatory for academics owing to their implementation within University X.

Third, University X, with the support of HEC, took another significant step for increasing the standards of research in 2007 when the university started using an anti-plagiarism software in order to ensure the originality of research works of its academics and research students (Piracha, 2011). In this regard, the HEC not only provided University X an access to the software but also provided training to the library staff nominated by the university regarding its use. In the beginning, only a focal person (i.e. chief librarian) in the

university could access it but there was a plan to make it available to all academics by the end of 2008 (Piracha, 2011). In addition, at the end of September 2007, the HEC also announced first ever anti-plagiarism policy for the universities in the country. According to this policy, no research work (e.g. research article, PhD thesis, conference paper etc.) will be accepted by the university/HEC for any purpose unless its originality has been checked through this software (Piracha, 2011).

Consequently, a new structural factor emerged in the context of the university which supported academics to maintain a high quality in their research writings. In terms of Archer's morphogenetic approach, it can be regarded as a '*necessary compatibility*' at systemic level as academics necessarily/have to comply with these policies.

5.2.2.3 **Criteria for Academics' Appointment/Promotion**

This was another area of research related policies which has significantly changed in the context of University X in recent years. Similar to other structural changes in the university, it also emerged from the HEC-led reforms in the higher education sector of the country.

The review of policy documents (before these reforms) revealed that the appointments/ promotions of academics in University X were made based on a criterion which was mainly rewarding for the length of academics' service. In these appointment criteria, a research degree was not a mandatory requirement for the appointment against any academic rank but certain number of research publications were necessary in case of the appointments of associate professor (5) and professor (6) (University X, 2002, p.833).

In 2005 the HEC decided to revise the criteria for the appointment and promotion of university teachers, and in the subsequent year the revised criteria were implemented in the universities (including University X) of the country (Higher Education Commission, 2006b). According to these rules, a research degree as well as research publications became mandatory requirements for the appointment of academics at various levels. For example, PhD as well as 8 and 12 research publications were necessary for the appointment of associate professor and professor respectively. MPhil/equivalent degree became mandatory in the case of assistant professor (Higher Education Commission, n.d.-a). In this way, research seems to become a rewarding activity in the context of University X. Therefore, new structural factors resulted from the adaption of the revised rules of academics' appointment may set enabling conditions for research in the university. Similar to other enabling structural factors emerged from the HEC-led reforms in the universities, these structures were also in a state of '*necessary compatibility*' at the systemic level of the university.

5.2.2.4 Situational Logic

Overall, the research-related structural factors emerged from the above discussed policies seemed to be in a relationship of ‘necessary compatibilities’ at systemic level as it created enabling conditions for academics’ research practices in the context of University X.

However, there were two exceptions in this regard: 1) in case of the distribution of academics’ workload, the compatibilities were contingent rather necessary; and 2) an aspect of quality assurance policies i.e. the mechanism for determining ‘W’ category journals, was necessarily in a state of incompatibility, especially, for the social sciences research in the context.

5.2.3 Research-Related Resources

The task force on higher education assessed the overall situation of higher education sector existing in the country till 2002 and revealed that the unavailability of adequate resources (e.g. academic literature, opportunities for research-related trainings, and funds) was one of the barriers for academics in doing research in universities (Task Force on Higher Education, 2002). Moreover, the studies (e.g. Saigol, 2005; Yousuf, 2003; Zaidi, 2002), which particularly examined the situation of social sciences research in Pakistani universities, also highlighted that the lack of resources was the severest of all factors which contributed to the poor state of research. University X also faced the same problem. However, the HEC - after its inception in 2002 - has continually been taking various measures to provide adequate resources for universities. However, in the following section, I will examine only those measures which affected research related structural conditions in University X before 2008.

In 2003 an important structural development surfaced when ‘the social sciences and humanities research council’ was constituted at national level as a part of the HEC (Higher Education Commission, 2009a). It exclusively aimed at the development of research in social science through providing strategic and financial assistance to universities (including University X) in the country. Therefore, it can be considered as an enabling factor for the development of social sciences research at University X.

In the same year the HEC also established ‘the national digital library’ (NDL) for providing academics access to the latest academic and research literature. Through this library, more than 23,000 full-text journals and nearly 50,000 e-book were made electronically available to academics and research students of all state-run universities - including University X- in the country (Higher Education Commission, 2009a, pp.85-86). These e-resources included literature from various academic areas including social sciences. Moreover, the HEC also arranged a number of workshops all over the country for academics and research students for building their skills to get optimal benefit from NDL resources (Higher Education Commission, 2009a). In addition, Pakistan research repository (PRR) was

also setup and maintained as a part of NDL. The PRR not only digitalised PhD theses produced in various universities across the country but also made it electronically available for national and international audiences. Owing to these developments, it became possible for the academics at University X to access the latest academic literature which possibly facilitated them in their research projects be precise.

The HEC launched a number of scholarship schemes through which financial assistance was provided for pursuing (post-)doctoral studies in overseas or indigenous universities. These scholarships were offered in social sciences along with other academic disciplines (Higher Education Commission, 2009a). Moreover, these schemes, particularly, for doctoral studies were open to academics from all universities in the country. It implies that every academic (including those who belonged to social sciences faculties) in University X can compete and avail these opportunities for acquiring a research degree which is necessary for his/her subsequent promotion in the university. In this way, these schemes created enabling conditions for social sciences research at University X.

In 2003 the HEC took another research friendly initiative and provided funds for presenting papers in international conferences (Higher Education Commission, 2009a). All academics as well as doctoral candidates in all Pakistani universities were entitled to avail this opportunity. Moreover, the HEC initiated another scheme which provided partial financial support to universities for organising research-related activities: such as seminars/conferences/workshops in various academic fields including those of social sciences (Higher Education Commission, 2009a). Since these schemes encourage research and are open to all universities, therefore, these may also foster research friendly conditions in University X.

5.2.3.1 Situational Logic

It seems clear that the discussed research related resources produced enabling conditions for academics' research practices and made them compatible with research. There was no compulsion on academics that they necessarily utilise these resources. In other words, the utilisation of such resources remained optional on the part of individual academics. For example, the decision to get benefit from the national digital library (NDL) is purely an individual's decision since there is no professional/structural obligation for academics to use the NDL. It means that the enabling conditions created by these resources were contingent in the context. From Archer's perspective, the structural configuration in which compatible structures are contingently linked is known as 'contingent compatibility' at systemic level (Archer, 1995, p. 222). Therefore, in Archer's language, the research related resources available at the university can be considered in a state of 'contingent compatibility' with reference to research in social sciences.

CHAPTER 6: SYSTEMIC COXTEXT-II

This chapter provides details about the analysis of questionnaire data and consists of two sections. First section presents the analysis of data related to academics' prevailing research practices. The second section includes the findings of the data emerging from academics' views about the existing individual, leadership and institutional features in the context.

6.1 Analysis of Existing Research Practices of Academics

6.1.1 Research Publications

The data collected about academics' research practices context is presented in Table 13. It is pertinent to mention here that only outputs (i.e. books, book chapter, and journal articles) of academics are considered their research publications in the context of this study. It is clear from column B in the table that varying portions of the sample (ranged from 4% to 57%) were involved in publishing different kinds of research publications. The calculation based on the information provided by each respondent about his/her research publications indicated that a large majority (66%) of the sample has varying number of publications in their account. However, the remaining one-third respondents have never published any article/book/book chapter throughout their career; therefore, they will be considered as academics with no experience of research publications in further data analysis.

As column A in Table 13 presents the analysis of publications count within the group of respondents who have experience of publication, it clearly indicates that a major part of the group was engaged in publishing articles either in international (65%) or in HEC recognised (87%) journals. However, less than one-fifth of the group has published book chapter or single/co-authored/edited book. It can also be noticed in the table that the research outputs of the group in terms of publication count was low, as most of the respondents published only one or two journal articles/books/book chapters in their entire academic career. However, there were some exceptional cases whose research accounts have 10 and above articles either published in international or in HEC recognised journals. As a result, the total number of publications per respondent within the group was 2.1 (i.e. 100/46) which further goes down to 1.4 (i.e. 100/70) in relation to the whole sample. In summary, although more than half of the sample (66%) has experience of publications but overall pattern of publication count shows low level of research outputs. This is in contrast to other contexts, especially developed countries, in which the average count of academics' research publications is much higher in the discipline of social sciences.

Table 13: The snapshot of respondents' research publications

	Number of respondents	% within the experienced group (i.e. 46) (column A)	% within whole sample (i.e.70) (column B)
Experience of research publications*			
Yes	46	-	66
No	24	-	34
Total	70	-	100
Book chapters published			
	9	20	13
1-2	8	17	11
3-5	1	2	1
Articles published in international journals			
	30	65	43
1-2	16	35	23
3-5	5	11	7
6-9	5	11	7
10 and above	4	9	6
Articles published in HEC recognised journals			
	40	87	57
1-2	18	39	26
3-5	8	17	11
6-9	5	11	7
10 and above	9	20	13
Books published as single authored			
	12	26	17
1-2	11	24	16
3-5	1	2	1
Books published as co-authored			
	6	13	9
1-2	4	9	6
3-5	2	4	3
Edited Books published			
	3	7	4
1-2	3	7	4
Total number of publications	100		

*who published any book/article/book chapter in his/her entire academic career.

6.1.2 Publication Experience and Personal Characteristics

In order to investigate the association, if any, of respondents' personal characteristics (gender, age range and highest academic qualification) with their experience of publication, the chi-square statistics were computed and results are presented in .

Table 14. It was checked and found that the expected counts in each cell of the Cross tabulation was greater than five (for this study, minimum value was 9.9 in case of gender). Thus, the basic assumption of chi-square, which is even split of respondents among the levels, was checked and was met in case of all three personal characteristics of interest. Julie Pallant (2011) suggests that if each of two variables used in chi-square test has two categories, as in my case, then Yates' Correction for continuity should be made in chi-square value for compensating the overestimation in it (p. 219). Therefore, the adjusted value of Chi-square is reported in Table 14.

Table 14: Chi-squared analysis of prevailing experience of research publications within gender, age and highest academic qualification

Variable	Experience of research publications		N	Chi-square Value	p	Phi
	NO	YES				
Gender				3.097	.078	-.241
Male	Count	6	23	29		
	Expected Count	9.9	19.1	29.0		
	% within Gender	20.7%	79.3%	100.0%		
Female	Count	18	23	41		
	Expected Count	14.1	26.9	41.0		
	% within Gender	43.9%	56.1%	100.0%		
Totals	Count	24	46	70		
	Expected Count	24.0	46.0	70.0		
	% within Gender	34.3%	65.7%	100.0%		
Age				20.225	.000	.568
25-35 years	Count	20	11	31		
	Expected Count	10.6	20.4	31.0		
	% within Age range	64.5%	35.5%	100.0%		
36 years and above	Count	4	35	39		
	Expected Count	13.4	25.6	39.0		
	% within Age range	10.3%	89.7%	100.0%		
Totals	Count	24	46	70		
	Expected Count	24.0	46.0	70.0		

		% within Age range	34.3%	65.7%	100.0%			
Highest academic qualification						15.647	.000	.507
Masters	Count	14	5	19				
	Expected Count	6.5	12.5	19.0				
	% within Highest academic qualification	73.7%	26.3%	100.0%				
M. Phil /PhD	Count	10	41	51				
	Expected Count	17.5	33.5	51.0				
	% within Highest academic qualification	19.6%	80.4%	100.0%				
Totals	Count	24	46	70				
	Expected Count	24.0	46.0	70.0				
	% within Highest academic qualification	34.3%	65.7%	100.0%				

With regard to gender, the value of chi-square is 3.097, with a corresponding p-value of 0.078, which is greater than commonly acceptable level of significance (0.05) in social sciences. Therefore, it can be concluded that the result related to gender is not significant. This means that the proportion of males who have experience of publication is not significantly different from the proportion of females who have experience of publication. There appears no association between gender and the experience of research publication.

With respect to age, the Chi-square value of 20.225, with the corresponding p-value less than 0.05, indicates that the results are statistically significant. It is also clear from the table the proportion of respondents aged 36 years and above is more likely to get publication experience than the proportion of the sample with less than 36 years of age. Therefore, it may be inferred that there is an association between age and the experience of research publication. The value of Phi-coefficient, which is commonly used to indicate the strength of association between two variables that have two category levels (i.e. 2x2 tables), is 0.568 and, thus, the effect size may be considered larger than the typical one according to Cohen's criterion (1988) cited in (Morgan et al., 2011, p.101).

In case of highest academic qualification, the Chi-square value is 15.647, with an associated p-value less than 0.05; thus, similar to age, the results related to the highest academic qualification are also statistically significant. The table clearly shows that the proportion of the M.Phil./PhD degree holders is more likely to be engaged in publishing research in their academic career as compared to the proportion of master degree holders. Therefore, there is a relationship between the highest academic qualification and the experience of research publication. The corresponding value of Phi-coefficient is 0.507 that indicates larger than typical effect size in accordance to criteria suggested by Cohen (1988) for interpreting the coefficient.

In summary, the respondents' experience of publications was found sensitive to their age and academic qualification but it remained insensitive to their gender. In the next section, the data about academics' research activities other than publications is presented. In addition, the association between additional research work and respondents' personal characteristics (gender, age and highest academic qualification) is also analysed.

6.2 Additional Research Activities

Table 15 summarises the data gathered about academics' research-related activities (i.e. conference papers, keynote speeches, and supervision of students' research), which are not recognised as research publications but are just considered *additional research works* in the context of University X (see details in 5.2.2.2). The table shows that the majority of respondents (90%) has remained engaged in different forms of *additional research work* in their academic career. It also indicates (see Column B) that the respondents were commonly engaged in the supervision of master/PhD students (82.9%), and presented papers at national (57.1%) / international (47.1%) conferences.

Column A in Table 15 presents the analysis within the group of respondents who were engaged in *additional research work*. It shows that every respondent, who was engaged in supervision of research students, used to perform primary supervisory role, however, some of them (33%) also acted as co-supervisors. Most of the respondents within the group presented only 1-2 papers at national or international conferences. There were very few respondents who presented 10 and more papers. Another noticeable point is that only a small number of respondents received invitations for delivering keynote speeches in conference/seminars both at national and international levels.

Table 15: The snapshot of respondents' additional research activities*

	Number of respondents	% within the group (i.e. 63) (Column A)	% within whole sample (i.e.70) (Column B)
Engagement in additional research activities			
Yes	63	-	90
No	7	-	10
Total	70	-	100
Research students (Master/PhD) supervised as:			
Primary Supervisor	35	55.6	50.0
Co-Supervisor	0	0.0	0.0
Primary and co-supervisor	23	36.5	32.9
Papers presented at international conferences			
1-2	24	38.1	34.3
3-5	8	12.7	11.4
6-9	5	7.9	7.1
10 and above	3	4.8	4.3
Papers presented at national conferences			
1-2	16	25.4	22.9
3-5	8	12.7	11.4
6-9	5	7.9	7.1
10 and above	4	6.3	5.7
Invitation received for keynote speeches in international conferences/seminars			
1-2	10	15.9	14.3
Invitation received for keynote speeches in national conferences/seminars			
1-2	3	4.8	4.3
3-5	6	9.5	8.6

*such research related activities whose outputs are not considered as publications in the context

6.2.1 Additional research Activities and Personal Characteristics

In order to examine the association of respondents' personal characteristics with their additional research work, the chi-square test can be applied. Before making inference based on the test statistics, it is required that the respondents must be evenly split among the categories of variables involved. In statistical terms, the expected count in each cell of the cross tabulation table should be five or more (Morgan et al., 2011). The crosstabulation of data is presented in Table 16. It is clear from the table that there is at least one cell in the crosstabulation for each personal characteristic has an expected count of less than five. This shows that the respondents were not evenly split among the categories, which was the violation of a basic assumption of the Chi-square test. Consequently, the test might generate misleading results. One of the main reasons for this uneven division of respondents was the existence of a small number of respondents (7, 10%) who were not engaged in any *additional research work*. Therefore, the chi-square test was not calculated.

Table 16: Crosstabulation of academics' involvement in other research activities within gender, age and the highest academic qualification

Variable		involvement in other research activities		n
		NO	YES	
Gender				
Male	Count	4	25	29
	Expected Count	2.9	26.1	29.0
	% within Gender	13.8%	86.2%	100.0%
Female	Count	3	38	41
	Expected Count	4.1	36.9	41.0
	% within Gender	7.3%	92.7%	100.0%
Totals	Count	7	63	70
	Expected Count	7.0	63.0	70.0
	% within Gender	10.0%	90.0%	100.0%
<i>Two cells (50.0%) have expected count less than 5. The minimum expected count is 2.90.</i>				
Age				
25-35	Count	4	27	31
	Expected Count	3.1	27.9	31.0
	% within Age range	12.9%	87.1%	100.0%
35 and above	Count	3	36	39
	Expected Count	3.9	35.1	39.0
	% within Age range	7.7%	92.3%	100.0%

Totals	Count	7	63	70
	Expected Count	7.0	63.0	70.0
	% within Age range	10.0%	90.0%	100.0%

Two cells (50.0%) have expected count less than 5. The minimum expected count is 3.10.

Highest academic qualification

Masters	Count	1	18	19
	Expected Count	1.9	17.1	19.0
	% within Highest academic qualification	5.3%	94.7%	100.0%

M. Phil /PhD	Count	6	45	51
	Expected Count	5.1	45.9	51.0
	% within Highest academic qualification	11.8%	88.2%	100.0%

Totals	Count	7	63	70
	Expected Count	7.0	63.0	70.0
	% within Highest academic qualification	10.0%	90.0%	100.0%

One cell (25.0%) has expected count less than 5. The minimum expected count is 1.90.

6.3 Analysis of Existing Features of the Context

This section presents an analysis of academics' views about the individual, leadership and institutional features of the context separately. Two types of statistical tests were used to analyse responses collected on five point Likert scale statements pertinent to different aspects of the features of the context. The analysis of each feature consists of two steps.

The first is one-sample t-test which compares the mean value of each statement with the midpoint of the Likert scale (i.e. 3) so that the (dis)agreement of respondents may be examined. It is important to remind that the Likert scale statement was designed and data was coded in a way (strongly disagree=1, disagree=2, neither agree nor disagree= 3, agree= 4, strongly agree=5) that mean value greater than 3 indicates agreement while less than 3 shows disagreement. Finally, means values equal to three represents neither agreement nor disagreement of the respondents.

The second is independent sample t-test for making comparison of mean scores of different groups of the respondents that shared certain personal characteristics i.e. gender, age range, highest academic qualification, and the experience of research publications.

Before reporting the results of t-tests, it is essential to check the normality of the data which is a basic assumption of these tests. According to Carven and Nash (2008, p. 107), if

the sample size is greater than 30 then it can usually be considered a large sample and the Central Limit Theorem can be invoked to assume that the data is normally distributed. Since the sample size of this study was greater than 30 (i.e.70), the distribution of the data can be considered normal in the light of Carven and Nash's suggestion.

Here it is important to recall that there were some statements (i.e. 1.c, 1.d, 2.a, 2.b, 2.c, 3.c, 6.c, 10.c, 10.d, 11.c, 11.d, 12.c, 12.d, 13.d, 14.d, 19.d) which offered an extra option in addition to five options on Likert scale just to create room for the respondents to reply if the statement was 'not applicable' in their case (e.g. one was not supposed to report one's managerial experiences if one was not engaged in any managerial work during one's career). By considering the nature and purpose of this additional option, the responses collected on Likert scale were only used for statistical analysis (e.g. mean and the t-tests) while responses to the additional option (i.e. NA) were treated as missing data. The exclusion of such cases may result in the reduction of number of responses to a particular statement which may affect the normality of the data collected against the respective statement. However, it was noticed that there were maximum 13 cases that choose the option 'not applicable'. Therefore, the sample size (i.e. $70-13=57$) remained greater than 30 despite the exclusion of these cases (maximum 13 as mentioned at the bottom of the relevant tables). Consequently, the dataset related to these statements may also be assumed normally distributed in the population. In this way, the basic assumption of both t-tests was fulfilled by the dataset regardless of the fact that these statements had an additional option of 'not applicable'.

6.3.1 Individual Features

The analysis of means scores of sample's responses about individual features: *content knowledge and research skills*, and *personal commitment and motivation* is presented in Table 17.

The results of one-sample t-test presented in Table 17 clearly show that all items have mean values greater than 3 but their respective p-value (1-tailed) is smaller than 0.05 except in case of item 8.c. These statistics suggest that the mean scores of all the items, apart from 8.c are significantly higher than 3 (the cut-off point) in statistical terms. In other words, the respondents were agreed with the items but disagreed or remained neutral with item 8.c.

Following conclusions can be drawn from of the analysis of reported mean scores. The respondents, in their own opinion, kept themselves up-to-date with current literature in their areas of teaching and research (4.a and 4.b). They also believed that they were currently up-to-date in different kinds of research skills except 'grant getting skills' with varying intensity. The respondents further claimed that they are not only highly committed to contribute to the success of their departments, faculty, university, and academic discipline but also motivated to fulfil their job responsibilities (i.e. research, teaching and service to

Table 17: The summary of individual features

	Df	Mean	SD	Mean Difference (Mean - 3)	t	p-value (1-tailed)	Effect size Cohen's d
Content knowledge and research skills							
4. Academics stay “up-to-date” with current literature in their:							
a. research interest area(s)	69	3.71	0.950	0.71	6.29	0.000	0.75
b. teaching area(s)	69	3.96	0.770	0.96	10.41	0.000	1.24
8. Academics believe they are currently up-to-date in:							
a. quantitative research design and analysis	69	3.59	0.925	0.59	5.30	0.000	0.63
b. qualitative research design and analysis	69	3.29	0.980	0.29	2.44	0.009	0.29
d. computer skills	69	4.17	0.761	1.17	12.88	0.000	1.54
e. presentation skills	69	4.10	0.837	1.10	11.00	0.000	1.31
f. writing skills	69	3.84	0.879	0.84	8.03	0.000	0.96
g. in using relevant software for data-collocation and analysis	69	3.57	0.878	0.57	5.45	0.000	0.65
h. publisher-hunting skills	69	3.26	1.030	0.26	2.09	0.020	0.25
c. grant getting skills for their area	69	3.19	0.997	0.19	1.56	0.062*	-
Personal commitment and motivation							
5. Academics are highly committed to contribute to the success of their:							
a. department/ institute	69	4.44	0.581	1.44	20.79	0.000	2.48
b. faculty	69	4.24	0.690	1.24	15.07	0.000	1.80
c. university	69	4.33	0.631	1.33	17.63	0.000	2.11
d. discipline outside the university	69	3.94	0.849	0.94	9.29	0.000	1.11
6. Academics would describe themselves as being self- motivated to							
a. conduct research	69	4.17	0.798	1.17	12.28	0.000	1.47
b. teach	69	4.39	0.728	1.39	15.92	0.000	1.91
c. provide service to industry/community**	63	3.91	0.938	0.91	7.73	0.000	0.97

* p > 0.05, ** Number count for Not Applicable (NA) for item 6.c = 6 (8.5%)

community). There were also six respondents who believed that they were not supposed to provide service to industry or community.

According to Cohen's criterion cited in (Morgan et al., 2011) for interpreting the effect size (Cohen's d), it can be noticed that the effect size of the items pertaining to *personal commitment and motivation* (i.e. items 5 and 6), and *content knowledge* (i.e. item 4) is very large (i.e. >1.0). However, in case of items related to research skill, the effect size varied from medium to very large with the exception of item 8.h which has a small (0.25) effect size. According to the standard conventions of interpreting effect size, once, during normal course of experience in the context, one would be able to notice the existence of such individual features having large effect size as compared to those of small Cohen's criterion cited in (Morgan et al., 2011).

The following section presents a comparison of the mean scores of individual features based on personal characteristics (i.e. gender, age range, highest academic qualification, and the experience of research publications).

Table 18 : Mean difference based on personal characteristics (gender, age range, highest academic qualification, and experience in research)

	Mean	SD	Mean	SD	Mean Diff.	F**	t	df	Sig. (2-tailed)	Eta square
Gender	Male (n=29)		Female (n=41)							
Content knowledge and research skills										
8.g. Academics believe they are currently up-to-date in using relevant software for data-collocation and analysis	3.83	.76	3.39	.92	0.44	5.97*	2.174	66	0.03	0.07
8.h. Academics believe they are currently up-to-date in publisher-hunting skills	3.59	.91	3.02	1.06	0.56	0.833	2.315	68	0.02	0.07
Personal motivation and commitment										
5.a. Academics are highly committed to contributing to the success of their department/ institute	4.62	.62	4.32	.52	0.30	0.768	2.215	68	0.03	0.07
5.c. Academics are highly committed to contributing to the success of their university	4.55	.57	4.17	.63	0.38	0.255	2.591	68	0.01	0.09
6.a. Academics would describe themselves as being self-motivated to conduct research	4.45	.63	3.98	.85	0.47	0.001	2.535	68	0.01	0.09
Age range	25-35 Years (n=31)		36 years and above (n=39)							
Content knowledge and research skills										
4.a. Academics stay “up-to-date” with current literature in their research interest area(s)	3.32	.98	4.03	.81	-0.71	9.397*	-3.216	58	0.00	0.15
8.d. Academics believe they are currently up-to-date in computer skills	4.48	.63	3.92	.77	0.56	0.499	3.271	68	0.00	0.27
8.e. Academics believe they are currently up-to-date in presentation skills	4.35	.66	3.9	.91	0.46	0.401	2.345	68	0.02	0.16

8.h. Academics believe they are currently up-to-date in publisher-hunting skills	2.97	1.05	3.49	.97	-0.52	0.043	-2.148	68	0.04	0.13
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Personal motivation and commitment

6.b. Academics would describe themselves as being self-motivated to teach	4.1	.83	4.62	.54	-0.52	0.791	-3.145	68	0.00	0.25
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Academic qualification

	Masters (n=19)	M. Phil /PhD (n=51)
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Content knowledge and research skills

4.a. Academics stay “up-to-date” with current literature in their research interest area(s)	3.21	.98	3.90	.88	-0.69	3.223	-2.843	68	0.01	0.31
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8.g. Academics believe they are currently up-to-date in using relevant software for data-collocation and analysis	3.16	1.01	3.73	.78	-0.57	5.912*	-2.209	26	0.04	0.16
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8.h. Academics believe they are currently up-to-date in publisher-hunting skills	2.84	1.01	3.41	1.00	-0.57	.001	-2.106	68	0.04	0.20
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Experience in publication

	NO (n=24)	YES (n=46)
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Content knowledge and research skills

8.d. Academics believe they are currently up-to-date in computer skills	4.58	.58	3.96	.76	0.63	.206	3.534	68	0.00	0.36
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8.h. Academics believe they are currently up-to-date in publisher-hunting skills	2.75	1.03	3.52	.94	-0.77	.060	-3.160	68	0.00	0.30
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Personal motivation and commitment

6.a. Academics would describe themselves as being self-motivated to conduct research	3.79	.98	4.37	.610	-0.58	5.470*	-2.642	33	0.01	0.18
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**Equal variances assumed , *Equal variances not assumed

An independent sample t-test was conducted to investigate the mean difference of the individual features based on gender, age group, higher academic qualifications and the experience of research separately (see Table 18). Only statistically significant results of the t-test ($p < 0.05$, 2-tailed) were presented in table. In other words, the mean difference based on the personal characteristics was found statistical significant only in the case of the presented items in the table. However, the results of the remaining items with $p \geq 0.05$ (2-tailed) which shows no significant difference in mean scores are not reported here.

The results based on gender indicate that the mean scores of males and of females were significantly different (as p values < 0.05) regarding the use of data collection softwares (8.g) and publishing skills (8.h). The mean scores of males' commitment to the success of their department (5.a) and university (5.c) were also differed from those of females. Moreover, the male respondents reported significantly different level of self-motivations for conducting research (6.a) as compared to their female counterparts. It is a noticeable point that the mean scores of males for all presented items related to gender are numerically higher than that of female. The results related to gender presented in the table indicate that the effect size (Eta square) of the items is either 0.07 or 0.09 which may be considered as medium to large effects size according to Cohen's criteria for Eta square. Following the standardised convention for interpreting an effect size, it can be said that the statistically significant difference in mean scores based on gender is large enough in the context to be seen with naked eyes.

The t-test statistics based on the age of the respondents, presented in the table, indicates the respondents aged 25-35 years have significantly different mean scores than that of respondents aged 36 years and above for keeping themselves up-to-date with current literature in their research area(s) (item 4.a.) as well as, in *computer, presentation and publishing* skills (items 8.d, 8.e, and 8.h). It is noticeable point that the respondents aged 25-35 years have numerically higher mean score in *computer and presentation skills* than that of respondents aged 36 years and above. However, the mean scores of the respondents aged 36 years and above regarding *self-motivation for teaching* (item 6.b) were not only numerically but also significantly different from that of respondents aged 25-35 years. The effect size (Eta square) of the items, for which the mean difference based on age was found significant, varied from 0.13 to 0.27 which may be considered large by following Cohen's guidelines in this regard.

The table indicates that the mean scores of the respondents with an M. Phil /PhD degree about staying up-to-date in publishing skills (item 8.h), using relevant software for data-collection/analysis (item 8.g), and literature in relevant research area(s) (4.a) were numerically higher as well as significantly different from those of respondents with a

master's degree. Moreover, similar to results based on age, the effect size of the items was large as its values were 0.16 and above.

The comparison between the mean scores of the respondents with and without experience of publication reveals statistically significant difference regarding items 8.d, 8.h, and 6.a as their p-values were less than 0.05. These results suggest that the groups of respondents based on their expertise of research reported different opinions about their current level of *self-motivation to conduct research* and of *computer* and *publishing* skills. The difference of opinion between these group may be noticed easily in the context as the effect sizes (Eta square) of these items varied from 0.18 to 0.36 which can be called medium to large by following Cohen's criterion of assessing effect size (Eta square).

Overall results infer that the current level of publishing skills (8.h) was the only individual feature which was found sensitive to all of the four personal characteristics of interest i.e. gender, age, highest academic qualification and publication experience. It was also found that the respondents' opinion about their level of current literature in their relevant research areas (4.a) changes with the variation in their age or/and academic qualification. Moreover, the variation in the respondents' opinion about the use of relevant software for data-collection and analysis (8.g) was only found with reference to gender and academics qualification. However, the groups based on age and publication experience reported different perceived levels of their computer skill (8.d). The self-motivation level of the respondents for conducting research (6.a) varied only with respect to gender and publication experience. In conclusion, the respondents largely hold similar opinion regarding most of the individual features except some aspects reported above.

The analysis of existing leadership features is presented in the following sections.

6.3.2 Leadership Features

The mean score analysis of sample's responses about the *leadership* and *scholarly orientation of the leaders* is summarised in Table 19.

Table 19: Leadership Features

Variables	df	Mean	SD	Mean diff (Mean – 3)	t	Sig. (1- tailed)	Effect size (Cohens'd)
Research friendly Leadership							
27. Their department/ institute chairperson (or director) keeps the department/ institute on track by clearly emphasizing our core missions of education and research	69	3.37	1.253	0.371	2.48	0.008	0.30

25. It is expected that academics will meaningfully and actively contribute to important decisions making in their							
a. department/ institute	69	3.46	1.059	0.457	3.612	0.00	0.43
b. faculty	69	3.3	1.054	0.3	2.381	0.010	0.28

18. Their department/ institute chairperson (or director) is very supportive to academics' efforts in							
a. research	69	3.47	1.188	0.471	3.319	0.001	0.40
b. teaching	69	3.57	1.149	0.571	4.16	0.000	0.50
c. service to industry /community	69	2.99	1.268	-0.014	-0.094	0.463*	-

Scholarly standing of the leader/ orientation							
19. Their department/ institute chairperson (or director) is highly regarded for his/her							
a. research	69	3.59	1.21	0.586	4.051	0.000	0.48
b. teaching	69	3.61	1.133	0.614	4.536	0.000	0.54
c. service to industry /community	69	3.33	1.248	0.329	2.203	0.015	0.26
d. managerial skills	69	3.51	1.294	0.514	3.326	0.001	0.40

* p > 0.05

Table 19 shows that the mean values of all items pertaining to leadership features, except 18.c, were higher than 3 with corresponding p-values less than 0.05. The mean value of item 18.c was 2.99 and p-value > 0.05. The figures clearly indicate that t-test results were statistically significant for all items except 18.c. In simple terms, the respondents agreed with the existence of leadership features mentioned in these items while they remained undecided about the efforts of their department/ institution chairperson/director to support service to

industry/community. The table also indicates that the effect size of these items (excluding 18.c) lies between 0.26 to 0.54, which may be considered as small to medium according to Cohen's criterion mentioned earlier. Overall these results suggest that the respondents consider that their departmental leadership is research friendly. They also believe that their department leader is highly regarded for her/his scholarly work.

An independent sample t-test was also computed to examine the differences in the mean scores for leadership features between the groups of the respondents based on certain personal characteristics. In case of gender, academic qualification and age range of the academics, the mean difference for any single item related to leadership features was not found statistically significant ($p\text{-values} \geq 0.05$).

On the contrary, the mean difference of all the items (except 18.c) was found statistically significant between the groups based on publication experience. It is clear from Table 20 that the respondents without publication experience have higher means score for all the items pertaining to all leadership features as compared to their counterparts with publication experience. Moreover, the corresponding p-values (2-tailed) of the items are less than 0.05. Another noticeable point is that the respective value of effect size is greater than 0.14 which is commonly considered a very large effect (see Cohen guide lines for Eta square). However, item 19.c (with moderate effect size) is an exception in this regard. In short, the agreement level of respondents for the presence of leadership features was found only sensitive to the publication experience of respondents.

Table 20 : Mean difference based on personal characteristics (gender, age range, highest academic qualification, experience in research)

	Mean	SD	Mean	SD	Mean Diff.	F**	t	df	Sig. (2-tailed)	Eta saqure
	No (n=24)		Yes (n=46)							
Experience of Publications										
Research friendly Leadership										
27. Their department/ institute chairperson (or director) keeps the department/ institute on track by clearly emphasizing our core missions of education and research	4	1.06	3.04	1.23	0.96	4.74*	3.232	53	0.001	0.165
25. It is expected that academics will meaningfully and actively contribute to important decisions making in their										
a. department/ institute	3.92	.88	3.22	1.07	.70	7.18*	2.744	55	0.005	0.120
b. faculty	3.83	.96	3.02	1.00	0.81	1.42	3.264	68	0.002	0.135
18.Their department/ institute chairperson (or director) is very supportive to academics' efforts in										
a. research	3.96	.91	3.22	1.25	0.74	11.74*	2.575	61	0.006	0.099
b. teaching	4.04	.86	3.33	1.21	0.72	9.45*	2.571	62	0.006	0.097
c. service to industry /community	3.0	1.31	2.98	1.25	0.022	0.268	0.068	68	0.947	-
Scholarly standing of the leader/ orientation										
19. Their department/ institute chairperson (or director) is highly regarded for his/her										
a. research	4.17	.96	3.28	1.22	0.88	3.56	3.075	68	0.003	0.122
b. teaching	4.21	.83	3.3	1.15	0.90	4.24	3.403	68	0.001	0.146
c. service to industry /community	3.79	1.32	3.09	1.15	0.71	0.46	2.312	68	0.024	0.073
d. managerial skills	4.08	1.06	3.22	1.32	0.87	4.29	2.785	68	0.007	0.102

**Equal variances assumed , *Equal variances not assumed

6.3.3 Institutional Features

This section presents the results of one sample t-test computed for examining the mean values of the sample's responses about various institutional features. As mentioned earlier, the institutional features of interest comprise six sets of relevant factors. For the convenience of readers, the results of each of the six sets are presented separately in the following tables (Table 21 to Table 26).

Table 21 : Communication with professional network

	df	Mean	SD	Mean - Test value i.e. 3	t	p- value (1- tailed)	Effect size (Cohen'd)
15. Academics have a well-developed network of colleagues for discussing research and writing projects:							
a. within their department / institute	69	3.41	1.20	0.41	2.89	0.00	0.35
b. outside the university	69	3.20	1.21	0.20	1.38	0.09*	-
16. At least <i>weekly</i> , academics have substantive uninterrupted conversations about research and writing with colleagues in their:							
a. department/institute	69	2.93	1.17	-0.07	-0.51	0.31*	-
b. faculty	69	2.91	1.13	-0.09	-0.64	0.26*	-
c. university	69	2.60	1.07	-0.40	-3.13	0.00	0.37
17. At least <i>monthly</i> , academics have substantive uninterrupted conversations about research and writing with colleagues in their:							
a. department/institute	69	3.24	1.21	0.24	1.68	0.05*	-
b. faculty	69	3.07	1.11	0.07	0.54	0.30*	-
c. university	69	2.74	1.09	-0.26	-1.98	0.03	0.24
29. Academics frequently exchange information with their colleague through:							
a. face-to-face communication	69	4.10	0.62	1.10	14.91	0.00	1.78
b. paper based written communication	69	2.91	0.99	-0.09	-0.73	0.24*	-
c. electronic communications	69	3.43	1.04	0.43	3.44	0.00	0.41

* $p \geq 0.05$

Table 21 summarises the results of the items related to the communication of academics with their professional network. It shows that the means score of approximately half of the items were numerically higher than 3. Further, t-test results revealed that the mean difference was found statistically significant for five items, as their p-values (1-tailed) are less than 0.05. The noticeable point was that the mean score of three out of the five items (15.a, 16.c, 17.c, 29.a & 29.c) was statistically greater than three while, in case of remaining two items (16.c and 17.c) it was found statistically smaller than three. It is clear from the table the effect size (Cohen's d) of the items lies between 0.20 to 0.50 which may be considered small to medium effect. However, item 29.a, with very large effect size (i.e. 1.78), was an exception in this respect.

It can be inferred from the reported results that the respondents have a well-developed network of colleagues for discussing research and writing projects within their department (15.a). However, they neither agreed nor disagreed that they have a discussion network of colleagues outside the university. The respondents disagreed that they have substantive uninterrupted conversations about research and writing with their colleagues in the university on weekly (16.c) and even monthly (17.c) basis. However, they remained neutral in case of such interaction with their colleagues in the department (16.a & 16.b) or faculty (17.a & 17.b). It was also found that they frequently use face-to-face (29.a) and electronic (29.c) modes of communication to exchange information with their colleagues. The data implies that the frequent exchange of information through face-to-face communication may be noticed by anyone in the normal course of events in the context as this item has a very large effect size.

Table 22 : Milieu

	df	Mean	SD	Mean - Test value i.e. 3	t	Sig. (1-tailed)	Effect size (Cohen'd)
10. Academics feel appreciated and valued by their department/institute colleagues for their work in:							
a. research	69	3.36	1.12	0.36	2.68	0.00	0.32
b. teaching	69	3.43	1.16	0.43	3.09	0.00	0.37
c. service to industry /community**	58	2.93	1.10	-0.07	-0.48	0.32*	-
d. managerial position (team members, chairs)**	59	3.25	1.10	0.25	1.76	0.04	0.23
11. Academics feel appreciated and valued by their university colleagues for their work in:							
a. research	69	3.43	1.06	0.43	3.39	0.00	0.41
b. teaching	69	3.44	1.00	0.44	3.70	0.00	0.44
c. service to industry /community**	59	3.03	1.10	0.03	0.23	0.41*	-
d. managerial position (team members, chairs)**	58	3.24	1.02	0.24	1.78	0.04	0.23
12. Academics have excellent opportunities in their university to pursue their interests in:							
a. research	69	3.26	1.19	0.26	1.81	0.04	0.22
b. teaching	69	3.53	1.05	0.53	4.23	0.00	0.51
c. service to industry /community	60	3.03	1.18	0.03	0.22	0.41*	-
d. managerial role (chairs)**	57	3.12	1.19	0.12	0.78	0.22*	-
14. A large portion of their department/institute colleagues can be considered to :							
a. be productive in research	69	3.29	0.98	0.29	2.44	0.01	0.29
b. be significant external grant "getters"	69	2.93	0.97	-0.07	-0.62	0.27*	-
c. provide quality education	69	3.47	1.06	0.47	3.72	0.00	0.44
d. provide service to the university and beyond.	69	3.34	1.02	0.34	2.81	0.00	0.34

* $p \geq 0.05$

** Not Applicable (NA) for: item 10.c = 11(15.7%), item 10.d = 10(14.2%), item 11.c = 10(14.2%), item 11.d=11(15.7%), item 12.c = 9(12.8%) and item 12.d = 12 (17.1%)

Table 22 presents the summary of t-test statistics of the items related to prevailing milieu. It is clear from the table that the mean scores of all the items were greater than or approximately equal to three. It was also found statistically higher than the cut-off point (i.e. 3) between the level of agreement and disagreement as their respective p-values were < 0.05 . Moreover, the effect size of these items varies from 0.29 to 0.51 which may be considered as small to medium.

However, the means scores of few items (10.c, 11.c, 12.c, 12.d and 14.b), most of them emphasising on 'service to industry/community', were not found significantly above/below three in statistical terms since the corresponding p-values were ≥ 0.05 . Here it is important to mention that almost one-sixth of the respondents believed that the items related to 'service to industry/community' and 'managerial position/role' (i.e. 10.c, 10.d, 11.c, 11.d, 12.c and 12.d) were not applicable to them.

The respondents believed that their teaching, research and managerial activities were appreciated by their department and university colleagues. However, the appreciation for both teaching and research work at university level seems to be a more prominent feature in comparison with the appreciation at the department level as their effect size at the former level was relatively higher than that at the latter level. The respondents neither agreed nor disagreed with the point that their work in 'service to industry/community' was appreciated by their department/university colleagues. The respondents believed that a large portion of their department colleagues may be considered to be productive in research works which were not externally funded. Owing to its small effect size, it seems difficult for a layman to identify such a belief during a normal course of observation. The academics thought that the majority of their colleagues provide quality education, and service to the university and beyond. They also believed that they have excellent opportunities for pursuing their research and teaching interests in their university. Since the effect size (i.e. 0.51) of the dominating opinion about teaching opportunities was medium, therefore, this feature may easily be noticed within the context. However, the respondents remained undecided about the opportunities to promote their agenda for service to industry/community and managerial activities.

Table 23 : Mentoring practice

	df	Mean	SD	Mean - Test value i.e. 3	T	Sig. (1- tailed)	effect size (Coh en'd)
2. As a junior academics, they have been/ was formally assigned an advisor/mentor within their department / institute which provided them valuable guidance in:							
a. research**	61	2.56	1.40	-0.44	-2.45	0.01	-0.31
b. teaching**	60	2.67	1.34	-0.33	-1.91	0.03	-0.25
c. service to industry /community**	56	2.35	1.19	-0.65	-4.13	0.00	-0.55
3. Academics have / had an “unassigned” mentor either in their or other department/ institute who provide(s/d) them valuable guidance in:							
a. research	69	2.80	1.31	-0.20	-1.27	0.10*	-
b. teaching	69	2.93	1.21	-0.07	-0.50	0.31*	-
c. service to industry /community**	56	2.81	1.23	-0.19	-1.18	0.12*	-
9. To be promoted at their present institution, academics fully understand the expectations of their university regarding:							
a. research	68	3.99	0.93	0.99	8.79	0.00	1.06
b. teaching	68	3.94	1.00	0.94	7.84	0.00	0.94
26. Academics get constructive feedback, guidance, and suggestions on their research and writing from their:							
a. department/ institute colleagues	69	3.33	1.11	0.33	2.47	0.01	0.30
b. department/ institute chairperson (or director)	69	3.24	1.14	0.24	1.79	0.04	0.21
c. colleagues outside my department/ institute	69	3.00	1.04	0.00	0.00	0.50*	-

* $p \geq 0.05$

** Not Applicable (NA) for: item 2.c = 13(18.6 %), item 3.c = 13(18.6%), item 2.a = 8(11.4%) and item 2.b = 9 (12.8%)

The results for the items pertaining to mentoring practice at department/institution level within the university are presented in Table 23. The table clearly indicates that the mean values of the items about the provision of mentor, either formally assigned or unassigned, were numerically below 3. However, the mean difference was found statistically significant only in case of items (i.e. 2.a, 2.b, and 2.c) about formally assigned mentor as their respective p-values is less than 0.05. Here, it is worth mentioning that almost one-fifth (18.6%) of the sample reported that items 2.c and 3.c were not applicable in their case. Moreover, approximately 12 % of the respondents had similar opinion about items 2.a and 2.b.

The table also indicates that the mean values of items in questions 9 and 26 were significantly higher than 3 in statistical terms as their corresponding p-values are smaller than 0.05. However, the item 26.c with $p > 0.05$ was an exception in this regard.

The effect size of the items in questions 2 and 26 varied from 0.21 to 0.55 which may be called small to medium effect according to Cohen's criteria. However, it became large for both items in question 9.

In other words, the reported results in Table 23 indicate that the respondents were not formally assigned a mentor within their department to guide them in teaching, research and service to industry/community. However, the respondents remained neutral while answering the statement about the presence of unassigned mentors for the similar purposes. They also agreed that they usually receive constructive feedback, guidance, and suggestions on their research from their department colleagues and/or chairperson. Finally, they believed that they fully understood the expectations of their university regarding research and teaching to get promotion in their present institution. Moreover, the understanding of these expectations appears to be a prominent feature of the context because of the large effect size of the statement corresponding to these aspects.

Table 24: Research emphasis

	Df	Mean	SD	Mean - Test value i.e. 3	t	Sig. (1-tailed)	effect size (Cohen'd)
13. There is a high expectation in their department/ institute for academic staff to:							
a. be productive in research	69	3.73	0.99	0.73	6.15	0.00	0.73
b. conduct research that is externally funded	69	3.27	1.10	0.27	2.06	0.02	0.25
c. provide quality education	69	3.86	1.07	0.86	6.72	0.00	0.80
d. provide service to my university and beyond**	64	3.45	1.00	0.45	3.60	0.00	0.45
24. It is clear to academics how their research agenda is or can be related to the vision of their department/ institute.	69	3.73	0.99	0.73	6.15	0.00	0.73
28. Their department/ institute has a communication system that allows them to be adequately informed in a timely fashion about major issues, important events, and upcoming concerns regarding research	69	3.24	1.21	0.24	1.68	0.05*	-

* $p \geq 0.05$

** Not Applicable (NA) for item 13.d= 5(7.1%)

The analysis of items related to department emphasis on research is presented in Table 24. It can be noticed that the mean scores of all the items in the table were numerically above three (the minimum level of agreement). One-sample t-test statistics for these items show that the corresponding p-values of these items were less than 0.05, therefore, the mean of these items was also found significantly higher than 3 in statistical terms. However, the item 28 with $p \geq 0.05$ was an exception in this respect.

The table also shows that the effect size of the items varied from 0.25 to 0.80. According to Cohen's criterion, the effect size of item 13.b and 13.d was small to large, however, it was medium to large for items 13.a and 24. However, 13.c was the only item with a large effect size.

In the light of the reported results it can be inferred that the departments of respondents highly expect from them not only to conduct funded and non-funded research but also to provide quality education and service. Owing to a large effect size, high expectations

for quality education and research appeared more visible features of the context. Moreover, the respondents' belief that their research agenda may be related to the vision of their department was found another prominent feature of the context. However, the sample neither agreed nor disagreed with the point that the information about important events and upcoming concerns about research was communicated to them in time.

Table 25: Resources

	Df	Mean	SD	Mean - Test value i.e. 3	t	Sig. (1-tailed)	effect size (Cohen' d)
20. Academics have access to adequate resources such as computers, library materials, technical support, etc., to:							
a. conduct my research projects	69	3.67	1.22	0.67	4.59	0.00	0.55
b. teach	69	3.79	1.22	0.79	5.41	0.00	0.65
21. Academics have access to adequate human resources such as secretarial support, support staff etc., to:							
a. conduct my research projects	69	2.67	1.29	-0.33	-2.13	0.02	-0.25
b. teach	69	2.99	1.28	-0.01	-0.09	0.46*	-
22. Their university provides them adequate financial support to travel to participate in academic conferences:							
a. within Pakistan	69	3.13	1.24	0.13	0.87	0.19*	-
b. outside Pakistan	69	3.09	1.21	0.09	0.59	0.28*	-
23. Their university provides them adequate administrative support to apply for travel grant from HEC or other external sources for presentation of paper in academic conferences:							
a. within Pakistan	69	3.26	1.19	0.26	1.81	0.04	0.22
b. outside Pakistan	69	3.27	1.19	0.27	1.91	0.03	0.23

* $p \geq 0.05$

Table 25 summarises the analysis of the mean scores of the items about the availability of resources for conducting and presenting research. The table shows that the mean score of items in questions 20 and 23 were not only numerically but also statistically above 3 as their

p-values were less than 0.05. However, the mean values of items 22.a and 22.b were found only numerically above 3 and remained statistically insignificant because their corresponding p-values are smaller than 0.05. In case of question 21, both items have mean scores less than or equal to 3 but only the mean difference for item 21.a with a p-value of 0.02 is statistically significant.

According to Cohen’s guidelines, the effect size of items 20.a and 20.b is medium to large (i.e. between 0.5 to 0.8) whereas, it is small (around 0.2) in case of items 23.a, 23.b and 21.a.

The results imply that the respondents have access to adequate physical resources for both teaching and research. It seems to be one of the visible features of the context since it has medium to large effect size. They also believed that their university provides them administrative support to apply for financial aid for the presentation of papers in the conferences within and outside the country. However, they neither agreed nor disagreed about the point that their university gives them financial support for this purpose. Finally, they reported that they do not have access to adequate human resources for conducting research; however, they remained neutral about the fact that they have such resources for teaching.

Table 26: Sufficient work time

	Df	Mean	SD	Mean - Test value i.e. 3	t	Sig. (1-tailed)	effect size (Cohen' d)
1. Academics have adequate time to:							
a. conduct research	69	2.84	1.16	-0.16	-1.13	0.13*	-
b. teach	69	4.03	0.85	1.03	10.12	0.00	1.21
c. provide service to industry /community**	62	2.71	1.20	-0.29	-1.89	0.03	0.24
d. fulfil managerial roles (team members)**	62	3.43	1.04	0.43	3.26	0.00	0.41
7. Academics have a system that allows them to protect uninterrupted time for:							
a. research activities	69	2.77	1.09	-1.75	-0.23	0.04	1.60
b. teaching activities	69	3.13	1.09	0.99	0.13	0.16*	-

** Not Applicable (NA) for: item 1.c = 7(10 %) and item 1.d = 7(10%)

Table 26 summaries the mean scores of the items related to the availability of time to academics to perform various professional roles. The mean score of half of the items (i.e. 1.b,

1.d and 7.b) in the table was numerically above 3 while it is less than 3 for the remaining items. Further, the results of t-tests revealed that the mean difference is statistically significant for all items except items 1.a and 7.b. Another noticeable point in the table is that the effect of items 1.a and 7.b is very large according to Cohen's criteria.

The respondents strongly agreed that they have adequate time to teach but remained neutral about the existence of a system protecting uninterrupted time for teaching. They were unsure about the availability of sufficient time for research. However, they believed that there was not a system in place which may allow them to protect uninterrupted time for research. Finally, the respondents believed that they have adequate time to fulfil their managerial roles but they do not have enough time to provide service to industry/community. It is interesting to note that almost 10% of the respondents believed that they were not supposed to perform managerial roles or to provide service to industry/community.

The overall analysis of 58 items grouped into six sets of institutional features presented in tables Table 21-Table 26 reveals that, in the opinion of the academics, the context in which they live is featured with the presence of 29 factors. Only the contrary, they also reported the absence of 8 factors (16.c, 17.c, 2.a, 2.b, 2.c, 12.a, 1.c and 7.a) which mainly include some features related to the communication of academics with professional networks and mentoring practices in the university. The academics remained undecided about the presence or absence of remaining 21 factors pertaining to various institutional features grouped in all of the six sets. The next section examines the reported opinions of academics about the institutional features; whether these vary with respect to the personal characteristics of the sample or not.

Table 27 : Mean differences based on personal characteristics (gender, age range, highest academic qualification, and experience in research)

	Mean	SD	Mean	SD	Mean Diff.	F**	t	df	Sig. (2-tailed)	Eta saquare
GENDER	Male (n=29)		Female (n=41)							
Resources										
21.a. Academics have access to adequate human resources such as secretarial support, support staff etc., to conduct their research projects	3.10	1.26	2.37	1.24	0.74	0	2.432	68	0.018	0.08
Sufficient work time										
1.d. Academics have adequate time to fulfil managerial roles (team members)	3.07	1.07	3.69	0.95	-0.62	1.41	-2.427	61	0.018	0.09
7.a. Academics have a system that allows them to protect uninterrupted time for research activities	3.10	0.98	2.54	1.12	0.57	1.511	2.197	68	0.031	0.07
AGE	25-35 Years (n=31)		36 years & above (n=39)							
Milieu										
14.a A large portion of their department/institute colleagues can be considered to be productive in research	3.61	0.92	3.03	0.96	0.59	0.51	2.591	68	0.012	0.09
14.c A large portion of their department/institute colleagues can be considered to provide quality education	3.81	0.98	3.21	1.06	0.60	2.26	2.442	68	0.017	0.08
HIGHEST ACADEMIC QUALIFICATION	Masters (n=19)		M. Phil/PhD (n=51)							
Communication with professional network										
16.b At least weekly, academics have substantive uninterrupted conversations about research and writing with colleagues in their faculty	2.47	1.02	3.08	1.13	-0.61	1.537	-2.044	68	0.045	0.06
16.c At least weekly, academics have substantive uninterrupted conversations about research and writing with colleagues in their university	2.16	0.90	2.76	1.09	-0.61	4.022	-2.169	68	0.034	0.06

Milieu

10.a Academics feel appreciated and valued by their department/ institute colleagues for their work in research	2.89	1.15	3.53	1.07	-0.64	0.388	-2.17	68	0.033	0.06
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EXPERIENCE OF PUBLICATION	NO (n=24)	YES (n=46)								
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Communication with professional network

15.b Academics have a well-developed network of colleagues for discussing research and writing projects outside the university	2.71	1.08	3.46	1.21	-0.75	0.282	-2.549	68	0.013	0.09
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17.c At least monthly, academics have substantive uninterrupted conversations about research and writing with colleagues in their university	2.38	0.97	2.93	1.10	-0.56	0.493	-2.097	68	0.04	0.06
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Milieu

14.b A large portion of their department/institute colleagues can be considered to be significant external grant “getters”	3.25	0.94	2.76	0.95	0.49	0.056	2.053	68	0.044	0.06
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14.c A large portion of their department/institute colleagues can be considered to provide quality education	3.83	0.96	3.28	1.07	0.55	3.537	2.116	68	0.038	0.06
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Mentoring

26.a Academics get constructive feedback, guidance, and suggestions on their research and writing from their department/ institute colleagues	3.83	0.87	3.07	1.14	0.77	7.918	3.141	59	0.003	0.14
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26.b Academics get constructive feedback, guidance, and suggestions on their research and writing from their department/ institute chairperson (or director)	3.75	0.85	2.98	1.18	0.77	11.83	3.142	61	0.003	0.14
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Resources

20.b Academics have access to adequate resources such as computers, library materials, technical support, etc., to teach	4.17	0.87	3.59	1.33	0.58	6.206	2.197	64	0.032	0.07
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**Equal variances assumed

Table 27 presents the results of independent sample t-test, which was conducted to compare the means of the institutional features based on the personal characteristics of respondents. The table only presents the results of those features in which the mean difference was found statistically significant ($p < 0.05$, 2-tailed). However, the remaining results were not reported here.

The mean comparison based on gender revealed that the males and females have significantly different means score in relation to their access to adequate human resources as well as in relation to the availability of sufficient work time to fulfil their managerial roles. Moreover, the difference of opinions regarding the availability of uninterrupted time for their research was also found statistically significant. The corresponding eta square of these items varies from 0.07 to 0.09 which is moderate according to the criterion suggested by Cohen. Besides, both males and females have the similar opinions about the presence/absence of all other institutional features.

T-test results based on age indicate that the means scores of the respondents aged 25-35 years were significantly different from those of the respondents aged 36 years and above only in case of a couple of items related to milieu. The mean scores of relatively younger respondents were numerically higher than those of older counterparts. Moreover, the values of eta square of both items were 0.09 and 0.08 which may be considered moderate in accordance with the commonly accepted criteria for interpreting eta square.

The table indicates that the respondents with Masters degree and those with M Phil/PhD have statistically different means scores only for a couple of items. They reported difference about weekly substantive undisrupted conversation about research with colleagues in their faculty or university. Moreover, they also have different opinions about the appreciation or value given by their department colleagues for their work in research. However, the difference in the opinions cannot easily be noticed by a layperson during normal course of actions as these items have a small effect size (i.e. 0.06).

The table also shows a difference in the mean scores of the respondents with and without the experience of publications. However, the difference was found statistically significant only in case of 7 out of 58 items group into six sets of institutional features. The respondents from each group (with and without research publications) reported different opinions about the presence of colleague networks outside the university aimed at discussing research and writing projects. They were also different from each other in relation to the arrangement of substantive uninterrupted conversations about research with their university colleagues on monthly basis. With regard to the milieu, they only expressed different perceptions

about the majority of their colleagues as an external grant getter or as a quality education provider. Moreover, both groups showed difference in their responses related to items asking about constructive feedback, guidance, suggestions on their research and writing from their department colleagues or chairpersons. The difference of opinions about the availability of physical resources for research was also found between these groups. Following Cohen's criteria for eta square, it can be inferred that the reported difference between these groups can only be visible in case of items number 26.a and 26.b as their effect size (0.14) is large. However, the effect size of the remaining items is small, therefore, it may be difficult for a layperson to detect the difference of agreement between the groups based on publication experience.

Overall, results clearly indicate that the academics, irrespective of their personal characteristics, held similar views about the presence/absence of the majority of institutional features. However, respondents' views about a small number (15 out of 58) of institutional features were found sensitive to their different personal characteristics, especially, publication experience.

Finally, in response to item no. 30, the majority of the respondents ranked 'the provision of internal funding opportunity for new project' as first strategy (n=43, 61.4%) and 'the reduction in teaching worked load' as second strategy (n=42, 60%) that may facilitate their research performance. While provision of 'a support group for research and writing' was placed at 3rd position (n=38, 54%). Moreover, the availability of institutional support to academics (e.g. realise time) while acquiring news research skill (n=35, 50%) and the availability of graduate assistant (n=31, 44.3%) were ranked by the respondents as 4th and 5th strategies which may be helpful in improving their research performance.

CHAPTER 7: CULTURAL MORPHOGENESIS/STASIS

The middle element of a tripartite cultural morphogenetic analysis is the socio-cultural (S-C) interaction which is always conditioned, rather determined, by the respective systemic context. Archer (1995; 1996) argues that the (dis)orderliness among people (i.e. the S-C relationships) does not reflect the same state of (dis)orderliness in the relevant cultural system (CS) at a particular time because both have distinctive properties and causal influences. The reciprocal causal influences of the cultural system and the socio-cultural factors are responsible for the cultural stability/change in a particular context (Archer, 1996). The outcomes of the socio-cultural interaction become prominent at the third part of a cultural morphogenetic cycle. This chapter thus explores the socio-cultural interaction pertaining to research at University X during 2008-11 (when data was collected for this study). Moreover, it also highlights the cultural morphogenesis/stasis resulted from the socio-cultural interaction which was conditioned by the research-related systemic context prevailing in the university before 2008 and has already been established in the preceding chapter. The focus of this chapter remains on the last two stages [i.e. 'socio-cultural interaction' and 'cultural elaboration' (Archer, 1995, p. 193)] of a cultural morphogenetic cycle.

In this chapter, I explain the way in which the cultural systemic context of University X exercises its causal influences on academics' research practice as well as the way in which the academics (social agents) dealt with these systemic conditions and attempted to change/reproduce them (the systemic context) while pursuing their ideas/interests pertaining to research during 2008-11. Finally, I also discuss the change/stability of the existing research-related cultural systemic context resulting from these reciprocal influences i.e. the socio-cultural interaction. Following Archer (1996), I argue the modification of existing configuration of the cultural factors during the socio-cultural interaction entails the change of the cultural system. In other words, this section explores: a) how do the cultural factors influence academics' research practices and b) how do these practices contribute towards the changing or stability of existing research culture (i.e. research-related cultural system) at University X. These are the second and third research questions articulated to achieve the objectives of this study.

7.1 Research-related Socio-cultural Interaction at University X during 2008-11

In Chapter 5 and 6 the cultural systemic context was established by exploring research-related cultural factors and their relationships with the faculty of social sciences at University X prior to 2008. It consisted of seven sets of the cultural factors and all of them except one (i.e. discourses around research productivity/outputs) were in the state of contradictions, either necessary or contingent. The causal influences of these factors shape the academics' research practice. However, the academics held mixed and divided ideas/interests regarding research as evidenced by the analysis of questionnaire data. Therefore, from Archer's perspective, they tend to reproduce or modify the relationship between cultural factors in order to pursue their varying research ideas/interests. Consequently, the cultural systemic context either elaborated or reproduced, what is known as, the cultural morphogenesis/morphostasis (Archer, 1995). In the following section, I examine the morphogenesis/morphostasis of each of the seven sets of cultural factors resulting from the socio-cultural interaction occurred during 2008-11 in the university.

7.1.1 The Morphogenesis/stasis of the Discourses around the Major Aspects of Academics' Job

The data revealed that the discourses around research were conflicting with those of teaching and managerial work in the context of University X (see 5.1.1). I also argued that the research component of academics' job was in a state of 'constraining contradictions' with other components, both teaching and managerial work at the systemic level.

It was also evident that the supporters of each of three aspects of academics' job were present in the university; for example, the responses of questionnaire items, summarised in Table 22, indicated that the academics appreciated/valued research, teaching and managerial work of their department and university colleagues with varying degrees. I also noticed (in case of item 6 presented in Table 17) that a large segment of the respondents perceived themselves as self-motivated to conduct research as well as to teach. In other words, there was a low degree of orderliness among the academics at the socio-cultural level since they attached varying importance/value to research, teaching and managerial work as a prime component of their job in context of University X.

These findings suggest that a part of the cultural system (i.e. discourses around the major aspects of academics' job) entailing *constraining contradictions* map onto low level of the socio-cultural orderliness in University X. In this case, I

argue, by following Archer (1995; 1996), that these *constraining contradictions* placed academics who gave high value to research in a particular situation logic (i.e. *correction*) in which they confront with those who attached high importance to teaching and to the managerial work. Moreover, the former has no option but to live with the latter as, in the context of University X research, teaching and managerial works are necessary aspects of academics' job. In accordance with the situational logic, for a continuing commitment of the academics to research, there is a need to reduce/correct inconsistencies between prevailing discourses around research and those around other aspects of their job at the systemic level by the means of *syncretic* reinterpretation of the cultural factors involved. This kind of corrective measures are called 'syncretism', which may foster a thrust among the academics at the socio-cultural level for the ideational unification with reference to the concerned cultural factors. After arguing the conditioning influences at the socio-cultural level stemming from the constraining contradictory relations between discourses around the major aspects of academics' job, now, I move to explain the way in which academics practically dealt with these conditions for pursuing their research agenda during 2008-11.

At the socio-cultural level, based on Archer's argument, *desertion* is one of the possible option for the academics in this situation. It means that they can take exit from any *syncretic* action and move to another university, which may have suitable settings for them since, logically, they are not bound to stay in University X. In practice, the pertinent available record shows that no one has resigned from one's concerned faculties during 2008-11. This indicates that the phenomenon of desertion may be insignificant in the university despite the existence of the constraining contradictory relations at the cultural system. A possible explanation of this may be that most of academics in the concerned faculties were relatively young (44% between 25 to 35 years of age) and at the beginning of their career (54% lecturers) (see Table 9), therefore, they may be unable to explore career opportunities in other universities.

Despite the discussed contradictory conditions for pursuing research in the university, some of the participants remained committed to their research works (see Table 17) and were able to publish their research during 2008-11 (see Table 8). The interviewee RA is one of the typical examples of these academics. The interviewee explained the way/strategy to deal with these conditions in the following words:

I came here [in the university] at 08:30. From 08:30 till 2'o clock, I am only teaching in the department [and] organising some administrative/[managerial] jobs...So I have no time here to spare for my own research activity...when I go back to home, I have to take my two daughters. Obviously, they are school going

so they required that I spend some time with them. I am a wife so I have to take time for my husband. I started my research at 10 when my two daughters are in their bedrooms and my husband makes me free. Yes, you can do your work now so from 10:00 to 02:00...this is the time [that]I spent for my research (Interviewee RA).

The extract clearly shows the difficulties of academics in sparing time for research activities. The structural system of the university and academics' hectic job routines seem to leave no space for research activities. That is why the academics committed to their research work have to sacrifice/utilise their personal or family time in order to fulfil their research-related aspirations.

Another interviewee, MA, who also managed to publish research papers during this period, shared his strategy to address these constraining conditions. He stated that 'I maintain a diary in which I mention my day-to-day schedule of activities so [I can] easily manage three kinds of activities [i.e. research, teaching and managerial work]'. This statement reveals that good time management skills may, probably, do some good to academics in saving time for research activities. Senior academic BM, who held a formal managerial position in the university, also reported a similar strategy. According to him:

I have learnt to manage my time...I do not go strictly by the clock but I have some kind of loose time plan for myself. [For example] what are my goals for the month of May...summer is coming or vacations are coming so I have to plan for my own publications. (Interviewee BM)

From these remarks, especially from interviewees MA and BM, it may also be inferred that some of the participants were able to exploit the *contingent compatibilities*, existed between the structural factors resulted from the distribution of academics' workload (see section 5.2.2.1), in favour of research. Probably this was one of the reasons why respondents reported divided opinions: a) about the availability of adequate time to perform various aspects of their job; b) about the mechanisms to protect time for research and teaching (see Table 26). Moreover, these extracts also indicate that the academics tend to address the *contradictory* relations between research and other aspects of their job by the means of the socio-cultural adjustments. As a result, these relations remain problematic at the systemic level.

Besides these adjustments, the data also reported that there were some academics who perceived their teaching is positively influenced by their research practices. For example, a junior academic MA viewed the relationship between research and teaching in this way:

Research strengthens one's teaching. One cannot properly teach without doing research. When you do research, you deeply study the concepts; you deeply understand the theories...so research is very important (Interviewee MA).

The interviewee seems to suggest that research complements teaching abilities of a teacher as it may contribute to her/his background knowledge. Similarly, interviewee BA explained how his research work facilitated him in the classroom teaching. The interviewee said; 'It [research] actually complemented my teaching method I have a lot of example to quote in my teaching' (Interviewee BA).

Moreover, senior academic CM, who also held a key managerial position in the university, said that 'teaching and research must go side by side'. He seems to imply that both research and teaching are necessary components of an academic' professional life and neither of them should be ignored for the sake of the other. Another senior academic also found out a similar link between research and teaching in these words; 'I think updating yourself in terms of teaching is very important and that is the role which is aligned with research' (Interviewee DM).

These emerging discourses during 2008-11 indicate a growing sense of compatibility between research and teaching in the context. This also brings forward the idea that academics' engagement in research may increase their understanding of subject contents which may also be helpful in their classroom teaching. In this regard, the findings of their own research work can be more valuable while teaching relevant subjects. This sense of relationship between research and teaching seems similar to the notion of 'research-led teaching' which is specifically interpreted by Griffiths (2004, p. 722). This reflects that, during the socio-cultural interaction, the academics also tend to address the inconsistencies between teaching and research by reinterpreting their views about these aspects of their job in such a way that both become compatible at the systemic level. Such adjustments signal the involvement of some academics in A↔B sort of *syncretic* correction in order to make research compatible with the teaching aspects of their job. But the data did not reveal any evidence about any kind of *syncretism* between research and managerial activities at the systemic level. Consequently, a cultural item present in the discourse around research-led teaching was added to the cultural system of the university. Moreover, the presence of the proponents of these emerging discourses contributes to an increase in the degree of disorder at the socio-cultural level. In terms of Archer's language, I can argue a part of the cultural system, which is made of conflicting discourses around research and teaching, is in the state of *morphogenesis* as the emerging discourses around 'research-led teaching' in the context during 2008-11 tend to change their relationships existed prior to 2008. However, another part of the

cultural system, which consisted of conflicting discourses around research and managerial activities, remained in the state of *morphostasis* since their conflicting relationship has not changed during the socio-cultural interaction.

7.1.2 The Morphogenesis/stasis of the Discourses around the Natural and Social Sciences Divide

I have already contested that (see section 5.1.2) within the prevailing discourses about the natural/social sciences, the value of social sciences research was undermined in the context of University X before 2008. I also argued that these discourses were in the relationship of '*competitive contradictions*' at the systemic level. Moreover, the overview of research performance of the respondents (belonging to different fields of social sciences), presented in Table 13, clearly indicated that there was a group of academics involved in various kinds of research activities (although the quantity of their research publications was not impressive). From this data, it can be inferred that there were some academics that tended to promote social sciences research in the university despite the prevailing situation in the favour of natural sciences. Overall, the promoters of research in both social and natural sciences were present (as University X comprises both natural and social sciences faculties) to oppose each other at the C-S level of the university. The existence of such groups indicated that the discussed *competitive contradictory* relation was operational in the context. As Archer (1996, p. 230) suggests that although the *competitive contradictions* is systemic property, its activation depends upon the presence of opposite interest groups at the socio-cultural level.

In principle, based on Archer's framework, these *competitive contradictory* relations placed their supporters in the situational logic of 'elimination'. According to the logic, the promoters of both social and natural sciences tend to *eliminate* their competing ideas, therefore, their idea can gain/maintain social prominence at the socio-cultural level of the university. Logically, it is possible because these conflicting cultural factors have a contingent relationship with each other, as I argued in 5.1.2. Under the situational logic of *elimination*, in order to promote social sciences research in the context, academics may engage in a *debate* in which they tend to highlight the positive aspects of social sciences research and/or the negative aspects of natural sciences. However, in the context of University X, it is not possible for the supporters of either social or natural sciences research to completely *eliminate* the discourses entailing the importance/value of a kind of research from the cultural system because their supporters are present at the socio-cultural level (as the university comprises the faculties of both social and natural sciences). Moreover, the involvement of academics in this on-going debate can make them skilful in promoting the importance/significance of social sciences research in the university.

This may provide them opportunities to highlight the distinctive aspects of social sciences research as compared to those of natural sciences research. Moreover, this kind of debating scenario, as Archer suggests, fosters *pluralism* at the systemic level and promotes *cleavage / polarisation* among the respective people at the socio-cultural level (for detail see 2.7.5.3).

Practically, the data suggested that the engagement of academics during 2008-11 in *debating* process, stemming from the activation of the *competitive contradictory* relations between the cultural factors, manifested itself in the discourses around the social and natural sciences divide in University X. For example, the following explanation given by a junior academic, ZA, clearly indicated his awareness about the distinctive aspects of social sciences research in contrast to those of natural sciences. He stated:

Kalashnikov [name of a gun], it is the result of research in natural sciences. Now how to use this Kalashnikov, what use of it is legitimised and justified or what is not justified, this falls in the area of social sciences. So, research in social sciences and research in natural sciences is not substitute (Interviewee ZA).

The statement seems to indicate that the research in social and natural sciences serve different spheres of human life. The participant also seems to imply that these different areas of research cannot replace each other, therefore, may be given due importance. In a similar perspective, another participant JA, who was a senior academic as well as a member of ‘the social sciences and humanities research council of Pakistan’, emphasised on the need of a common platform in the university for the promotion of research in various fields of social sciences. The interviewee stated:

We have a school of biological sciences. School of physical sciences is there ... You can have a school of social sciences which is purely a research institution (Interviewee JA).

This participant not only seems to highlight the over-emphasis on research in the field of natural sciences but also wishes to have similar arrangements for social sciences research within the university. In this regard, the remarks of some academics appeared to criticise the research on natural sciences but, in fact, their focus was on those structural factors which emerged from natural sciences friendly policies of the higher education commission (HEC) of Pakistan. For example, interviewee EM criticised the HEC’s funding policies (i.e. main funding agency for state universities) which are in the favour of natural sciences research as compared to social sciences. According to interviewee:

Financial aspect is very very important...we also have discrepant policy of [the] HEC towards social sciences and natural sciences. Natural sciences can be given millions and millions [rupees] but when it comes to social sciences they are few lacs... It is important to review the policies of higher education commission as well as the funding agencies. (Interviewee EM).

This interviewee seems to clearly manifest the discrepancies of funding related to social and natural sciences. Similarly, another participant KA criticised a particular aspect of the HEC's quality assurance policy which is more favourable to natural sciences than social sciences. He stated:

The criterion of impact factor journals is very relevant in the case of natural sciences like physics etc. But it is inappropriate measure to assess quality of research in social sciences. (Interviewee KA).

Similarly, another participant BM, who also held a managerial position in University X, also expressed this concern while saying: 'The criteria used for science cannot be exactly used for social sciences' (Interviewee, BM). A possible explanation for the emergence of this criticism may be that the HEC's classified impact factor journals in 'W' category and articles published in those journals are considered as high quality works as per the HEC's policy for Pakistani universities. In this regard, I have already argued (see section 5.2.2.2) that this particular aspect of HEC's policy for the evaluation of research works has created a *necessary structural constraint* for social sciences research in the Pakistani context.

It can be inferred from the above mentioned extracts that the academics within the university tend to promote the value/importance/acceptance of social sciences research by highlighting its distinctiveness/uniqueness rather than by criticising natural sciences research. In addition, the first international conference on the 'promotion of social sciences research in Pakistani universities: prospects and challenges' was held at national level in April 2011, which can be considered as a beginning of the formal debating process for increasing an awareness about research in social sciences. Therefore, it can be argued that the discourses around the importance of social sciences research were relatively growing within the university during 2008-11 but they still remained less prominent than those of natural sciences. As interviewee TA, who has been working with this university for a long time, stated in response to a question about the gap between social and natural sciences 'previously there was and, now, I think it is less'. In other words, the relationship between the cultural factors exhibited in the discourses around the natural and social sciences research remained in the same state i.e. 'competitive contradictions' after the socio-cultural interaction during 2008-11. However, during this period, the

relatively growing prominence/value/importance of social sciences research indicated that the competitive contradictory configuration of these cultural factors, existed at systemic level before 2008, was not reproduced exactly in the same manner. In spite of this little change, the relation/configuration of these factors remained conflicting, therefore, I considered the part of cultural system of the university made up of these factors as in the state of cultural morphostasis. Here, it is important to recall that Archer's morphogenetic model remained silent in acknowledging such changes in the relationship of cultural items (see Horrocks, 2009).

7.1.3 The Morphogenesis/stasis of the Discourses around the Utility of Research

It was argued in the section 5.1.3 that a part of the cultural system of University X before 2008 was characterised by the discourses around the utility of research (applied or basic). Moreover, the cultural factors manifested in these discourses showed conflicting and contingent relations which were called *competitive contractions* in Archer's language. According to Archer's (1996) argument, as mentioned earlier, a competitive contradiction only comes into play when its contingent relations are *accentuated* by the opposing interest groups at the socio-cultural level at a particular time (for details see 2.7.5.3). Therefore, first, I need to analyse either these competitive contradictions were activated or not in the context of University X during 2008-2011 by examining the existence of active supporters of these opposing cultural factors regarding the utility of research at the respective C-S level.

Historically, it has been noticed that the basic research in social sciences was not very popular among academics in Pakistan. As Inayatullah (2003a, p. 227) stated that 'there was a lack of development of theories and their testing in social sciences in Pakistan. Consequently, Pakistani social scientist did not make any scientific contribution to the cumulative growth of social scientific knowledge at national and international level'. In this regard, the situation within University X was not different. The review of interview transcriptions revealed that there was not a single participant who expressed his/her intension to enrich theoretical knowledge base of his/her concerning subject while describing the reasons behind their selection of topics for research. For example, Interviewee AA who frequently published his research works in local journals clearly stated his inclination to study local issues. He said; 'I think our research should be specific to our culture, our economy or social economic issues' (Interviewee AA).

Another interviewee, a senior academic IA, who was the author of more than 30 articles, also reported similar considerations while explaining his focus of research in the following way:

When I select the topic I always think is this topic needed. Is there any need to do a research on this topic? So, normally, the need of the time. (Interviewee IA).

The respondent added:

The basic requirement of the time is that we may do ... original work on the issues which are basically originated in the Pakistani society (Interviewee IA).

Moreover, a junior academic LA, who was pursuing his research degree in the same university and so far had no research publication, explained the reasons for the focus of his research in these words:

[It] is an important factor that the area which I am selecting is very relevant to the society because my supervisors concerned that research has [to] be relevant towards society [so] I am not going to do a research which is not indigenous... [and] irrelevant to the society (Interviewee LA).

It is clear from his remarks that he was interested in carrying out the applied research in a broader sense. The participant also indicated that his decision for choosing a particular research project is largely influenced by his supervisor's liking. This element of supervisors' influence was also reflected in the comments of a senior academic DM who used to supervise postgraduate research students. According to the interviewee:

We believe in the research which is more relevant and which is more rigorous. So, rigor and relevance [are] two basic things that we inculcate in our scholars (Interviewee DM).

Similarly, the remarks of another senior academic EM also indicated the influence of supervisors in research choices. He stated:

I would guide my students to look into those subjects which are not explored in Pakistan [and] which are important [for the society] (Interviewee EM).

Probably, the senior academics intend to promote the research which has direct social utility because it is in line with the mission of the university as well responds to the basic objectives of the HEC (for detail see 5.1.3). As discussed earlier, both

university and the HEC encourage research which is immediately relevant to the society.

Moreover, the questionnaire data also revealed the influence of the managers of teaching departments as well as the pressure of institutional policy on academics in this regard. For example, most of the participants believed that the managers of their departments tend to keep the department on track by clearly emphasizing on the mission of the institution about research (see Table 19). The majority of the respondents also reported that their research agenda is consistent with the vision of their institution (i.e. promotion of applied research - see Table 24).

The above discussed data suggests that the academics predominately were interested or involved in those studies which primarily focussed on local issues rather than those which might enrich subject-specific theoretical knowledge. Moreover, it was also reported that the influences of certain structural factors (i.e. mission of the university and the aim of the HEC) as well as agential factors (i.e. heads of academic department) supported these research practices at the socio-cultural level. Therefore, it may be inferred that the idea of doing research for solving immediate issues and problems of the society (applied research) was largely accepted by academics at the socio-cultural level of the university. In other words, the competing idea (i.e. basic research) could not gain a considerable social approval and its adherents were not engaged in an active opposition at the socio-cultural level which is considered a basic requirement for activating a competitive contradiction. It implied that the contingent relationship of the opposing cultural factors related to the utility of research was not *accentuated* at the socio-cultural level of the university during 2008-11, therefore, the relevant competitive contradiction remained inactive.

Overall, this may further be inferred that these cultural factors remained present at systemic level without any change during the inactive period as Archer (1996) stated that the activation of a competitive contradiction (i.e. accentuation) is purely dependent upon the socio-cultural interactions. Hence, the competitive contradictory relationships between the cultural factors displayed in the discourses around the utility of research remained unchanged after the socio-cultural interaction during 2008-11. Therefore, I considered the part of cultural system of the university made up of these factors as in the state of cultural morphostasis.

7.1.4 The Morphogenesis/stasis of the Discourses around the Choice of Research Strategy

The analysis of empirical data revealed that the discourses around the choice of research strategy existing at the systemic level of University X were in the state of *competing contradictions* (for detail see 5.1.4). It was also found that the prevailing

discourses at the university predominantly favoured the use of quantitative as compared to qualitative approach.

In principle (based on Archer's idea discussed in Chapter 2.), this competitive contradiction between the discourses around the choice of research strategy (e.g. quantitative and qualitative approaches) creates a situational logic (i.e. *elimination*) which requires academics to make it operational at the socio-cultural level of the university through selecting an approach while deselecting the other (i.e. called *accentuation of a competitive contradiction*). Moreover, the decision of choosing a research strategy from the given alternatives is a matter of socio-cultural level as it mainly depends upon academics' knowledge about the availability and suitability of the competing approaches. Now, I examine the ways in which academics practically made these choices during 2008-11.

The interview data revealed the one of the main considerations which shaped the choice of research approach (e.g. qualitative and quantitative) was its suitability with the topic under investigation; for example, a junior academic FA stated that 'it (research approach) depends on the nature of the topic or focus of the study'. Another participant MA also reported to follow similar considerations while deciding research strategy for his studies. He stated that 'I use [research approach] according to my [academic] subject's needs or requirements'. Senior academics were also found to share similar views/considerations in this regard. For example, a senior academic FM opined that the choice of methodology should be based on the nature of subject area within which a research work is being conducted. As he mentioned that 'what kind of methodology to be adopted really depends on the subjects [academic disciplines]'. We noticed (see details 7.1.3) that an overwhelming majority of academics in the university were interested in exploring such topics that focus on addressing contextual problems. However, the overall volume and actual contribution of such studies in the Pakistani context were questionable. Further, the academics usually borrow / imitate / adopt studies conducted in the developed countries and uncritically replicate those in local settings (see 5.1.6 for details). Since 'replication is presumed' in the case of quantitative inquiries (Grix, 2010, p.123), the participants may be assumed to have a tendency to study such topics, which are compatible with the quantitative approach. In other words, in the context of University X, the selection of a research strategy on the basis of its suitability to the topic may favour the choice of quantitative methodology.

A large number of interviewees reported an overall lack of expertise in designing an empirical investigation. As a junior academic SA described this situation in these words:

In our university methodological skills are really lacking...I even consulted my colleagues... they really do not know an iota of research methodology what it is. And without any research methodology, doing a project is really impossible (Interviewee SA).

A senior academic IA, who used to publish his research work in national and international journals, also reported similar condition within the university. The participant believed that there was a 'lack of research techniques [and] lack of knowledge about research methodology' among academics working in the university. In spite of an overall deficiency in the knowledge of research design, the questionnaire data indicated that the respondents considered themselves relatively up-to-date in the techniques of quantitative research design (mean 3.59) as compared to those of qualitative one (mean 3.29 for details see Table 17). This one-dimensional knowledge of research skills may be seen as a barrier to undertake qualitative research in the context of University X. Some academics clearly acknowledged that they need more knowledge and skills to conduct a study based on qualitative research design as it is obvious in the following remarks of a junior academic BA:

I love to read qualitative studies. But I think at this stage I am not able to do a qualitative research because in that studies and you have to improve your research skills, you have to improve your writing skills, you have to improve your ideas, how you present ideas, how you can conduct so I need some more time, some more learning, some more skills to do qualitative study (Interviewee BA).

It is also clear from his remarks that she was familiar with the alternative approach (i.e. qualitative) but his perceived deficiency in pertinent skills (e.g. writing) necessary for this approach forced the participant to adopt the other approach (i.e. quantitative). The interviewee believed that without developing these skills it would be difficult for him to undertake a qualitative research project.

On the contrary, few interviewees believed that the choice of research strategy should not be based on investigator's prior competence in a particular research design. They believed that it is researcher responsibility to acquire necessary expertise for his/her research project. For example, a junior academic ZA stated:

One should not be biased in the selection of [research] techniques appropriate to the problem, whether I am at home with it or I am weak in this technique.

He also suggested:

While choosing an appropriate [research] technique, we have to compare its relative merits and demerits (Interviewee ZA).

Another junior academic LA also criticised the idea of choosing a research design just on the basis of investigators' capabilities to carry out a specific kind of inquiry:

May be you are inclined towards a particular research strategy [that] may be quantitative or qualitative. One of the most important things is which methodology is most suitable for your research. Even if you are not a quantitative person, may be you have to go for it (Interviewee LA).

In 2010, a central office was established in the university in order to facilitate research activities across all faculties. The mandate of organising research-related training sessions/workshops for academics was also given to it. The review of its first annual report revealed that only five workshops were arranged by this office and none of them focused on research design (University X, 2011c). It clearly indicates a dearth of opportunities for developing research methods within the university. In addition, it was also reported that accessible resources for research (e.g. library material, technical support, etc.) in the university are relatively few as compared to those available for teaching (see Table 25). Academics may have to face challenges in order to acquire/enhance their knowledge of research methods in these circumstances. I therefore may argue that the existing conditions in University X may hinder the development of skills necessary for conducting qualitative inquiries. The following remarks of a senior academic DM also highlighted similar concerns for promoting qualitative studies in the context. He stated:

The whole world is shifting towards more qualitative paradigms. In our research, I must say that qualitative trends [should] also be reflected and for that we have to do a lot. We have to prepare the teachers. We have to prepare the courses because for qualitative research we did not have much strength. So first, we [need to] develop our resources for that and then we started inculcating the same in our scholars (Interviewee DM).

At another instance during the interview, the interviewee explained specifically the nature of resources in these words:

We need to prepare resources. We did not have even sufficient resources in term of books [and] guides for qualitative research; so first we [should] build that base (Interviewee DM)

The data revealed that a large number of academics were aware of available competing research strategies (i.e. quantitative and qualitative) at systemic level. However, certain structural (i.e. lack of adequate resources and dearth of research

methods training), cultural (i.e. choice of research topics and replication of studies) and agential factors (i.e. lack of expertise on the part of academics) compel academics to favour the selection of quantitative research design and deselect the alternative approach (i.e. qualitative) in the context of University X. It may be inferred that qualitative research design could not gain adequate social support to oppose the adherents of quantitative research design at the socio-cultural level. Consequently, the dominant use of quantitative research design remains in practice at the socio-cultural level of the university during 2008-2011. As discussed earlier, in case of a *competitive contradiction*, the selection of an idea by deselecting the other (i.e. *accentuation*) is a matter related to the socio-cultural level (Archer, 1996). I therefore may argue that the nature of relationships between cultural factors contained in the discourses around the choice of research strategy remained intact at the systemic level despite the dominance of quantitative inquiries at the socio-cultural level. In Archer's terms, the part of university's cultural system comprising these cultural factors entails cultural morphostasis after the socio-cultural interaction during 2008-11.

7.1.5 The Morphogenesis/stasis of the Discourses around the Research-related Skills

I discussed in section 5.1.5 that the cultural factors manifested in the discourses around the importance of and the deficiency in research-related skills were in a relationship of *competitive contradictions* at the systemic level of University X before 2008. The data revealed three types of skills (i.e. language, information and digital literacy (IDL), and publishing skills) were considered important by the academics for conducting research in the context. Some prevailing deficiencies among academics in relation to these skills were also identified.

In theory, the discussed *competitive contradictory* configuration of discourses around research-related skills foster the situational logic of *elimination* in which academics have to choose either to become proficient or to remain deficient in research-related skills (i.e. competing cultural factors). The rejection of an alternative in favour of the other (i.e. *accentuation* of *competitive contradiction*) depends upon academics' awareness about the availability of alternative options and (dis)advantages associated with each of them. In line with Archer, I also consider making such choices is a matter of the socio-cultural level of the university.

Practically, the analysis of questionnaire data revealed that the respondents believed they are currently updating some research-related skills; for example, writing and computing skill (see Table 17). We noticed that there was a group of academics at the socio-cultural level who chose to become proficient rather deficient

in these skills. In Archer's terms, the presence of such group in the university indicates the *accentuation* of the *competitive contradictory* relations between the discourses around research-related skills which is a necessary condition for the activation of a *competitive contradiction* at the socio-cultural level. Now, I examine separately the measures taken by the academics during 2008-11 for acquiring language, IDL and publishing skills which they considered necessary for doing research in their context.

In relation to the development of language skills, an interviewee BA reported that the main source of guidance were his senior colleagues within the department. The participant acknowledged their contribution in these words:

The first thing which I have gotten from my professors is to read research articles...How you can read many articles...How you write critiques. So in this way, I have developed these skills (Interviewee BA).

A participant FA, who recently started his research degree, reported another way of improving her language skills:

For last two years, I really want to write papers, the good ones... So far I am not successful in it. Presently, I have stop[ped] thinking about it. I am planning my studies so I think that my studies will help me in doing that (Interviewee FA).

His remarks not only indicate his deficiency in writing skills but also reveal his approach to address it through higher studies. Perhaps, the development of language skills was one of the motives for his recent registration in PhD. A senior academic BM highlighted the benefits of reading skills in research process by telling his own experience in the following words:

I read books and they give ideas you can go in this way or you can do that way. So by studying them I found that I can go for separate analysis of quantitative and qualitative data (Interviewee BM).

Another interviewee FM, who is the author of 39 research articles, expressed her method of developing writing skills in the form of a suggestion:

Once you start writing, then you can really know or find out your shortcomings for not doing it. [Only then], you will do something for improvement (Interviewee FM).

The above statement reveals that learning by doing something seems useful technique for developing writing skills in the context.

I noticed that none of the participants reported she/he developed her /his language skills by attending formal training courses. One of the possible explanations for this may be the lack of opportunities in this regard within the university as analysis of documents did not reveal any evidence of the offering of workshops/courses focusing on academic writing and reading within the university during 2008-11. Perhaps owing to this reason, the majority of questionnaire respondents ranked 'support group for research and writing' low (at number three) among other suggested institutional policies/practices which can facilitate them in enhancing their research performance (see details at page 171). A junior academic LA also highlighted the lack of university support for developing research-related skills, especially for writing skills. As he said:

Research group for writing may be one of the options but there should be organised efforts at university level (Interviewee LA).

With reference to IDL skills, it was evident that academics adopted different ways to learn these skills; for example, a junior academic FA stated:

Electronic skill was learnt by doing, like computer is available and you could do experiment with it (Interviewee FA).

It indicates that the interviewee adopted hit-and-trial method for enhancing her IDL skills. The empirical data also revealed that there were some academics that preferred using online resources for improving these skills. A junior academic ZA was an example of such academics. According to the participant:

In the present era, it is very easy to develop those techniques because internet is available whenever you face a problem just type the problem on a search engine...so you will find a number of solutions (Interviewee ZA).

I also noticed that few participants wished to develop their IDL skills through participating in the workshops or training courses organised by the university. For example, a junior academic RA expressed his deficiency in IDL skills and his way of addressing it:

I first write with pen and then move towards computer because I cannot write directly on computer. This is my drawback. This is my handicap. These types of trainings should be required...so we can better utilise these technological advancements (Interviewee RA).

A possible explanation for academics' choice of training workshops for developing these skills may be their access to the workshops or training courses occasionally organised by the university. As the annual report of newly established office for

research (as mentioned in 7.1.4) provides evidence of some workshops/training courses aimed at fostering information and digital literacy (IDL) skills among academics across the university (University X, 2011c). However, some interviewees, who attended any of these workshops, reported the ineffectiveness of these activities:

I actually participated in those workshops. I did not get anything because there was a mess of people (Interviewee RA).

An interviewee KA also expressed his concerns about the effectiveness of these events.

The main aim of organising such events is just to highlight that the university has hosted a large number of workshops seminars and conferences to support the research activities. But they have no concerns about the practical impact on the development of research capacity of people (Interviewee KA).

In relation to publishing skills, some participants reported that they have learnt certain things through hit-and-trial method, which enabled them to publish their research work in well-reputed journals. A senior academic BM, who has published 29 research articles in international journals, narrated her way for finding suitable journals to publish his research work:

First we have at least capacity or skills to find the relevant journals in our field. Then [identify] which are the impact factor journals, the HEC [higher education commission of Pakistan] recognised journals, and other journals. Then [define] what your area is and which journals are focusing on those areas. You can go to home pages of the journals and you get idea ...is it relevant to [your] area/scope or not...then read about their scope [and] what kind of research they entertain and then try it.

A junior academic BA described his method of updating himself with current trends in journals relevant to his academic field, which also enabled him to spot out appropriate forum to publish the findings of his studies:

I have email alerts from different international and national journals. Once the latest issue is published, I get the alert that this issue is published and contained such articles so I got [idea] in which [journal] my article can [be] published (interviewee BA).

In summary, the discussed evidence shows that during 2008-11 the academics learnt or attempted to learn language, IDL and publishing skills with varying degrees through adopting different means such as hit-and-trial method and training courses/workshops. This suggests that the discourses around the importance

of research-related skills gain considerable support from academics at the socio-cultural level of the university. Consequently, the prevailing deficiency in research related-skills among academics prior to 2008 may be assumed to have reduced gradually during 2008-11. However, the data showed that the deficiency in research-related skills still existed up to certain extent as the pertinent items in Table 17 have varying mean scores.

Since academics' decision for developing these skills is a socio-cultural matter, this does not change the conflicting relations between the discourses around the importance and deficiency of research-related skills at the systemic level of the university. However, the considerable decrease in the dominance of the discourses around the deficiency of research-related skills during socio-cultural interactions suggests a cultural change in the context. I therefore consider the part of University X cultural system consisting of the discourses around the research-related skills as a modified/elaborated one after the socio-cultural interaction during 2008-11. Thus, it can be viewed as *cultural morphogenesis* in Archer's terms.

7.1.6 The Morphogenesis/stasis of the Discourses around Intellectual Engagement

It has been identified in 5.1.6 that a part of university cultural system consisted of the discourses around the importance and dearth of intellectual engagement in research and their conflicting relationships represented a *competitive contradiction* in Archer's language. The dominance of discourses around the dearth/scarcity of intellectual engagement was also evident at the systemic context of the university before 2008.

In theoretical terms, this *competitive contradictory* configuration between the discourses around intellectual engagement generates a situational logic of *elimination* (see 2.7.5.3 for detail). In order to bring this *competitive contradiction* into play, which Archer calls *accentuation*, there should be some academics at the socio-cultural level, which not only know the importance of intellectual inputs in research but are also actively engaged in enhancing their intellectual competencies to *eliminate* the existing intellectual deficiency (i.e. competing cultural factor). By following Archer (1996), I argue the choice of academics for enhancing their intellectual skills depends upon the socio-cultural interactions.

In practical terms, it was noticed that the majority of participants were either involved in or inclined towards replicating empirical studies conducted in advanced countries. They were primarily interested in imitating/borrowing research designs used in other contexts. As the interviewee HA described his way of planning a

research project, which is not different from a large number of academics in the context:

I always go for internationally developed tools or internationally developed methodologies. I [have] always preferred to search out particular variable [and] methodology [that] has been used internationally. I go for that and, usually, I do not find any difficulty in understanding the methodology that has been used (Interviewee HA).

It seemed that the academics tend to rely passively on the knowledge base of advanced countries as a senior academic EM called this trend as a ‘copy paste kind of culture’. The participant explained his observations in these words:

They [academics] will not dare, they will not show courage to even re-write a sentence [and] to reformulate [information], so this is a major issue. However, the issues vary from level to level (Interviewee EM).

In order to ensure that research works were produced in accordance with the acceptable ethical practices worldwide and to discourage unethical practices, the university has introduced anti-plagiarism mechanisms, which are also in line with the first ever anti-plagiarism policy formulated by the higher education commission of Pakistan (HEC) for all universities in the country (see 5.2.2.2 for details). I have already argued that the emergence of this policy created *necessary compatibility* structural conditions for academics in University X. The empirical data revealed that these structural factors (anti-plagiarism policy) have contributed positively to the promotion of original research work within the university. For example, a junior academic ZA compared the present situation with the previous one in these words:

In the past many people copied and produced research work but now ... you have to produce genuine research work so in that sense it is difficult.

These comments also give us an idea about the difficulties faced by academics while coping with the demands of new policy requirements or conducting original studies. Interviewee SA also quoted plagiarism incidents to illustrate the impact of the policy in discouraging unethical research practices in the universities. According to the interviewee:

There are instances [at national level] even in this university; a person at the level of professor has been thrown out of the university because he copied some work of his colleagues (Interviewee SA).

The strict implementation of anti-plagiarism measures in the university may foster a sense of protection among academics against the potential fear of the misuse of their research works. Consequently, they may feel comfortable to take suggestions from their colleagues in order to deal with the problems, issues and challenges of carrying out a research work.

The existing shortage of formal arrangements, within University X, for the development of their research competencies may also stimulate academics to make informal arrangements in this regard. As interviewee KA stated:

There is no systematic way in the university that helps academics in the development of their research skills. Here, every person has to find out development opportunities by utilizing his own resources and contacts (Interviewee, KA).

Although there was a newly established office responsible for enhancing academics' research capacity through organising workshops, seminars, sections, etc. at university level but the list of workshops/sessions arranged during 2010 consisted of only five events (University X, 2011c). This would highlight the dearth of opportunities within the university for building the research capacity of academics.

It may therefore be argued that the combined influence of identified structural factors (i.e. the introduction of anti-plagiarism measures as well as the absence of formal arrangements for developing academics' research capacities) may be a reason for the increasing trend of social networking among the academics. The questionnaire data revealed that the respondents have a network of colleagues in their own departments for discussing their research projects (see Table 21). It was also reported that the respondents were able to manage uninterrupted conversation about research and writing with their colleagues at department level on monthly and even weekly basis (see Table 21). Moreover, the respondents preferred to have face-to-face communication with their colleagues as compared to other modes of communication such as paper based (see Table 21). The academics also believed that they usually receive useful suggestions about their research work from their colleagues within their departments and/or from their managers i.e. chairpersons (see Table 23). They perceived their managers are highly regarded for their research as well as teaching. They also found their managers supportive to their research and teaching activities (see Table 19). In brief, the data reported above suggested that nearly half of the respondents tend to seek guidance about research from their colleagues within their own departments. Whereas, the managers with high research profiles, seemed critical of providing research-related support to academics.

The analysis of interviews revealed that senior academic, particularly those who frequently interacted with junior academics, observed that the junior academics

were deficient in certain skills (such as critical thinking, analytical abilities, etc.). This eventually perpetuates the prevailing intellectual deficiency in the university. For example, a senior academic DA pointed out the existing dearth of analytical skills in new academics. The interviewee also considered this situation a barrier to the formulation of independent opinion, among junior academics, through the critical examination of the available information/knowledge about a certain phenomenon. According to the interviewee:

They do not have depth. They have information through the media, through the internet but they do not have the capacity of analysis. This is the major problem (Interviewee DA).

Another interviewee BM (has more than 50 published international and national journal articles) witnessed the deficiency of critical thinking among these academics during his frequent interaction with them as a senior academic and manager of an academic department. He stated:

[They] just come with the topic but when I... [ask] how you are going to get the sample? How you are going to get [research] questions? So [owing to] the lack of analytical, logical skills, they do not have answer to those things (Interviewee BM).

The following words of a senior academic JA explained the importance of theoretical knowledge base in the research process. He also highlighted the prevailing misperceptions among the academics about the importance of theoretical knowledge that may also be another reason of their intellectual deficiency. According to him:

I would say first good knowledge about the society, then theoretical knowledge theories, perspectives [and] skills would come later. But here the problem is [that] the people think only skill [you need] is that you can do the quantitative analysis; that's it (interviewee JA).

Perhaps, the relative competence of academics in quantitative research methods lead them to perceive that they were up to date in their research area (see Table 17). This argument may also be supported by the remarks of those participants who were either deficient in or not interesting in the use of quantitative data analysis techniques. These participants admitted that they were not able to keep themselves abreast of the latest and sophisticated quantitative research knowledge/skills. For example, an interviewee CA, who was planning to improve his quantitative data analysis skills at the time of interview, clearly mentioned his deficiency in these words:

I feel that my level is not up to that mark...I need a lot of study, so a lot of things are unfamiliar to me. So this is, you can say, a gap (Interviewee CA).

Another participant LA, who was working on a qualitative research project, reported that:

We do not really get updates because there is no proper system of getting updates...that this is something new, which is coming more in research [area] (interviewee LA).

In the light of these above cited statements, I may argue that the deficiency of intellectual efforts was largely echoed in academics' practices during the socio-cultural interactions at the university despite the existence of compatible structural systemic conditions in the form of anti-plagiarism policies and the growing trend of consultation about research with colleagues at department level. In Archer's (1996) views, the perseverance of a particular idea out of a *competitive contradictory* set of ideas is a socio-cultural activity. I therefore argue the continuation of prevalent intellectual deficiency at socio-cultural level of the university during 2008-2011 does not alter the *competitive contradictory* relations between the discourses around the importance and dearth/ deficiency of intellectual engagement at the systemic level. Consequently, the part of university cultural system characterised by these discourses remained stable after the socio-cultural interaction during 2008-2011 and this is called *cultural morphostasis* in Archerian language.

7.1.7 The Morphogenesis/stasis of the Discourses around the Research Productivity/Outputs

As discussed earlier in 5.1.7, a component of University X's cultural system was made up of the discourses around the research productivity/output. The cultural factors (i.e. intrinsic stimulus and pragmatic/strategic motives) embedded in these discourses were mutually complementary but linked contingently to each other. Archer referred such a relation between cultural factors as *contingent complementarities*. Questionnaire data revealed that the respondents considered themselves self-motivated to conduct research (see Table 17). It was also reported that they fully understood research-related expectations necessary to get promotion in the university (see Table 23). They also understood that university has a high expectation from them to be productive in research (see Table 24). These responses clearly indicated their awareness of intrinsic (e.g. self-motivation) as well as pragmatic/strategic (e.g. expectations/requirements for promotion) motives for doing research in the context. I therefore may argue that the *contingent complementarity* entailed by the discourses around the research productivity/outputs has fulfilled the

basic criterion of its existence in the university cultural system. As Archer (1996; 2005) argues that the presence of a *contingent complementary* configuration should be recognised by people at the socio-cultural level for actualising the *opportunities* associated with it.

In principle, this socially known *contingent complementarity* creates a relatively loose situational logic of *opportunity* in which academics enjoy substantial freedom to: a) pick any of the available cultural factors (i.e. intrinsic stimulus and pragmatic/strategic motives); b) discover /explore a compatible cultural factor; c) and engage themselves in *synthesising* these cultural factors or some of their parts in any fashion for taking advantage of the available factors. The generic implication of a successful attempt of this kind of *synthesis* of cultural factors may result in the introduction of a new cultural factor (i.e. cultural change) at the systemic level of the university, which may eventually broaden the horizon of *opportunities* for academics to get benefit of it. Now, I examine the ways in which academics dealt with the discussed *contingent complementarity* during 2008-11.

In practice, most of the academics seemed to be inspired to do research for actualising their different pragmatic/strategic aims such as financial gains and career progression. The financial stimuli for doing a research degree was clearly mentioned in the following comments of interviewee SA who recently completed his research degree from abroad, which was funded by the higher education commission (HEC) of Pakistan. The participant described his intentions for completing PhD:

I do not say that I was eager to go for research and I am going to put a new thing to the world. Economic reasons are in the forefront as the government started a scheme sending PhD researchers abroad and after that there is very nice follow-up. Once you come after a PhD, you start with a very nice salary (Interviewee SA).

This statement reveals that this participant's major motive of doing a research degree was to benefit from the financial gains associated with it and the HEC's scholarship schemes (see details in section 5.2.3) enabled him to secure this degree. In other words, the interviewee exploited the existing *contingent compatible* structural conditions created by the HEC's scholarship schemes (as argued in section 5.2.3.1) in order to pursue his pragmatic ambition of doing research.

Another pragmatic reason for doing PhD, described by interviewee TA as he narrated that his main purpose for carrying out doctoral studies was to achieve professional and academic excellence. In this regard, the participant mentioned:

To excel in my career. I had to go for ... the higher degree, the ultimate degree in an academic field this is PhD (Interviewee TA).

According to a senior academic CM, one of the main reasons of the increasing attention of early-career academics towards a research degree is to access the monetary rewards associated with it.

Whosoever will do PhD they are given some amount per month...and various incentives. I think these are bringing all young people on the research line so they are going for research (Interviewee CM).

A senior academic FM, having a rich experience of research (39 research articles on her credit), appreciated the existing policy of the university regarding the provision of financial incentives to faculty members on publishing research works in well-reputed national and international journals. The participant stated:

A kind of incentives is given to the faculty members [academics] for research because research has not been very popular among the faculty members [academics]. So to encourage them the university has initiated this incentive (Interviewee FM).

These views seem to imply that financial rewards attached with research publications might be a motivating factor for his frequent publications in research journals. Another senior academic EM who has over 50 research articles shared similar views. He said:

[The] university has started to give award to the teachers [academics] who are publishing in impact factor journals or in the HEC approved journals. It is not much but still there is some financial benefit (Interviewee EM).

Early-career academics similar to their senior counterparts also seem to be motivated in publishing research articles owing to financial incentive associated with it. For example, an early-career academic AA who has published 13 research articles in national journals believed that an increase in incentive based policies may promote research activities among faculty members. He said, 'If the authorities want to promote research, then research incentives should be enhanced'. He also emphasized on the need (for new faculty members) to participate in research activities as these may bring for them the opportunities of career progression.

The new faculty members should engage in research activities, if they want to promote themselves and their institutions (Interviewee AA).

The data discussed above revealed that early-career academics in the context tend to do research for their career progression and financial rewards. Similarly, the senior academics appeared to be more interested in monetary benefits of doing research in

the context. Overall, it may be argued that academics in the university were inclined to actualise pragmatic benefits of doing research.

However, some academics also reported their interest in taking advantage of the other available cultural factor (i.e. intrinsic stimulus for research) which is compatible with the pragmatic motive of doing research in the context. For example, interviewee FA suggested that university needs to take some measures to foster research friendly intrinsic drive among academics. According to the interviewee:

I believe some people are born with more analytical mind, more research oriented attitude. But others could be [research oriented], if they are provided certain positive environment. I believe, as university teachers, there should be some binding on us I am not saying that every year two research papers. No, I am saying that we should be bound to that which help [us] in moulding, mending and improving attitude towards research (Interviewee FA).

The data also showed that the consistent involvement of some academics in research for pragmatic purposes may develop their natural inclination or intrinsic motivation for research. In this regard, a senior academic ZA is a typical example. He started a research degree and published his research articles for career promotion but with the passage of time it became his personal interest. He narrated:

I have written my MPhil thesis [title of the thesis] and then I wrote PhD dissertation [title of the thesis]. During the last three years, I have been able to publish fourteen articles. Now, I have developed a strong taste for research.

Interviewee added:

Once you do a thing, you have developed a taste for it then you need no further motivation. So this is a self- motivation (Interviewee ZA).

In spite of the above discussed attempts of combining pragmatic/strategic and intrinsic reasons of doing research, the empirical data did not reveal any evidence of a successful attempt of their *synthesis* into a new idea. Consequently, these attempts remained unable to introduce any cultural change at the systemic level of the university.

Some evidences suggested that the participants were familiar with the importance of the quality of research outputs during the socio-cultural interactions. For example, a senior academic IR said:

I think quality is more important and to measure the quality...there must be a committee who may look after the standard of the publications (Interviewee IA).

This comment clearly indicates the value of research quality for the interviewee, and interviewee's dissatisfaction with the existing policies of the university regarding the evaluation of the quality of journals as well as of the articles published in them (discussed in section 5.2.2.2) as she has emphasised on the need to introduce a new policy. A senior academic DM also highlighted the importance of this quality by criticising the policy recently adopted by the university to measure research productivity/outputs of academics through counting the number of their publications in well-reputed national and international journals (see section 5.2.2.3 for more details about the policy).

Unfortunately, quality is very less focused and more emphasis is on quantity. The number of publications matters more as compared to the quality of the publications (Interviewee DM).

An early-career interviewee LM also expressed similar views:

It [the evaluation of academics' research performance] has to be made on the quality of research but unlikely it is [done] on the number of research articles. How much you are publishing, so this is a very crucial issue (Interviewee LM).

These comments clearly indicate that the interviewees were aware of the importance/value of the quality of research as they criticised the existing university policy (focuses on the quantity of publications only) for measuring/evaluating their research performance. Probably it might be a result of their recent exposure to the first ever university policy for the evaluation of academics' research performance. As I discussed earlier (see section 5.2.2), the university has recently adopted these policies under the influence of the HEC and this adoption has created *necessary compatible* structural conditions at the systemic level. I therefore may argue that the participants are becoming increasingly aware of the value of the quality of research which is evident from their discourses emerged during the social-cultural interaction.

Overall, the evidences discussed above reveal that, during 2008-11, a majority of academics was inclined towards research for actualising their pragmatic/strategic gains (i.e. career progression and financial incentives). Some of them were also inclined to combine them with their intrinsic motives for conducting research. However, the data did not show that any attempt of combining the ideas of pragmatic/strategic and intrinsic motives culminated into a new idea at the systemic level. Therefore, such efforts remained limited to the socio-cultural level.

I found some clues of emerging discourses about the value/importance of quality research in the context during the socio-cultural interactions. In relation to the *contingent compatibility* entailed by discourses around the research productivity/outputs, I consider the emergence of the discourses about importance/value of quality research as a corollary of an attempt to explore the ideas which were previously unknown to the people in the context. Therefore, these may be used innovatively to maximise the benefits of doing research. The way academics will tend to actualise this newly explored opportunity, in the form of cultural factors manifested in the discourses around the importance/value of quality research, is a subject of empirical investigation in the next cultural morphogenetic cycle of the university. Owing to a rise in the opportunities that can be actualised by the academics, I consider that the part of university cultural system characterised by the discourses around the research productivity/outputs was elaborated after the socio-cultural interactions during 2008-11, which may be referred as cultural morphogenesis in Archer's language.

7.2 Overview of the Cultural System of University X after Socio-Cultural Interaction during 2008-11

In this chapter, I primarily addressed the third research question of the study, that is, in what ways do academics' research practice contribute towards changing or sustaining the existing research culture in the university? As shown in Table 28 below, academics through socio-cultural actions seemed to reproduce four components of the cultural system (i.e. natural and social sciences divide, the utility of research, the choice of research strategy and intellectual engagement) without any visible change and elaborated two of the remaining components (i.e. research-related skills and research productivity/outputs). The component about the aspects of academics' job was partially elaborated with respect to research and teaching and partially reproduced in case of managerial work and research.

Table 28: Overview of the cultural system of University X after socio-cultural interaction during 2008-11

Discourses around:	The morphogenesis/stasis
Aspects of Academics' Job Research and teaching Research and managerial work	Cultural morphogenesis Cultural morphostasis
Natural and Social Sciences Divide	Cultural morphostasis
Utility of Research	Cultural morphostasis
Choice of Research Strategy	Cultural morphostasis
Research-related Skills	Cultural morphogenesis
Intellectual Engagement	Cultural morphostasis
Research Productivity/outputs	Cultural morphogenesis

CHAPTER 8: CONCLUSIONS AND IMPLICATIONS

Being a novice academic in a state-run Pakistani university which was striving to absorb unprecedented reforms introduced in 2002 at the national level for promoting research in universities, I was curious to understand the phenomenon of research culture in general and within my university in particular. My curiosity and interest in the phenomenon of research culture culminated in this research project. This study was designed to examine and explain the situation of the prevailing research culture in a Pakistani state-run university (University X) through understanding the dominant research-related cultural factors (e.g. ideas, beliefs, values and assumptions, etc.) held by academics in the university. The study also aimed to investigate the reciprocal influences of these factors on academics' research practices. I attempted to achieve these objectives by addressing the following three interrelated research questions:

1. What are the factors which characterised the existing research culture in the university?
2. In what ways do these factors influence academics' research practices?
3. In what ways do academics' research practices contribute towards changing or sustaining the existing research culture in the university?

8.1 Conclusions of the Study

I employed Archer's social realist morphogenetic approach as a meta-theoretical framework throughout the process of searching the answers of the stated research questions. Therefore, the results of this project may be seen as the morphogenetic interpretations of the phenomenon of research culture in University X. Since there was no readily available model/theory/framework which could explicitly define various aspects of research culture in a university context, I therefore used Evans's conceptual model for researcher development to develop tools for data collection, particularly interview schedule. Overall, the combination of Evans's model and Archer's meta-theoretical framework enabled me to draw results from the empirical data collected from two social sciences faculties (one was relatively active in research) of the university.

The empirical findings have been discussed simultaneously with reference to the research questions and relevant stages of the tripartite cultural morphogenetic cycle in Chapters 5, 6 and 7 of this thesis. These results have also been presented diagrammatically in Figure 9 (on following page) in which rows against research

questions (i.e. RQ1, RQ2 and RQ3) show the findings pertaining to respective research question while the column labelled with seven sets of discourses (e.g. utility of research) represents the morphogenetic cycle of the corresponding component of the university cultural system.

In response to the first research question, the data revealed that research-related cultural system of the university comprised seven sets of cultural factors, which manifested themselves in the discourses around the: 1) major aspects of academics' job; 2) natural and social sciences divide; 3) utility of research; 4) choice of research strategy; 5) research-related skills; 6) intellectual engagement and; 9) research productivity/outputs. The findings of this study suggested that the cultural system of the university was dominated by those factors, which may be considered less favourable for the promotion of social sciences research in the university. For example, the research component of academics' job was valued less as compared to other aspects, such as teaching and managerial work. The social sciences research was also considered less important in the context as compared to that of natural sciences. In addition, the cultural system of the university did not encourage the ideas of doing research for creating subject-specific theoretical knowledge (basic research). Quantitative research methods were largely preferred over qualitative ones. In this context, it was also perceived that there was a dearth of research-related skills and intellectual engagement on the part of academics. Pragmatic motives for doing research were the only prominent cultural factor in the system, which was not problematic to the promotion of social sciences research.

In relation to the second research question, all seven sets of cultural factors, except one (i.e. research productivity/outputs), tend to exert constraining influence on academics' research practices at University X. These constraints emerged from the necessary/contingent and conflicting (in Archer's terms, contingent/competitive contradictory) relationships between cultural factors within each set (as shown in Figure 9). Only cultural factors about research productivity showed enabling influence on academics' research practices owing to their contingent but compatible relationship which may be called *contingent complementarity* according to Archer. This study, therefore, addressed its second research question by identifying the constraining/enabling influences of each of the seven sets of cultural factors identified in response to first research question.

Figure 9: The Morphogenetic Cycle of University X's Cultural System Pertaining to Research

Research Questions (RQ)	The morphogenesis / morphostasis of culture (Archer,1995 p.193)		Descriptions of the inferences drawn from empirical data	The components of University X cultural system (which is characterised by the following seven sets of discourses) and their corresponding morphogenetic cycles								
	T1			1. Aspects of academics' job	2. Natural and social sciences divide	3. Utility of research	4. Choice of research strategy	5. Research-related skills	6. Intellectual engagement	7. Research productivity/outputs		
RQ 1	↓	2008	Cultural conditioning	Discourses around:	Value/importance of Research and TEACHING	Value/importance of Research and MANAGERIAL WORK	Value/importance of NATURAL SCIENCES versus social sciences	Preferred idea for utilizing research: Basic or APPLIED	Inclination towards QUANTITATIVE or Qualitative methods	Importance and DEFICIENCY of language, information and digital literacy (IDL), and publishing skills	Importance and DEARTH of intellectual inputs on the part of a researcher	STRATEGIC/ PRAGMATIC and intrinsic motives for doing research
RQ 2				Key cultural factors manifested in the discourses (dominating factors in UPPERCASE)								
				Contextual systemic relations between the cultural factors								
				Causal influences of the systemic relations in Archer's terms	Constraining contradictions		Competitive contradictions	Competitive contradictions	Competitive contradictions	Competitive contradictions	Competitive contradictions	Contingent complementarities
RQ 3	↓	2011	Socio-cultural interaction	Prominent socio-cultural factors	Distribution of Academics' workload	Investing personal time in research	The HEC's policy for the funding and measuring of research outputs	The university's mission and the HEC's objectives and support for applied research	Lack of resources and research method training	Limited training courses and workshops offered by the recently established research office	Absence of institutional support in the form of training opportunities	The HEC's policy for academics' promotion
	↓		Cultural elaboration or reproduction	Cultural morphogenesis/morphostasis i.e. elaboration/reproduction of systemic relations between cultural factors	Cultural morphogenesis	Cultural morphostasis	Cultural morphostasis	Cultural morphostasis	Cultural morphostasis	Cultural morphogenesis	Cultural morphostasis	Cultural morphogenesis
	To T4											

RQ 1: What are the factors which characterised the existing research culture in University X?

RQ 2: In what ways do these factors influence on academics' research practices?

RQ 3: In what ways do academics' research practices contribute towards changing or sustaining the existing research culture in the university?

T1, T2, T3 and T4 = successive points in time

With reference to the first stage of the morphogenetic cycle, as shown in Figure 9, the identified seven sets of cultural factors characterised the research related cultural systemic context of the university existed before 2008. Each of the seven sets entailed causal powers (which emerged from the logical configuration of their respective cultural factors) that conditioned academics' research practices in the context. Most of the cultural factors were in the relationship of contingent/competitive contradictions which indicate a low level of integration in the university's research culture.

In response to the third research question, one of the important consequences of academics' research practices or, in Archer's terms, socio-cultural actions was the growing emergence of two cultural factors contained in the discourses around the awareness of research-led teaching and discourses about the importance of the quality of research (see Figure 9). Owing to their emergence, the parts of cultural system consisted of the discourses around the aspects of academics' job (particularly teaching and research) and the research productivity/outputs seemed elaborated i.e. cultural morphogenesis in Archer's language. The research findings also revealed an increasing involvement of academics in acquiring research-related skills, especially in information and digital literacy (IDL). The situation resulted in a visible decrease in the discourses about deficiency in these skills which may suggest the cultural morphogenesis of the respective component of the system. Interestingly, a slight rise in the importance of social sciences research was also observed despite natural sciences friendly policies (e.g. allocation of funds and criterion used for the assessment of research outputs) formulated by the HEC for the universities of Pakistan. However, the research in natural sciences was still believed to be more valuable as compared to that in social sciences. Therefore, this little change may be considered insignificant and the respective part of the cultural system seems to have remained in a state of cultural morphostasis.

The empirical findings of this project suggest that the academics tend to maintain the remaining components of the university cultural system owing to causal powers of the varying socio-cultural factors (as shown in Figure 9). For example, the mission of the university, the aim of the HEC, and managers' efforts to remain consistent with the institutional policy were the main socio-cultural factors which seemed to favour the stability of discourses around the utility of research. The lack of expertise in qualitative research design and insufficient institutional support for developing this expertise appeared to be the main socio-cultural contributors in maintaining the dominant use of quantitative methods which led to the cultural morphostasis of the respective part of the university cultural system (i.e. choice of research). Despite the growing trend of consultation with colleagues about research and the recent adaptation of anti-plagiarism policy by the university, no visible change was observed in the part of the cultural system characterised by the discourses around the intellectual engagement. Moreover, the

absence of institutional support in building the intellectual capacity of academics reinforced the cultural morphostasis of this component. The contradictory relation between research and managerial aspects of academics' job was not affected during the social-cultural interactions. Therefore, this part of cultural system, which comprised discourses about the importance of research and managerial work, remained in the state of cultural morphostasis.

With regard to the second stage of the cultural morphogenetic cycle, academics' socio-cultural actions were examined in relation to each component of university's cultural system and identified prominent socio-cultural factors (see in Figure 9), which facilitate/hinder academics in maintaining or modifying existing cultural context for the pursuit of their research interests (as discussed earlier in relation to research question 3). The consequences of socio-cultural interactions, occurred during 2008-11, on individual parts of cultural system were also discovered that provided an insight into their morphogenesis/morphostasis (as presented in Figure 9). These consequences led to the third stage of cultural morphogenesis. Overall, the degree of cultural integration in the university system remained low as the majority of its components comprised conflicting cultural factors which were in the state of cultural morphostasis (reproduced) after the socio-cultural interaction during 2008-11. However, there appeared to be slightly more cultural integration than that existed before 2008 owing to the cultural morphogenesis (elaboration) of two sets of the conflicting cultural factors displayed in the discourses around: 1) research-related skills; and 2) teaching and research aspects of academics' job. In addition, an important research-related structural development in the form of a new central office for research was also observed in the context during the socio-cultural period 2008-11.

8.2 Limitations of the Study

The main aim of the study was to present the analysis of research culture prevailing in University X. The study was informed by Archer's morphogenetic approach. Owing to its focus on cultural analysis, the study remained interested, primarily, in the cultural morphogenetic cycle, and could not focus in detail on structural and agential morphogenetic cycles of morphogenetic approach. Consequently, the data relied heavily on the information about the cultural dimension of morphogenetic approach. The data about structural and agential domains was gathered only to analyze the cultural change/stability which is supported or resisted during socio-cultural interactions. This did not aim at a full scale structural and/or agential analysis of the research culture in the university. This may be considered as a major limitation of this study. Future studies on research culture may focus on a detailed analysis of its structural and agential elements.

This may yield a profound understanding of the phenomenon for academics and policy makers of educational institutions.

Morphogenetic approach explains an existing phenomenon but does not predict its future outcomes (1995). Similarly, the analysis presented in this thesis also allows the researcher to explain the existing situation of research culture in a university but does not facilitate the researcher to make any prediction about it. It is a point of departure from the studies conducted with a positivist point of view, especially; on the topic of academics' research productivity (e.g Bland et al., 2002; Bland et al., 2005; Santo et al., 2009) as they were conducted, with the intention of making predictions about research productivity based on certain factors (e.g. personal, institutional and leadership). Future studies, intending to make predictions about research culture, may benefit from these predictive models within positivist paradigm.

As mentioned earlier this study was guided by Archer's model. Since Archer (1995) believes that our knowledge about social realities is revisable, the findings and results of this study may also be considered as provisional and revisable in the light of new knowledge generated about the context in which this study was conducted.

Methodologically, the study remained limited to the participants recruited from the faculties of social sciences only. Similar to other critical realist studies, the findings of this study cannot be generalised to other contexts though its theoretical principles may be applied to other contexts in line with the opinion of Stake (2005).

8.3 Reflections of the Researcher about the Metatheoretical Framework of the Study

While applying Archer's theory on explaining the phenomenon of research culture in the context of a higher education institution, the researcher faced some problems and issues. Most of these problems were interrelated as summarized in the following points.

8.3.1 Defining the Properties and Causal Power of Cultural Factors

Working with empirical data, the researcher observed that identifying the cultural factors and describing their properties is not an unproblematic and straightforward task.

First, Archer (1995) suggests that cultural items stand in logical relation with each other at systemic level. She also puts forward four ideal types of logical relations in which any two cultural items are involved. However, the data of this study showed that a situation may arise when more than two cultural items are logically connected. For example, the discourses around the natural and social sciences divide may have logical connections with the discourses around the choice of research strategy. In this situation, four cultural items are involved (see 5.1.2.1 and 5.1.3.1). Although, Archer (1995)

acknowledges the possibility of extending cultural items but she has not explicitly informed and explained the situation/s in which three or more cultural items may have logical relations at systemic level. Moreover, she also has not explained the impact of such a systemic situation on socio-cultural level which may be useful for providing a clear explanation of a complex social phenomenon. It is worth-mentioning here that Lipscomb (2009) has also raised similar arguments against Archer's work.

Secondly, the identification of logical relations (necessary or contingent and complementary or contradictory) between cultural items at systemic level, although a time-consuming exercise (discussed below), was relatively unproblematic at the initial stage of analysis. However, this process became problematic at the third stage of cultural morphogenetic cycle where outcomes of socio-cultural interaction were observed in terms of change or stability. For example, the part of cultural system, comprising the discourses around natural and social sciences, was modified as a result of socio-cultural interaction in such a way that the conflicting nature of relationship between the respective cultural items diluted up to some extent (see section 7.1.2). However, the relationship did not reach a level where it can be considered as complementary. Identification of such changes may be useful to understand the potential area of cultural change (Lipscomb, 2009). However, Archer's morphogenetic approach does not provide any specific terms to acknowledge such changes. The issue of not recognizing the strength (i.e. weak or strong) of relationship between cultural and structural entities was also pointed out by Horrocks (2009). In this regard, Lipscomb (2009) argues that Archer may develop this aspect of her methodology to enhance its explanatory power. This study also recommends that future studies may take into account and specify these critical changes in the relationship between cultural items.

8.3.2 Lack of Illustrative/Empirical Studies Based on the Morphogenetic Approach

Initially, I found that Archer uses difficult vocabulary, one of the problems I faced, to develop her approach. For example, the name of the framework 'The morphogenetic approach' itself reflects this difficulty. Researchers from other academic disciplines (e.g. information system), who intend to use Archer framework as a meta-theoretical framework to explain a social phenomenon of their own discipline (e.g. adaptation of technology), need to put extra efforts in order to develop its understanding. Perhaps, this is one the reasons that there are few empirical studies (e.g Cuellar, 2010; O'Byrne, 2011; Case, 2013) which utilized Archer's framework (Carter and New, 2005; Horrocks, 2009). In addition, most of the available literature on critical realism (the paradigm of morphogenetic approach) does not provide detailed guidelines regarding the practical application of its theory. Therefore, researchers may be reluctant to use this approach for their empirical studies so far. However, Paul K. Edwards, Joe O'Mahoney, and Steve

Vincent compiled an edited book in 2014 to address the problems related to critical realist informed empirical studies. Perhaps it is the first comprehensive effort to provide practical guidelines for empirical studies based on critical realism. Unfortunately, the book was published when I had finished the first draft of my thesis and I could not benefit a lot from the details provided by this book. However, this book guided me to understand the critical realist perspective on combining multiple data collection instruments in the revised version of my thesis.

8.3.3 Time-consuming Process

I experienced during the analysis of empirical data, based on Archer's morphogenetic approach, that I had to spend a lot time in establishing the research-related cultural context of the university studied. For example, I carefully examined the transcripts of all interviews and identified the cultural factors manifested in the discourses of the interviewees. Then, I had to examine logical relations (necessary/contingent and complementary/contradictory) among these cultural factors so that the situational logic at systemic level can be defined. In this way, the empirical data was mapped on the morphogenetic tools. The issue of time-consuming data analysis process is not reduced to Archer's morphogenetic framework, rather it is also common in all studies based on critical realist approach (Horrocks, 2009; Ackroyd, 2004). Since the main focus of critical realist studies are to explore invisible causal mechanisms operating behind the observable phenomenon as they subscribed to stratified social ontology, every researcher has to go through this time-consuming process of data analysis in order to explore mechanisms in an empirical research project.

8.3.4 Temporal Dimension of the Morphogenetic Framework

Archer (1995) introduces time in her framework to indicate three stages (emergence-interplay-outcome) of a morphogenetic cycle. The integration of temporality in morphogenetic model compels researchers to consider time while developing the understanding of the nature and description of events (Lipscomb, 2009). However, the use of time in the application of morphogenetic cycle in various empirical studies was arbitrary. Some researchers mentioned time period explicitly (see Lockett, 2012) while others used it implicitly (see Thursfield and Hamblett, 2004b) and even some have not mentioned time at all (see Morén and Blom, 2003). It has been argued that the specification of time period is problematic when structural, cultural and agential cycles are investigated in the same study (Horrocks, 2009). Since this study focused primarily on one cycle (i.e. cultural morphogenetic cycle), the specification of time period was not found problematic. It may be relevant to mention here that the top management of the university was changed in 2008 which introduced significant cultural and structural changes in the university in order to cope with emerging higher education situation at

national level. This event helped me to specify time for setting the morphogenetic cultural context. Moreover, the beginning of data collection (2011) helped me specify the period (i.e. 2008 to 2011) for the socio-culture interaction (the second stage of cultural morphogenetic cycle). This may also be considered a limitation of this study as the morphogenetic explanation of research culture presenting in this thesis was limited only to this specific period. A relatively lengthy period would have rendered a detailed and in-depth view of cultural changes in the context.

8.4 Practical Implications of the Study

The findings of this study have the following suggestions and implications for the educational policy makers and managers of University X and other institutions related to higher education and research.

8.4.1 Preparation of Plans for the Promotion of Social Sciences Research

This study embodied Archer's explanatory framework which is not meant for making predictions from the data rather it helps us to understand a socio-cultural phenomenon in certain phases of time. Therefore, the results of this study may not be used to anticipate future change/stability in the university research culture. However, the explanatory account of research-related cultural factors provided by this study offers deep insights into the prevailing research culture in the university that can provide guidance for the university leadership in articulating strategic plans for the promotion of social sciences research within the context. The university management may prepare detailed plans including these cultural factors to ensure the persistence of research supporting/friendly factors (e.g. incentives and training opportunities for the academics). The plans may also include the proposals for necessary measures to control those factors (e.g. lack of research funds and library resources) which may constrain research activities in the university.

8.4.2 Need to Ensure Compatibility between Research and other Aspects of Academics' job

University leadership may support academics in their pursuit of research by minimising the incompatibility between research and other aspects of their job. For this purpose, the leadership would need to encourage research-led teaching. As the discourses suggested that the academics would welcome the linking of research and teaching through research-led teaching. In these circumstances, it may be suggested that Griffith's (2004) concept of research-led teaching would be compatible with the context of this study and other similar settings.

The leadership also needs to ensure that the department managers assign managerial work to the academics in accordance with their prescribed workload as the persisting tension between research and managerial aspects of academics' job seemed to be rooted in the lack of compliance with the existing policy of the university defining maximum hours per annum for managerial activities of various cadres of the academics. Simultaneously, it would be useful for academics to know themselves the university policy regarding the distribution of the managerial workload of their job in order to keep balance between their research and managerial work. During data collection, I noticed that this provision was not known to the majority of academics and managers participated in this study.

8.4.3 Need to Create Awareness about the Importance of Social Sciences Research

The leadership of higher education commission (HEC) of Pakistan as well as of the university would also need to pay special attention to social sciences research, keeping in view its historical poor situation in the country. It may be useful for the promotion of overall research culture in the university/country that the leadership considers the differences between social and natural sciences research while formulating research policies both at national and/or institutional level. In order to increase an awareness of the importance of social sciences research, the university may create a forum (e.g. a society for the promotion of social sciences research) to support the emerging debate emphasising on the value of social sciences research in the context.

8.4.4 Need to Focus on Basic Research

Considering the reported lack of basic research as a constraint in the promotion of social sciences research within the institution, the university and the HEC may need to rethink their policy of supporting applied research at the expense of basic research. In this regard, the university and the HEC may adopt policies to encourage basic research, for example, by allocating special funds and organising conferences for this kind of research. This would enrich the background/theoretical knowledge base available for Pakistani researchers working in university X or other organisations of the country.

8.4.5 Measures to Enhance the Research Capacities/skills of Academics

University X may need to facilitate its academics in developing important aspects of their research capacities, e.g. intellectual development, research design skills, publishing and language skills. First, it may be useful to offer support/training aiming at the intellectual development (e.g. creativity and critical thinking etc.) of the academics since the long history of the existing dearth of intellectual engagement on the part of researchers was

found one of the main obstacles in the promotion of social sciences research in the university.

Secondly, considering the persisting lack of expertise in research methods particularly in qualitative, it may be useful to provide assistance in this area. The university may arrange workshops and training courses to equip its academics with necessary skills/knowledge research methods. Related to this, a comprehensive needs analysis of the academics may provide university management an in-depth view of their research-specific needs and the workshops/trainings may be organised to address the individual as well as collective target needs of the academics. In addition, the introduction and an easy access of the latest softwares (e.g. Nvivo, Endnote, SPSS) to the academics may not only enable them to manage their research projects, including those based on qualitative methodology, in a better way but may also enhance their knowledge/skills of research designs. The university may provide platform/forums to its academics where they may discuss and share their knowledge and expertise in various research designs.

Finally, the university may not only need to keep offering training courses and workshops for developing information and digital literacy (IDL) skills but also need to provide its academics the opportunities to acquire publishing and language skills. The existing lack of publishing and language skills among the academics appeared to be a barrier to conduct research in social sciences. In order to provide assistance in these areas, the university management would need to strengthen the recently established research office which has the mandate of organising such activities.

8.4.6 Measures to Ensure the Quality of Research

This study revealed that the discourses around the importance of the quality of research were emerging in the context. Considering this insight the university and the HEC would need to facilitate its emergence. In this regard, it may be a good option to link financial incentives with the quality of research outputs as a significant role of pragmatic/strategic motives in conducting a research project was reported in the university. Moreover, the policy makers at national and institutional level may need to refine the existing criteria for evaluating the quality of research, particularly in case of social sciences research since the discourses around the importance of the quality of research seemed to have surfaced as a reaction to the existing criteria for assessing research quality, which is more suitable for the research in natural sciences.

8.5 Theoretical Implications of the Study

The study has also some implications for the theoretical knowledge of research culture which may be useful for researchers interested to work in this area.

8.5.1 A new Definition of Research Culture

The study proposed a new definition of research culture by revisiting Evans's (2007) conception of research culture in the light of Archer's (1996) non-conflationary theorisation of culture (see section 2.5). The proposed definition embodies all characteristics associated with Archer's concept of culture including its theoretical base and practical utility for examining cultural dynamics. Consequently, this study offers a theory driven conception of research culture which may allow a detailed examination of change/stability in a research culture existing in a particular context over a certain time period. Owing to these characteristics, the proposed definition differs from other existing interpretations of research culture. Since the conceptual clarity of the notion of research culture particularly in the context of universities is an unsettled issue in the limited body of existing literature (see Cheetham, 2007 ; Evans, 2007; Pratt et al., 1999), the proposed definition may be considered a useful step in explaining various aspects of a research culture. This may facilitate other researchers in developing an understanding of the notion of research culture.

8.5.2 Using Archer's Morphogenetic Approach in the Analysis of Research Culture Prevailing in a University

This study employed Archer's explanatory approach to examine the phenomenon of research culture in the context of University X. This approach, by the virtue of analytical dualism, enabled me to explain the dynamics of the university's research culture during 2008-11 without reducing/conflating culture with academics (agency) and vice versa. So far, there are only few studies that used Archer's framework to investigate issues in higher education; for example, Crawford (2009), Quinn (2006) and Vorster (2010) used this approach to explore continuing professional development, staff development programme and curriculum development processes respectively in different higher education contexts. This study may be viewed another empirical example of the application of Archer's approach in the sphere of higher education. Moreover, the theoretically driven explanatory account of research culture prevailing within a Pakistani university offered by this case study may also be considered as an addition to the existing literature on the topic in general and with reference to Pakistani context in particular.

There were some attempts to understand and investigate the phenomenon of research culture in the context of universities but I am unable to trace any study did so on non-conflationary grounds. For example, Deem and Lucas (2007) utilised Bourdieu's concept of habitus, field and capital to explore teaching and research cultures but Bourdieu is criticised for committing downwards conflation (see section 2.7.21.). Another example is the study of Pratt et al. (1999) which conflated the cultural systemic level with the socio-cultural level by endorsing the myth of cultural integration. In

contrast, this study approaches the notion of research culture in a non-conflationary way by the means of Archer's morphogenetic framework. This may give a new direction to study the phenomenon of research and may also be considered another theoretical implication of Archer's model used for this study.

8.6 Importance for Future Research

This study may provide valuable ideas to researchers interested in exploring the phenomenon of research culture by applying Archer's framework. Especially, the findings have set the systemic context for the next morphogenetic cycle which may be studied in future within the context of University X. A future study in this regard would be beneficial for understanding more cultural changes in the context.

Moreover, the study offers an understanding of research-related cultural constraints and enablements existing in the university that can be useful not only for academics in the pursuit of their research interests but may also provide them with new ideas for research. Future studies on research-related constraints and enablements may be extremely useful for the promotion of research in University X as well as in other similar contexts.

Seven sets of research-related cultural factors identified in this study may be used in future studies on research culture in other contexts. These clearly explained factors may also be used as constructs/variables in a study based on a quantitative research design. A questionnaire survey on these factors may help a researcher collect data from a large sample.

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Please be informed that some of the documents have been anonymised for the sake of confidentiality of an institution. Therefore, it would be difficult for you to trace some of the references. Please do not hesitate to contact the author, if you are interested in accessing these documents.

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APPENDIX A: QUESTIONNAIRE

Respected Colleagues

This questionnaire is designed to examine the determinants of research culture in your university. As you have firsthand experience of the situation in your university, your information will help me to explore the ways that help to maximise research capacity of academics and strengthen research culture. Therefore, you are requested to respond the questions frankly and honestly and return the filled questionnaire in the provided envelop.

Your participation is voluntary and will remain anonymous. Moreover, your responses will be kept strictly confidential and used only for academic purpose. Only the researcher will have access to the information you give. Thank you for your time.

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HOW TO FILL IN THIS QUESTIONNAIRE

Please read the given statements and encircle [O] the relevant answer that best indicates your level of agreement against each statement by using the following key:

- SD = Strongly Disagree
- D = Disagree
- N = Neither Agree nor Disagree
- A = Agree
- SA = Strongly Agree

Some items also provide the option: NA=Not Applicable

INDIVIDUAL FACTORS

1. I have a dequate time to:

- | | | | | | | |
|--|----|---|---|---|----|----|
| a. conduct research (e.g., writing articles, books and presenting conference papers etc.)..... | SD | D | N | A | SA | |
| b. teach (within the department / institute)..... | SD | D | N | A | SA | |
| c. provide service to industry /community | SD | D | N | A | SA | NA |
| d. fulfil managerial roles (chairs, team members)..... | SD | D | N | A | SA | NA |

2. As a junior faculty member, I have been/ was **formally assigned** an a dvisor or mentor within my department / institute and I was provided valuable guidance in:

- | | | | | | | |
|--|----|---|---|---|----|----|
| a. research..... | SD | D | N | A | SA | NA |
| b. teaching | SD | D | N | A | SA | NA |
| c. service to industry /community..... | SD | D | N | A | SA | NA |

3. As a junior faculty member, I have/ had an **“unassigned”** mentor either in my department/ institute or in other department/ institute who provides (or provided) me with valuable guidance in:

- | | | | | | | |
|--|----|---|---|---|----|----|
| a. research..... | SD | D | N | A | SA | |
| b. teaching..... | SD | D | N | A | SA | |
| c. service to industry /community..... | SD | D | N | A | SA | NA |

SD = Strongly Disagree
A = Agree,

D = Disagree
SA = Strongly Agree

N = Neither Agree nor Disagree,
NA=Not applicable

4. I stay very “up-to-date” with current literature in my:
- | | | | | | | |
|-----------------------------------|----|---|---|---|----|--|
| a. research interest area(s)..... | SD | D | N | A | SA | |
| b. teaching area(s)..... | SD | D | N | A | SA | |
5. I am highly committed to contributing to the success of my:
- | | | | | | | |
|---|----|---|---|---|----|--|
| a. department/ institute..... | SD | D | N | A | SA | |
| b. faculty..... | SD | D | N | A | SA | |
| c. university..... | SD | D | N | A | SA | |
| d. discipline outside the university..... | SD | D | N | A | SA | |
6. I would describe myself as being self- motivated to:
- | | | | | | | |
|---|----|---|---|---|----|----|
| a. conduct research(e.g., writing articles, books and presenting conference papers etc.)..... | SD | D | N | A | SA | |
| b. teach..... | SD | D | N | A | SA | |
| c. provide service to industry /community..... | SD | D | N | A | SA | NA |
7. I have a system that allows me to protect periods of uninterrupted time to address:
- | | | | | | | |
|-----------------------------|----|---|---|---|----|--|
| a. research activities..... | SD | D | N | A | SA | |
| b. teaching activities..... | SD | D | N | A | SA | |
8. For the following items, please, indicate if you believe you are currently up-to-date in:
- | | | | | | | |
|--|----|---|---|---|----|--|
| a. quantitative research design and analysis..... | SD | D | N | A | SA | |
| b. qualitative research design and analysis..... | SD | D | N | A | SA | |
| c. grant getting skills for your area (e.g. identifying your funding sources, contacting funding agency personnel, preparing grants etc.) | SD | D | N | A | SA | |
| d. computer skills (e.g. Microsoft Word, Excel, PowerPoint etc.)..... | SD | D | N | A | SA | |
| e. presentation skills (e.g. oral/poster presentation in conferences, Seminars, Workshops etc.) | SD | D | N | A | SA | |
| f. writing skills (e.g. preparing materials according to specified format, constructing concise/persuasive text etc.)..... | SD | D | N | A | SA | |
| g. using relevant software for data-collocation and analysis (e.g., SPSS, Nvivo, EndNote, etc.)..... | SD | D | N | A | SA | |
| h. publisher-hunting skills (e.g. identifying appropriate journal/ conference/ publishing houses, understanding their procedures for submission and evaluation of your research..... | SD | D | N | A | SA | |
9. To be promoted at my present institution, I fully understand the expectations of my university regarding:
- | | | | | | | |
|------------------|----|---|---|---|----|--|
| a. research..... | SD | D | N | A | SA | |
| b. teaching..... | SD | D | N | A | SA | |
10. I feel appreciated and valued by my **department/ institute** colleagues for my work in:
- | | | | | | | |
|--|----|---|---|---|----|----|
| a. research..... | SD | D | N | A | SA | |
| b. teaching..... | SD | D | N | A | SA | |
| c. service to industry /community..... | SD | D | N | A | SA | NA |
| d. managerial position (team members, chairs)..... | SD | D | N | A | SA | NA |

SD = Strongly Disagree
A = Agree,

D = Disagree
SA = Strongly Agree

N = Neither Agree nor Disagree,
NA=Not applicable

11. I feel appreciated and valued by my **university** colleagues for my work in:
- | | | | | | | |
|--|----|---|---|---|----|----|
| a. research..... | SD | D | N | A | SA | |
| b. teaching..... | SD | D | N | A | SA | |
| c. service to industry /community..... | SD | D | N | A | SA | NA |
| d. managerial position (team members, chairs)..... | SD | D | N | A | SA | NA |
12. I have excellent opportunities here to pursue my interests in:
- | | | | | | | |
|--|----|---|---|---|----|----|
| a. research..... | SD | D | N | A | SA | |
| b. teaching..... | SD | D | N | A | SA | |
| c. service to industry /community..... | SD | D | N | A | SA | NA |
| d. managerial role (chairs)..... | SD | D | N | A | SA | NA |

INSTITUTIONAL AND LEADERSHIP FACTORS

13. There is a high expectation in my **department/ institute** for academic staff to:
- | | | | | | | |
|---|----|---|---|---|----|----|
| a. be productive in research (e.g., writing articles, books and presenting conference papers etc.)..... | SD | D | N | A | SA | |
| b. conduct research that is externally funded..... | SD | D | N | A | SA | |
| c. provide quality education (e.g., rated highly by students)..... | SD | D | N | A | SA | |
| d. provide service to my university and beyond..... | SD | D | N | A | SA | NA |
14. A large portion of my department/ institute **colleagues** can be considered to:
- | | | | | | | |
|---|----|---|---|---|----|----|
| a. be productive in research (e.g., article, conference paper, books etc.)..... | SD | D | N | A | SA | |
| b. be significant external grant "getters"..... | SD | D | N | A | SA | |
| c. provide quality education..... | SD | D | N | A | SA | |
| d. provide service to my university and beyond..... | SD | D | N | A | SA | NA |
15. I have a well developed network of colleagues with whom I discuss research and writing projects:
- | | | | | | | |
|---|----|---|---|---|----|--|
| a. within my department/ institute..... | SD | D | N | A | SA | |
| b. outside the university..... | SD | D | N | A | SA | |
16. At least weekly, I have substantive uninterrupted conversations about research and writing with colleagues in my:
- | | | | | | | |
|-------------------------------|----|---|---|---|----|--|
| a. department/ institute..... | SD | D | N | A | SA | |
| b. faculty..... | SD | D | N | A | SA | |
| c. university..... | SD | D | N | A | SA | |
17. At least monthly, I have substantive uninterrupted conversations about research and writing with colleagues in my:
- | | | | | | | |
|-------------------------------|----|---|---|---|----|--|
| a. department/ institute..... | SD | D | N | A | SA | |
| b. faculty..... | SD | D | N | A | SA | |
| c. university..... | SD | D | N | A | SA | |
18. My department/ institute chairperson (or director) is very supportive to my efforts in:
- | | | | | | | |
|--|----|---|---|---|----|--|
| a. research..... | SD | D | N | A | SA | |
| b. teaching..... | SD | D | N | A | SA | |
| c. service to industry /community..... | SD | D | N | A | SA | |

SD = Strongly Disagree D = Disagree N = Neither Agree nor Disagree, A = Agree, SA = Strongly Agree NA=Not applicable

19. My department/ institute chairperson (or director) is highly regarded for his/her:
- | | | | | | | |
|--|----|---|---|---|----|----|
| a. research..... | SD | D | N | A | SA | |
| b. teaching..... | SD | D | N | A | SA | |
| c. service to industry /community..... | SD | D | N | A | SA | |
| d. managerial skills..... | SD | D | N | A | SA | NA |
20. I have access to adequate **resources** such as computers, library materials, technical support, etc., to:
- | | | | | | | |
|--------------------------------------|----|---|---|---|----|--|
| a. conduct my research projects..... | SD | D | N | A | SA | |
| b. teach..... | SD | D | N | A | SA | |
21. I have access to adequate **human resources** such as secretarial support, support staff etc., to:
- | | | | | | | |
|--------------------------------------|----|---|---|---|----|--|
| a. conduct my research projects..... | SD | D | N | A | SA | |
| b. teach..... | SD | D | N | A | SA | |
22. My university provides me adequate **financial** support to travel to participate in academic conferences :
- | | | | | | | |
|--------------------------|----|---|---|---|----|--|
| a. within Pakistan..... | SD | D | N | A | SA | |
| b. outside Pakistan..... | SD | D | N | A | SA | |
23. My university provides me adequate **administrative** support to **apply** for travel grant from HEC or other external sources for presentation of paper in academic conferences :
- | | | | | | | |
|--------------------------|----|---|---|---|----|--|
| a. within Pakistan..... | SD | D | N | A | SA | |
| b. outside Pakistan..... | SD | D | N | A | SA | |
24. It is clear to me how my research agenda is or can be related to the department/ institute vision.....
- | | | | | | | |
|--|----|---|---|---|----|--|
| | SD | D | N | A | SA | |
|--|----|---|---|---|----|--|
25. It is expected that academic staff will meaningfully and actively contribute to important decisions in my:
- | | | | | | | |
|-------------------------------|----|---|---|---|----|--|
| a. department/ institute..... | SD | D | N | A | SA | |
| b. faculty..... | SD | D | N | A | SA | |
26. I get constructive feedback, guidance, and suggestions on my research and writing from my:
- | | | | | | | |
|---|----|---|---|---|----|--|
| a. department/ institute colleagues..... | SD | D | N | A | SA | |
| b. department/ institute chairperson (or director)..... | SD | D | N | A | SA | |
| c. colleagues outside my department/ institute..... | SD | D | N | A | SA | |
27. My department/ institute chairperson (or director) keeps the department/ institute on track by clearly emphasizing our core missions of education and research...
- | | | | | | | |
|--|----|---|---|---|----|--|
| | SD | D | N | A | SA | |
|--|----|---|---|---|----|--|
28. My department/ institute has a communication system that allows me to be adequately informed in a timely fashion about major issues, important events, and upcoming concerns regarding research
- | | | | | | | |
|--|----|---|---|---|----|--|
| | SD | D | N | A | SA | |
|--|----|---|---|---|----|--|
29. I frequently exchange information with my colleague through:
- | | | | | | | |
|---|----|---|---|---|----|--|
| a. face-to-face communication (e.g. formal meeting, informal discussions etc.)..... | SD | D | N | A | SA | |
| b. paper based written communication (e.g. memos, letters etc.)..... | SD | D | N | A | SA | |
| c. electronic communications (e.g. e-mail, intercom, cell phone etc.)..... | SD | D | N | A | SA | |

SD = Strongly Disagree
A = Agree,

D = Disagree
SA = Strongly Agree

N = Neither Agree nor Disagree,
NA = Not applicable

POLICIES / PRACTICES

30. Please encircle [O] FIVE of the following policies / practices that would best facilitate your research performance:

- Provide internal funding opportunities for new projects.
- Provide you with up to date, and easy to understand, account information on your grants. (For example, current information on the amount of unencumbered funds you have remaining to spend.)
- Alert you to external funding opportunities.
- Support you (e.g., release time) while you acquire new research skills.
- Provide you with a graduate assistant.
- Provide you with more statistical assistance.
- Reduce your teaching load
- Provide a **formal** mentoring programme for junior faculty.
- Provide an **informal** mentoring programme for junior faculty.
- Provide a support group for research and writing.
- Provide more opportunities for senior faculty to contribute and continue to grow.
- Provide executive coaches for new chairperson (or director).
- Identify the priorities of the faculty.
- Identify the priorities of my **department/ institute**.
- Designate a faculty-level faculty development person to coordinate strategies to help faculty succeed.

31. Please add any other policies / practices you think would be helpful to enhance your research performance.

.....
.....
.....
.....
.....

WORK INFORMATION

Please write relevant information in provided space.

32. How many articles have you published in:

- a. international journals Please write appropriate number in this box.
- b. HEC recognised Journals at National level Please write appropriate number in this box.

33. How many papers have you presented at:

- a. international conferences Please write appropriate number in this box.
- b. national conferences Please write appropriate number in this box.

34. How many invitations to present keynote speeches have you received:

- a. international conferences/ seminars Please write appropriate number in this box.
- b. national conferences seminars Please write appropriate number in this box.

35. How many research students have you supervised as:

- a. primary supervisor Please write appropriate number in this box.
- b. co-supervisor Please write appropriate number in this box.

*SD = Strongly Disagree D = Disagree N = Neither Agree nor Disagree,
A = Agree, SA = Strongly Agree NA = Not applicable*

36. How many **books** have you published:
- a. single authored.....
 - b. co-authored.....
 - c. edited.....
37. How many **book chapters** have you published?.....
38. How much **research income** have you received as:
- a. sole grantee
 - b. joint grantee
39. On average, in last year, how many hours each week were you involved in:
- a. teaching(within the department / institute).....
 - b. research.....
 - c. service to industry /community.....
 - d. administration (e.g. chairs, committee members).....
- NA
NA

DEMOGRAPHIC INFORMATION

Please check [✓] that apply

40. Age ranges: 25-35 36-45 46-55 56-65 Over 65
41. Gender: Male Female
42. What is your highest level qualification? Masters M. Phil PhD
43. What is your current academic rank? Lecturer Assistant Professor Associate Professor Professor

SD = Strongly Disagree
A = Agree,

D = Disagree
SA = Strongly Agree

N = Neither Agree nor Disagree,
NA=Not applicable

APPENDIX B: PARTICIPANT CONSENT FORM

Title of Research Project:

Factors influencing institutional research culture: the case of a Pakistani university

Name of Researcher: Ahamd Sohail Lodhi

Please initial the box to indicate your agreement with the statement to the left

- 1 I confirm that I have read and understand the information explaining the above research project and I have had the opportunity to ask questions about the project.
- 2 I understand that my responses will be kept strictly confidential. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason and without there being any negative consequences. In addition, should I not wish to answer any particular question or questions, I am free to decline.
- 3 I give permission to the researcher to audio record my responses. I understand that my name will not be linked with the research materials, and I will not be identified or identifiable in the report or reports that result from the research.
- 4 I agree for the data collected from me to be used in future research.
- 5 I agree to take part in the above research project.

Name of participant

Date

Signature

Researcher

Date

Signature

**APPENDIX C: NOTIFICATION OF ETHICAL APPROVAL BY THE
UNIVERSITY OF LEEDS RESEARCH ETHICAL COMMITTEE
(FACULTY OF EDUCATION, SOCIAL SCIENCES AND LAW)**

Research Support
3 Cavendish Road
University of Leeds
Leeds LS2 9JT

Tel: 0113 343 4873
E-mail: j.m.blaikie@adm.leeds.ac.uk



Ahmad Soahil Lodhi
School of Education
University of Leeds
Leeds, LS2 9JT

**AREA Faculty Research Ethics Committee
University of Leeds**

4 April 2011

Dear Ahmad

Title of study: An investigation of institutional research culture: a case study of a public university on Lahore, Pakistan
Ethics reference: AREA 10-082

I am pleased to inform you that the above research application has been reviewed by the ESSL, Environment and LUBS (AREA) Faculty Research Ethics Committee and following receipt of the amendments requested, I can confirm a favourable ethical opinion on the basis described in the application form and supporting documentation as of the date of this letter.

The following documentation was considered:

<i>Document</i>	<i>Version</i>	<i>Date</i>
AREA 10-082 researcher's 1st response.txt	1	01/04/11
AREA10-082 application.pdf	1	08/02/11
AREA10-082 questionnaire.pdf	1	08/02/11
AREA10-082 participant information sheet.pdf	1	08/02/11
AREA10-082 consent form.pdf	1	08/02/11

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 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.

Yours sincerely

Jennifer Blaikie
Research Ethics Administrator
Research Support
On behalf of Dr Anthea Hucklesby
Chair, AREA Faculty Research Ethics Committee
CC: Faculty Research Office/ Student's supervisor(s)

APPENDIX D: PARTICIPANT INFORMATION SHEET

Factors influencing institutional research culture: the case of a Pakistani university

I invite you to participate in my PhD research project. Before you take decision for participation in this research, it is important for you to understand its purpose and some important information. Please read the following details carefully. You may also discuss them with others if you wish so. If you need further details or find anything unclear here, you can ask me. Take your time to decide whether or not you wish to participate in this study.

Thank you for reading this information.

Purpose of the Study

This study aims to investigate and understand the research culture in a public university, Lahore, Pakistan. For this purpose, the opinions of academics and managers (of two selected faculties from the field of social sciences) about their research practices and university's environment will be analyzed and interpreted. Based on the need to design a context-specific framework that may help to promote research culture in the Pakistani public university, the study will also attempt to explore the influence of the context-specific factors on academics' research practices and vice versa and will make suggestions to strengthen the research culture.

Participation in this study:

Being an academic member, you have been invited for this study as you have firsthand experience of the prevailing research culture in your faculty. Your opinions will help me to understand the situation and to explore the ways to strengthen the research culture.

Almost all (100) academics of the two faculties would participate in questionnaire survey of this study. You would be one of them, if you choose to take part. Being a participant of this study, you will fill in a questionnaire, which contains simple questions about your research experiences and opinions about the research environment of your university. Filling in the questionnaire may take 20 to 30 minutes.

This study will also include 22 interviews of academics/ managers. If you decide to participate, the interview will consist of open-ended questions regarding your research experiences. It will take 40- 60 minutes. You can share your views frankly in English or Urdu whichever language is convenient for you.

The questionnaire and interview do not aim to assess your performance. Please feel free and respond to the questions according to your understanding.

It is not necessary for you to take part in both questionnaire and interview. You may participate only in questionnaire survey or interview. However, if you wish to participate in the interview please let me know so that I can give you a copy of informed consent and we can arrange time and venue for interview.

Voluntary Participation

Your involvement in this study is entirely voluntary. You are free to decide whether or not to participate. Your denial to take part in this research will not impose any penalty or loss of any benefits. Even if you decide to take part in this study, you can still withdraw from it at any stage of the research without any explanation. It will also not involve any kind of penalty.

The study will not involve travelling. I will personally distribute the questionnaire to you with the permission of your university administration. Interviews will also be conducted within your university premises or at any place of your liking/convenience.

Anonymity and Confidentiality

Your participation in this study will be kept anonymous and confidential. Your name or any other details (by which you may be identified) will not be included in the report of this research project or in any additional publication based on this research. Only the pseudonyms of the participants will be used in the report of this research.

In addition, your responses collected for the project will also be kept confidential. They will not be disclosed to your colleagues and university administration or any other person.

The preservation of Research Data

In this research, you will be invited to share your views and experiences about research practices. This information will not be used to assess you and/or your department for research performance. With the help of information you provide, I only aim to understand and explain the prevailing research culture in your university. All the information I collect from you during the course of the research will be saved only for five years after the completion of my PhD study (expected to be completed within next two years). However, I assure you again that you will not be identifiable in any publications based on this research even after the completion of my PhD.

Recording of the interviews:

The interview will be audio recorded so that I may recall our conversation later on in order to transcribe it. You may ask for a copy of transcription of the interview. In this way, you can make sure that your views have not been misunderstood by the researcher. The audio recordings of our conversation will be used only for presentation and analysis

of data. They will not be used for any other purpose and any person outside the project will not be allowed to access the original recordings.

Contact for further information:

If you need any information or further clarification about this 'information sheet', you may contact me through email or telephone with the help of the following address:

Ahmad Sohail Lodhi

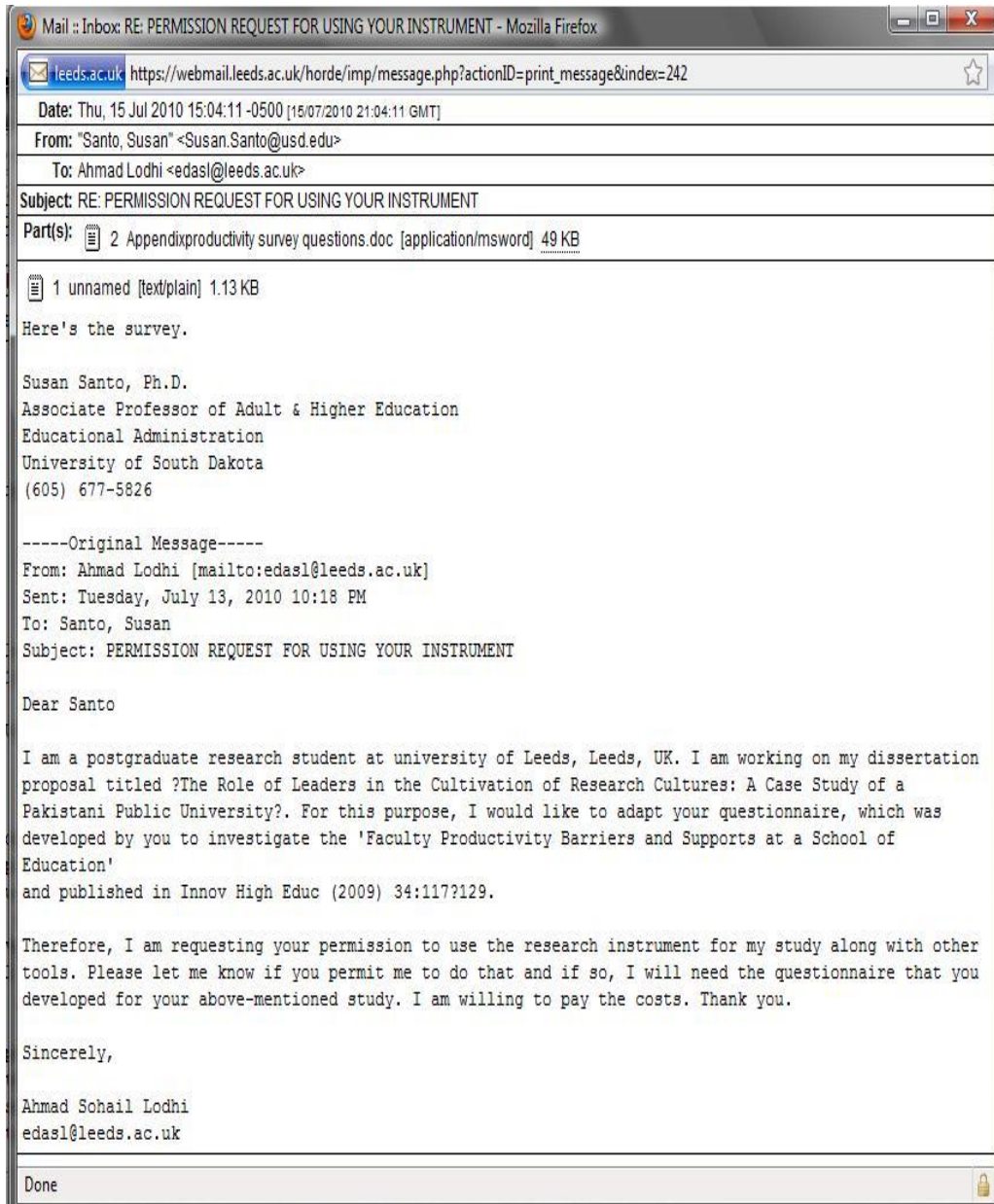
Email: edasl@leeds.ac.uk

Telephone: 0092-321-4299001

Thank you very much for reading this information sheet

Note: You can keep this information sheet, if you wish to participate in this study.

APPENDIX E: DOCUMENTARY EVIDENCE OF PERMISSION TO USE THE QUESTIONNAIRE



Mail :: Inbox: RE: PERMISSION REQUEST FOR USING YOUR INSTRUMENT - Mozilla Firefox

leeds.ac.uk https://webmail.leeds.ac.uk/horde/imp/message.php?actionID=print_message&index=242

Date: Thu, 15 Jul 2010 15:04:11 -0500 [15/07/2010 21:04:11 GMT]

From: "Santo, Susan" <Susan.Santo@usd.edu>

To: Ahmad Lodhi <edas1@leeds.ac.uk>

Subject: RE: PERMISSION REQUEST FOR USING YOUR INSTRUMENT

Part(s): 2 Appendixproductivity survey questions.doc [application/msword] 49 KB

1 unnamed [text/plain] 1.13 KB

Here's the survey.

Susan Santo, Ph.D.
Associate Professor of Adult & Higher Education
Educational Administration
University of South Dakota
(605) 677-5826

-----Original Message-----
From: Ahmad Lodhi [mailto:edas1@leeds.ac.uk]
Sent: Tuesday, July 13, 2010 10:18 PM
To: Santo, Susan
Subject: PERMISSION REQUEST FOR USING YOUR INSTRUMENT

Dear Santo

I am a postgraduate research student at university of Leeds, Leeds, UK. I am working on my dissertation proposal titled 'The Role of Leaders in the Cultivation of Research Cultures: A Case Study of a Pakistani Public University'. For this purpose, I would like to adapt your questionnaire, which was developed by you to investigate the 'Faculty Productivity Barriers and Supports at a School of Education' and published in Innov High Educ (2009) 34:117-129.

Therefore, I am requesting your permission to use the research instrument for my study along with other tools. Please let me know if you permit me to do that and if so, I will need the questionnaire that you developed for your above-mentioned study. I am willing to pay the costs. Thank you.

Sincerely,

Ahmad Sohail Lodhi
edas1@leeds.ac.uk

Done

APPENDIX F: INTERVIEW SCHEDULE

- What do you think about research?.....what is research in your opinion?.... does it support teaching/academic activities?... is it beneficial for the university or society in general in what ways?
- How do the people around you perceive research?... would you like to be known as a researcher?
- What is a research culture in your opinion?.... to what extent does it exist in your university?
- Do you engage yourself in research regularly?.... why/why not?what are your major professional responsibilities/work?
- Can you compare your recent research work with the your first one?.... Is there any difference? ... what changes can you observe in the quality, approach, and nature of your research work?
- Do you value research? why (peer recognition, students' need, approval for society, earning, promotion etc.)/ why not?
- In your opinion, what kinds of skills are necessary for conducting research?...does the university support you to develop these skills (through trainings, courses)?... does any other agency help you in this regard?
- What are your aspirations in doing research? what motivates/ de-motivates you to conduct research?... do your colleagues help or inspire you to conduct research?
- What kind of research (e.g. quantitative, qualitative, action research, etc.) do/would you prefer to conduct?.... do you know/follow the dominant traditions of research related to your field?..... can you tell me the traditions you generally follow?
- In what ways do your university support your research activities? library, internet, funds, conferences, etc.?.... Do your colleagues support you in research activities?
- Do you get enough opportunities to conduct research? are you happy with your university's policy in this regard?... Is there any other funding agency which supports your research activities?

- Would you like to tell me the procedure for doing research in your university/discipline? for getting funds and permission for it?
- What is the possible outcome of your research? how can it be measured? what is the criterion used by your university/funding agency to measure the research productivity of academics?
- Given the chance, what changes would you like to bring in the present research policies of your university/funding agency?....what changes do you think are more urgent?
- What should academics do, if needed, to improve their research performance (in both quality and quantity)?

APPENDIX G: LIST OF REVIEWED DOCUMENTS

Please be informed that some of the documents have been anonymised for the sake of confidentiality of an institution. Therefore, it would be difficult for you to trace some of the references. Please do not hesitate to contact the author, if you are interested in accessing these documents.

1. GOVERNMENT OF PAKISTAN. 1970. New Education Policy. Islamabad: Ministry of Education.
2. GOVERNMENT OF PAKISTAN. 1972. The Education Policy 1972. Islamabad: Ministry of Education.
3. GOVERNMENT OF PAKISTAN. 1998. National Education Policy. Islamabad: Ministry of Education.
4. GOVERNMENT OF PAKISTAN. 2002. Higher Education Commission Ordinance.
5. GOVERNMENT OF PAKISTAN. 2002. University ordinance 2002.
6. HIGHER EDUCATION COMMISSION. 2005. Medium Term Development Framework 2005-10. Islamabad.
7. HIGHER EDUCATION COMMISSION. 2006. Higher Education Commission Report 2005-2006. Islamabad.
8. HIGHER EDUCATION COMMISSION. 2009. Higher Education Commission Report 2002-2008. Islamabad.
9. STEERING COMMITTEE ON HIGHER EDUCATION. 2002. Final report of Steering Committee on Higher Education Islamabad.
10. UNIVERSITY X. 2002. The Calendar of University X. Lahore: University X.
11. UNIVERSITY X. 2011. Fact Book University X 2011. Lahore: University X.
12. UNIVERSITY X. 2011. Report on the Progress of University X : Jan 2008 - December 2010. Lahore: University X.
13. UNIVERSITY X. 2011. University X's office of research annual report 2010-11. Lahore: University X.
14. WORLD BANK-UNESCO TASK FORCE. 2000. Higher Education in Developing Countries: Peril and Promise Washington, DC: World Bank.
15. Official website of HIGHER EDUCATION COMMISSION of Pakistan www.hec.gov.pk/
16. Official website of UNIVERSITY X