Sociological Analysis of Teachers Perspective on Students Academic Performance in Higher Education in the Punjab

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INTERNATIONAL ISLAMIC UNIVERSIT ISLAMABAD
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This is certified that the contents and formats of the thesis titled "***Sociological Analysis of Teachers Perspective on Students Academic Performance in Higher Education in the Punjab***" Submitted by Muhammad Shoaib Registration No. 29-FSS/PHDSOC/F16 in partial fulfillment of the requirement for the award of Degree of Doctor of Philosophy in Sociology have been evaluated and approved by the examiners and viva-voce Committee after successful Public Defence.

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Dear Sir,

The undersigned pertaining registration number 29-FSS/PHDSOC/F16, Department of Sociology, International Islamic University, Islamabad has completed his PhD dissertation titled "Sociological Analysis of Teachers Perspectives on Students Academic Performance in Higher Education in the Punjab" under the supervision of Dr. Hazir Ullah, Associate Professor and Director ORIC, Quaid-i-Azam University, Islamabad. It is hereby stated that, in compliance of the recommendations of the foreign and internal evaluators, the undersigned has incorporated all the recommendations in the above-mentioned PhD thesis.

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FORWARDING SHEET

This thesis entitled, "SOCIOLOGICAL ANALYSIS OF TEACHERS PERSPECTIVES ON STUDENTS ACADEMIC PERFORMANCE IN HIGHER EDUCATION IN THE PUNJAB" submitted by Muhammad Shoaib (29-FSS/PHDSOC/F16) in partial fulfillment of the requirement of PhD degree in Sociology has been completed under my supervision. I am satisfied with the quality and originality of the research work. I allow Mr. Muhammad Shoaib to submit the dissertation to concerned authorities for further process as per rules and regulations.

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STATEMENT OF UNDERSTANDING

I, Muhammad Shoaib Reg. No. 29-FSS/PHDSOC/F16, student of PhD Sociology, Department of Sociology, International Islamic University Islamabad hereby declare that the thesis entitled, "Sociological Analysis of Teachers Perspectives on Students Academic Performance in Higher Education in the Punjab" submitted in partial fulfillment for the requirement of PhD degree is my original work, and has not been submitted for any other degree in national or international institution. Moreover, all the sources that I have been indicated, acknowledged by means of complete reference.

Date: 12-04-2021

Signature: _____

Muhammad Shoaib

DEDICATION

My thesis is dedicated to my family and teachers who gave me strength, provided me with a good and sound educational background.

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The successful completion of this research was impossible without meaningful contributions from very important people who were directly or indirectly supporting me. I would therefore like to express my indebtedness to God Almighty who gave me wonderful people and grace sufficient to endure the whole process.

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Muhammad Shoaib

ABSTRACT

The main purpose of this research was to examine gender differences in academic performance in higher education in Punjab. The main focus was to unpack the reasons for female students' outperformance and male students' underperformance in higher education in Pakistan. In this study, I used a quantitative approach to examine gender reversal change at tertiary level education at the University of Punjab. I employed content analysis techniques on the examination result books of the above-mentioned university from 2006-2015 and analyzed female and male students' top three positions at master level examinations taken as indicators of outperformance. For primary data, the study sample consisted of 253 university teachers teaching in the university (the country's oldest and largest Public Sector University) in Pakistan using a proportionate random sampling technique. The data was collected by using a well-structured questionnaire. The analysis was carried out with the help of AMOS, Statistica, and Statistical Package for Social Sciences (SPSS). Based on the findings of the analysis of result books of ten years, I concluded that there was a vivid trend of young females' outdoing males in education at the tertiary level. Moreover, the results of primary data revealed multiple factors of gender reversal change in terms of female-outperform and male-underperformance at the tertiary level such as familial, educational, motivational, and sociocultural domains. Based on study findings, I recommended that counseling services should be provided to students in educational institutions for students coming from rural areas (mostly males) and families along with educational institutions should provide equal learning environment and opportunities to female and male students with the changing landscapes of the society.

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List of Abbreviations and Acronyms

Abbreviations	Explanation
A	Agree
AGFI	Adjusted Goodness-of-fit Statistic
ANN	Artificial Neural Network
CFI	Comparative Fit Index
D	Disagree
df	Degree of Freedom
GFI	Goodness-of-fit Statistic
HEC	Higher Education Commission
HEIs	Higher Education Institutions
ICT	Information and Communication Technology
IFI	Incremental Fit Index
MA	Master of Arts
MSc	Master of Science
RMSEA	Root Mean Square Error of Approximation
SA	Strongly Agree
SD	Strongly Disagree
SD	Standard Deviation
SE	Standard Error
SEM	Structure Equation Modeling
SES	Socio-economic Status
SLA	Slightly Agree
SLD	Slightly Disagree
TLI	Tucker Lewis Index
U	The Mann-Whitney Test Statistic
UAE	United Arab Emirates
UK	United Kingdom
US	United States
USA	United States of America
α	Cronbach's Index of Internal Consistency
β	Beta: Population Values of Regression Coefficients
$\chi 2$	The Chi-square Distribution

Chapter One

Introduction

1.1 Introduction

Girls/women in Pakistan, since 1947, have limited access to education in general and higher education in particular. The last fifteen years, despite unequal access to education, demonstrates a gender reverse change in education performance (girls are outperforming boys in education). This study is an attempt to understand and explain the gender reverse trend in higher education performance from university teachers' perspective in the Punjab, Pakistan. The main focus of the study is to indicate the contributing factors of female outperformance and male underperformance in higher education. This gender reverse change in education performance is a very important issue and needs to be examined and highlighted with great academic sophistication.

The recent decades have shown a variation in female and male educational performance across Pakistan (Shoaib & Ullah, 2019; Ullah & Ullah, 2019). The change shows females' outperformance and males' underperformance in education. Educational results on every level (secondary, higher secondary, graduate and post-graduate levels), show vivid females' outperformance, unlike the developed world (Johnson, 2017; Legewie & DiPrete, 2012; Lortie, Castrogiovanni, & Cox, 2017; Mead, 2006; Saa, 2016; Skelton, 2012). Nevertheless, the phenomenon/issue has not received serious academic attention in Pakistan. Before engaging and explaining the key concept, it is important to highlight the gender reverse change in education performance in the broader Pakistani context.

1.2 Background of the Study

The known human history reveals that men have more and better access to education than women. Men's participation (enrollment), graduation rate and performance remained higher than women (OECD, 2008). Since the mid-1990, however, the gender gap has mainly been due the disadvantage of men. Feminists, educationists and sociologists of education have documented a vivid gender reverse change in educational participation and performance (more women in higher education and their outperformance as compared to men (Bobbitt-Zeher, 2007). The trend of this gender reverse in education performance in Pakistan is almost similar to other parts of the world.

Access to and participation in education in Pakistan is much gendered (Ullah, 2013). Since the inception of Pakistan, the gender gap between male and female literacy has been attempted to be bridged. Education for all, without any discrimination of sex, race and ethnicity has been delineated in all the education policies developed so far (Siddiqui, 2016). The government of Pakistan has been found committed to the cause of free and compulsory education for all irrespective of any kind of discrimination. As Article 25-A of the 1973 constitution of Pakistan defines the right of education, "The state shall provide free and compulsory education to all children (irrespective of male and female) to the age of five to sixteen years in such manner as may be determined by the law." Beside the constitutional adherence, Pakistan is dedicated to access quality and equality of education infidelity to signatory of international declarations and conventions i.e., World Declaration on Education For All (1990) and the Dakar Framework for Action for EFA-2000 (Ullah, 2013). Inspite of these agreements at all the levels, the literacy rate in the country is 62.3 percent (72.5 % for male and 52.8 % for female). It is observed that there exists a series of

regional variations in access to education and literacy as well. Therefore, the problem of male and female access to equal education in general and higher education in particular is embedded in history (Vieira, Vieira, & Raposo, 2018).

The territorial expanse of Pakistan, since its inception, from the British colonial rule has been found underdeveloped and situation is not so indifferent presently. However, the area constituting Pakistan was backward by all means including education sector. Furthermore, since independence almost 85 percent population was illiterate while literacy rate for women in general and rural women in particular was literally zero (Bengali, 1999). At that time, 189 Madrasas were found predominantly and few schools were perpetuating the modern education while only one higher education institution existed i.e., University of Punjab. Primarily, the male dominated Madrasas and few modern educational institutions used to provide education to males. Whereas in the University of Punjab, there were only 644 registered students, comprising predominantly men (Azhar, 2009; Batool, Sajid, & Shaheen, 2013). The concept of education is believed to be instrumental for men and ornamental for women (Ullah, Ali, & Ahmad, 2018). Previously, a traditional approach was adopted to educate females either at home or to discontinue as they reach the age of eleven to twelve and were supposed to get married at early age of fourteen to fifteen. Females were trained to attract the men having higher education in the elite class.

For the last seventy years, females in Pakistan have significant progress in education. Due to education, wider gap between the literacy of male and female fell off to the great extent (Economic Survey of Pakistan, 2018). As the imbalance between male and female literacy since 1947 to 2000 have faded away, a reverse change has been observed where a greater ratio of females is entering in the higher education than males for the last

few decades. Due to this reversal change in education generally and higher education in particular, female students are more in number than male students in higher education accomplishing the 2025 vision of Higher Education Commission of Pakistan (Batool et al., 2013). Resultantly, a categorical change has been observed where female students not only outperform the male students in higher education, DAIs and Universities but also outperform males in almost all the education fields. Such phenomenon is not restricted to Pakistan but has been evident across the globe.

Generally, in the Punjab, females as compared to males have less opportunities and access to education in general and higher education in particular. There are multiple and diverse factors discouraging girls' access to tertiary education (Azhar, 2009; Batool et al., 2013). Males, on the other hand, have greater and easy access to education (Batool et al., 2013; Malik & Courtney, 2011; Niazi & Mace, 2006; Rehman et al., 2013). Despite limited opportunities and access to education, females' outperformance in tertiary education needs to be discussed and highlighted as positive trend (Ali, 2012; Batool et al., 2013; Niazi & Mace, 2006). This is an important trend to know, in Pakistani context, how well young females are performing and doing than young males in education.

1.3 Female Students' Outperformance and Male Underperformance

Educational performance has always been an inspirational source of scholarship within sociology of education (Powell et al., 2019). However, recently the debate on educational performance has acquired renewed toll of gender differentials (Frijters, Brown, & Greenberg, 2019; Karioris & Allan, 2019; Randolph, 2019; Wright & Horta, 2018). It has been observed that female candidates tend to significantly outperform male students (Frijters et al., 2019; Whyte, 2017; Wright & Horta, 2018). In fact, males'

underperformance has an attenuating effect on their economic participation while educationally outperforming females might not opt for joining the labour force (Okpara, Squillace, & Erondu, 2005; Rehman et al., 2013). Apart from this applied concern about educational performance, the question of gender based differences in educational performance has its own intrinsic worth in the field of educational sociology (Muñoz-Bullón, Sanchez-Bueno, & Vos-Saz, 2017; Randolph, 2019; Rogers & Ruth, 2019; Van Den Besselaar & Sandström, 2016).

Hence, opting for a holistic approach, the present research revolves around a comprehensive model of female outperformance and male underperformance. Various factors and determinants of performance differentials include sociological factors such as historical, cultural, structural as well as critical factors (Ahmad, Pervaiz, & Aleem, 2015; Kuo, Casillas, & Allen, 2019; Yousef, 2017). Additionally, the model for analysis entails those related variables which may be upon the educational performance through the mediation of the above-mentioned factors. These include consumption of mass media, peer influence, educational, familial and parenting related factors (Muller, 2018; Van Hek, Kraaykamp, & Wolbers, 2015). It is worth noting that most of these factors are developmental and socializing in nature (Adler, Kless, & Adler, 1992). Furthermore, these developmental factors may also affect some psychological factors including motivational factors, commitment and the construction of educational self (Lee & Sten, 2017; Meece, Glienke, & Burg, 2006; Preckel, Holling, & Vock, 2006).

There exists a plenty of studies on the gender related differences in higher educational performance in the western society (Baye & Monseur, 2016; Jo, Sarah Van de, Hans, & Mieke Van, 2016; Patton et al., 2017; Robb & Watson, 2012; Van Den Besselaar

& Sandström, 2016). One stream of researchers highlight the differences in the selection of subjects and consequent career paths (Duffy, Warren, & Walsh, 2001; Frosh, Phoenix, & Pattman, 2003). Most of the foundational studies tend to describe the female outperformance in terms of socialization differences, communication practices and learning methods (Adler et al., 1992; Ainin, Naqshbandi, Moghavvemi, & Jaafar, 2015). It is assumed that because females are socialized to adopt caring roles (Steinmayr & Spinath, 2008), which demand good interpersonal and communicational skills (Frijters et al., 2019). Ultimately, this training places female students at an advantaged position (Cheraghi & Schøtt, 2015). Most of this kind of studies are built upon the assumptions of gender role theory (Adler et al., 1992; Mendez & Crawford, 2002).

Developing world has a keen interest in the involvement of youth public in the economic institutions (Atinaf & Petros, 2016; Baoyan & Minggang, 2015; Croizet & Claire, 1998). Hence, the phenomenon of female under participation labor force and concomitant outperformance in education has become a pressing concern (Okpara et al., 2005). Unlike developed countries the developing countries such as Pakistan face a dual dilemma of coping with the sustained pace of modernization on one hand and inertia posed by cultural, social and critical systems on the other (Bengali, 1999; Choudhary, 2014; Malik & Courtney, 2011). When it comes to the educational performance and gender differentials, one important factor consists of the same cultural inertia and wide spread norms of patriarchy (Azhar, 2009). The debates revolve around the axiomatic content of the empirical research based upon the modernization thesis (Saigol, 1997). In fact, the modernization thesis implies that developing countries have to opt the same cultural, educational and technological path of western society (Suryadarma, Suryahadi, Sumarto,

& Rogers, 2006). They have to achieve the standards of development in higher education (Rehman et al., 2013). Female autonomy and emancipation entails that they have to reduce the educational gap between males and females on different fronts (Hung, Yoong, & Brown, 2012; Malik & Courtney, 2011). The net sequel of this debate is that discourses of women empowerment in the developing world have created an extremely desirable educational self-concept of females (Bezzina, 2010).

Underdeveloped countries face many social and natural problems including extreme poverty, epidemics, mass migrations, conflicts and famine (Moses Oketch, 2019; Okul, Sika, & Olel, 2019). Therefore, education, especially, the higher education has a little direct policy relevance to these countries (Adiya, 2010). Nonetheless, education is often conceived as a tool of filling the labor gap in the government institutions (Okpara et al., 2005; Rehman et al., 2013). Moreover, commercialization of higher education is not a priority due to lack of infrastructure and funds. Furthermore, it is worth mentioning that the situation in such countries is not favorable to female mobility and outperformance in education (Chiu & McBride-Chang, 2006). Another cultural factor persistent across the sub-Saharan Africa consists of the high levels of fertility and early age marriages that prevent females from getting higher education (Callaghan & Papageorgiou, 2015).

1.4 Problem Statement

Females and males' academic performance in education has attracted academicians since 1970s (see Corbett et al., 2008). Since then, a considerable number of research studies (see Frosh et al., 2003; Buchmann et al., 2010; Burgess et al., 2004; Chiu & McBride-Chang, 2006; Dee, 2006; Duckworth & Seligman, 2006; Lahelma, 2005) have been carried out on the issue in different contexts (i.e., USA, UK, Australia, Canada, New Zealand, Sweden,

Denmark and Norway). The phenomena (female outperformance and male underperformance) has attracted policy makers, politicians, media and academicians across the world (see Smith, 2003; Ringrose, 2007). In many countries (i.e., UK, USA), this transformation was called boys' crisis and challenge to masculinity. The global north (i.e. Australia, Canada, Germany, Denmark, France, UK, Japan, Poland etc.) has been trying to improve boys' performance and put them on competitive pace with the girls (see Lynch & Feeley, 2009). Females' outperformance and boys' poor education achievements are growing structural transformations happening in Pakistan, though unnoticed. The aim of this study was to understand the gender difference in educational attainment from teachers' point of view to initiate debate on the issue. I intend to examine how teachers explain females' outperformance and males' underperformance in Pakistan higher education. The exact title of this study is "Sociological Analysis of Teachers Perspective on Students Academic Performance in Higher Education in the Punjab". The key concept used in the title are explained in the chapter of methodology.

1.5 Objectives of the Study

The study is carried out with the following objectives:

i. To study teachers' perception of the current trends of female and male students' differential academic performance at the university level.

ii. To examine top three position holders across the axis of gender.

iii. To unpack the underlying factors of female outperformance and male underperformance at the university level.

iv. To analyze the intersection of class and gender with reference to academic achievements.

1.6 Hypotheses

Based on conceptual framework model 1, following hypotheses have been developed:

H1: Socio-economic status of students' families has direct impact on educational determinants of the students.

H2: Socio-economic status of students' families has direct impact on the cultural factors

H3: Educational determinants have direct impact on gender differentials in academic performance.

H4: Cultural factors have direct impact on educational determinants.

H5: Socio-economic status of students' families has indirect effect on educational determinants via cultural factors of gender differentials in academic performance.

H6: Cultural factor of family has indirect effect on gender differentials in academic performance in higher education via educational determinants.

H7: Socio-economic status of students' family has indirect effect on gender differentials in academic performance via cultural factors and educational determinants

Further, the model 1 applies, separately, on female and male faculty members. It describes the differences of attitude towards input and output variables along with existing path relationship by the gender of the respondents. Moreover, it also applies, separately, on teachers' geographical location (the teachers belong to rural areas and urban backgrounds).

Based on conceptual framework model 2, following hypotheses have developed;

H1: Socio-economic status of students' families has direct impact on the cultural factors of students' academic performance.

H2: Socio-economic status has direct impact on gender differentials in academic performance.

H3: Cultural factors have direct impact on motivation and commitment of the students in academic performance.

H4: Motivation and commitment have direct impact on educational determinants of students' academic performance.

H5: Educational determinants have direct impact on gender differentials in academic performance.

H6: Socio-economic status of students' families have indirect effect on motivation and commitment via cultural factors of gender differentials in academic performance.

H7: Cultural factor of family has indirect significant effects on educational determinants via motivation and commitment.

H8: Motivation and commitment have indirect effects on gender differentials in academic performance via educational determinants.

H9: Socio-economic status of students' family has indirect effect on educational determinants via cultural factors and motivation and commitment.

H10: There was indirect relationship between cultural factors and gender differentials in academic performance of the students in higher education via motivation, commitment and educational determinants.

H11: There were indirect effects of socio-economic status of students' family on gender differentials in academic performance of the students by the mediation of cultural factors, motivation, commitment and educational determinants.

Further, model 2 applies, separately, on female and male faculty members. It describes the differences of attitude toward input and output variables along with existing path relationship by the gender of the respondents. Moreover, it also applies, separately on teachers' geographical location (the teachers belong to rural areas and urban backgrounds). Based on conceptual framework model 3, following hypotheses have been formulated;

H1: Socio-economic status of the students' families has direct impact on gender differentials in academic performance.

H2: Parental involvement has direct impact on gender differentials in academic performance.

H3: Role of social construction of educational self has direct impact on gender differentials in academic performance.

H4: Role of gender specific study culture has direct impact on gender differentials in academic performance.

H5: Educational determinants of the students have direct impact on gender differentials in academic performance.

H6: There is covariation between students' home background (in context of favourable socialization) and socio-economic status of the family

Apart from the aforementioned hypotheses, there are 19 other hypotheses having indirect effects. Further, model 3 applies, separately, on female and male faculty members. It describes the differences of attitude toward input and output variables along with existing path relationship of the gender of the respondents. Moreover, it also applies, separately, on teachers' geographical location (the teachers belong to rural areas or to urban backgrounds).

At the end, Artificial Neural Network statistical test applies to cluster or label raw data and interprets sensory data through a kind of machine perception. The patterns have been recognized as contained vectors, numerical and real-world data translated. Therefore, it applies on the factors for checking the gender differentials in academic performance of the students.

Sociological analysis model focuses on four important factors. For analyzing a social phenomena, it is important to take into consideration the historical background, cultural aspects, structural and critical factors (Altbach, Reisberg, & Rumbley, 2019). These aspects are discussed in detail in the context of teachers' perspectives on gender differentials in academic performance in terms of female students' outperformance and male students' underperformance in higher education.

1.7 Sociological Analysis

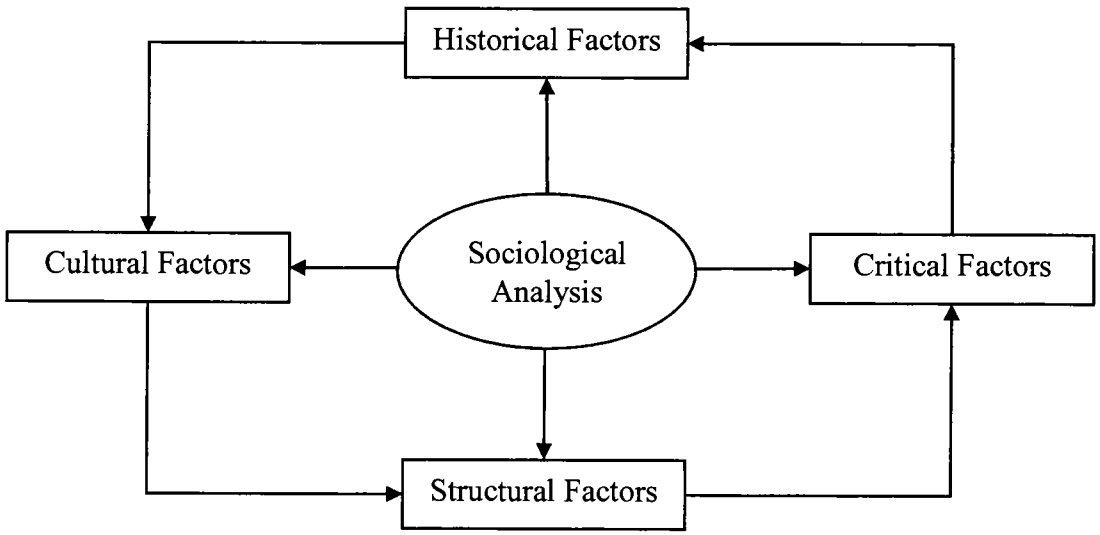

Figure 1.1. The sociological analysis template

Historical Factors: As far as the female outperformance and male underperformance is concerned, it has a clear starting point related to some historical factors such as promotion of higher education for women empowerment (Collins, McLeod, & Kenway, 2000). These

historical factors have contributed towards greater levels of female enrollment in higher education institutions (Ford & Moore, 2013). Similarly, historical trends in the gender mechanisms have given greater space to female students to outperform the males and, hence, to join the labor forces (Gagné, Schonert-Reichl, Costigan, Guhn, & Shapka, 2019). The researcher has conceived that the historical trends and shifts in the dynamics of gender in higher education have been a binding trend for female outperformance and male underperformance.

Cultural Factors: Cultural aspects have been playing an important role in formation of teachers' opinion which influences their behavior regarding gender differentials in academic performance (Noguera, 2003). Culture entails various normative value-laden guidelines for structurally approved behaviours and attitudes (Altbach et al., 2019). The entire culture structure is used to reproduce a specific social texture through the process of socialization (Watson, Kehler, & Martino, 2010). It is exactly true in a sense that the researcher has conceived various literature-based hunches about the effects of the cultural factors on teachers' perspectives regarding students' academic performance in higher education through the differentials of gender in the Punjab.

Structural Factors: Various social institutions have influenced teachers' perspectives on female outperformance and male underperformance in higher education. Insofar as the institutions of a society are concerned, sociology assumes that there exists a congruent institutional interdependence between various systems (Gagné et al., 2019). Hence, the educational system and its subsystems have to do with other spheres of institutional ethics (Altbach et al., 2019) which include religion, economy, politics and mass media. While the cultures structure provides normative standards of behavior, the institutional arrangements

help reinforcing the standards. Institutions also delegate authority, and channelize power to ensure durable patterns of behavior. According to Talcott Parsons, the basic unit of institutions consist of the allocation of roles and status (Parsons, Shils, & Smelser, 1965). Parsonian concept is useful to understand how roles and statuses within the educational institution help structuring the behavior and behavioural expectations of teachers, and the female and male students.

Critical Factors: Critical factors of students' academic performance are teachers' expectation, and attitude about the inequality in the treatment of students based on gender undergone any substantial changes (Altbach et al., 2019). Critical factors have grown in the sociological analysis because many researchers who asses the educational performance based on gender tend to opt for a critical stance (Gagné et al., 2019; Najaf, Sultana, & Jamal, 2019; Parsons, 2019). This perspective offers the advantage of being critical towards status quo in the higher education. Beyond cultural norms of gender and structural constraints, the critical perspective may challenge power, prestige, status, income inequality and exploitation which permeate the educational policy.

1.8 Significance of the Study

This study, I do believe, is of great theoretical and practical significance. Theoretically the findings of this study would be intend to understand the real determinants and correlates of female success and male's underperformance. It provides and offers multidisciplinary explanation for the phenomena at hand including gender specific study culture and social construction of educational self. However, the evidence and the ultimate analysis cover the breadth and the depth of phenomena in a typical patriarchic society such as Pakistan.

Practically, the study's findings are of great importance for the policy makers and contribute to the educational administration and policy development in Pakistan. Therefore, a series of recommendations have been given for the benefit of research community and future incursions in this field. It provides corrective measures for a better educational planning and classroom management. This research document will be available as a teaching-learning material far future research reference.

1.9 Organization of the Thesis

Chapter 1: This chapter provides the introduction of the topic in hand. It consists of background of the study, problem statement, objectives of the study, main hypothesis and significance of the study.

Chapter 2: Chapter two comprises literature review. It presents the published scholarship and theoretical argument on the issue of gender and education performance. It is divided into three parts. Part one skimmed the empirical studies. Part two consists of theoretical review whereas part three outlines Theoretical Framework which informs the analysis. The empirical review skims previous studies and summarizes their findings for strengthening my argument. The theoretical review provides good analytical lens and enabled me to engage to compare and critical analyzed the existing debate i.e., biological versus social constructionist argument around the issue of gender and education. Theoretical review provides good understanding, and some key concepts for developing theoretical framework. Theoretical framework encompasses potential concepts which have been utilized for informed analysis of my data throughout the thesis.

Chapter 3: Chapter 3 outlines the methodology used in the present research. It includes study design, samplings procedures, calculation and proportional allocation of sample to

each strata and sampling frame. It further provides techniques (secondary data-content analysis and primary data-survey) and tools (Data Sheet and Questionnaire), pretesting and procedures of data collection. It also focusses on data analysis software/s and techniques used to analyze the data. Further, this section of dissertation provides descriptive and inferential analysis of the statistical techniques used to conduct research. This section also delivers definitions of the variables and conceptual framework along with field experiences.

Chapter 4: Chapter 4 is content analysis of the results. It covers young females' and males' performance in master level examinations from 2006 to 2015. The data come from the top three position holders of MA/MSc level programmes in the University of the Punjab, Pakistan. Top three positions in master level examinations have been taken as indicators of outperformance. The analysis of results books of ten years depicts female students' outperformance and male students' underperformance in education. The analysis enables to draw conclusion that there is a vivid trend of young female's outdoing males in education at tertiary level, especially in the social sciences and humanities discipline.

Chapter 5: Chapter 5 presents primary data collected from the university teachers on young females' and males' performance in master level examinations. It has been divided into two main parts: a) descriptive statistics and b) inferential statistics. Descriptive statistics is a process to analyze and summarize data and study findings in a meaningful way. It present the patterns of data and allows to make conclusion. Similarly, it is the simplest and clearest way of presenting raw data in the form of frequency distribution along with percentages and mean value of the data. It allows simple interpretation and conclusion of the study findings. Moreover, the second part consists of inferential statistical analysis.

This portion presents Confirmatory Factor Analysis (CFA), normality test, Kruskal Wallis Test, Kendall's tau-b and Chi-square statistical tests. Further, it implements two multivariate techniques namely Structural Equation Modelling (SEM) and Artificial Neural Network (ANN) to test the hypotheses. SEM applies to identify the impact of different variables on gender differentials in academic performance of the students. Whereas, ANN predicts the gender differentials in academic performance based on the using of factors.

Chapter 6: This chapter deals with the key findings and debate of the dissertation. It also provides a critical analysis of the research problem. Moreover, this section also provides similarities and differences between my study and previous researches in this area.

Chapter 7: It sums up the study. It includes conclusion, summary and recommendations. The recommendations are based on the study's findings. It also consists of the implications and limitation of the study.

Chapter Two

Review of Literature

2.1 Introduction

This chapter of the dissertation gives a brief literature review on the issue under consideration. It is divided into three parts: a) empirical review, b) theoretical review and c) theoretical framework. The empirical review skimmed previous studies and summarized the findings for strengthening my argument. The theoretical review guides the study and enables me to engage the biological versus social constructionist debate in the analysis of my findings. The theoretical review provides an understanding of key concepts that have been used as a theoretical framework. The theoretical framework provides potential concepts that are of great help for my analysis and argument throughout the study.

2.2 Empirical Review

The empirical review skimmed previous empirical studies and summarized their findings for strengthening my argument. This section is divided into two main parts a) female and male students' academic performance and b) factors of female and male students' academic performance. Furthermore, each section consists of bifurcation with developed, developing and Muslim countries.

2.2.1 Female and Male Students' Academic Performance in Developed Countries

The recent decades have seen a change in the gendered geography of education. Many studies demonstrated that females are doing better than males in education (Carrier, 2009; Hicks, Johnson, Iacono, & McGue, 2008; Lahelma, 2005; Meece et al., 2006; Preckel, Goetz, Pekrun, & Kleine, 2008; Spinath, Spinath, & Plomin, 2008; Steinmayr & Spinath, 2008) Initially, it is argued that girls, at school level, are performing better than boys

(Carrier, 2009; Matthews, Ponitz, & Morrison, 2009; Steinmayr & Spinath, 2008). It is pertinent to mention here that boys underperformance and girls outperformance is not limited to school level but also prevails in higher education as well (Batool et al., 2013; Houtte, 2004). I deem it pertinent to give a brief history of gendered education at the university level both in the developed and developing countries.

In the context of Australia, research findings also support the argument that female students outperform and male students underperform in education including higher education (Devlin, Kift, Nelson, Smith, & McKay, 2012; Hodgetts & Lecouteur, 2010; Perry & McConney, 2013; Ramsay, 2001). As mentioned by Hodgetts and Lecouteur (2010) and Ramsay (2001) that the female students are continuously outperforming male students since the last three decades in Australia. The study conducted by Hodgetts and Lecouteur (2010) revealed that female students outperformed male students in education and their names as boys positioning as 'disadvantaged' in Australia. Similarly, Grebennikov and Skaines (2009) asserted that female students have higher access to facilities in Australian higher education institutions and they are outplaying male students in examinations.

Canada has also witnessed a similar gender reversal trends over the past 30 years in higher education (Frenette & Zeman, 2007). Perry and McConney (2013) argue that female students outnumber male students in higher education in Canada. There are several studies on gender reversal in academic performance in higher education (Gagné et al., 2019; Johnstone & Lee, 2014; Lascano, Galambos, & Hoglund, 2013). As pointed out by Frenette and Zeman (2007) 58 percent of the students are female in Canadian universities and they are outscoring male students in examinations. Furthermore, Lupart, Cannon, and

Telfer (2004) also asserted that female students are outpacing male students in learning and performing in examination results.

In France, female education has become the significant fact where female students are more than male students in schools, colleges and universities (Fryberg, Covarrubias, & Burack, 2013; Martínez-Cantos, 2017; Mendolicchio & Rhein, 2014; Piussi & Arnaus, 2010; Thijs, van Dijk, Stoof, & Notten, 2015). Moreover, at the primary and secondary level of education females are outperforming their counterparts in grades as well as occupying most of the higher positions (Kislev, 2016; Mendolicchio & Rhein, 2014; Powell et al., 2019). Furthermore, at higher education level, female students are outclassing male students in participation and examinations (Piussi & Arnaus, 2010). Similarly, Terrier (2016) assert that male students lag in schools which results in their further education. Another study by Hartjen and Priyadarsini (2003) also pointed out that female students are performing well in examinations in France. Duru-Bellat, Kieffer, and Reimer (2008) reported that female students mostly excel in male counterparts in education as well as in the professional fields. According to the findings of Gestsdottir et al. (2014), female students show good results in education as compared to male students in France.

As concerned with German higher education, several research findings have reported that female students outperform male students (Duru-Bellat et al., 2008; Jiang & Singelmann, 1998; Mertova, Ertl, & Zierer, 2019; Powell et al., 2019; Zapp, Marques, & Powell, 2017). Moreover, the gender gap in academic performance in higher education has also been reported by Jiang and Singelmann (1998) and Zapp et al. (2017). In academia, it has been considered as a source of exploring new horizons to study gender reversal change in education in the world generally and in Germany particularly (Kluczniok & Mudiappa,

2018; Mangold, 2018; Zapp et al., 2017). As the focus of education has been expanded, females got attention and started getting an education along with the males (Duru-Bellat et al., 2008; Jiang & Singelmann, 1998; Powell et al., 2019). Likewise, most of the developed world including Germany is an evidence of the increasing female ratio of education at the primary level (Jiang & Singelmann, 1998; Mertova et al., 2019; Powell et al., 2019). Moreover, females started excelling males in higher educational levels in Germany. Furthermore, females in schools and colleges are specifically surpassing males (Jiang & Singelmann, 1998; Mangold, 2018). In Germany, female students are showing constant progress in educational examinations (Riphahn & Schwientek, 2015). Similarly, Jürges and Schneider (2011) reveal that males in Germany stumble in their early schooling which results in underachievement in tertiary education.

The education system of Hong Kong is pretty interesting to focus on female students' educational performance (Sit, Braman, Kerr, & Lindner, 2011; Xu & Wu, 2015; Zhang, Nie, & Xu, 2019). After declaring the primary free education up to 15 years of age, the literacy rate of females has arisen as compared to males (Sit et al., 2011). The basic purpose was to bring the females equal to males in getting an education and develop a sense of competition among them (Lam, Tse, Lam, & Loh, 2010; Zhang et al., 2019). Resultantly, females at secondary and higher secondary levels got impetus and came to outnumber the males in grades and positions. It not only happened at school and college levels but extended gradually to the university level, the females are excelling the males in educational performance at all levels as well in Hong Kong (Kim & Law, 2012; Lam et al., 2010; Xu & Wu, 2015).

Higher education in Japan has been dominated by female students in terms of top positions and performance as compared to male students (Hojo, 2012; Nozaki, Aranha, Dominguez, & Nakajima, 2009). Overall results are also progressive for female students as compared to male students (Ishida, 2007; Utrata, 2017). Female student's interests have increased to outperform male students in school, college, and university levels (Ishii, Tamai, & Kera, 2016). Moreover, Kikō (2006) reveals that female students outclass males in higher educational institutions. Furthermore, it is pertinent to mention here that female students are encouraged in the beginning of their early schooling to perform well in Japanese schooling which results in outshining in higher education (Nakanishi, 1992).

In the context of Netherland higher education, female students have shown good performance as compared to male students reported by several studies (De-Graaf, De-Graaf, & Kraaykamp, 2000; Driessen & van Langen, 2013; Duff, Boyle, Dunleavy, & Ferguson, 2004; Hausmann, 2009; Kraaykamp & Dijkstra, 1999; Verkuyten & Thijs, 2002; Vermunt, 1994). Such gender reversal changes in education have been observed not only in school but also in a higher educational context (Breen, Luijkx, Müller, & Pollak, 2010; Hausmann, 2009; Severiens & Ten-Dam, 2012; Sieben, Huinink, & De-Graaf, 2001; Verkuyten & Thijs, 2002). A considerable number of studies have revealed that female students are performing well in top examination results as compared to males (De-Graaf et al., 2000; Driessen & van Langen, 2013; Duff et al., 2004; Fryberg et al., 2013; Hausmann, 2009; Kislev, 2016; Mendolicchio & Rhein, 2014; Piussi & Arnaus, 2010; Severiens & Ten Dam, 2012). Furthermore, Harskamp, Ding, and Suhre (2008) and Driessen and van Langen (2013) also highlight that female students are outperforming male students not only in schools and colleges but also at the higher education level. In the exams held at the

university level, female students outscored male students and this gap is increasing with the time in Netherland (Breen et al., 2010; Duff et al., 2004; Harskamp et al., 2008; Kraaykamp & Dijkstra, 1999; Martínez-Cantos, 2017; Powell et al., 2019; Thijs et al., 2015; Verkuyten & Thijs, 2002).

Female students have dominated higher education in New Zealand for the last two to three decades (Zepke & Leach, 2007). Several studies in this regard have revealed findings related to female performance (Devlin et al., 2012; Hodgetts & Lecouteur, 2010; Mertova et al., 2019; Simpson & Wigglesworth, 2019). As Fergusson and Horwood (1997) argue female students outranked male students in education in the New Zealand educational system. Moreover, this gender gap is increasing over time in higher education (Devlin et al., 2012; Gibb, Fergusson, & Horwood, 2008a).

In the context of the United Kingdom (UK), such changes in education have been observed in a higher educational context (Dee, 2006a; Savolainen, Hughes, Hurtig, Ebeling, & Taanila, 2013; Smith, 2003; Zhukov, 2012). A considerable number of studies have revealed that females are performing well in higher education as compared to males (Buchmann, Condron, & Roscigno, 2010; Carrington et al., 2007; Duckworth & Seligman, 2006). In this regard, Hicks et al. (2008) and Glaesser and Cooper (2012) assert that female students are outperforming male students not only in schools and colleges but also at the higher education level. In the exams held at the university level, female students outscore male students and this gap is increasing with the passage of time in the UK (Horne, Skelton, Speed, & Todd, 2013; Matthews et al., 2009; Younger & Warrington, 2006). Moreover, Snyder and Dillow (2011) assert that female students have been outclassing male students in UK since 1982. Contrary to it, Epstein (1998) reveals that this gender reversal change in

education has been the topic of concern in the UK and other industrialized nations since the 1990s. However, Bowe (2015) points out Afro-Caribbean male students' underachievement in England and also reveals that female students are outplaying. In addition to it, the findings of Crawford, Wang, and Andrews (2016b) show that female students' higher performance in previous education results in outplaying in tertiary education in the UK.

In the United States (US), the education system has accepted a gender reversal change. There are several studies on gender reversal change in the context of the United States in higher education (Buchmann et al., 2010; Holmlund & Sund, 2008; Mills, Martino, & Lingard, 2004; Steinmayr & Spinath, 2008). Duckworth and Seligman (2006) argue that female students have shown good performance in the US as compared to males. Specifically, this trend is emerging for the last two decades (Ciarrochi, Heaven, & Davies, 2007; Gibb, Fergusson, & Horwood, 2008b). Similar findings by Leeson, Ciarrochi, and Heaven (2008) and Demie (2001) also support the argument that gender reversal has been seen in higher education in the US.

2.2.2 Female and Male Students' Academic Performance in Developing Countries

As regards developing countries, higher education has also seen gender reversal change (Jha, Bakshi, & Faria, 2012b; Kim, Cho, & Kim, 2019; Suryadarma et al., 2006). The recent decades have seen a change in the gendered geography of education in developing countries (Ashraf, Khaki, Shamatov, Tajik, & Vazir, 2005; Jha, Bakshi, & Faria, 2012a; Suryadarma et al., 2006). Many studies demonstrate that females are doing better than males in education (Ashraf et al., 2005; Effah, 2011; Hossain & Ahmed, 2013; Jha et al., 2012a; Kim et al., 2019; Suryadarma et al., 2006). Initially, it is argued that girls at the

school level are performing better than boys (Jha et al., 2012b; Nuamah, 2018). It is pertinent to mention here that boys' underperformance and girls' outperformance are not limited to school level but also prevails in higher education as well (Bedard & Cho, 2010; Chiu & McBride-Chang, 2006; Fleischmann et al., 2014; Jha & Kelleher, 2006; Kim et al., 2019). I deem it pertinent to give a brief overview of gendered education at different levels in the developing countries.

The case of India is significant to mention here where the ratio of females is increasing in schools at the secondary level (Cheruvalath, 2018; Jha et al., 2012a; Kim et al., 2019; Prakash & Coplan, 2007; Singhal, 1993). Moreover, females are excelling male students in getting positions and grades (Jayaram, 1979; Shah, 2011; Verma, 2014). Previously, female education was not given importance like male education (Gandhi & Sen, 2020; Joshi & Ahir, 2019). However, females, at schools in different states, are worth mentioning because of their performance at secondary and intermediate examinations (Prakash & Coplan, 2007; Shah, 2011; Singhal, 1993). For the last few decades, the female literacy level has also arisen while males ratio has been found consistent in India (Gandhi & Sen, 2020; Maurya, Maurya, & Das, 2019; Nozaki et al., 2009; Verma, 2014). The reforms at the secondary and higher secondary level are bearing fruit for the females while outnumbering the males at large scale (Prakash & Coplan, 2007; Shah, 2011; Singhal, 1993). Moreover, female students outstrip male students in higher education has also been reported by several studies in India (Bagguley & Hussain, 2014; Jayaram, 1979; Joshi & Ahir, 2019; Morley & Crossouard, 2015; Shah, 2011; Verma, 2014). Similar to these studies, the findings of Nozaki et al. (2009) and Verma (2014) also reveal that female students outclass male students in Indian higher education.

In Kenyan higher education, female students' outperformance has been observed (Agesa & Agesa, 2002; Ashraf et al., 2005; Jha et al., 2012b; Kamau, 2004; Kim et al., 2019; Mwoma, 2017; Moses-Oketch, 2019). Besides, the same argument is supported by Mwoma (2017) and Otieno (1998) in the context of female students' educational performance in Kenyan school to the university level respectively. Besides this, Kamau (2004), also cited in his study claim that female students in Kenyan have more access to higher education and performance than the previous number of years. This gender reversal in higher education is normally changing in Kenyan public and private sector universities (Agesa & Agesa, 2002; Ashraf et al., 2005; Eshiwani, 1985; Hyde, 1989; Jha et al., 2012a; Kim et al., 2019; Ngware, Ciera, Abuya, Oketch, & Mutisya, 2012; Moses-Oketch, 2019; Ombati, 2013; Rathgeber, 1991). Contrary to it, the study findings of Ngware et al. (2012) reveal that male students outshine female students in mathematics in Kenya. Furthermore, Onsomu, Kosimbei, and Ngware (2006) also asserted similar results in favour of male students who outclass females in mathematics.

Similar trends have also been observed in Mongolia. Several pieces of research reveal that female students outperform male students in higher education in Mongolia as similar to other central Asian countries (Adiya, 2010; Diffendal & Weidman, 2011; Magno & Silova, 2008; Weidman & Bat-Erdene, 2002). In this regard, Adiya (2010) argues that 62 percent of Mongolian undergraduates were females in 2004-2005 and they performed well as compared to male students. So, gender imbalance persists in Mongolian higher education as has been reported by different studies (Jagdag & Dembereldorj, 2017; Nozaki et al., 2009; Weidman & Bat-Erdene, 2002). Furthermore, Nozaki et al. (2009) reports that there is higher number of female students in higher education and they surpass male

counterpart. Similarly, female outperformance in Mongolian higher education is also proved with the studies of Diffendal and Weidman (2011) and Jagdag and Dembereldorj (2017).

In South Asian region of Nepal, comparison of females and males in getting an education has been considered important because females are outshining and now have equal opportunities as males do previously (Maslak, 2003; Morley & Crossouard, 2015; Roff, McAleer, Ifere, & Bhattacharya, 2001; Witenstein & Palmer, 2013). The sense of competition has arisen among the females and their contribution towards education has been found in different regions of Nepal (Maslak, 2003; Watkins & Regmi, 1990). Female students' educational performance has been elevated at school and university level (Subedi, 2003; Witenstein & Palmer, 2013). They have been found with better grades and distinctions than males in academics (Parajuli & Enslin, 1990; Watkins, Regmi, & Alfon, 1990). The literacy level of several Asian countries including Nepal is evident that, previously, it was low and not in favor of females (Neupane, Thapa, & Sapkota, 2018; Robinson-Pant, 2000; Watkins & Regmi, 1994). Now, it has turned into their favor so rapidly. The girl's education has increased (Bagguley & Hussain, 2014). Females' ratio of attending the schools and higher educational institutions is significantly progressive in Nepal (Singh, 1990; Witenstein & Palmer, 2013).

Females' education has a great role in the development of a developing nation including Philippine (Alderman & King, 1998; Bernardo, 2003; Hossain & Ahmed, 2013; Jha et al., 2012a; Nuamah, 2018; Smith & Cheung, 1986; Suryadarma et al., 2006; Yap & Melchor, 2015). As for as the development of the developing countries is concerned, free primary education has played a significant role in expansion of the education (Dacuycuy

& Dacuycuy, 2019; Effah, 2011; Nuamah, 2018; Suryadarma et al., 2006). Besides this, female education has been focused by Philippine to educate the females shoulder by shoulder to males (Alderman & King, 1998; Perez, 2012; Yap & Melchor, 2015). In most of the Philippian educational institutions, female education has been found better to perform in the examinations (Dacuycuy & Dacuycuy, 2019; Estudillo, Quisumbing, & Otsuka, 2001; Smith & Cheung, 1986). Females have been found pretty well in getting an education and outnumbering the males not only at the school level but also at higher level i.e., technical and professional fields in different areas of Philippine (Alderman & King, 1998; Arguillas & Williams, 2010; Bernardo, 2003; Perez, 2012; Yap & Melchor, 2015).

Females' education and performance have been the debate of the scholars and researchers in Sri Lanka (Kim et al., 2019; Malhotra & Mather, 1997; Ranasinghe, Wathurapatha, Mathangasinghe, & Ponnamperuma, 2017; Weerakkody & Ediriweera, 2008). As reported by Sriyalatha (2016), female students are outpacing male students in Sri Lankan educational examinations. Besides higher education, primary education for females has been considered essential for uplifting educational standards in Sri Lanka (Liyanage, 2013; Morley & Crossouard, 2015). In addition to educational development, female education has been focused and their education level has raised to that of males (Aturupane, Shojo, & Ebenezer, 2018; Hill & King, 1993). Moreover, the study findings of Aturupane et al. (2018) and Liyanage (2013) assert that female students outshine males in education in Sri Lanka. In addition to it, female students started competing male students in almost every educational level in Sri Lanka (Ranasinghe et al., 2017; Sriyalatha, 2016; Weerakkody & Ediriweera, 2008). Previously, though lagging behind but now females have been found getting better scores in examinations (Hill & King, 1993; Jayaweera,

1999; Liyanage, 2013). Resultantly, female students were found performing better than male students at school and college levels (Aturupane et al., 2018; Sriyalatha, 2016; Weerakkody & Ediriweera, 2008). This ratio has also increased over the last few decades as the females entering the primary and secondary level are more inclined to get higher education (Liyanage, 2013; Malhotra & Mather, 1997). Furthermore, female students are now excelling male students in Sri Lankan higher education (Aturupane et al., 2018; Bagguley & Hussain, 2014; Liyanage, 2013; Malhotra & Mather, 1997; Sriyalatha, 2016).

In East African country Tanzania, females' education was not considered a priority (Hyde, 1989; Meena, 1996). Gradually, with the changing world, it unpacked the African countries that development would not be possible without females' education (Effah, 2011; Johnstone, 2004; Mama, 2003; Meena, 1996; Molla & Cuthbert, 2016). However, education was mainly the male-dominant sphere (Mama, 2003; Morley, 2011; Riordan & Louw-Potgieter, 2011). Following to the developed nation, education was focused mainly by some of the states and development was made possible in east African region including Tanzania (Ashraf et al., 2005; Effah, 2011; Jha et al., 2012a; Kim et al., 2019; Ndijuye & Rao, 2019). On the lower level, school education was made compulsory, and females were also included along with the males to gain insight (Effah, 2011; Hossain & Ahmed, 2013; Morley, 2011; Nuamah, 2018). Presently, at school and college levels female students are progressing than male students while outnumbering the males even in male-dominant spheres of education in Tanzanian higher education (Ashraf et al., 2005; Effah, 2011; Jha et al., 2012a; Meena, 1996; Molla & Cuthbert, 2016; Morley, 2011). However, the gender reversal trend of females' outshining in Tanzanian higher education is not similar the developed nations (Hyde, 1989; Morley, 2011).

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In the case of Vietnam, there are also similar trends of gender reversal which have been seen in terms of female students outshining male students in education (Huong, Tien, Hung, & Loc, 2019; Liu, 2004; Pham & Lai, 2016). Several studies reveal that females are beating males not only at school levels but also at tertiary education level in Vietnam (Belanger & Liu, 2004; Bélanger & Liu, 2008; Croll, 1998; Goodkind, 1995; Hamano, 2008; Huong et al., 2019; Liu, 2004). Similarly, the findings of Desai (2000) and Knodel (1997) assert that the gender gap in academic performance is closing, and females are outnumbered and getting top position examinations not only in schools but also in higher education. Moreover, the educational performance of females in the tertiary educational level in Vietnam is also reported by Harman, Hayden, and Nghi (2010), Peeraer and Van Petegem (2010), and Binh (2011).

2.2.3 Female and Male Students' Academic Performance in Muslim Countries

The gender reversal change is not only confined to the developed and developing countries, but it has also been observed in Muslim countries of the world (Basit, 2017; Munawar & Tariq, 2018; Rahman, 2002; S. Shah & Sobehart, 2008; Smits & Huisman, 2013; Yousif, 2011). The recent decades have seen a change in the gendered geography of education in Muslim countries (Abdulla & Ridge, 2011; Abdullah, 2011; Allam, 2020; Monem & Muhammad, 2010; Rahman, 2005; Shoaib & Ullah, 2019; Ullah & Ullah, 2019; Yasin, Khansari, & Sharif, 2020). Many studies demonstrate that females are doing better than males in education (Al-Mazidi & Abusham, 2018; Jebreil, Azizifar, & Gowhary, 2015; Kabir & Greenwood, 2016; Smits & Huisman, 2013; Statistics, 2011; Yasin et al., 2020). Initially, it is argued that girls at school level are performing better than boys (Jha et al., 2012b; Kim et al., 2019; Latif, 2009; Nuamah, 2018; Suryadarma et al., 2006; Ullah &

Ullah, 2019). It is pertinent to mention here that boys' underperformance and girls' outperformance are not limited to school level but also prevails in higher education (Abdulla & Ridge, 2011; Abdullah, 2011; Allam, 2020; Shoaib & Ullah, 2019; Smits & Huisman, 2013). I deem it pertinent to give a brief description of gender education at different levels in the Muslim countries.

In Afghanistan, the progress for girls' education has not been made as per other Muslim countries (Afzali, 2017; Roof, 2014; Watch, 2017a, 2017b). Several girls do not go to school in Afghanistan due to worsened security in the country (Intili, Kissam, & St George, 2006; Karlsson & Mansory, 2002; Khwajamir, 2016; Watch, 2017a). Moreover, harmful gender norms also kept girls at home and do not value their education (McBride & Wibben, 2012; Sadat, 2004; Yacoobi, 2008). Taliban and United States-led invasion are also restricted girls' education (Watch, 2017b). It is very difficult to provide an actual number of girls who received any education under the Taliban (Samady, 2013; Shayan, 2015). However, impressive progress for girls' education was started in 2001. Latterly government reports that 39 percent of girls' students were attending schools in 2015 (Watch, 2017a, 2017b). Moreover, girls' education is reported as a success story by the Afghan government and donors (Othman, Manap, Ramli, & Kassim, 2018). In the early period after the war, there were fewer number of girls' schools than boys' (McBride & Wibben, 2012). Gradually, girls' education has become a significant fact where they are progressing along with boys in schools (Burde & Linden, 2013; Intili et al., 2006; Morley & Crossouard, 2015). At the primary and secondary level of education, females are trying to minimize the gender gap as well as most of the higher positions in exams are mainly occupied by the females (Bagguley & Hussain, 2014; Burridge, Maree Payne, & Rahmani,

2016). At the higher education level, females are also playing their role to surpass males in different educational examinations (Afzali, 2017). Female students are trying to excel the male in education as well as in professional fields (McBride & Wibben, 2012). The war in Afghanistan affected educational institutions generally and girls' educational institutions particularly (Morley & Crossouard, 2015; Roof, 2014; Watch, 2017a, 2017b). Currently, the situation of female students is good at the tertiary level of education in Afghanistan (Samady, 2013). They are trying to excel in number and also securing better positions in examination results in Afghanistan. Moreover, several studies highlight female success in educational examinations in Afghanistan (Abdulbaqi, 2009; Burde & Linden, 2013; Nazari & Himat, 2019; Roof, 2014; Shayan, 2015).

The gender reversal change in Bahrain has also been observed in terms of female students' outperformance males in examinations (AI- Ahmed, 1994; Al-Haddad & Hamadeh, 2003; Bennett & Wright, 2010; De-Jesus, 2016; Loori, 2005; Smits & Huisman, 2013). Bahrain has the oldest education system in the Gulf region and also has the highest literacy rate (Al-Mahdi, 2014). In Bahrain, free elementary education for males was started in 1919, and for females in 1928 (Karolak, 2012). Moreover, secondary education in Bahrain was started for males in 1936 and for females in 1951. Before 1968, students have to study abroad for tertiary education. The first tertiary educational institution named 'The University of Bahrain' was established in 1984 (Karolak, 2012). Furthermore, public and private sector tertiary educational institutions were started and enrollment gradually increased (Darwish, 2014; Marinakou & Giousmpasoglou, 2014). As a result, female students show competition not only in schools and colleges but also at tertiary educational examinations (Giousmpasoglou & Marinakou, 2014; Marinakou & Giousmpasoglou,

2015; Mirza & Lawrence). Gradually, the gender gap in enrollment and examination results has reduced (Shafik, 2001). Several studies reveal that female students are not only getting a better score in examinations at schools but results also prevailed in tertiary education (Desmal, 2017; Karolak, 2012; Loori, 2005; Smits & Huisman, 2013; Yousif, 2011). Albaker (2017) asserts that in Bahrain, there is a vivid performance of female students and they are outnumbering males in different educational institutions. Moreover, the study findings of Bennett and Wright (2010) also support the argument of female outperformance in education. Contrary to it, the findings of De-Jesus (2016) highlight the better performance of males in mathematics and science subjects. In addition to these findings, several studies also highlight that females outshines males in educational examinations in Bahrain (Hayes & Findlow, 2020; Karolak, 2012; Kirk, 2013; Kosior, Barth, Gremm, Mainka, & Stock, 2015; Kukreja & Al, 2013).

In Bangladesh, basic education including girls' education was not given importance since the inception of the state (Huq & Rahman, 2008; Jayaweera, 1997a, 1997b; Kabir & Greenwood, 2016; Rahman, 2005). The educational policies were made but not implemented as per the spirit of the policies was concerned (Bagguley & Hussain, 2014; Cagna & Rao, 2016; Rahman et al., 2015). There were several impediments to getting an education for females. The cultural and religious barriers put the females' education in danger for a long time in Bangladesh. Over time, female education prevailed gradually (Kabir & Greenwood, 2016; Morley & Crossouard, 2015). Despite barriers, females have always been encouraged to get an education. Presently, females in Bangladesh, at the secondary and higher secondary levels are found contributing to education through active participation. The female and male ratio of education has a wider gap but now the

increasing number of females may shrink in future (Statistics, 2011). Females are getting an education at school and college levels by competing with the males. Most of the positions at school and college levels are obtained by females. Females are found progressive towards higher education (Huq & Rahman, 2008). Moreover, female students are outclassing male students in higher education as reported by Monem and Muhammad (2010). In addition, several researchers also assert that female students surpass males in educational examinations in Bangladesh.

Many studies in Egypt have revealed that female students outshine males in educational examinations (Assaad & Krafft, 2015; El-Missiry, Soltan, Hadi, & Sabry, 2012; El-Safty, 2004; Smits & Huisman, 2013; Sultana, 2008a, 2008b; Yousif, 2011). They are performing and scoring better grades in schools and colleges (Elbadawy, 2014; Lloyd, El-Tawila, Clark, & Mensch, 2001; Russell, 2004). The gender reversal change in educational examinations has also been observed at the tertiary level (Cupito & Langsten, 2011; El-Gamal & Abd-El-Aziz, 2012; Elsayad, 2014). El-Sheikh, Shaker, Hussein, and Ramy (2013) reveal that female students are outnumbered in a higher educational institution of Egypt and also score better as compared to males (Buckner, 2013; Cupito & Langsten, 2011; El-Baradei, 2010; Elsayad, 2014). Moreover, the study findings of Youssef (2018) report that female students are actively participating and surpassing males in exams. Most of the developing world including Egypt is an evidence of the increasing female ratio of education at the primary and secondary levels (Abd-El-Fattah, 2006; Lloyd et al., 2001). Moreover, females started excelling males in education in different class performances (Abd-Elmotaleb & Saha, 2013; El-Gamal & Abd El-Aziz, 2012; Heba & Nouby, 2008). Female at tertiary level in Egypt are specifically outpacing males and this

phenomenon is revealed by several studies (Cupito & Langsten, 2011; El-Baradei, 2010; El-Gamal & Abd-El-Aziz, 2012; Elsayad, 2014; Smits & Huisman, 2013; Sobaih, Moustafa, Ghandforoush, & Khan, 2016; Yousif, 2011).

In the context of Indonesia, gender reversal changes in education have been observed in higher education in terms of female students beat males (Prasetio, Azis, Fadhilah, & Fauziah, 2017; Samarakoon & Parinduri, 2015; Susanti, 2011; Treagust, 2004). A considerable number of studies have revealed that females are also performing well at school and college levels examinations (Hansen, Saleh, Flinn, & Hotchkiss, 1989; Newhouse & Beegle, 2006; Octarra & Hendriati, 2017; Suryadarma et al., 2006). In this regard, Suryadarma et al. (2006) and Deolalikar (1993a) assert that female students are outperforming male students not only in schools and colleges but also at the higher education level. In the exams held at the university level, female students outscore males and this gap is increasing with time in Indonesia (Deolalikar, 1993a; Hansen et al., 1989; Leigh, 1999). Currently, in Indonesian higher educational institutions, enrollment of female students has increased (Deolalikar, 1993b; Ismail, 2015; Theodore & Carpenter, 1974; Welch, 2007). Moreover, active participation of female students and scoring better grades in final examinations in Indonesia have been revealed by several studies (Deolalikar, 1993a; Kelly & Kelly, 2017; Sutantoputri & Watt, 2013; Treagust, 2004).

As for female students' outperformance is concerned, it has been observed in Iranian higher education (De-Jesus, 2016; Jebreil et al., 2015). In this regard, a huge body of literature revealed that female students outnumber male students in higher education (Bennett & Wright, 2010; De-Jesus, 2016; Esfahani & Shajari, 2012; Kurzman, 2008). The education system of Iran is significant because female education has prevailed (Bennett &

Wright, 2010; Mehran, 2009). Similarly, in the Iranian educational system, it is progressing in a better way especially the females are getting proper education and outnumbering the males at school and university levels (Rezai-Rashti & Moghadam, 2011). There is acute educational competition between males and females in Iran (Mehran, 2009). Females are outnumbering the males at the secondary and higher secondary levels (De-Jesus, 2016; Esfahani & Shajari, 2012). Moreover, several studies report that female is outplaying males in educational levels including schools, colleges and universities (Hill & King, 1993; Jha et al., 2012b; Kim et al., 2019; Kurzman, 2008; Mehran, 2009; Rezai-Rashti & Moghadam, 2011; Smits & Huisman, 2013; Suryadarma et al., 2006).

The situation of Iraq in terms of female education is not different as compared to other Muslim countries and gulf-states (Bennett & Wright, 2010; De-Jesus, 2016; Gardy & Akbay, 2015; Yasir, Elywy, & Radhi, 2018). The study findings of Altun (2019) also report that female students are outshining males in school examinations. Similarly, Smits and Huisman (2013) highlight the vivid performance of female students at secondary level examinations. Further, the study results of female students surpassing males at tertiary level examinations have been reported by Bennett and Wright (2010). The review also supports the argument that female students are getting better scores not only at school and college levels but also showing vivid performance at tertiary level education (Al-Khouri, 2015; Alahmar, 2017; Kourdi & Tuama, 2019; Mohamed, 2012). Additionally, several studies also assert that female students outrank and outnumber their counterpart in educational examinations of Iraq (Al-Husseini & Elbeltagi, 2015; Al- Mendalawi, 2010; De-Jesus, 2016; Issa & Jamil, 2010; Mahmood, Murad, & Kakamad, 2018; Smits & Huisman, 2013; Yildiz, 2016).

In the case of Jordon education system, female students outranked male students in educational performance in school and college levels (Bennett & Wright, 2010; Hamaideh, 2010; Khwaileh & Zaza, 2011). This success does not stopped until a higher education level. Khwaileh and Zaza (2011) argue based on their study findings that female students outshine male students in Jordanian higher educational examinations for the last six years (i.e. 2002-2007). Moreover, they also point out that the enrollment of a female student at the university level in Jordan has also increased. Similarly, the study findings of Sawair, Baqain, Al-Omari, Wahab, and Rajab (2009) assert that female students outscore in different universities of Jordan including medical educational institutions. Moreover, a number of studies reveal that female students outrank males in educational examinations of Jordan (Jansen, 2006; Kanaan, Al-Salamat, & Hanania, 2010; Khader et al., 2008; Majzub, Bataineh, Ishak, & Rahman, 2011; Salameh, Al-Omari, & Jumia'an, 2011)

The case of Kuwait for female educational performance is not different from other gulf countries (Alhajraf & Alasfour, 2014; Bennett & Wright, 2010; De-Jesus, 2016; Metle, 2001; Tannir & Al-Hroub, 2013; Zogheib, Zogheib, & El-Saheli, 2015). Here, girls have started to show their performance and efforts in getting better scores than boys in schools (Alharbi, 2014; Hadi & Al-Omar, 2009; Smits & Huisman, 2013; Tfaily & Samarah, 2018). The incidence of performance by girls does not stopped at the school level but also prevailed at college and tertiary levels (Abdullah, 2011; Al- Fadhli & Khalfan, 2009; Karim, Becher Al-Halabi, Sadeq, Dawas, & Al-Abdulrazzaq, 2015; Meleis, El-Sanabary, & Beeson, 1979). Moreover, the study findings of Alanzi (2018) and De-Jesus (2016) reveal that female students are outshining in tertiary level examinations in Kuwait. Besides, the study findings of Karim et al. (2015) assert that female students outshine males in

medical examination in Kuwait. Further, literature also supports that female students are performing better than males in accounting, and developing critical thinking in the environment of Kuwaiti universities (Al- Fadhli & Khalfan, 2009; Alanzi, 2015a). Additionally, several studies also highlight the performance of females over males in different educational examinations of Kuwait (Abdullah, 2011; Al-Othman, 2004; Al-Sahel, 2005; Al-Shalabi, 2016; Alanzi, 2015b; Alhajraf & Alasfour, 2014; Bennett & Wright, 2010; Hadi & Al-Omar, 2009; Smits & Huisman, 2013).

In the central Asian region (The Stan), the situation of girl students' performance in schools is very competitive with their counterparts (Ishkanian, 2003; Sabarwal & Terrell, 2008). Similarly, this competition has also been observed at the tertiary level (Brunner & Tillett, 2007; DeYoung Alan & Constantine Elizabeth, 2009). The study findings of Giddings, Meurs, and Temesgen (2007) reveal that female students outshine males in different examinations. Moreover, female student enrollment is also increasing in higher educational institutions in Turkmenistan and Uzbekistan (Arabsheibani & Mussurov, 2007; Clement & Kataeva, 2018; Majidov, Ghosh, & Ruziev, 2010; Ruziev & Rustamov, 2016). The gender reversal change in educational performance in terms of females surpassing males has also been observed in Kyrgyzstan and Kazakhstan (Akin, 2013; Arabsheibani & Mussurov, 2007; Munko, 2017; Tiuliundieva, 2006; Zdorovets, 2017). Several studies reveal that female students outpace males not only at the school level but also at the tertiary level (Akin, 2013; Brunner & Tillett, 2007; Majidov et al., 2010; Ruziev & Rustamov, 2016). Nevertheless, education has been mainly considered the male domain in these Muslim states (Almukhambetova & Kuzhabekova, 2020). Results have shown an increase in enrollment of girl students not only in schools but also at the tertiary levels (Akin, 2013;

Kocak, 2019). Currently, the results also reveal that females are progressing more than males and outnumbering even in male-dominant subjects like engineering and technology development in Azerbaijan (Aghayeva, 2013; Heyat, 2006; Mollaeva, 2017; UNICEF, 2002). Additionally, several studies highlight the success of female students in tertiary educational examinations in the central Asian region (DeYoung Alan & Constantine Elizabeth, 2009; Heyat, 2006; Ishkanian, 2003; Sabarwal & Terrell, 2008; Silova & Magno, 2004; Tiuliundieva, 2006).

For the last few decades in Libya, the situation has become better for females' education (Abidin, Pour-Mohammadi, & Alzwari, 2012). The literacy rate has grown up but, still, in many parts of the country females' education is stigmatized on religious and ethnic basis (Abusbiha & Mustaffa, 2014). The girls entering the schools and college levels are found better in performance (Al-Agili, Mamat, Abdullah, & Maad, 2012). The positions in different intermediate boards have also been compared where girls are found outperforming the boys in getting positions (Appleton, 1979). Another aspect of females' education has been evaluated by analyzing competition result for admission in colleges and university levels (Tamtam, Gallagher, Olabi, & Naher, 2011). It is pertinent that females are possessing more than half of the seats as compared to males (Shammas, 1962). Moreover, in colleges and universities, the female ratio is higher than males in securing the admissions as well as performing in the class competition (Rhema & Miliszewska, 2012, 2014). Presently, female ratio has increased significantly almost in every region of Libya. Rural areas of Libya have also been pointed out in securing a significant place in girls' education where previously the access to education was not properly given (Kibasan & Singson, 2016). Furthermore, several studies highlight that female students are securing

better grades than males in examination results in Libya (Al-Agili et al., 2012; Appleton, 1979; Bharija, Kanwar, Singh, & Belhaj, 1988; Dyab, 1997).

In case of Malaysia, several studies report that female students are progressing significantly as compared to male students in educational examinations (Ali & Musah, 2012; Anuar Zaini, Lim, Low, & Harun, 2005; Cagna & Rao, 2016; Khemlani-David, 1998). The gender reversal trend has been observed not only in Malay school but also at the college and university levels (Abdullah, Elias, Mahyuddin, & Uli, 2004; Jayaweera, 1997a; Ong, 1990; Tseng & Fuligni, 2000; Yagci & Cevik, 2019). Yagci and Cevik (2019) and Unin (2010) assert that female students' learning is improved in examination results in different educational institutions including higher education. The study findings of Salvation and Adzharuddin (2014) and Wan-Chik et al. (2012) assert that female students achieve better grades in higher education as compared to males. In addition to the aforementioned studies, several researchers also reveal that female students outrank males in higher educational examinations in Malaysia (Arzuman, Ja'afar, & Fakri, 2012; Helou & Rahim, 2014; Jelas & Dahan, 2010; Remali, Ghazali, Kamaruddin, & Kee, 2013; Rosli et al., 2012).

Similar to other Muslim countries, females are also showing their progress in examinations in Morocco (El-Alaoui, 2016). There has been observed that female students outnumber males and secure better positions in educational examination (Garmah & Bernouss, 2020; Liouaeddine, Bijou, & Naji, 2017). DeGorge (2002) reveals that female students outshine males in schools and colleges. The gender reversal change does not stop at schools and colleges but also prevails in higher educational institutions (Benmansour, 1999; Garmah & Bernouss, 2020). In the tertiary educational examination of Morocco,

females surpass their counterparts in tertiary level examinations (Sadiqi, 2003; Spratt, 1992; Zaid, 2020). The study findings of Liouaeddine et al. (2017) assert that female students outshine males at the college level in Morocco. Moreover, female students' progress has also been observed after educational reforms in Morocco (Bedmar, 2015). In the same way, Ibourk (2016) reveals that female students' success in learning achievement in Morocco has also been observed. Likewise, female active participation in education has resulted in their academic performance (Agnaou, 2004; Ibourk, 2016; Kapchan, 1996; Lavy & Spratt, 1997). Additionally, several studies also point out the phenomena of female students outplaying in educational performance in Morocco (Auletto, 2017; Bedmar, 2015; Benmansour, 1999; D'hondt, Van Praag, Stevens, & Van Houtte, 2015; Griffiths, 1996; Herz, Herz, & Sperling, 2004).

The education system of Oman is very much supportive in the context of female students' performance in different examinations (Al-Aufi & Al-Azri, 2013; Al-Mazidi & Abusham, 2018; Chapman, Al-Barwani, Maawali, & Jones, 2014; Smits & Huisman, 2013; Yousif, 2011). Several studies report that female students are taking keen interest in educational participation and excelling in examination results of Oman (Al-Ani, Al-Musawi, & Osman, 2020; Al-Mazidi & Abusham, 2018; Chapman et al., 2014; Khan & Fernandez-Carag, 2016; Mohamed Emam & Al-Mahdy, 2020; Yasin et al., 2020). Resultantly, females at secondary and higher secondary levels got impetus and came to outnumber the males in grades and positions (Chapman et al., 2014; Emam, 2020; Fontanella, Sarra, & Di-Zio, 2020; Smits & Huisman, 2013; Yousif, 2011). It does not only happen at school and college levels but also at the tertiary level. The females are surpassing the males (Al-Aufi & Al-Azri, 2013; Aljahwari & Aldhafri, 2020; AlWahaibi, 2020;

Bennett & Wright, 2010). Moreover, the study findings of Abdullah, Al-Ghafri, and Al-Yahyai (2019) reveal that female students are outpacing males in tertiary level examinations. Recently, the enrollment of female students have also increased in higher educational institutions in Oman (Al-Haremi, 2016; D. Hasan, 2016), Similarly, De-Jesus (2016) also highlights the vivid performance of female in the gulf region. It is pertinent here to mention that the study of Alhadabi and Karpinski (2020) assert that female students have high goal achievements in examination results. In addition to these findings, several studies report that female students are high achievers in examination results in higher education in Saltant of Oman (Al-Bahrani, Allawati, Abu Shindi, & Bakkar, 2020; Al-Haremi, 2016; Al-lawati, 2019; F. Khan & Fernandez-Carag, 2016; Mohamed Emam & Al-Mahdy, 2020).

Similar gender reversal trends of female students' outshining have occurred in the setup of the higher education system in Pakistan during the last three decades (Choudhary, 2014; Education, 2018; Khan & Hussain, 2019; Klitgaard & Currimbhoy, 1978; Qureshi, 2003). In Pakistan, gender differences exit at large scale because most of the population lives in rural areas with typical patriarchal social structure (Azhar, 2009; Malik & Courtney, 2011). Performance of boys and girls is to be debated because there is always a low performance of the boys and girls at school level whether in science or arts and higher educations (Afzal, Butt, Akbar, & Roshi, 2013; Ahmed, 2009; Latif, 2009; Mateju & Smith, 2015). A larger number of females have joined higher education and they are performing well (Afzal et al., 2013; AyubBuzdar, Ali, Akhtar, Maqbool, & Nadeem, 2013; Azhar, 2009; Batool et al., 2013). They are achieving higher positions in the exams than males (Shoaib & Ullah, 2019). The enrolment of the student in higher education students

reveals that more females are getting admission, which is a proof of females' outperformance (Afzal et al., 2013; *Economic Survey of Pakistan*, 2018; Education, 2018; Latif, 2009; Shaikh, Baghat, & Gill, 2015). Over the time, the gap between the performance of male and female students is widening, and male students seem to be lagging behind (Shoaib & Ullah, 2019; Ullah & Ullah, 2019).

In the case of Palestine, the situation of females' education is a little bit different from other Muslim countries (Abu- Rabia- Queder, 2008; Abu- Rabia- Queder & Arar, 2011; Alayan & Al-Khalidi, 2010; Yousif, 2011). Despite multiple challenges faced by Palestine, girls' education is making progress and they are performing well (Greenberg, 2004; Velloso, 1996; A. H. Zeidan & Jayosi, 2015), even though, girls' education at the primary and secondary level is affected badly in a different regions of Palestine (Alzaroo & Hunt, 2003). Nonetheless, females have been found pretty well in getting an education and outnumbering the males not only at the school level but also at higher level i.e., technical and professional fields (Alayan & Yair, 2010; Arar & Mustafa, 2011; Azaiza & Abu-Baker, 2010; Hilal & McGrath, 2016; Yousif, 2011). The study findings of Greenberg (2004) assert that education for Muslim girls is very important in Jerusalem. Similarly, Greenberg (2010) highlights importance of the girls' education which provides opportunity for preparing mothers for future. Furthermore, the study findings of Makkawi (2011) reveal that female students outperform males in educational examinations in Palestine. Likewise, female students are also outnumbering males in educational institutions of Palestine gradually (Arar & Mustafa, 2011; Azaiza & Abu-Baker, 2010; Greenberg, 2004, 2010; Hilal & McGrath, 2016). In addition to these studies, several researchers also report that female students outshine males in educational examinations of Palestine (Sweileh et al.,

2012; Tucktuck, Ghandour, & Abu-Rmeileh, 2018; Velloso, 1996; Wahbeh, 2006; A. Zeidan, 2010, 2015; Zeidan & Jayosi, 2015).

The gender reversal change in the education system of Qatar, has also been observed with similar trends in terms of female students' outscoring in examinations (Al-Thani, Al-Thani, & Semmar, 2014; Bennett & Wright, 2010; Smits & Huisman, 2013; Sulaiman & AlMuftah, 2010; Younis, Katsioloudes, & Al-Bakri, 2020). The education system of Qatar is significant because female education has been progressing. Similarly, gulf-states are also progressing in education especially that of females (Al-Yafi, El-Masri, & Tsai, 2018; Sellami et al., 2017). Females are getting proper education and outnumbering the males at school and university levels (Bennett & Wright, 2010; Said, Al-Emadi, Friesen, & Adam, 2018). The study findings of Al-Thani et al. (2014) assert that the enrollment of female students at the university level supersedes males in Qatar. There is a competition between males and females in gulf countries including Qatar. The study findings of De-Jesus (2016) assert that females are outnumbering the males at the secondary and higher secondary level. Despite several challenges, Nasser and McInerney (2016) highlight that female students currently are progressing and are securing better positing in examination results in Qatar. Moreover, several studies reveal that female students outclass males in Qatar (Bennett & Wright, 2010; De-Jesus, 2016; El-Emadi, Said, & Friesen, 2019; Morsi & Al-Kobaisi, 1984; Nasser, 2013; Smits & Huisman, 2013).

Saudi Arabia has also made necessary arrangements in education by revising its education policies with regard to female education (Alamri, 2011; Allam, 2020; De-Jesus, 2016; Hamdan, 2005; Saleh, 1986; Smits & Huisman, 2013; Yousif, 2011). Similarly, Saudia is progressing in better education especially the females are getting proper

education and outnumbering the males at school and university levels (Al-Manea, 1985; Alfahad, 2012; Alsuwaida, 2016; Bennett & Wright, 2010; S. Khan, 2019). There is a competition between males and females to have better scores in examinations (Jamjoom & Kelly, 2013; Smits & Huisman, 2013; Yousif, 2011). Females are outnumbering the males at secondary, higher secondary, and tertiary levels (Alamri, 2011; Bennett & Wright, 2010; Smits & Huisman, 2013). Similarly, De-Jesus (2016) also asserts that mostly the males' underperform females in educational examinations in Gulf States. Moreover, Hamdan (2005) asserts that fifteen centuries-old traditions of Saudi Arabia have changed and now females are getting education. There were more female graduates in 1980 in humanities as compared to males. Several studies also report that female students are surpassing males in higher education in Saudi Arabia (Al-Alhareth, 2013; Alamri, 2011; Alfahad, 2012; Alsuwaida, 2016; El- Sanabary, 1994; Saleh, 1986; L. Smith & Abouammoh, 2013; Yamin, 2015).

In Sudan, basic education for girl students gradually progressed like other Muslim countries (Brown, 2006; Hale, 2003; Seri-Hersch, 2017; Yousif, 2011). It is pertinent here to mention that, through the educational policies for female education in Sudan were made but not implemented as per the spirit of the policies had been concerned (Bedri, 2013; El-Jack, 2010; Walker-Dalhouse & Dalhouse, 2009).

There were several impediments in getting the education of the females in previous decades in Sudan (Etim & Gindeel, 2016; Hale, 2003). The evidence shows that female education in Sudan prevailed gradually (Katz, 2001; Mirghani & Elnour, 2017). Despite war along with other barriers in Sudan, females are always encouraged to get education (Holmarsdottir, Ekne, & Augestad, 2011; Ibrahim, 2018; Joyner, 1996; Yousif, 2011).

Presently, females in Sudan, at the secondary and higher secondary level, are found contributing towards the education through active participation (Batterjee & Ashria, 2015; Ibrahim, 2018; Mirghni & Elnour, 2017; Seri-Hersch, 2017). The female and male ratio of education has a wider gap but now the increasing number of females may shrink it in future (Al-Mihaisi, 2016; Deng, 2003; Joyner, 1996; Katz, 2001). Females are getting education at school and college levels by competing with the males (Hale, 2003). Most of the positions at school, college, and university levels are secured by the females (Abdallah & Ahmed, 2015; Gindeel & Etim, 2014; Katz, 2001; Mirghani & Elnour, 2017). Similar gender reversal trends in educational performance has been observed in higher education levels in terms of female students' outpacing (Abdallah & Ahmed, 2015; Al-Mihaisi, 2016; Deng, 2003; El-Jack, 2010; Hale, 2003; Yousif, 2011).

The case of Tunisia is significant to mention here where the ratio of females is increasing in schools at the secondary level and they are excelling the male students in getting positions and grades (Maddeh, Hermessi, Bennour, & Souissi, 2015; Rebai, Yahia, & Essid, 2019; Zayed, Zguira, Souissi, & Bali, 2019). Previously, females' education was not given importance as per males' education in Tunisia (Benstead, 2019). However, females at schools are worth mentioning because of their performance at secondary and intermediate level education (Akkari, 2005; Lockheed & Mete, 2007). For the last few decades, the female literacy level has also risen while males ratio has been found consistent in higher education (Hamani, Chalghaf, Maaloul, & Azaiez, 2013; Karamti, 2016). The reforms at the secondary and higher secondary level are bearing fruit for the females by outnumbering the males at a large scale in higher education (Akkari, 2005). The study findings of Ayachi (2018), Rouis (2012), and Jebahi (2011) reveal that female students'

are progressing and securing better grades than males not only at school and college level but also at the university level in Tunisia. Moreover, it has also been observed by several studies that female students outshine males in tertiary level educational examinations (Karamti, 2016; Lockheed & Mete, 2007; Maddeh et al., 2015; Megahed, 2015; Megahed & Lack, 2013; Zayed et al., 2019).

The situation regarding female students in higher education in Turkey is also encouraging where education has been evaluated by the ratio of females joining the school at primary level (Atac, 2017; Buchmann & DiPrete, 2006; Caner, Guven, Okten, & Sakalli, 2016; Hadjar & Buchmann, 2016; Ozdemir, 2016). The female numbers in education are increasing as compared to male attending the school (Gök, Aydın, & Weidman, 2019; Hadjar & Buchmann, 2016; Yagci & Cevik, 2019). The actual comparison of male and female education lies at the heart of Turkey that how females are treated in getting an education (Akben-Selcuk, 2017; Caner et al., 2016; Kondakci & Zayim-Kurtay, 2019; Patrinos, Psacharopoulos, & Tansel, 2019). Moreover, several studies reveal that female students excel the males in getting higher education and showing good examination results (Akben-Selcuk, 2017; Atac, 2017; Aypay, Cekic, & Boyaci, 2012; Yagci & Cevik, 2019). Similar trends of gender reversal change in academic performance in higher education have been observed as females outscore males in examination results in Turkey (Dayioğlu & Türüt-Aşik, 2007; Duman, 2010; Gök et al., 2019). Moreover, it is pertinent to mention here that female students' enrollment has increased in tertiary education (Caliskan, Akin, & Engin-Demir, 2020; Jacobs, 1996; Kondakci & Zayim-Kurtay, 2019). In addition to this empirical evidence, several studies also assert that female students surpass males in all

Turkish educational examinations (Buchmann & DiPrete, 2006; Dayioğlu & Türüt-Aşik, 2007; Gök et al., 2019; Jacobs, 1996; Zengin-Arslan, 2002).

Several studies assert that the female success in examination results in Yemen is not bad (Alim, 2007; Khair, Khairani, & Elrofai, 2012; Smits & Huisman, 2013; Yousif, 2011). Similar to the other Gulf States, females are outnumbering males in the Yemeni education system (Bennett & Wright, 2010; De-Jesus, 2016; Yousif, 2011). The study findings of Yuki, Mizuno, Ogawa, and Mihoko (2013) reveal that the gender gap in educational performance in examination in minimizing in Yemen and females are actively participating to perform at different levels of education. Moreover, the enrollment of female students has increased recently in Yemen (Sánchez & Sbrana, 2009). Contrary to it, the study results of Khair et al. (2012) assert that male students outperform females in Mathematics in Yemeni educational examinations. Several studies point out female surpass males in Yemeni educational examinations (AL-Arashi, 2015; Alim, 2007; Igei & Yuki, 2015; Mizuno & Kobayashi, 2011; UNICEF, 2005).

2.2.4 Factors of Female and Male Students' Academic Performance in the developed countries

Gender of the students is very important element to explain position acquiring in educational sector. The researches conducted by a number of researchers supported the argument of gender gap in educational performance. Gender differences have been observed to be inherited and natural (Hicks et al., 2008; Spinath et al., 2008): variation proficiencies and ability of learners (Buzhigeeva, 2004; Deary et al., 2007): physical orientation variation (Steinmayr & Spinath, 2008): type and motivation level differences (Gilman & Anderman, 2006; Preckel, Holling, & Wiese, 2006): dissimilar behavior

towards education (Buzhigeeva, 2004; Carrier, 2009): variation in personal experiences (Lahelma, 2005): a set of socio-cultural beliefs (Meelissen & Luyten, 2008): and learning styles and differences of self-discipline (Carrier, 2009; Matthews et al., 2009) specifically interesting description of gap in academics having top three positions regarding changing aspects of interaction of learners and teachers or teachers and learners gender combination. Social interaction based on gender of learner and teacher affects field of policy and educational research. The reason for the interest in the field is linked to a number of evidences including female teachers' dominance in education system in number of countries.

In the context of Australia, research findings also pointed out number of factors of female students' outperformance and male students' underperformance in education including in higher education (Devlin et al., 2012; Hodgetts & Lecouteur, 2010; Perry & McConney, 2013; Ramsay, 2001). As mentioned by Hodgetts and Lecouteur (2010) and Ramsay (2001), the female students have been continuously outperforming male students for the last three decades in Australia. The study conducted by Hodgetts and Lecouteur (2010) revealed that female students outperformed male students in education and they name as boys' position as 'disadvantaged' in Australia. Furthermore, they pointed that the main reason of male underperformance in education is 'curricula feminization' and favouring to female students. Moreover, a number of factors of females outmatching males in education in Australia are reported by a number of researchers including social and economic disadvantages (Considine & Zappalà, 2002), socio-economic background (Devlin et al., 2012; Perry & McConney, 2013), participation and aspiration (Gore et al., 2017), access to education (Postle & Sturman, 2003), self-regulatory behaviour (Walker &

Berthelsen, 2017), and academic support to female students (Grebennikov & Skaines, 2009).

A number of factors of gender reversal trends over the past 30 years in Canadian higher education have been reported by a number of studies (Buchmann et al., 2010; Buchmann & DiPrete, 2006; DiPrete & Buchmann, 2013; Frenette & Zeman, 2007; Lupart et al., 2004). In this regard, Perry and McConney (2013) argue that the school socio-economic status is the main factor of female students outnumbering male students in higher education in Canada. There are a number of studies on gender reversal in academic performance in higher education (Gagné et al., 2019; Johnstone & Lee, 2014; Lascano et al., 2013). As pointed out by Frenette and Zeman (2007), female students are outplaying in Canadian higher education due to their socio-economic family background, previous schooling and grades and expectations of their parents. Moreover, Lupart et al. (2004) also asserted that learning attitude, life role expectation and carrier aspiration of female students are motivating to outpace male students in learning and performing in Canadian higher education.

In France, female education has become the significant fact based on a number of factors where females are more than males in schools, colleges and universities (Fryberg et al., 2013; Martínez-Cantos, 2017; Mendolicchio & Rhein, 2014; Piussi & Arnaus, 2010; Thijs et al., 2015). As pointed out by Hartjen and Priyadarsini (2003) the main reason of male students' falling behind female students is peer influence and behaviour in educational institutions. In France, at primary and secondary level of education, females are outperforming male students in grades and most of the higher positions in exams are occupied by the female students (Kislev, 2016; Mendolicchio & Rhein, 2014; Powell et

al., 2019). At higher education level, female students are also outplaying males in participation and examination based on their aspirations and future orientation (Piussi & Arnaus, 2010). As Duru-Bellat et al. (2008) reported, female students mostly excel the male counterparts in education as well as in professional fields based on social inequality, access to education and selection in the field of study. Moreover, a number studies in France reported several factors of females' excelling males in examinations including teachers' gender and bias (Terrier, 2016), peer influence (Hartjen & Priyadarsini, 2003), socio-economic background of the students (Duru-Bellat et al., 2008), previous education (Kislev, 2016), future aspirations (Mendolicchio & Rhein, 2014), and early behaviour & self-regulations (Gestsdottir et al., 2014).

In German higher education, a number of research findings have reported a number of factors of female students' outshining male students (Duru-Bellat et al., 2008; Jiang & Singelmann, 1998; Mertova et al., 2019; Powell et al., 2019; Zapp et al., 2017). The gender gap in academic performance in higher education is based on family background of the students as reported by Jiang and Singelmann (1998) and Zapp et al. (2017). Moreover, it has been considered important to identify the factors of gender reversal change in higher education and a source of exploring new horizons in the world generally and in Germany particularly (Kluczniok & Mudiappa, 2018; Mangold, 2018; Zapp et al., 2017). Although, focus of education has been males but as the world expanded, females started getting education along the men (Duru-Bellat et al., 2008; Jiang & Singelmann, 1998; Powell et al., 2019). Most of the developed world including Germany is an evidence of the increasing female ratio of education at the primary level (Jiang & Singelmann, 1998; Mertova et al., 2019; Powell et al., 2019). Moreover, females started excelling males in education in

different levels in Germany for better opportunities (Mangold, 2018). A study of Jiang and Singelmann (1998) and Mangold (2018) reveals that the class mobility and family background of students is the main factor of female students' outranking males in schools and colleges. Similarly, the findings of Kluczniok and Mudiappa (2018) assert that the socio-economic status and home learning environment of students is creating gap in educational performance in terms of female outstripping males in Germany. In addition to these findings, several studies pointed out a number of factors of females outpacing males in educational examinations which take account of personality and motivation of students (Birgit Spinath, Eckert, & Steinmayr, 2014), educational background of the student (Bedard & Cho, 2010), social inequality (Duru-Bellat et al., 2008), teaching practices (Powell et al., 2019), previous school environment (Legewie & DiPrete, 2012; Legewie & DiPrete, 2014), parental education (Legewie & DiPrete, 2012), early school tracking and gender bias, and family determinants & background (Legewie & DiPrete, 2009; Riphahn & Schwientek, 2015).

The education system of Hong Kong is pretty interesting to focus on female students' educational performance and its major factors (Sit et al., 2011; Zhang et al., 2019). After declaring the primary free education up to the 15 years of age, the literacy rate of female has arisen as compared to male students (Sit et al., 2011). According to the study of Zhang et al. (2019), the main reason of female students outshining in education in Hong Honk is the sense of competition in getting education. This study also pointed out the family backgrounds of students and parenting practices as the main factors of females outranking in educational examinations. Resultantly, females at secondary and higher secondary level got impetus and came to outnumber the males in grades and positions. It

did not only happen at school and college levels but also at university level, the females are excelling the males. Moreover, Sit et al. (2011) pointed out that motivational differences are the main factors of female students outrunning in Hong Kong examinations. In addition to these studies, the factors of females outmatching males in Hong Kong educational examinations have been reported as family background of the students by Kim and Law (2012), social media influence by Lau (2017), gender of the teacher by Lam et al. (2010), and learning behaviour and social skills of students by Xu and Wu (2015).

Higher education in Japan has been dominated by female students in terms of top positions and performance as compared to male students based on a number of factors (Hojo, 2012; Nozaki et al., 2009). Overall results are also progressive for female students as compared to male students based on educational accessibility and inequality (Ishida, 2007; Utrata, 2017). Moreover, female student's interest has also increased to outperform male students in school, college and university levels based on interaction with other peers (Ishii et al., 2016). A study conducted by Yamamoto and Brinton (2010) reported that the cultural capital is the main factor of gender reversal gap in academic performance in Japan. As pointed out by Kikō (2006), the motivation and future job orientation is the main factor of female students outdistancing male students in Japanese higher education. Similarly, Nakanishi (1992) also uses the term 'gender track' in the context of gender role and socialization differentials of females and males in Japanese educational institutions resulting in female exceling in performance. Further, he adds that curriculum, histories and school environment is motivating females to outshine males in examination results.

In the context of Netherland higher education, there are several factor of female students to outclass male students in examinations (De-Graaf et al., 2000; Duff et al., 2004;

Hausmann, 2009; Verkuyten & Thijs, 2002). The factors of gender reversal changes in education are not only limited to socio-economic differences of students families (Breen et al., 2010) but parental education and family cultural capital is also contributing at a large level (De-Graaf et al., 2000). Furthermore, Harskamp et al. (2008) also highlight the importance of peer group influencing female students to outshine male students not only in schools and colleges but also at higher education level. In the exams held at educational institutions, female students outscore male students and this gap is increasing with the passage of time in Netherland based on previous educational background (Breen et al., 2010), personality and learning approaches (Duff et al., 2004), and facilities provided in educational institution (Verkuyten & Thijs, 2002). In addition to these studies, a considerable number of researches have also revealed that female students are performing well in top examination results as compared to males. The human factors include parental involvement (De-Graaf et al., 2000), subject selection and choices (Severiens & Ten Dam, 2012), family factors (Hausmann, 2009; Sieben et al., 2001), learning styles (Vermunt, 1994), leisure time activates and reading habits (Kraaykamp & Dijkstra, 1999), and behavioural differences (Driessen & van Langen, 2013).

A number of factors have been promoting female students to have dominate positions in higher education examinations in New Zealand for last two to three decades (Prebble et al., 2004; Zepke & Leach, 2007). It includes teachers' behavior in classroom and students home background that is widening the gap between female and male students in academic performance (Prebble et al., 2004). A number of studies in this regard also have revealed findings related to female performance in terms of teachers' competency, favouring female students, students' previous background conditions and parental role as

well (Devlin et al., 2012; Hodgetts & Lecouteur, 2010; Mertova et al., 2019; Simpson & Wigglesworth, 2019). As Fergusson and Horwood (1997) argued, the behavior of female students in the classroom motivate them to outrank male students in education in New Zealand educational system. He also pointed out that males' behavior in classroom is disruptive, inattentive and disadvantaged that results in lower performance. Moreover, this gender gap is also increasing with the passage of time in higher education due to socio-economic backgrounds of the students, teachers' behavior in classroom and teaching styles as reported by Devlin et al. (2012) and Gibb et al. (2008a).

Female outperformance in higher education has been debated in the context of United Kingdom (Dee, 2006a; Savolainen et al., 2013; E. Smith, 2003; Zhukov, 2012). A number of factors are responsible for this gender reversal change in higher education (Buchmann et al., 2010; Carrington et al., 2007; Duckworth & Seligman, 2006). In this regard, Crawford, Wang, and Andrews (2016a) report that individual and previous academic differences among female and male students are the main factors of female outplaying in UK education system. Similarly, Forster (2001) asserts that equal access and career prospectus among female motivate them to outrank male students in education. As Epstein (1998) asserts boys' underperformance is as 'real boys don't work' and study habit is the main factor of gender differential in equational performance. The findings of Hicks et al. (2008) asserts that female students are outperforming male students not only in schools and colleges but also at higher education level. In the exams held at university level, female students outscore male students and this gap is increasing with the passage of time in UK (Horne et al., 2013; Matthews et al., 2009; Younger & Warrington, 2006). Furthermore, a number of studies conducted by researchers reveal multiple factors of

female students outdistancing male students in UK examinations which are psycho-social factors (Bowe, 2015), gender and previous educational background (Crawford et al., 2016b), behaviour, classroom environment and equal access to education (Warrington & Younger, 2000), and parental education, student ability and educational background (Glaesser & Cooper, 2012).

The results of the United Nations Educational, Scientific and Cultural Organization (UNESCO) studies describe that students supervised by female demonstrator tend to have better academic performance as compared to male teachers (UNESCO, 2008). The findings also suggest that female teachers focus more on nonverbal and verbal aspects of female learners as compared to male learners. The results reveal that female students tend to be more performer than boys during their studies in science subjects which are considered to me more masculine related subjects (Holmlund & Sund, 2008; Mills et al., 2004). Research findings also show that females have high performance than boys in a number of subjects and the argument is supported by different researches (Ciarrochi et al., 2007; Demie, 2001; Duckworth & Seligman, 2006; Gibb et al., 2008b; Leeson et al., 2008; Steinmayr & Spinath, 2008). However, the findings of these educational realms, different scholars linked these findings to the lack of number of male teachers as role models for males (Skelton, 2003). Some researchers also recommended that teachers support and encourage male learners to develop their skills and do effort to perform well in educational institutions (Demie, 2001; Leeson et al., 2008). Therefore, researchers have described that gender of teachers and students does have different effects on the academic achievement of the learners. Here, Dee (2006a) reports that female learners have high performance when the gender of teacher is female, on the other hand, males also perform well studying under the

tutorship of male teachers. So, the argument of Buchmann et al. (2010) also supports the argument based on the data collected from American and British educational institutions. They argued that a teacher's gender plays a vital role for learning. The findings were unreliable as compared with other empirical evidences which deviate from the argument and relevance of learner and teachers' gender interaction patterns on academic performance (Carrington et al., 2007; Driessen, 2007).

Further, some researches focused on the context of learner's knowledge and awareness; regarding subject measured and analyzed. These measures were misrepresentations of their findings. The research focused on marks and females' consistent outperformance as compared with male students. It is not fair to use it as standardized tests (Hicks et al., 2008). The nature of school marks and grades are very important variation from standardized tests. University grades partly describe the psychological causes having teachers' instructions, conformity, neatness, obeying the rules that support females (Carrier, 2009). Females tend to adopt to learn different activities, have greater self-discipline (Duckworth & Seligman, 2006), less school concerned (Buzhigeeva, 2004), self-regulation effectiveness (Matthews et al., 2009), have favorable behavior towards school (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011), and they have less tendency to avoid work as compared to males (Steinmayr & Spinath, 2008).

2.2.5 Factors of Female and Male Students' Academic Performance in developing countries

Female outperformance and male underperformance has also seen in developing countries depending on multiple factors (Irving & Hudley, 2005). A number of researchers report different factors regarding the argument about females' successes in higher education in

developing countries (Einarsson & Granström, 2002; Irving & Hudley, 2005; Jacob, 2002). Sommers (2013) asserts that favoritism and praise is the main factor of female outperformance and male under performance in higher education of developing countries. Teachers' communication is also a major factor in academic expectations of females and males (Jones & Myhill, 2004). These factors are discussed in detail in the context of female outperformance and male under performance in higher education institutions of developing countries in the forthcoming sections.

Interestingly, females' education has increased in South Asian region of India like developing nations (Angom, 2015; Jayaram, 1979; Shah, 2011). A large number of girls have been found outside the school during the last few decades in India (Prakash & Coplan, 2007; Prakash et al., 2017; Singhal, 1993). The gender gap has shrunk and a significant change has been found (Chakrabarti, 2009; Gandhi & Sen, 2020; Shah, 2011). In many of the states of India, girls' education is still stigmatized but effective measures have been found on policy-making side to improve the attendance in the schools (Gandhi & Sen, 2020; Nozaki et al., 2009). On the other hand, the girls joining the schools are found performing well in getting education on school and college levels (Shah, 2011; Singhal, 1993). Female students entering in higher education are now competing with the male students in securing the grades based on number of factors (Angom, 2015; Jayaram, 1979; Joshi & Ahir, 2019; Verma, 2014). Several studies reveal a number of factors of female students outclass male students in higher education including participation and geographical location (Chakrabarti, 2009), classroom environment (Gandhi & Sen, 2020), socio-economic characteristics (Prakash & Coplan, 2007), equal access to education (Singhal, 1993), and deviant behaviour of male students (Walls, 2008).

In Kenyan higher education, there has been observed a number of factors of female students' outperforming their counterparts (Agesa & Agesa, 2002; Ashraf et al., 2005; Jha et al., 2012b; Kamau, 2004; Kim et al., 2019; Mwoma, 2017; Moses Oketch, 2019). In addition to these studies, Mwoma (2017) and Otieno (1998) reports previous education and advancement in Kenyan educational systems and the main factors of female students outpacing males in examination results. Besides this, Kamau (2004) also cited in his study that female students in Kenyan have more access to higher education. The gender reversal in higher education is normally changing in Kenyan public and private sector universities based on number of factors including traditional and cultural (Agesa & Agesa, 2002), family (Abuya, Mutisya, Onsomu, Ngware, & Oketch, 2019), socio-economic (Moses Oketch, 2019), access to and opportunities of higher education (Eshiwani, 1985; Rathgeber, 1991), future aspiration (Ombati, 2013), teachers' attitude (Hyde, 1989), and job orientation (Kamau, 2004).

There are a number of factors of female outperformance and male underperformance in Mongolian higher education (Adiya, 2010; Diffendal & Weidman, 2011; Loo, 2017; Weidman & Bat-Erdene, 2002). The main factors are socio-cultural norms that encourage females to enter in higher education (Nozaki et al., 2009). Economic and institutional factors influence college choices and have strong influence on current gender situation in Mongolian society (Jagdag & Dembereldorj, 2017; Weidman & Bat-Erdene, 2002). Another very important explanation of the gender difference in higher education is lack of role models (Burn & Oidov, 2001). Most of the students follow their parents and teachers for future aspiration (Buchmann, DiPrete, & McDaniel, 2008). There are 75 percent female teachers and mostly they do not motivate male students to study hard

(Burn & Oidov, 2001). The review also confirms that female students are better able to cope with the post-communist transition (Hanks, 2005) and male students are attracted to be involved and influenced by bad companies of their peers. They become addicted to drinking and unconsciously choose other paths rather than higher education (Weidman & Bat-Erdene, 2002). Therefore, preference is given to female students in terms of educational attainment is the uniqueness of Mongolia in Asia (Adiya, 2010). In addition to micro factors that influence female students' outperformance and male students' underperformance in higher education institutions, there are macro level factors that are also shaping patterns of higher education success including socio-economic environment and Mongolian educational structure (Adiya, 2010; Buchmann et al., 2008; Diffendal & Weidman, 2011; Jagdag & Dembereldorj, 2017; Nozaki et al., 2009).

In the region of Nepal, comparison of males and females in getting education has considered important because females have now opportunities equal as to males (Watkins & Regmi, 1990; Witenstein & Palmer, 2013). Nepali government is providing literacy classes to young females and has adopted 'autonomous model of literacy' to motivate females to get higher education (Maslak, 2003; Street, 2003; Subedi, 2003). A sense of competition has arisen among the females and contribution towards the education has been found interesting in different regions (Robinson-Pant, 2000; Singh, 1990). Female students' educational performance has been elevated at school and university (Neupane et al., 2018). They have got better grades and distinctions than males in academics (Witenstein & Palmer, 2013). The literacy level of several Asian countries including Nepal is also evident. Previously, it was low and not in favor of females (Guinee, 2014; Robinson-Pant, 2000; Singh, 1990). Now, it has turned into their favor so rapidly. The girls' education

has increased while girls' ratio attending the schools as significantly progressive (Witenstein & Palmer, 2013). The study of findings of Subedi (2003) reveals that teachers' competence and classroom environment is the main factor of female outmatching males in Nepali examinations. Similarly, Watkins and Regmi (1994) assert that family financial problems of Nepalese male students is the main hindrance of their lagging behind in examinations. Moreover, a number of studies also report several factors of female students' surpassing males in Nepali education: self-esteem and peer group (Watkins et al., 1990), academic self and classroom activities (Roff et al., 2001), motivation (Guinée, 2014; Neupane et al., 2018), parental and family background (Thapa, 2015), and socio-cultural environment and socialization (Singh, 1990).

Females'' education has great role in the development of Philippine (Hossain & Ahmed, 2013; Jha et al., 2012a; Nuamah, 2018; Suryadarma et al., 2006). As per the development of the developing countries is concerned, access to and free primary education have played a significant role in the expansion of education (Dacuycuy & Dacuycuy, 2019; Effah, 2011; Nuamah, 2018; Suryadarma et al., 2006). Besides this, female education has been focused by Philippine in order to educate the females shoulder to shoulder to males. In most of the Philippian educational institutions, female education has been found rigorous based on educational mobility (Dacuycuy & Dacuycuy, 2019). Females have been found pretty well in getting education and outnumbering the males not only at school but also at higher level i.e., technical and professional fields in different areas of Philippine (Alderman & King, 1998; Estudillo et al., 2001; Smith & Cheung, 1986). The study findings of Yap and Melchor (2015) assert that the main factor of females outmatching males in examination to join labour force after graduation. Further, a number of studies reveal

several factors of female students outranking in examinations in Philippian educational institutions which are previous education (Alderman & King, 1998; Bernardo, 2003), parental support (Arguillas & Williams, 2010; Estudillo et al., 2001), motivation (Perez, 2012), and family background (Smith & Cheung, 1986).

In Sri Lanka, girls' education is getting the same status as boys have because of their balanced education system (Ashraf et al., 2005; Jha et al., 2012b; Liyanage, 2013). Performance of females and males in education has been found neck to neck in securing admission and getting grades (Aturupane et al., 2018; Malhotra & Mather, 1997; Sriyalatha, 2016). Currently, the girls have been found in every walk of life competing the boys even in odd subjects like engineering and science to join labour force in Sri Lanka (Amarathunga, Pathiratne, & Weerasinghe, 2016; Ranasinghe et al., 2017; Sriyalatha, 2016). The school education is found very strong which bears good fruit at higher level by outperforming the boys in schools and colleges as well as at university level (Aturupane et al., 2018; Liyanage, 2013; Malhotra & Mather, 1997). The study findings of Sriyalatha (2016) reveal that female students' outpacing male students in Sri Lankan educational examinations is based on their place of residence, family socio-economic status and learning environment. Similarly, a number of studies assert several factors of females' surpassing males in Sri Lankan education including access to education (Amarathunga et al., 2016; Jayaweera, 1999), educational self (Ranasinghe et al., 2017), previous education and socio-economic status of students' families (Aturupane et al., 2018; Jayaweera, 1999; Liyanage, 2013; Sriyalatha, 2016) and motivation (Ranasinghe et al., 2017).

In East African country Tanzania, education has not been considered a priority since long (Meena, 1996). Gradually, with the changing world, it unpacked the African

countries that development would not be possible without females' education (Effah, 2011; Johnstone, 2004; Mama, 2003; Meena, 1996; Molla & Cuthbert, 2016). However, education was mainly the male dominant sphere being earning members of family (Mama, 2003; Morley, 2011; Riordan & Louw-Potgieter, 2011). Owing to the developed nation, education was focused mainly by some of the states and development was made possible for females (Ashraf et al., 2005; Effah, 2011; Jha et al., 2012a; Kim et al., 2019; Ndijuye & Rao, 2019). On the lower level education was made compulsory in schools and females were also included along with the males to achieve insight (Effah, 2011; Hossain & Ahmed, 2013; Morley, 2011; Nuamah, 2018). Presently, at school and college levels, females are progressing more than males while outnumbering the males even in the male dominated spheres of education and higher education (Ashraf et al., 2005; Effah, 2011; Jha et al., 2012a; Meena, 1996; Molla & Cuthbert, 2016; Morley, 2011). The gender reversal change in terms of female students' outclassing male students in examinations is based on multiple factors in Tanzania including previous educational background of the students (Ndijuye & Rao, 2019), gender and grades of students (Morley, 2011), and participation (Effah, 2011).

In the case of Vietnam, there are also a number of factors of gender reversal in terms of female students' outshining male students in education (Desai, 2000; Harman et al., 2010; Huong et al., 2019; Knodel, 1997; Liu, 2004; Peeraer & Van Petegem, 2010; Pham & Lai, 2016). As pointed out by Belanger and Liu (2004) that educational reforms and motivational factors are the important factors of females outperforming males in education. Similarly, Harman et al. (2010) agreeing with Belanger and Liu claim that educational reforms are the main reason of females excelling males in examination results.

Furthermore, the study findings of Peeraer and Van Petegem (2010) assert that teacher competency and teaching methodology are along with classroom environment are contributing to females outscoring males in examinations. A number of studies revealed that females are outshining males not only at school level but also at tertiary educational level (Bélanger & Liu, 2008; Glewwe, 1998; Goodkind, 1995; Harman et al., 2010; Huong et al., 2019; Liu, 2004). In addition to these factors, several studies also point out family background (Goodkind, 1995), family living standard (Fukase, 2014), historical factors (Desai, 2000), and changing occupational position of females in Vietnam is promoting females' education, and they are shining in examinations.

2.2.6 Factors of Female and Male Students' Academic Performance in Muslim countries

Several factors of gender reversal change have been identified in a number of studies in Muslim countries (Bennett & Wright, 2010; De-Jesus, 2016; Greenberg, 2004; Hussain, Johnson, & Alam, 2017; Shah & Sobehart, 2008; Yousif, 2011). The factor includes socio-economic background (Alam, Ibrar, & Khan, 2016), cultural factors (Al-Manea, 1985; Alsuwaida, 2016), family backgrounds (De-Jesus, 2016; Kirk, 2013), parental involvement (Igei & Yuki, 2015; Kaus, 2018; Purewal & Hashmi, 2015), educational factors (Haghighi & Jusan, 2013; Salameh et al., 2011), educational self (Abdallah & Ahmed, 2015; Al-lawati, 2019; Al-Thani et al., 2014; Zaid, 2020), and teacher's motivations (Al-Sahel, 2005; Ashraf et al., 2005; Mohamed Emam & Al-Mahdy, 2020; Siddiqi, 2005; Ullah, 2018, April 19). Similarly, Yousif (2011) also reports multiple factors and support the argument that female students outclass males in higher education in Arab states. The factors are discussed

with reference to female outperformance and male underperformance in the context of Muslim world in the forthcoming section.

In Afghanistan, the progress for girls' education has not been made as per other Muslims countries (Afzali, 2017; Roof, 2014; Watch, 2017a, 2017b). Moreover, female education has become the significant fact where females have been less than male in schools during war and Taliban era (Morley & Crossouard, 2015; Watch, 2017a, 2017b). A number of girls do not go to school in Afghanistan because of worsened security in the country (Intili et al., 2006; Karlsson & Mansory, 2002; Khwajamir, 2016; Watch, 2017a). Moreover, detrimental gender norms also kept girls at home and did not give value to their education (McBride & Wibben, 2012; Sadat, 2004; Yacoobi, 2008). Taliban and United States led invasion have also restricted girls' education (Watch, 2017b). It is very difficult to provide actual number of the girls who received education under Taliban (Samady, 2013; Shayan, 2015). However, impressive progress for girls' education started in 2001 and, latterly, government reports that 39 percent of girls' students were attending schools in 2015 (Watch, 2017a, 2017b). Moreover, girls' education is reported as a successes story by Afghan government and donors (Othman et al., 2018). As in early time period after war, there were fewer number of girls' school than boys (McBride & Wibben, 2012). There are a number of studies which report barriers for girls' education in Afghanistan including local culture, war, early marriages, tribal customs, lack of resources, lack of infrastructure, as well as lack of motivation (Intili et al., 2006; Khwajamir, 2016; Samady, 2013; Watch, 2017a, 2017b). Gradually, girls' education has become a significant fact where they are progressing along with boys in schools based on familial motivation and prevailing peace in the country (Intili et al., 2006; Morley & Crossouard, 2015). At primary and secondary

levels, females are trying to minimize the gender gap and most of the higher positions in exams are mainly occupied by the females (Bagguley & Hussain, 2014; Burridge et al., 2016). At higher education level, females are also playing their role to surpass males in different educational examinations to get job (Afzali, 2017). Female students are trying to excel the male counterparts in education as well as in professional fields based on their familial motivation and changing profile of education (McBride & Wibben, 2012). Although, war in Afghanistan affected educational institutions generally, and girls' educational institution particularly but females have been engaged in religious education (Morley & Crossouard, 2015; Roof, 2014; Watch, 2017a, 2017b).

Currently, the situation of female students is good in tertiary level of education in Afghanistan (Samady, 2013). They are trying to excel in number and they are also securing better positions in examination results. Moreover, a number of studies highlight female success in educational examinations in Afghanistan (Abdulbaqi, 2009; Nazari & Himat, 2019; Roof, 2014; Shayan, 2015). Besides, local culture and customary belief systems are the evident gradually progress of female education. During years of war, educational institutions have been closed and the families prefer only religious education for their daughters and sons. Furthermore, the study findings show that the starting of peace in Afghanistan was also linked with education (Abdulbaqi, 2009; Khwajamir, 2016; McBride & Wibben, 2012). Therefore, a competitive educational environment started among female and males with reference to participation (Intili et al., 2006). Currently, the situation of female education is becoming good and challengeable for male students. Moreover, several factors of female educational performance in Afghanistan is linked with historical (Othman et al., 2018), cultural and emotional factors (Adnan, Chaudhry, & Malik, 2012), economic

(Abdulbaqi, 2009), religious and institutional factors (Sadat, 2004; Samady, 2001; Shayan, 2015), teacher competency (Ono, Chikamori, & Kita, 2007), peer influence (Nazari & Himat, 2019), and internet addiction (Ghulami, Hamid, Ibrahim, Hikmat, & Aziz, 2018)

Multiple factors of gender reversal change in Bahrain has also been observed in terms of female students' outperforming males in examinations (AI- Ahmed, 1994; Al-Haddad & Hamadeh, 2003; Bennett & Wright, 2010; De-Jesus, 2016; Loori, 2005; Smits & Huisman, 2013). Historically, Bahrain has oldest education system in the Gulf region and also has highest literacy rate (Al-Mahdi, 2014; Darwish, 2014). In Bahrain, free elementary education for male students was started in 1919 and for female students in 1928 (Karolak, 2012). Moreover, secondary education in Bahrain was started for male in 1936 and for females in 1951. Before 1968, the students have to study abroad for tertiary education as there was no tertiary institution. First tertiary educational institution named 'University of Bahrain' was established in 1984 (Karolak, 2012). Furthermore, public and private sector tertiary educational institutions were started and enrollment was gradually increased with the help of government of Bahrain and other private stakeholders (Darwish, 2014; Marinakou & Giousmpasoglou, 2014). As a result, based on motivational factors, female students showed competition not only in schools and colleges but also at tertiary educational examinations (Giousmpasoglou & Marinakou, 2014; Marinakou & Giousmpasoglou, 2015; Mirza & Lawrence). Gradually, females were motivated to join labour force. Consequently, the gender gap in enrollment and examination results was also reduced (Shafik, 2001). Moreover, several studies reveal that social media and family factors motivated female students to get not only better score in examinations at schools but also to participate actively in tertiary education (Desmal, 2017; Essam & Al-Ammary,

2013; Giousmpasoglou & Marinakou, 2014; Smits & Huisman, 2013; Yousif, 2011). Likewise, Albaker (2017) asserts that there is vivid performance of female students in education is due to policymakers who tried to improve it. Additionally, female students are outnumbering males in different educational institutions based on hospitality and motivation (Giousmpasoglou & Marinakou, 2014). Moreover, the study findings of Bennett and Wright (2010) also support the argument of female outperformance in education based on behavioural differences among male and female students. Contrary to it, the findings of De-Jesus (2016) highlight the better performance of males in mathematics and science subjects based on aptitude differences. In addition to these factors, several studies also highlight multiple factors of contributing and widening the gap between female and male students' educational performance in tertiary education in Bahrain including role of policymaking and competition (Hayes & Findlow, 2020; Kirk, 2013), educational reforms (Karolak, 2012), environment of institutions (Kosior et al., 2015), previous educational grades (Kukreja & Al, 2013), intelligence difference (Loori, 2005), usage of technology (Mirza & Lawrence), and study habits (Al-Haddad & Hamadeh, 2003).

In Bangladesh, basic education including girls' education was not given importance since the inception of the state (Jayaweera, 1997a, 1997b; Kabir & Greenwood, 2016; Rahman, 2005). Although the educational policies were made but not implemented as per the spirit of the policies (Bagguley & Hussain, 2014; Cagna & Rao, 2016; Rahman et al., 2015). There were several impediments in getting education for females. The cultural and religious factors put the females' education in danger for long in Bangladesh. With the passage of time, female education prevailed gradually (Kabir & Greenwood, 2016; Morley

& Crossouard, 2015). In spite of barriers, females are always encouraged to get education. Presently, females in Bangladesh, at secondary and higher secondary levels, are found contributing towards the education through active participation. Female and male ratio of education has a wider gap but now the increasing number of females may shrink it in the future (Statistics, 2011). Females are getting education at school and college levels by competing the males. Most of the positions at school and college levels are secured by the females. Females are found progressive towards higher education for their better future. Moreover, female students are outclassing male students in higher education as reported by Monem and Muhammad (2010). In addition, a number of researchers also assert several factors of female students surpassing males in educational examinations in Bangladesh including motivation (Rahman, 2005), job orientation (Salma & McGillivray, 2019), and previous education (Huq & Rahman, 2008).

Many studies in Egypt have revealed multiple factors of female students outshining males in educational examinations (Buckner, 2013; El-Missiry et al., 2012; Fahim & Sami, 2010; Mensch, Ibrahim, Lee, & El- Gibaly, 2003; Roudi-Fahimi & Moghadam, 2006; Smits & Huisman, 2013; Yousif, 2011). They are supported by their parents and families to perform and score better grade in schools and colleges (Abd-El-Fattah, 2006; Lloyd et al., 2001). Moreover, the study findings of El-Baradei (2010) and Buckner (2013) assert that access to higher education is the main factor of females outclassing males in tertiary education in Egypt. Similarly, El-Safty (2004) reports that cultural factors of Egyptian society are creating gap in academic performance among female and male students. Furthermore, the study of Sultana (2008b) reveals that awareness and motivation were created by UNICEF girls' education initiative programme in Egypt. This project motivated

girl students to outperform boys in Egyptian schools. However, social media exposure is also mentioned as a factor of female students outscoring males in higher education by (Sobaih et al., 2016). This gender reversal change in educational examinations has also been reported and observed at tertiary level by El-Sheikh et al. (2013). The review also reveals that female students are outnumbering males in educational institutions of Egypt, and also scoring better as compared to males (Cupito & Langsten, 2011; Elsayad, 2014; Hawi & Samaha, 2016). Moreover, the study findings of Youssef (2018) report that female students are actively participating and surpassing males in the exams. Most of the developing world including Egypt is an evidence of the increasing female ratio in education at primary and secondary levels (Abd-El-Fattah, 2006; Lloyd et al., 2001). Moreover, females at tertiary level in Egypt are specifically outperforming the males and this phenomena is revealed by number of factors including Egyptian educational reforms (Elsayad, 2014; Sayed, 2006), smartphone addition (Hawi & Samaha, 2016), academic self-efficacy (Abd-Elmotaleb & Saha, 2013), parental support and family economic conditions (Abd-El-Fattah, 2006; Dwairy & Menshar, 2006; Elbadawy, 2014), previous learnings from schools (Lloyd et al., 2001; Loveluck, 2012), access to higher education (Buckner, 2013; El-Baradei, 2010; Fahim & Sami, 2010), personal factors and motivation (Russell, 2004).

In the context of Indonesia, there are several factors of gender reversal change in higher educational in terms of female students beat males (Hansen et al., 1989; Leigh, 1999; Susanti, 2011; Swetz, Langgulung, & Johar, 1983; Welch, 2007). Family factors and role of teacher are contributing towards females outshining males at school and college level examinations (Kelly & Kelly, 2017; Octarra & Hendriati, 2017; Prasetio et al., 2017;

Suryadarma et al., 2006). In this regard, Newhouse and Beegle (2006) assert that female students are outperforming male students based on their previous grades at higher education level. In the exams held at university level, female students outscore male students and this gap is increasing with the passage of time in Indonesia. Similarly, the study finding of Samarakoon and Parinduri (2015) highlight that the concept of empowerment motivate females students to achieve better grades in Indonesian higher educational institutions. Several factors of female outscoring male students in Indonesian educational examinations include classroom environment (Treagust, 2004), motivation (Sutantoputri & Watt, 2013), family factors (Deolalikar, 1993a), motivation and parental inspiration (Ismail, 2015), students' learning strategies (Sizoo, Malhotra, & Bearson, 2003), family and peer support (Qudsyi, Sa'diyah, & Mahara, 2020), learning attitude and study culture (Swetz et al., 1983), future aspirations (Theodore & Carpenter, 1974), socio-economic status of families (Hansen et al., 1989), and access to higher education (Hansen et al., 1989).

As for as the factors of female students outperforming males is concerned, educational environment and family factors have been observed in Iranian higher education (De-Jesus, 2016; Jebreil et al., 2015). In this regard, a huge body of literature revealed that female students outnumber male students in higher education based on study culture, family factors, change in Iranian education system with global educational patterns, and personal motivation (Bennett & Wright, 2010; De-Jesus, 2016; Esfahani & Shajari, 2012; Kurzman, 2008). Moreover, female choices and options in the context of motivational factors are also significant for female outperformance in higher educational examinations (Bennett & Wright, 2010; Mehran, 2009). Similarly, in Iranian educational system, the

females are getting proper education and outnumbering the males at school and university level for better job opportunities in future (Rezai-Rashti & Moghadam, 2011). There is an educational competition between females and males to outscore in examinations in Iran (Mehran, 2009). Family members and parents are supporting females and it results in outnumbering the males at secondary and higher secondary level (De-Jesus, 2016; Esfahani & Shajari, 2012). Moreover, several studies report that female are outplaying males in educational levels including schools, colleges and universities based on multiple factors including (Hill & King, 1993; Jha et al., 2012b; Kim et al., 2019; Kurzman, 2008; Mehran, 2009; Rezai-Rashti & Moghadam, 2011; Smits & Huisman, 2013; Suryadarma et al., 2006).

The factors in terms of female education in Iraq are not different as compared with other Muslim countries and gulf-states (Bennett & Wright, 2010; De-Jesus, 2016; Harb, 2008; Issa & Jamil, 2010; Yildiz, 2016). The study findings of Altun (2019) report that female students are outshining males in school examinations based on teachers' commitment and extracurricular activities. Female students are actively participating in extracurricular activities which results in outscoring in examinations in Iraq (Altun, 2017). Moreover, Smits and Huisman (2013) highlight vivid performance of female students at secondary level examinations based on familial and geographical factors. Moreover, they added that educated mother and father give more attention to girl child education than boy child in rural areas of Iraq. Furthermore, similar nature of factors including cultural, previous educational and behavioural factors of female students surpassing males at tertiary level examinations have been reported by Bennett and Wright (2010). Likewise, a number of studies also assert multiple factors of female students outranking their counterparts in

educational examinations of Iraq including western influence on education (De-Jesus, 2016; Mohamed, 2012), household level factors (Smits & Huisman, 2013), extracurricular activities (Yildiz, 2016), social media influence (Ghareb & Sharif, 2015; Yasir et al., 2018), critical factors and learning styles (Rezaee & Mubarak, 2018), personal, socio-cultural and institutional factors (Alahmar, 2017; Kourdi & Tuama, 2019; Masika et al., 2014), parental influence and study habits (Mahmood et al., 2018), and sequence of war in Iraq (Harb, 2008; Issa & Jamil, 2010).

In Jordon, there are several factors of female students' outranking male students in educational performance in school and college levels (Bennett & Wright, 2010; Hamaideh, 2010; Khwaileh & Zaza, 2011). This success does not stop till higher education level. As Khwaileh and Zaza (2011) argue that historical factors of female students underperforming male students in Jordanian higher educational examinations is not correct but just a story telling. They highlight and correct the misconception of female underperformance in higher education. Their study reports that females surpass males in higher education during last six years (i.e. 2002-2007). They pointed parental education, family economic background and teachers' competency as the main factors of females' outshining in tertiary education. Similarly, the study findings of Sawair et al. (2009) assert that gender of the student and family economic position are the main factor of female students outscoring in different universities of Jordan including medical educational institutions. Furthermore, several factors of female students outpacing males in educational examinations in Jordan have been highlighted by number of studies including access to higher education (Jansen, 2006), future career and job orientation (Khader et al., 2008), teachers' competency and

class management (Salameh et al., 2011), family background and income level (Kanaan et al., 2010), and motivational factors (Majzub et al., 2011).

The case of Kuwait for female educational performance based on multiple factors is not different from other gulf countries (Abdel-Khalek & Lynn, 2006; Abdullah, 2011; Al-Sahel, 2005; Bennett & Wright, 2010; De-Jesus, 2016; Meleis et al., 1979). Here, girls started competition to show their performance and efforts in getting better scores than boys in schools (Abdullah, 2011; Alanzi, 2015b; Smits & Huisman, 2013). The performance by girls does not stop at school level but prevails at college and tertiary levels (Abdullah, 2011; Alanzi, 2015b; Alharbi, 2014; Karim et al., 2015). Moreover, the study findings of Alanzi (2018) and De-Jesus (2016) reveal that female students are outshining in tertiary level examinations in Kuwait based on their gender identity and changing global trends in education. Besides, the study findings of Alhajraf and Alasfour (2014) report that previous education and demographic factors of female outscoring males in educational examinations in Kuwait. However, the study of Karim et al. (2015) highlight the importance of educational and learning environment as a factor of gender reversal gap in academic performance in terms of male underperformance females in Kuwait. Nonetheless, the focus of Zogheib et al. (2015) is on the gender of both teachers and students for learning and creating differences in educational performance among female and male students. But the study of Metle (2001) asserts job orientation as a main factor of females' success in higher educational examinations. Furthermore, a number of studies highlight the performance of females over males based on multiple factors in educational institutions of Kuwait including family and previous grades (Abdullah, 2011; Alanzi, 2015b), behavioural differences (Bennett & Wright, 2010), parental socio-economic status (Smits & Huisman,

2013), motivation (Tannir & Al-Hroub, 2013), peer group influence (Tfaily & Samarah, 2018) learning environment (Al- Fadhli & Khalfan, 2009) teachers' competency (Alothman, 2012), and changing educational trends (Meleis et al., 1979).

In central Asian region (The Stan), the situation of girl students' performance in schools is very competitive with their counterparts based on local political and socio-economic factors (Ishkanian, 2003; Sabarwal & Terrell, 2008). Similarly, this competition has also been observed at tertiary level (Brunner & Tillett, 2007; DeYoung Alan & Constantine Elizabeth, 2009). The study findings of Giddings et al. (2007) reveal that female students outshine males in different examinations. Their educational institutions are increasing. Furthermore, female students' enrollment is also increasing in higher educational institutions in Turkmenistan and Uzbekistan (Arabsheibani & Mussurov, 2007; Clement & Kataeva, 2018; Majidov et al., 2010; Ruziev & Rustamov, 2016). This gender reversal change in educational performance in terms of females surpassing males has also been observed in Kyrgyzstan and Kazakhstan based on motivation and familial factors (Akin, 2013; Arabsheibani & Mussurov, 2007; Munko, 2017; Tiuliundieva, 2006; Zdorovets, 2017). A number of studies reveal that female students outpace males not only at school level but also at tertiary level (Akin, 2013; Brunner & Tillett, 2007; Majidov et al., 2010; Ruziev & Rustamov, 2016). Nevertheless, education was mainly considered the male domain in the Muslim states (Almukhambetova & Kuzhabekova, 2020). Gradually, the results have shown increase in enrollment of girl students not only in schools but also at tertiary levels (Akin, 2013; Kocak, 2019). Currently, the results also reveal that females are progressing more than males and outnumbering even in male-dominant subjects like engineering and technology development in Azerbaijan (Aghayeva, 2013; Heyat, 2006;

Mollaeva, 2017; UNICEF, 2002). The study of Zdorovets (2017) reveals demographic, family and school environment related factors of female outshining male students in educational examinations of Kazakhstan. However, Ubaidullaieva (2004) asserts educational reforms in Uzbekistan as a main factor of female outscoring male students in examinations. Conversely, the study findings of Smite (2010) point out the importance of religious movements in Kyrgyzstan for girls' education. On the other hand, Shukakidze (2013) mentions student personal motivation and educational environment as a main factors of gender gap in educational performance in Azerbaijan. Likewise, Kaus (2018) argues that parental involvement is a factor of widening gender gap in educational performance in examinations in central Asian region. In the same way, Kalikova and Rakhimzhanova (2009) highlight private tuition as a main factor of gender reversal gap in educational performance in Kazakhstan. Additionally, several studies highlight multiple factors of female students' success in tertiary educational examinations and outnumbering in central Asian region (DeYoung Alan & Constantine Elizabeth, 2009; Heyat, 2006; Ishkanian, 2003; Sabarwal & Terrell, 2008; Silova & Magno, 2004; Tiuliundieva, 2006).

In addition to these factors, multiple factors have been reported as gender reversal change in academic performance in higher education in central Asian region including socio-economic conditions of students' families (Ishkanian, 2003), global influence and changing gendered norms (Heyat, 2006), teachers' role (Hasankhani & Asadian, 2018; Hernández-Torrano & Tursunbayeva, 2016), Turkish and western influence (Gozaleva, 2015), socio-cultural reforms (DeYoung-Alan & Elizabeth, 2009), transformation in higher educational institutions (Brunner & Tillett, 2007; Clement & Kataeva, 2018), motivation

(Almukhambetova & Kuzhabekova, 2020), and usage of information technology in universities (Akin, 2013).

In Libya, there are several factors that point out the turning situation of gender reversal change in performance in terms of female students outshining males in examinations (Abidin et al., 2012). Literacy rate has grown up but still in many parts of the country females' education is stigmatized for religious and ethnic basis (Abusbiha & Mustaffa, 2014). The girls entering the schools and college levels are found better in performance, based on family factors and motivation from parents side (Al-Agili et al., 2012). The positions in different intermediate boards can compared where girls are found outperforming the boys in getting positions (Appleton, 1979). Another aspect of females' education has been evaluated through the competing of females for the admission in colleges and university level education (Tamtam et al., 2011). It is pertinent that females are possessing more than half of the seats as compared to males for their better future in Libya (Shammas, 1962). Moreover, in colleges and universities, female ratio is also high than males in securing the admissions as well as performing in the class competition (Rhema & Miliszewska, 2012, 2014). Presently, the female ratio has increased significantly almost in every region of Libya based on changing cultural and value based factors. Rural areas of Libya have also been pointed out in securing a significant place in girl's education where previously the access to education was not properly given (Kibasan & Singson, 2016). Furthermore, several studies highlight family, parent, economic, motivation, and classroom factors of female students securing better grades than males in examination results in Libya (Al-Agili et al., 2012; Appleton, 1979; Bharija et al., 1988; Dyab, 1997).

In case of Malaysia, several studies report multiple factors of female students progressing high as compared to male students in educational examinations (H. M. Ali & Musah, 2012; Anuar Zaini et al., 2005; Cagna & Rao, 2016; Khemlani-David, 1998). This gender reversal trend has been observed not only in Malay schools but also at college and university level (Jayaweera, 1997a; Ong, 1990; Tseng & Fuligni, 2000; Yagci & Cevik, 2019). As the study findings of Yagci and Cevik (2019) and Unin (2010) assert that female students' learning has improved in examination results in different educational institutions including higher education based on previous educational background. The study findings of Salvation and Adzharuddin (2014) assert that social media exposure of female and male students' result in gender differentials in academic performance in Malaysia. Male students have high exposure and spend more time to use social media. Contrary to it, female students tend to focus on study sites on social media. Moreover, Bakar et al. (2010) highlight motivational factors create gender differential in academic performance in terms of female outscoring males in higher education in Malaysia. Furthermore, the study of Wan-Chik et al. (2012) highlights family and previous school factor importance for female students outshining in higher education. In addition to these studies, several researchers also reveal multiple factors of female students outranking males in higher educational examinations in Malaysia including educational self (Hasan, Hossain, & Islam, 2014; Rosli et al., 2012), family factors and previous school environment (Arzuman et al., 2012; Jelas & Dahan, 2010), demographic and motivational factors (Abdullah et al., 2004; Remali et al., 2013; Saad, Tek, & Baharom, 2009), and social media influence (Helou & Rahim, 2014).

Similar to other Muslim countries, females are also showing their progress in educational examinations based on several factors in Morocco (Benmansour, 1999;

Kapchan, 1996; Khandker, Lavy, & Filmer, 1994; Nitami, 2014). It has been observed that female students outnumber males and perform better in educational examination based on their familial trainings and parental support (Benmansour, 1999; Lavy & Spratt, 1997; Sadiqi, 2003). The study findings of Ibourk (2016) and Kapchan (1996) reveal that female students outshine males in schools and colleges due to their strong socio-economic conditions and cultural factors. This gender reversal change is not stopped at school and colleges but also prevail in higher educational institutions (Benmansour, 1999; Garmah & Bernouss, 2020). In tertiary educational examination of Morocco, females surpass their counterpart in tertiary level examinations based on their motivation and self-efficacy to perform with better grades (Soubhi, Touri, Lima, Knouzi, & Talbi, 2014; Zaid, 2020). In addition, number of studies highlight the phenomena of female students high performance as compared to males in examination results based on multiple factors as teachers' interest and attitude (Liouaeddine et al., 2017; Zohri, 2011), motivation (Khandker et al., 1994; Soubhi et al., 2014; Zaid, 2020), family background (Spratt, Seckinger, & Wagner, 1991) historical, cultural and religious factors (Sadiqi, 2003), educational reforms (Herz et al., 2004; Nitami, 2014), role of parents and students' goals (Liouaeddine et al., 2017), internet addiction (Garmah & Bernouss, 2020), and students' behavioural differences (Benmansour, 1999; D'hondt et al., 2015).

The education system of Oman is trying to provide supportive educational environment in the context of female students to outperform in different examination results (Al-Aufi & Al-Azri, 2013; Al-Mazidi & Abusham, 2018; Chapman et al., 2014; Smits & Huisman, 2013). A number of studies report female students taking keen interest in educational participation through the support of family members, economic conditions

and other motivational factors including self-efficacy (Al-Ani et al., 2020; Al-Mazidi & Abusham, 2018; Chapman et al., 2014; Khan & Fernandez-Carag, 2016; Mohamed-Emam & Al-Mahdy, 2020; Yasin et al., 2020; Yousif, 2011). Resultantly, females at secondary and higher secondary level got impetus and came to outnumber the males in grades and positions (Al-Bahrani et al., 2020; Al-lawati, 2019; Alhadabi & Karpinski, 2020; Chapman et al., 2014; Smits & Huisman, 2013). It not only happened at schools and colleges level but also at university level that the females are excelling the males as well (Al-Aufi & Al-Azri, 2013; Aljahwari & Aldhafri, 2020; AlWahaibi, 2020; Bennett & Wright, 2010; Yousif, 2011). In recent times, based on these multiple factors, female students' enrollment has also been increased in universities in Oman. Moreover, the study findings of Abdullah et al. (2019) and Emam (2020) reveal that female students are outpacing males in tertiary level examinations based on peer support, access to education and parental support. Addition to these studies, motivational and institutional factors of female students outscoring males in higher educational examination are revealed by several studies in Oman (Al-Ani et al., 2020; Al-Bahrani et al., 2020; F. Khan & Fernandez-Carag, 2016; Mohamed Emam & Al-Mahdy, 2020).

In Pakistan, multiple factors of female students outshining males in examination results have been reported by several studies (Choudhary, 2014; Education, 2018; Khan & Hussain, 2019; Klitgaard & Currimbhoy, 1978; Qureshi, 2003). It is pertinent here to mention that the literacy level of females have been low to males historically. In Pakistan, gender differences exist at large scale because most of the population live in rural areas with typical patriarchal structure of the society (Azhar, 2009; Malik & Courtney, 2011). Performance of boys and girls is to be debated because there is always low performance of

the boys and high performance of girls at school level whether in science or arts and in higher educations as well (Afzal et al., 2013; Ahmed, 2009; Latif, 2009; Mateju & Smith, 2015). A larger number of females have joined higher education and they are performing well in Pakistan (Afzal et al., 2013; AyubBuzdar et al., 2013; Azhar, 2009; Batool et al., 2013). They are achieving higher positions in the exams than males (Shoaib & Ullah, 2019). The enrolment of the student in higher education reveals that more females are getting admission, which is also a proof of females' outshining in higher education in Pakistan (Afzal et al., 2013; *Economic Survey of Pakistan*, 2018; Education, 2018; Latif, 2009; Shaikh et al., 2015). With the passage of time, the gap between the performance of male and female students is widening, and the male students seem to be lagging behind (Shoaib & Ullah, 2019; Ullah & Ullah, 2019).

There are multiple factors of female students outplaying males in educational examinations. The study findings of Purewal and Hashmi (2015) reveal that parental support is a main factor of female outscoring male students in examinations. Similarly, Siddiqui (2016) argues that change in educational policies in Pakistan is the factor of female achieving better scores in examinations. Furthermore, Ullah and Ullah (2019) assert socio-cultural context of female outplaying male students in examinations in Pakistan. Likewise, family and economic conditions of students' families are also contributing towards female students' outshining males in educational examinations in Pakistan (Batool et al., 2013)

In the case of Palestine, the factors of female students outscoring in examinations is little bit different from other Muslim countries (Abu- Rabia- Queder, 2008; Abu-Rabia- Queder & Arar, 2011; Alayan & Al-Khalidi, 2010; Yousif, 2011). Despite multiple

challenges faced by Palestine, girls' education is going in progress and they are performing well (Greenberg, 2004; Velloso, 1996; Zeidan & Jayosi, 2015). Even though, girls' education at primary and secondary level is affected badly by conflict and war in a different region of Palestine (Alzaroo & Hunt, 2003). Nonetheless, females have been found pretty well in getting education and outnumbering the males not only at school level but also at higher level i.e., technical and professional fields (Alayan & Yair, 2010; Arar & Mustafa, 2011; Azaiza & Abu-Baker, 2010; Hilal & McGrath, 2016; Yousif, 2011). The study findings of Greenberg (2004) asserts that education for Muslim girls is very important in Jerusalem based on religious values. Similarly, Greenberg (2010) highlights the girls' education and provides importance as preparing mothers for future. Furthermore, the study findings of Makkawi (2011) reveal that female students outperform males in educational examinations in Palestine based on socio-economic factors and familial motivation. Likewise, female students are also outnumbering males in educational institutions of Palestine gradually (Arar & Mustafa, 2011; Azaiza & Abu-Baker, 2010; Greenberg, 2004, 2010; Hilal & McGrath, 2016). The study of Abu- Rabia- Queder (2008) highlights genderial context and ethnic factors of female students' educational performance in Palestine. Similarly, Abu- Rabia- Queder and Arar (2011) point out emotional and economic aspects of female performance in educational examinations. Moreover, the study findings of Alayan and Al-Khalidi (2010) mention that historical and curriculum as a factor of female students outscoring males in examination results. Likewise, Alayan and Yair (2010) argue that cultural factors are contributing towards female students achieving better scores in examination. In addition to these studies, several researchers also report multiple factors of female students outshining males in educational examinations of Palestine

includes psychological factors and internet addiction (Alhajjar, 2014), access to higher education (Arar, Masry-Harzalla, & Haj-Yehia, 2013; Arar & Mustafa, 2011; Koni, Zainal, & Ibrahim, 2013), educational reforms (Assaf, 1997), motivation (Greenberg, 2010; Okkenhaug, 2002), sleep differences among female and male students (Sweileh et al., 2012), smoking habits (Tucktuck et al., 2018), and learning environment (Wahbeh, 2006; A. Zeidan, 2015).

The gender reversal change in education system of Gulf-countries, Qatar has also showed similar trends in terms of female student outscoring in examinations (Bennett & Wright, 2010; Smits & Huisman, 2013). The education system of Qatar is significant because female education has prevailed. Similarly, Gulf-states are also progressing towards better education specially the females are getting proper education and outnumbering the males at school and university level (Bennett & Wright, 2010). There is a competition of males and females in golf countries including Qatar. The study findings of De-Jesus (2016) assert that females are outnumbering the males at secondary and higher secondary level. Moreover, several studies reveal that female students outclass males in Qatar (Bennett & Wright, 2010; De-Jesus, 2016; Smits & Huisman, 2013). The study findings of Al-Thani et al. (2014) assert that self-efficacy and learning style differences among female and male are the main factors of female students surpassing males in higher educational examinations in Qatar. Moreover, Al-Yafi et al. (2018) highlight the importance of social media usage creating gender gap in academic performance in terms of female students achieve better grades than males is examinations. Furthermore, the study findings of Nasser and McInerney (2016) reveal that self-fulfilling prophecy and motivational factors are contributing to create academic performance gap among female and male students. Its

result is female students outscore males in tertiary education. However, Morsi and Al-Kobaisi (1984) give importance to access to higher education as a factor of female students surpassing males in tertiary examinations. In addition to these findings, several studies also reveal multiple factors of female students' outperform males in higher educational examinations in Qatar include behaviour and self-efficacy of students (Said et al., 2018), parental attitude and support (Sellami et al., 2017), teaching styles (El-Emadi et al., 2019), teacher gender and extracurricular activities (Nasser, 2013), and motivational factors (Younis et al., 2020).

By looking at the changing landscapes of the world education systems, Saudi Arabia has also made necessary arrangements in education by revising their educational policies in the context of female education (Allam, 2020; Alshaghdali, Greener, & Loveless, 2014; De-Jesus, 2016; Hamdan, 2005; Smits & Huisman, 2013; Yamin, 2015; Yousif, 2011). Similarly, Saudi regions are also progressing in education specially the females are getting proper education and outnumbering the males at school and university level (Bennett & Wright, 2010; El- Sanabary, 1994; S. Khan, 2019; Saleh, 1986). There is a competition of males and females in Saudi Arabia (Jamjoom & Kelly, 2013; Smits & Huisman, 2013; Yousif, 2011). Females are outnumbering the males at secondary and higher secondary level based on motivational and family factors (Alamri, 2011; Bennett & Wright, 2010; Smits & Huisman, 2013). Similarly, De-Jesus (2016) assert that the underperformance of male students in educational examinations in Gulf States is the result of motivational differences between females and males. Likewise, the study findings of Hamdan (2005) reveals that educational institutions in Saudi Arabia have been changed including fifteen centuries old tradition. Female has more freedom and options to get

education. There were more female graduates in 1980 in humanities as compared to males in Saudi Arabia.

In addition to these studies, several factors of female outperformance males in higher education in Saudi Arabia have been highlighted by a number of researchers including historical and institutional factors (Al-Manea, 1985; Saleh, 1986), cultural factors of learning (Al-Alhareth, 2013), usage of information technology in higher educational institutions (Alfahad, 2012; Alshaghdali et al., 2014; Yamin, 2015), gender specific educational policy and curriculum (El- Sanabary, 1994), competition and motivation (Alamri, 2011), opportunities for females (Jamjoom & Kelly, 2013), access to higher education and participation (Alsuwaida, 2016), and educational reforms (L. Smith & Abouammoh, 2013)

In Sudan, basic education for girl students gradually progressed like other Muslim countries (Brown, 2006; Joyner, 1996; Yousif, 2011). It is pertinent here to mention that the educational policies for female education in Sudan were made but not implemented, due to war and conflict, as per the spirit of the policies had been concerned (Etim & Gindeel, 2016; Gindeel & Etim, 2014). There were several impediments in getting education of the females in previous decades including cultural barriers, familial responsibilities and early marriages (Bedri, 2013; Brown, 2006; El-Jack, 2010; Katz, 2001). Currently, the evidences show that female education in Sudan is progressing and prevailing gradually based on the educational reforms (Deng, 2003; Etim & Gindeel, 2016; Hale, 2003; Seri-Hersch, 2017). In spite of barriers, females are always encouraged and motivated to get education (Joyner, 1996; Yahia, 2015; Yousif, 2011). Presently, females in Sudan, at secondary and higher secondary levels, are found contributing towards the

education through active participation (El-Jack, 2010). Female and male ratio of education has a wider gap but now the increasing number of females will shrinks it in the future (Katz, 2001). Females are getting education at school and college level by competing with males (Deng, 2003). Most of the positions at school and college levels are scored by the females. Similar gender reversal trends in educational performance have been observed in the higher educational level in terms of female students outpacing (Al-Mihaisi, 2016; Deng, 2003; Etim & Gindeel, 2016; Mirghani & Elnour, 2017; Yousif, 2011). This gender reversal trend in terms of female student outshining males in educational examinations are linked with their family, economic and institutional factors (Batterjee & Ashria, 2015; Seri-Hersch, 2017). The role of parents is also highlighted by El-Jack (2010) for female students to outscore males in examination results. Moreover, previous grades and school environment are also considered important for female students outranking males (Seri-Hersch, 2017). Similarly, study culture and behaviour of students at university is also creating gap in academic performance among female and male students in Sudan (Mirghani & Elnour, 2017). Likewise, several studies reveal multiple factors of female students outscoring males in educational examinations includes educational reforms (Brown, 2006; Hale, 2003), role of parents and teachers (El-Jack, 2010; Walker-Dalhouse & Dalhouse, 2009), motivational factors (Abdallah & Ahmed, 2015; Bedri, 2013; Holmarsdottir et al., 2011; Yahia, 2015), and Shisha addiction among males (Othman, Aghamohammadi, & Farid, 2019).

The case of Tunisia is significant to mention here where ratio of females is increasing in schools at secondary level. Females are excelling the male students in getting positions and grades (Maddeh et al., 2015; Rebai et al., 2019; Zayed et al., 2019).

Previously, females' education was not a priority as per male education was concerned (Akkari, 2005). However, females at schools are worth mentioning because of their performance at secondary and intermediate level education (Mellouli et al., 2018). For the last few decades, female literacy level has also risen while males' ratio has been found consistent (Charrad, 2007; Lockheed & Mete, 2007). The reforms at secondary and higher secondary levels are bearing fruit for the females while outnumbering the males at large scale in higher education (Ayachi, 2018; Megahed, 2015; Megahed & Lack, 2013). Moreover, the study findings of Trabelsi (2013) and El-Alaoui (2016) assent that the progress of female students is directly linked with their parents and socio-economic status. Similarly, educated parents and economically well-established families are supporting girls' education more as compared with boys. In the same way, it has also started behavioural differences among girls and boys in schools which has result in boys lagging behind in examinations (Jebahi, 2011; Maddeh et al., 2015). Likewise, males in later life has become earning member of families and females have to marry to live with her husband (Benstead, 2019). Females prefer to study and males prefer to take interest in economic activities of family (Megahed, 2015). In short, these factors are creating further gender gap in academic performance in examinations in tertiary education (Lockheed & Mete, 2007). As Hamani et al. (2013) reveal that male students are involved in cheating practices in university examinations and are left behind in securing better position in examination.

In universities, females outnumbering males in Tunisia (Hamani et al., 2013; Karamti, 2016; Maddeh et al., 2015). It is based on multiple factors as mention in study conducted by Arfaoui (2011). In addition to these facts, several studies highlight multiple factors of female students outscoring males in tertiary level examinations which are

teachers' knowledge and attraction (Zayed et al., 2019), monitoring and assessment in education sector (Akkari, 2005), learning opportunities (Ayachi, 2015), cultural changing factors (Ayachi, 2018; Benstead, 2019; Charrad, 2007; Jebahi, 2011), educational reforms (DeGorge, 2002), family economic position (El-Alaoui, 2016), usage of ICT in university (Karamti, 2016), usage of Facebook (Rouis, 2012), and motivational factors (Akkari, 2005; Arfaoui, 2011; Rebai et al., 2019; Trabelsi, 2013).

The situation regarding female students in higher education in Turkey is also encouraging where education has been evaluated by the ratio of females joining the school at the primary level (Atac, 2017; Dayioğlu & Türüt-Aşik, 2007; Gök et al., 2019; Kondakci & Zayim-Kurtay, 2019; Ozdemir, 2016). The female numbers in education are increasing as compared to males attending the school through the support of parents and other family members (Buchmann & DiPrete, 2006; Duman, 2010; Yagci & Cevik, 2019). The actual comparison of male and female education lies at the heart of Turkey that how females are treated and motivated in getting education (Akben-Selcuk, 2017; Kondakci & Zayim-Kurtay, 2019). Moreover, number of studies reveal that female students excel the males in getting education at tertiary level and show good examination results based on multiple factors including family and school environment (Caliskan et al., 2020), parental role (Caner et al., 2016), choice of educational institution (Duman, 2010), job orientation (Gök et al., 2019), access to higher education (Hadjar & Buchmann, 2016; Jacobs, 1996), cultural and academic factors (Kondakci & Zayim-Kurtay, 2019), and economic background of students' families (Patrinos et al., 2019; Zengin-Arslan, 2002).

A number of studies assert that there are several factors of female success in examination results in Yemen (Alim, 2007; Khair et al., 2012; Smits & Huisman, 2013;

Yousif, 2011). Similar to other Gulf States, females are outnumbering males in Yemeni education system based on motivation and previous educational performance (Bennett & Wright, 2010; De-Jesus, 2016). The study findings of Yuki et al. (2013) assert that teachers' competency and gender is the main factor of female outscoring males in examinations. It is pertinent here to mention that the study of Sánchez and Sbrana (2009) highlight that female enrollment has increased in schools, colleges and universities based on the facilities provided in the boundary wall of institutions. Contrary to it, the study results of Khair et al. (2012) assert that male students outperform females in Mathematics in Yemeni educational examinations based on their motivational factors. Likewise, the curriculum in Yemeni educational institutions was male dominated and females were not enjoying real positions in education. Currently, the curriculum is the main source of motivational factor for female students outshining males in different educational examinations (AL-Arashi, 2015). Furthermore, a number of studies reveal multiple factors of female students outscoring males in educational examinations including motivation (AL-Arashi, 2015; UNICEF, 2005), parental support (Igei & Yuki, 2015), and role of teacher (Alim, 2007).

2.3 Theoretical Approaches to female and male students' academic performance

This section provides the theoretical insights on gender differentials in academic performance in higher education in terms of female students outshine males. The theories on gender and academic performance in higher education are; biological determinism, psychological determinism, sociological approaches, and post-structuralist perspective.

Biological determinism implies that social behavior is an outcome of biological dissimilarities among boys and girls (Aluja-Fabregat, Colom, Abad, & Juan-Espinosa,

2000; Murphy & Hall, 2011). Hence, famous debate related to nature versus nurture biological determinism tends to accentuate the role of nature in explaining human behavior (Tang et al., 2010). For instance, in explaining the role of elderly females in the moral upbringing of their children and grandchildren, this paradigm may be explained that, after a period of fertility, females have menopause where their sexual desires are attenuated and moral desires are amplified through a biological process (Bindu & Thomas, 2006; Helleday, Bartfai, Ritzén, & Forsman, 1994). Hence, moral socialization is a result of these biological instincts rather than social pressures or norms (Boyatzis, Hopkins, & Bilimoria, 2008; Halpern, 1997). Similarly, this biological determinism approach argues that female and male basis of differences are on God's gifted intelligence and skills (Naderi, Abdullah, & Tengku Aizan, 2008; Räty & Snellman, 1992). Moreover, this biological differential approach to study academic performance in tertiary education is also used in the field of sociology, education, anthropology, and psychology.

Several studies have been highlighted that females and males have different sizes of the brain, intelligence, and reasoning skills based on their biological characteristics (Aluja-Fabregat et al., 2000; Pardeller, Frajo-Apor, Kemmler, & Hofer, 2017; Tang et al., 2010). Based on these differences, they argue that males perform better than female students in educational examinations at the tertiary level (Boyatzis et al., 2008; Craig et al., 2009). Moreover, the male brain size is bigger than the female brain size. So, they store more memory (Pardeller et al., 2017). Therefore, males with a big size of the brain perform better in educational examinations as compared to females who have small brain (Andreano & Cahill, 2009). The argument is also supported by Zschoche (1983), Clarke

(1873), and Halberstam (2019) that female students underperform males in tertiary education.

Moreover, biological proponents argue that females and males have physiological differences (Maccoby, 1999). Furthermore, males have high reasoning and cognitive skills as compared to females. Therefore, male students outplay females in tertiary educational examinations. Likewise, this approach also segregates the educational performance of female students in arts and male students in science disciplines (Clarke, 2010). This argument is also linked with Hedges and Nowell (1995) that female students are strong in verbal and gesture learning. On the other side based on reasoning skills, male students perform better in engineering and science (Andreano & Cahill, 2009; Boyatzis et al., 2008; Maccoby, 1999). Furthermore, males are considered physically strong as compared with females which gives results in better results in reasoning skills (Halberstam, 2019). Studies also point out that females are passive and males are enthusiastic (Andreano & Cahill, 2009; Halpern, 1997). Therefore, female performance in education is linked to their body characteristics (Aluja-Fabregat et al., 2000; Naderi et al., 2008). Consequently, they can't perform the daring type of work including studying science subjects and outdoor activities in normal life. Similarly, learning abilities are linked with their menstruation period (Clarke, 1873, 2010; Zschoche, 1983).

I have observed from the empirical review that female students secure better grades in examination results. This notion rejects the argument of biological proponents in terms of the biological basis of the academic performance of females and males. Moreover, this approach also highlights that female students' lagging in examinations was traditionally linked with biological determinism and socio-cultural determinism was unnoticed.

Likewise, there is also debate that female students in the developed world are free to form cultural pressure and may perform better than males in examinations (Dumais, 2002). In addition to this argument, female students also perform well in achieving better positions during puberty and menstruation cycle does not affect their cognitive roots (Lent, Brown, & Hackett, 2002; Marcia, 2002).

Contrary to it, female students outshining males in tertiary education is based on socio-cultural and study environment including other linked factors rather than biological determinisms' view. It is a gaudily clearer picture from the previous review of developed, developing, and Muslim world that female students are performing better not only at school, college, and also at a higher educational level. It also opens a new discussion among research scholars that biological differences are not valid factors of females lagging behind in educational examinations (Blickenstaff, 2005; Ceci, Williams, & Barnett, 2009; Halpern, 1997; Matthews et al., 2009). Moreover, it favors the argument that gender is socially constructed phenomena and differences among female and male educational performances is based on femininity and masculinity rather than biological differences (Francis, 2006). Socio-cultural and socio-religious factors of female education had not been considered with serious concerns (Stets & Burke, 2000; Wood & Eagly, 2012). Relatively, it was assumed based on biological deterministic factors that males are more intellectual and better performers than females (Fausto-Sterling, 2008). Likewise, it was debate between non-academic and academic circles in the light of gender differentials in academic performance in education. It is pertinent here to mention that deterministic factors on gender differentials in educational performance have added a major contribution to the subject under discussion. The forthcoming debate sheds light on the psychological,

sociological, and post-structuralist perspectives on gender differentials in academic performances in higher education.

Under the umbrella term of psychological determinism, it entertain those social-psychological conceptions, which are retained as paramount determinants of social behaviors and socially significant aggregate trends such as gender differences in educational achievement. Sigmund Freud being the proponent of psychological determinism holds that while male and female children have a comparably similar early socialization; the identity construction is still more problematic for the males. In fact, unlike females males have to abandon many "ticklish" norms of early socialization to acquire the true masculine identity. This kind of complex, being the dual track of normative and deviant behaviors, males at a disadvantaged position as compared to females. According to the psychological determinism, secondary socialization at school cannot escape the identity crisis of early socialization; this may explain why females are more conformist students as compared to males.

The theory of psychodynamic given by Freud (1977) also focuses on family factors which contribute to individual personality development including gender identities. Therefore, the primary interaction of children starts with their parents. Based on interaction, a child tries to develop the imaginary aspects of society in the mind. Hence, this theory describes that the building of femininity and masculinity for both girls and boys is linked with the mothers. Mothers started early socialization of their children based on their familial cultural aspects (Grusec, 2011a). The differences between femininity and masculinity are started by the treatment of mothers to their girl and boy child (Hess & Shipman, 1965). The girl child is treated based on feminine characteristics including to

obey and to be shy in front of others (Grusec, 2011b). While a boy child is treated based on masculine characteristics including encouragement to do the daring type of activities (Block, 1973). Likewise, the color of dress and toys for girls and boys differ in their early age and are linked with their parents especially mothers' selection (Jadva, Hines, & Golombok, 2010; Pomerleau, Bolduc, Malcuit, & Cossette, 1990). Consequently, the treatment of a mother to a girl and boy child results in differences in gender identities in their later ages (Lytton & Romney, 1991; Wallien & Cohen-Kettenis, 2008). In a nutshell, proponents of the psychodynamic approach consider very important the relationship and interaction of mothers to their children for the process of gender identities. Girls in their later ages turn to be women by reflecting their gender identity shaped by their mothers through interaction (Diamond & Butterworth, 2008; Harris, 1991). Moreover, a boy child, in later ages turns to the bravery and daring activities of manhood (Harris, 1991). To sum up, it is argued that the development of the gender identity of girls and boys is linked with their early socialization patterns provided in their families by parents. Therefore, based on this aspect of psychodynamic proponents, I link this with the educational performance at the tertiary level. The gender identity provided by familial background creates a difference in academic performance; as the findings of an empirical review of literature are evident that female students achieve a better score in examination results. The trait of securing high positions in examinations in their personality developed in there early interaction with parents make them fit for educational performance. My argument here is that mother and father both provide a caring environment to daughters and sons to become earning member of the family and perform outdoor activities. Similarly, these traits are developed in their early ages which result in gender differentials in academic performance. In conclusion,

femininity and masculinity are constructed in a cultural environment that result in gender differences in choices in future. Thus, early personality development traits push girls to perform well and boys to think about familial economic matters. The familial responsibility of boys lays them down in securing top position in examinations.

A social learning theory explains the development of gender identity. The main proponents in the social learning approach are Bandura and Walters (1977), L'Abate and Bryson (1994), and Mischel (1973). This theory is also linked with behaviorism and conditioning behaviour given by Kimble (1961) and Burchard and Tyler (1964). This approach elaborates that learning is based on the concept of reward and punishment similar to the carrot and stick method. As behaviour followed by appreciation and acceptance is likely to be repeated again and again. However, disapproved behaviour is likely to be modified and changed accordingly or not repeated based on criticism. Therefore, parental and familial approach differentiates between the behavioural performance of girls and boys in their early ages. In families, behaviour based on gender differences among girls and boys is taught to their children. Furthermore, social learning theory is also in line with the modeling approach and imitation principle. In a family, a girl child prefers to follow the mother and boy child prefers to imitate the father. This assumption of the theory is evident that familial background and parental involvement have given space to girl child education. This argument is also supported by the results of Young (2016) and Kabeer (2005) that girls are more supported to achieve education that was restricted previously. In addition to it, girl students are getting more support from parents and teachers to get an education and the previous notion of educational restriction has been abandoned (Gurian, 2010a). They are also getting appreciation and acceptance from parents that results in their better

performance in examinations (Adams & Christenson, 2000). It is concluded, based on these assumptions that female students are more encouraged to learn and perform well in examinations as compared to their counterparts. In addition to it, the imitation and modeling aspect is also playing a very important role for females to show a better position in the examination. Likewise, female students are outnumbering not only at schools and colleges but also at the university level in Pakistan.

A cognitive development theory by Piaget (1972) and Erikson (1994) also asserts that girl and boy children learn through interaction and try to develop their stages of personality. They try to develop their gender identity starting their sensorimotor stage of personality development to the formal operational stage of personality. During these stages of personality development, girls and boys learn differently to play with toys, recognize the objects and symbols, and the ability to analyze the object logically in later stages. This primary learning in femininity and masculinity develops an opinion about gender differences that may not change over time. Moreover, children achieve internal motivation and try to develop and learn the role of their gender (Halpern, 1997). These roles are linked as feminine and masculine are reflected by society. Further, it is pertinent to mention here that girls' learning and role performance is linked with obedience, shyness, care, submissiveness, household activities, and emotional attachment (Clausen, 1966). Contrary to it, boys' learning is linked with to be daring, outdoor activities, normality, and rough behaviour (E. H. Erikson, 1994). These learning differences result in gender differentials for females and males in the public domain. Similarly, parental dealing and learning environments create differences among females and males in educational performance in examinations (Bindu & Thomas, 2006). In the current situation of educational

performance, female students are outscoring males in educational examination not only at schools and colleges but also at the tertiary level. The primary learning and socialization that is developed at home by parents provide space to girls. Hence, this favourable socialization to females results in their better performance in higher education. Moreover, female students are more competing with their counterparts in learning efforts and parental support as compared to the past.

Many sociologists have studied the process of gender socialization and identified differences between female and male behaviors (Howard & Hollander, 1997; Lerner, 2005; Räty & Snellman, 1992). The process of socialization starts with birth when the family treats a child according to his or her sex in a potentially different way (Bindu & Thomas, 2006; Clausen, 1966). The socialization of gender roles begins in delivery rooms including a blue dress for boys and a pink dress for girls (Block, 1973; Dumais, 2002). Baby enters the world that is updated with language and symbols which shapes its conception of gender stereotypes and gender roles (Gurian, 2010a). The language used in a family mostly centers on physical characteristics and themes for boys as agility and strength while appropriate language for girls used by family might be daintiness, expressivity, and address affection (Grusec, 2011a). Such boundaries become the identity standards, and context is used to compare the self to others. The literature on gender role socialization, the mechanisms and procedures differentiate acceptable behavior for females and males, and the evolvement of behavior over time (Francis, 2006; Halberstam, 2019). Therefore, these differences in socialization result in gender differentials in academic performance in education.

Poststructuralist perspective on gender role socialization is in direct contrast with more determinist schools of thought from the formative period of social sciences such as

biological and psychological determinism. Inspired by ethnomethodology proponents of this school of thought, West and Zimmerman (2009) believe that gender roles are to be performed by conscious actors who are playing the script provided to them by the interactional situation. Hence, actors can actively do and undo their roles. Hence, this perspective would construct gender gap in education not as "given" or "situated" as in the case of psychoanalysis but rather more "interactional'" and "fluid" as typical of interactionism.

It is pertinent here to mention that girls and boys learn different feminine and masculine identities as per cultural theories based on gendered socialization (Clausen, 1966). Moreover, society provides the lens to perform behavior and role for each gender (Howard & Hollander, 1997). Likewise, these gendered roles result to provide a clearer picture of the individual to see and analyze the social world. Furthermore, it inhabits each gender, and children perform different activities in their life which suits to their gender (Martin & Ruble, 2004). It illustrates as per the above-mentioned gender identity development approaches, it justifies that the educational performance of females and males is not based on biological determinism. It has been challenged by the performance of female students in developed, developing, and Muslim world countries. However, based on the social construction approach and psychological determinism, the male was dominated in the past in cultural and value structural context. Equal space was not provided to females in the past (Lerner, 2005). Moreover, the liberal feminist approach asserts that the number of societies in the past did not deal with females and males equally but discriminated against females (Lerner, 2005; Marilley, 1996). As per my understanding, the biological deterministic approach to provide an argument that male students outshine

females in the examination was based on biological differences is not valid. It is pretty good to develop the argument that females' underperformance in the past was based on their early unfavorable socialization and gender identity differences started from their homes. Moreover, their household activities and work burden of child care and familial chores were the main reason for lagging in educational performance. Gradually, the feminist approach contributed to remove educational barriers for females. But still, the situation of female education in the developed and developing world is not similar. It is pertinent here to mention that females in the developing world are still facing barriers to access to education such as familial value system and gender identity matters.

Likewise, the biological determinism, psychological determinism, learning approach, and personality development along with cultural theories provide insight into differences among girls and boys. It includes biological, psychological, role, and cultural differences in leaning and developing gender identities. In the early times, boys were preferred by parents and provided more space for education as compared to girls (Gurian, 2010a; Park, Byun, & Kim, 2010; Zhang et al., 2019). They performed better than girls based on favourable environment and learning opportunities (Lytton & Romney, 1991). However, as this space and opportunity are provided to girls in learning and education, they are performing better than boys not only at schools and colleges but also at the university level (Dumais, 2002). Currently, female students are not only in competition but also in outnumbering and outscoring male students in the examination at the tertiary level. Consequently, it is pertinent here to mention that the performance in the examination is not only link with biological determinism but also with the psychological and socio-cultural domains.

Gender is socially constructed and it is equally supported by the social constructionists, feminists, and gender-related theorists (Marecek, Crawford, & Popp, 2004). According to social constructionists, no other characteristic exists than femininity and masculinity (Harris, 1991). It reveals that gender is not natural or inherited rather socially learned behavior (Howard & Hollander, 1997). Moreover, the social construction of gender is found different in different societies. As many components affect gender in comparison to biological construction (Pomerleau et al., 1990), it is pertinent to identify that if gender is constructed socially then feminine and masculine characteristics may change. It is, further, argued that a man may possess feminine and women may possess masculine characteristics because of social and cultural construction rather than biological and sex variance (Stets & Burke, 2000). Hence, when a society lacks balance of gender power it may produce more variations of masculinity and femininity. In compliance with my study, I argue that variation in academic performances of females and males students at the tertiary level is directly linked with the polarity of gender differences. Blickenstaff (2005) and Halberstam (2019) identify that variation in feminine and masculine characters do not exist in West. That's why female students compete male students in almost all the fields, generally, and in education, particularly.

My study findings may also link to the wide range disparities in Pakistan between male and female performance in exams that are more likely associated with the feminine and masculine variations. It is, therefore, found that varying nature of emerging differences between feminine and masculine characters enable feminists to counter the argument of exponents of the brain and innate differences that produce differences in gender equality and ultimately affect the achievements of female and male students at tertiary level.

In my study, the female and male students' performance is more likely linked with the social construction of the society as performance varies with the students who have differences in geographic location and socioeconomic backgrounds along with other factors. Henceforth, I reveal that the gender differentials in academic performance is not linked with biological or body characteristic but with learning, feminine and masculine identities along with socialization differences. Moreover, the variation in femininity and masculinity provides very important insights to feminists to oppose the notion of a biological deterministic approach to study gender differentials in examination results and academic performance. Therefore, it is very important to have a detailed discussion and briefly explain a feministic approach to gender and education.

Feminism proponents believe that equal rights and opportunities to females and males in masculine structure (Acker, 1994; Gerhard, 2001; Kimmel, 1987; Marilley, 1996; Thompson, 2003). They demand social equality regardless of sex (Acker, 1987). So, they attracted the attention of the world towards the differences created in femaleness and maleness in society. In the United States, the first wave of feminism formally intended the Seneca Falls Convention in 1848 to highlight the issues of gender inequality in society (Rampton, 2015). It is pertinent here to mention that Elizabeth Cady Stanton drafted the Seneca Fall Declaration. Whereas, the second wave began in the 1960s and continued into the 1990s. It focused the equal education for all and civil rights. Such as, Gerhard (2001) and Whelehan (1995) conceded that the second wave was persuaded in the light of Education Act 1944 and this act was conferred to provide social equality and education regardless of gender. Many of these popular feminist women were born between the fourth and fifth decades of the twentieth century. By realizing the need for female education, they

raised voice and ultimately opened the way for equal education for all and particularly the female education in the masculine structure of the society. Furthermore, the third wave of feminism (the mid-1990s) focused on the perceived failures of the second wave and challenged the definitions of femininity. The main focus of the third wave was to see females' lives as intersectional; class, gender, nationality and ethnicity, etc., all significant factors to discuss feminism (Drucker, 2018). Thus, I argue that the third wave also rejected the notion of biological differences among females and males and pointed out that there are other factors including class, national, and ethnic identity to define femininity. Moreover, the fourth wave of feminism (begin about 2012) has also been started with the movement of the 'Metoo Movement' and 'The Time's Up Movement' demanding equality in education along with previous main issues.

In compliance with the hegemonic masculine structure of the society, several feminist voices came into existence to support the women's participation in different arrays of life. Among them, radical feminists emerged in the sixth decade of the twentieth century (Cowan, Mestlin, & Masek, 1992; Marilley, 1996). Moreover, they argued that masculine effects are not limited to family level but also prevailed over and affected almost all the other social institutions (Acker, 1987). Furthermore, the feminists argued that the male hegemony and masculine structures are major components of women subjugation, generally in society and, particularly, in education. In the past, the failure of females in every single life was more likely associated with their biological and sexual variations while the feminine and masculine factors were not considered. Currently, the feminist argued that variation of feminine and masculine are mainly because of male hegemonic values and culture (Gilbert & Gubar, 1996; Lorber, 2000). As the female and male were

dealt in different ways which created a clear rift in gender construction, it prevailed in every filed including education.

Rose (1993) asserted that the major reason for the feminine and masculine variation is the male hegemonic structure of society. The argument is, further, supported by Cole (2017) and Marilley (1996) that the predominant masculine structure is indebted to family and culture that drive social inequalities in society and hence education. As a result, gender differences are not due to sex differences rather male hegemonic culture of the society. Consequently, it is pertinent to mention the differences between females and males in educational performance in the context of the culture live are important. As the concern of cultural viewpoint in my study, similar findings have been reported in the empirical review that, previously, female and male educational performances were more likely linked with biological variations but, later on, a gender-neutral culture females started performing better in examinations. Hence, it is argued that the biological differences less likely affect the performance of female and male students rather they are shaped by cultural differences. Accordingly, to deprive females of education was due to the traditional and cultural practices in male hegemonic society. Moreover, feminists' proponents raised voices to provide equal opportunities for females to get education and perform equally with males (Acker, 1987; Gerhard, 2001; Marilley, 1996; Plottel, 1987).

To insert the assertion of Cole (2017) and Marilley (1996), it is pertinent to mention here that female and male students are equal by birth and no difference makes one preferable over the other which affects the performance. It is, further, strengthened that, instead of lack of interest in education and cultural differences, the innate factors less likely affect the performance of females. As female and male students are, after the birth,

socialized to seek and adjust with the environment provided by society. Along these lines, they develop imagery of social roles and responsibilities that affects them throughout their later life. It is, certainly, argued that variations in females and males are prevailing and more susceptible to influence the differences in their educational performance in examinations. At this point, the gendered academics performances and underachievement of females in education are more likely associated with the poor and traditional practice of socialization. As a consequence, the argument is also found in my study where the underperformance of female students is more likely associated with poor socialization and residence as girls of rural areas still underperform than girls of the urban centers. As in the West, gender is no more indicator of performance while female students achieve better scores in the examination as compared to males (Carrell, Page, & West, 2010; Niederle & Vesterlund, 2010).

Similarly, it is also found that the difference between feminine and masculine characteristics also define the choice and interest of the female and male students. Similarly, Morris (2008) and Lips (2016) also found that female students from traditional rural areas are not getting better grades based on the cultural milieu of that society where femininity is less likely privileged. Likewise, Gilmore (1990) also argued that culture plays an important role in constructing the feminine and masculine traits in society and such traditional practices are the main reasons for female students' underperformance. Based on the above findings, in my study, the female students from urban areas outplay males. This is mainly based on the traditional socialization threat that weakens the males to participate in education. On the assumption that awareness is concerned, in many rural areas' female students are now seeking opportunities for study. They are now equipped due to transition

and exceeding the males in education. In the same way, Ortner (1972) and Gerhard (2001) also argued that females have been kept inferior by males based on the cultural practices. As a consequence, the cultural practices determine the fate of the women even in education. Based on the above argument, females are considered good for domestic chores and always given an inferior role which affects their capabilities in education in the past. Consequently, it is argued that the differences between female and male students' educational achievements are not linked with their biological determinism rather they are results of masculine male hegemonic cultural practices.

It is however believed that no one is born with occupational specialization, but relatively society and culture create the differences. As Johnson (1976) and Amadiume (2015) asserted that females possess similar intellectual capabilities to males but, owing to the masculine structure of society, females are less likely to have access. Drawing on the Johnson (1976) and Amadiume (2015), I argue that girls' lagging behind in the past was based on traditional cultural practices and normative value structure. Thus, culture and society had made an inappropriate environment for females to learn and come up with better opportunities as females were born and treated differently to develop different imagery of society. At this point, my argument is that no one is born genius rather socialized and prepared in a particular socio-economic environment.

It is concluded from the above discussion of the feminist assertions that gender is mainly influenced by the masculine culture of the society. Females are mainly disturbed by male perspectives as they dominate every walk of life. Male design and execute the policies in almost every sphere of life. Owing to this, females are subjugated and kept at margins in every field in the past. Males were getting education and outperforming females

while females were excluded from education. It is, hence, argued that masculine and cultural differences have a pivotal role in socializing the girls for education and competition with males rather than innate differences.

To summarize the discussion as per the feminist approach to study gender and education, females were deprived in the past based on cultural practices and normative value structure of the societies. As the access and cultural practices provided gap to females, they try to perform not only at school and college levels but also at the university level. Therefore, I argue that females were not supported by their families and cultural practices for education. The proponents of feminism struggled for female education, and space was provided. Currently, female students are outshining males in examination results almost at all levels. Therefore, the performance of female and male students in education cannot linked with biological determinism and inborn characteristics. Based on the above empirical and theoretical review, I argue that the difference in educational performance among female and male students at the tertiary level is not linked with biological characteristics. It has roots with the difference of psycho-social, socio-economic, and cultural factors of socialization among female and male students.

The foregoing comprehensive empirical and theoretical review of literature, particularly theoretical, enabled me to construct a theoretical framework for teachers' perspectives on gender differentials in academic performance in higher education in Punjab. I assert key variables including household determinants (including student family background, socio-economic status, and parental involvement), social media, peer group, the social construction of the educational self-educational determinants (previous educational background, student-teacher interaction, teachers' competency and gender,

classroom environment), motivational factors and gender differentials in academic performance in higher education. The forthcoming discussion articulates the theoretical foundations of the dissertation.

2.4 Theoretical Framework of the Study

This section presents the theory that informed the present study. I opted for the theory of Bourdieus' Cultural Capital Theory. Bourdieu is perhaps the best known among the sociologists for a comprehensive theoretical lens to explore the complex social structures of society. The main theoretical tools of Bourdieu are habitus, fields, and different forms of capital. The purpose of developing a framework is to understand concepts and how these are used in the educational achievements of students coming from a rural and urban background and performing differently. However, it is pertinent to interpret the theoretical lens of Bourdieu to acknowledge his stance on sociological concerns. Moreover, concepts of Bourdieu are analogous to explain the conditioning of students towards learning and achievements.

Bourdieu's major theoretical work is habitus. The conditioning that is associated with a particular class of conditions of existence produce habitus, a system of strong, permutable nature, structured constructs to work as developing structures, as principles that produce and accumulate practices and represent which is adopted objectively to seek outcome assuming presupposed results or without showing mastery skills to operate and achieve (Bourdieu, 1990). Habitus describes the structure of education embodied by the students. It is internalized and adopted by the students which is inculcated, initially, by parents and, later teachers. However, the setting is either rural or urban. Despite the differences in the available social structures i.e., rural and urban schools, colleges, and

universities, students tend to pursue the dispositions, perceive the external world, and act accordingly to meet the expectations.

Furthermore, it is believed that the behaviour of students is not determined by the educational institutions rather by the social structure, rural and urban society, where they were borne, bread, and socialized. Thus, the primary habitus of students induced in childhood is more durable to learn behaviours regarding social structure rather than learned at a later stage. For example, gender, a primary habitus learned, always remains the same. Bourdieu asserted that habitus is not the only product of social structure rather reproduces structure and simultaneously. Habitus can shape and produce practice or practices in any given conditions (Bourdieu, 1983). It is, further, elaborated in the study context that students from rural and urban backgrounds may bring changes to certain behaviours to ensure coexistence and avoid maladjustment in a new setting. After spending some time, students from rural backgrounds adopt the new environment and gradually become part of the new structure and perform better.

Habitus has also been elaborated in connection with capitals. So, I am cognizant to discuss the field of education to magnify the outcomes which grew out of the connection between habitus and fields. As the actions are the result of interrelations of habitus, fields, and capitals. However, practice doesn't originate itself but developed out of the interrelationship of habitus, fields, and capitals (Bourdieu, 1990). While fields indicate that how actions, attitudes, and knowledge are produced, circulated by the actors to possess the knowledge, resources, and important state positions by dominating and monopolizing such capitals (Schwartz, 1997). Hence fields make particular arrangements through any type of capital consisting of dominant and subordinate positions (e.g. urban-rural schools and

colleges). Educational institutions vary in rural and urban areas and students of rural areas are supposed to join public schools while urban students have a variety of schools in the private sector. This strife may lead to differences in the educational achievements of students in tertiary education. Fields do not exist without capital. As various forms of fields and capital exist.

Bourdieu has given four forms of cultural capital i.e., economic, cultural, social, and symbolic (Bourdieu, 1986; Jenkins, 2014; Webb, Schirato, & Danaher, 2002). Here, it deals with cultural capital that further exists in three forms. i.e., embodies, objectified, and institutionalized. The first type of capital is embodied that exists in the form of inherent qualities found in the physical and cognitive abode of humans i.e., body and mind (Bourdieu, 1989), the second form is objectified that exists in the form of material goods i.e., journals, books, pictures, dictionary, instrumental and mechanical nature. The third form is institutionalized educational qualifications (Bourdieu, 1986).

I employed the theoretical lens of Bourdieu in my research work to explain the diversified dispositions found among the students towards education. As Bourdieu argues that social structures embody the habitus and individuals act according to the conditioned dispositions i.e., individuals learn the behaviour (habitus) and practice in a field (education) showing the strong disposition of cultural capital (Bourdieu, 1983). Students are normally conditioned to these dispositions to lead towards their educational achievements, shaped by the social structure of the society following cultural competence of particular social structure where s/he is socialized. Similarly, Bourdieu explains the role of habitus between structure and agency so that individuals may learn day to day routine behaviours and practice to establish, produce, and promote actions using capitals (Bourdieu, 1990).

I found that students from both rural and urban areas have different characteristics and act according to the learned behaviours in the setting of urban and rural social structure. It is observed that urban and rural structures have a profound impact on the exposition of behaviour among students in education. Cultural capital is "what makes the games of society . . . something other than a game of chance" (Bourdieu, 1986). The diversity in the achievements of the students refers to cultural capital that demonstrates the high status of those who possess it.

The schools endow and reinforce cultural ability. As it is transmitted by higher SES parents which eternalize the respective social advantages. Objectified represents the resources of education at home like reading materials and learning facilities) as well as cultural resources like literature and artworks. The learners who are from privileged backgrounds learn the values, perceptions, dispositions, knowledge, and skills from the teachers as they value such resources at the educational institutions. Embodied capital represents various characteristics of students associated with privileged SES families. This sort of resource is helpful in academic achievements. These are dispositions of significant norms, behaviours, and choices about academia and capabilities to prove skills. All of these traits are transferred through schooling while teachers expect students to come up with advanced skills to represent capabilities (Bourdieu, 1986). Researchers have examined embodied cultural capital using different variables, namely cultural participation, reading habits, parents' child trust, excitement and demands, parental home, and school involvement. Institutionalized capital comprises general and particular appreciations through certificates, degrees, and rewards the students receive in the academic journey through hard work and passion.

Scholars across the globe have identified cultural capitals as a source of success and recognition as well as they have sorted out the factors contributing to the achievement of students (De-Graaf et al., 2000; Jaeger, 2011; Kraaykamp & Van Eijck, 2010; Lareau, 1987; Reay, 2004). There is evidence indicating that cultural capital forms although interrelated to each other yet they are different in terms of possession of every form carry different impacts on the lives of the possessors (Kraaykamp & Van Eijck, 2010). H. Huang and Liang (2016) compared the relationship between all three types of cultural capital and the success of students. However, different researches examined a small number of variables (parental education, parental expectations, parental reading, book possession) corresponding to types of cultural capital. Other researchers revealed a few, however, didn't focus all types of cultural capitals (Hvistendahl & Roe, 2004; Moon & Lee, 2009).

I focused to know the gender gap while comparing the strength to find nexus between three forms of capital and relevance to the achievements of students. It has been discussed that either there is a need to analyze the syntax of cultural capital in a circumscribed way or draw a broader perspective in terms of contribution including language and cognition, seeking knowledge and strengthening skills and measuring and revisiting the evaluation benchmarks in schools (Lareau & Weininger, 2003). However, the results have been mixed (De-Graaf et al., 2000; Hvistendahl & Roe, 2004; Iruka, Dotterer, & Pungello, 2014).

Researchers have examined relationships of cultural capital and achievements of students which varies from student to student and place as well (e.g., student sex, grade levels, SES), national contexts, and achievement domains. Again, the evidence is mixed concerning grade levels: Aschaffenburg and Maas (1997) unveiled more educated students

tend less propensity on achievements in education due to cultural contribution. Nonetheless, Andersen and Hansen (2012) exposed class and gender inequalities in the achievements of students in secondary schools of Norway due to grammar and uncertain logical arrangements. As for SES, the theory of social reproduction that assumes people who possess high SES levels will possess high cultural capital while they transcend to the successors to contain the hegemony (Huang, 2013; Marks & McMillan, 2003). The teachers believe that students who possess this cultural capital will be intelligent and contribute to social reproduction (Kingston, 2001). Contrarily, proponents of cultural mobility theory (De-Graaf et al., 2000; DiMaggio, 1982; Hernandez- Martinez & Williams, 2013) believed that students from low-income families not having cultural capital can easily learn the cultural codes of education and can avail such cultural resources in academic careers.

Nexus of cultural capital and achievements of students has been evaluated on the basis indifferent education system, property, money, and social status possessed by the person in society. In such a case, success in achievement is affected by those who possess more. Consequently, cultural capital is achieved in daily routine even from the interaction of parents and children; the higher the cultural capital higher will be the achievement (Espinosa, Laffey, Whittaker, & Sheng, 2006; Hvistendahl & Roe, 2004).

Social Reproduction theory of Bourdieu presents the interrelationship of education, family, and social status (Bourdieu & Passeron, 1977). Education is the main source of social inequalities and subversion. In this process, cultural capital has a pivotal role because the inequalities in the cultural capital refer to an imbalance in the social class. Such inequalities flourish in educational institutions such as schools and teachers which are also

source when explaining the role in pedagogic activities/roles gives rise to perpetuation of classes by expounding the rich. They encourage the learners by rewarding the haves of such capital and discourage or degrade the have-nots. Therefore, schools serve as the main source of reproduction and omission.

The cultural capital denotes the coding culture supported by parents which is transmissible as well as the practices capable of a transmissible against. It contains a body of aesthetic codes, conditionings, and habituations transferred to learners through internalization by socializing or through the inherent transfer of cultural traits. It shows the status of the class or the actors' location from various walks of life. It expedites the naturalization of structural possession (Bourdieu & Passeron, 1977). Family refers to class by its habitus. The cultural resource of only the middle or elite class can become a valuable *capital* in society. In 'highbrow' culture, knowledge and possession are unevenly found in class and education that is declared as legitimate. Distinctions and privileges are awarded to the possessors. Other capitals like human, social and economic, cultural capital invoke the unequal social fabric of society. This highbrow is induced in school systems unevenly (Bourdieu & Passeron, 1977).

Children of rich people are recognized. The teachers recognize this advantage of students and exclude those who lack such cultural capital. Their pedagogic actions cause them to take part in a competitive mechanism that values based on cultural capital. Moreover, their pedagogic actions are considered meritocratic and legitimate. Therefore, elite culture seems to be contrary to the deprived or underprivileged (Bourdieu & Passeron, 1977). Due to unusual assessment, the teachers are biased when they grade educational performances of the students as they recognize the competencies of the elite, not their

scholastic performances. In this way, the schools serve as a source of a specific intergenerational social mobility and outcomes.

2.5 Conceptual Framework of the Study

Based on the present theoretical explanations of gender differentials in academic performance in terms of females' outperformance males in higher education, I try to develop three conceptual frameworks for the present study;

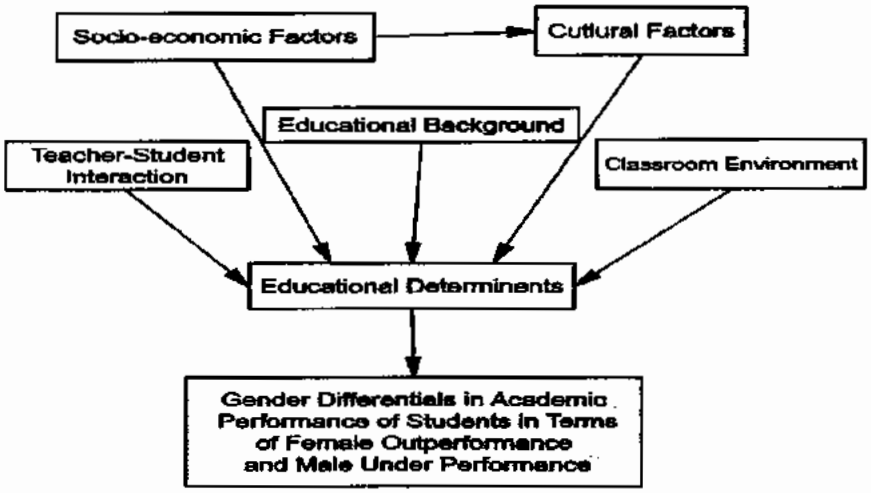


Figure 2.1. Conceptual model 1

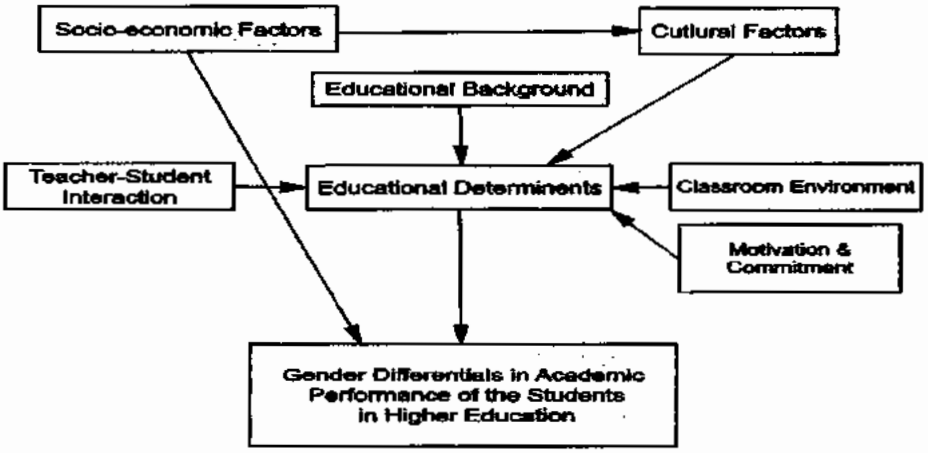


Figure 2.2. Conceptual model 2

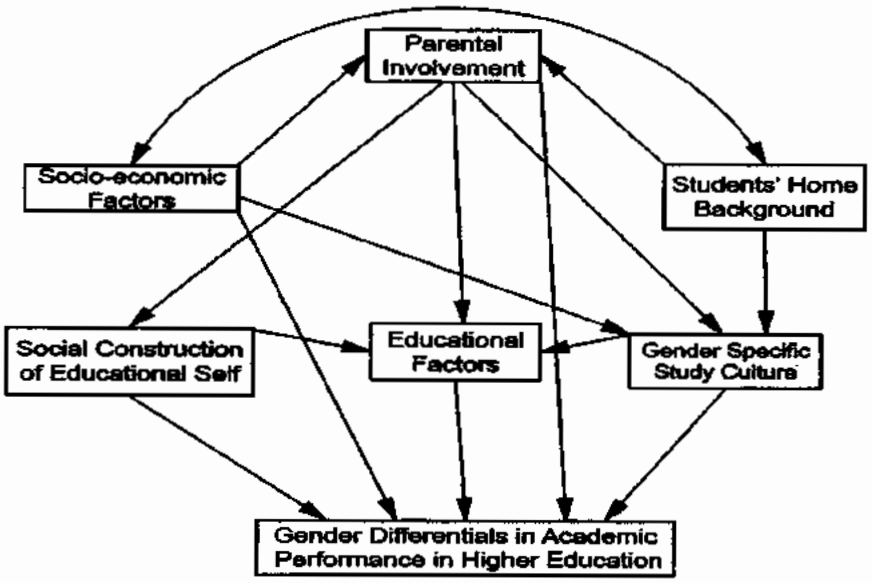


Figure 2.3. Conceptual model 3

Chapter Three

Research Methodology

3.1 Introduction

This chapter provides details of procedures and methods used in conducting the current research study. The study was carried out under the broader positivistic paradigm/quantitative traditions in sociology. Employing quantitative approach, I used content analysis and survey method technique for gathering intended data. The study universe was The University of the Punjab (PU), Lahore, Pakistan. The data for the study came from secondary (results of 72 master level examinations from 2004-06 to 2013-15) and primary (1119 faculty members) sources. The employed probability sampling technique for drawing a representative sample of master level result records of examinations for content analysis and university teachers for the survey. After dealing with the particular matter of sample selection, survey and content analysis methods were used for collection of intended data. Datasheet was used for secondary data under content analysis approach whereas a well-structured questionnaire was administered to 1119 university faculty members for the collection of primary data. The forthcoming section of this chapter gives detailed account of the method and material utilized in this study.

3.2 Study Design

This study carried was out under the positivistic approach. Positivism banks on quantifiable observations which lead to statistical analysis and factual knowledge. In this approach, the role of the researcher is limited to data collection and interpretation in an objective way. It dominantly employs survey as a method, a well-structured questionnaires, and as tool of data collection. My decision of using quantitative methods was based on my training in

quantitative research methodology as well as getting a wide coverage of the issue in hand. I deem it important to mention here that I, by carrying out my study under this positivistic approach, kept myself detached and independent form the study's respondents and my liking and disliking

3.3 Universe of the Study

The study universe was The University of the Punjab (PU), Lahore. The reasons for selecting the University of the Punjab was: 1) it is the oldest university in the province and accommodated students not only from all districts of the province but from across Pakistan, 2) students from all socio-economic backgrounds attended the university, and 3) the changing trend was seen in this university more clearly as compared to the newly established universities in other areas of the province of Punjab.

3.4 Population and Target Population

The secondary data for the study come from examination results. For secondary data, 83 master-level programmes at two campuses a) Quaid-i-Azam Campus and b) Allama-Iqbal Campus of the University of the Punjab, Lahore, constituted the population. It is pertinent to mention here that the data of 11 programmes were not available. Therefore, 72 master level examinations of session 2004-06 to 2013-15 were the target population for content analysis.

The primary data for the study come from university teachers. For primary data, faculty members/teachers of the University of the Punjab were the study population. It consisted of 1119 faculty members. The target population consisted of the faculty members working at two campuses. Moreover, 87 faculty members were on study leave or deputation. Therefore, these faculty members were excluded. Thus, a total of 1032 faculty

members in the two Lahore based campuses of the University of the Punjab constituted the target population of the study.

3.5 Element of the Study

Faculty members of the University of the Punjab and master level examination results from sessions 2004-06 to 2013-15 were elements of the study. Content analysis was carried out on 72 master level examination results of the sessions 2004-06 to 2013-15. In addition to these, 11 master level examination results were not available and some of them were held after 2003. So, these examinations and other annual off-campus examinations were excluded from the content analysis. For a survey and to collect primary data, the element of the study consisted of the following inclusion criteria;

- Regular faculty members
- Female and male teachers
- Working at Quaid-i-Azam and Allama-Iqbal Campus, Lahore

The total elements of the study were 1032 (females 427 and males 605) faculty members working in 13 different faculties at university.

3.6 Sampling Frame

For the collection of secondary data under quantitative content analysis, a complete list of master level programmes was obtained from the Office of the Controller of Examination, Allama-Iqbal Campus, University of the Punjab, Lahore.

For the collection of primary data through survey, the sampling frame was a complete list of faculty members working at two Lahore based campuses of the University of the Punjab. It was downloaded from the university website (Downloaded on 27/10/2017,

Friday, 13:47 PST). Further, it was verified from the Human Resource Section of the university before it was used to draw a representative sample.

3.7 Sampling Procedures

The probability sampling technique was employed to draw a representative sample of master level result records of examinations for content analysis as well as university teachers for the survey. This approach was based on a scientific and objective approach for drawing a sample from the population. The following section provides description of the sampling techniques, sample size, sample distribution and response rate of the study.

3.7.1 Content Analysis Sampling Technique and Sample Size

For content analysis, I opted random sampling technique to draw the name of departments from two campuses of the university. 61 out of 72 departments were selected based on offering an on-campus master level programme.

Sample size: For content analysis, the sample size was calculated by using the sample size determination formula given by Yamane (1967);

$$n = N/1+N(e)^2$$

$$= 72/1+72(0.05)^2$$

$$= 61.01$$

Therefore, the total sample for content analysis was 61 master level examination results of the top three position holders' gender and their geographical location.

Response rate: The response rate for the present research was very good. For content analysis, a complete 61 master level examination results record of the top three position holders was collected from the office of the controller of the examination. These results were taken from the session 2004-06 to 2013-15. It is based on ten years of results record.

This sort of data was secondary and it was not difficult to collect it. Moreover, it was based on examination result records and was available in one office of the university.

3.7.2 Survey Sampling Technique and Sample Size

For the survey, a proportionate random sampling technique was employed to draw a representative sample from the target population.

Sample size: For the survey, the sample size was selected through the same formula;

$$n = N/1+N(e)^2$$

$$= 1032/1+1032(.05)^2$$

$$= 288.26 \text{ (Say 288)}$$

Sample size distribution and actual sample: The sample size was proportionally allocated. The proportional allocation was based on gender, designation, and department of the faculty members (see Appendix-D). The calculated sample size was 288 faculty members. The data was collected from 253 faculty members. The remaining 35 teachers did not fill the questionnaires. Out of the 35 university teachers, 03 questionnaires were filled in partially, 11 teachers left university, and 13 were on leave. The leave cases were on long-term leave e.g. medical, study, earned, and extraordinary leave. Moreover, 08 teachers were not willing to fill the questionnaire. I tried my level best and visited their office again and again but could not get it filled from them due to their unwillingness. Finally, the actual sample size was 253 in number for the present research.

Table 3.1

Sample Size Distribution and Actual Sample

Sr. #	Name of Faculty	Total Faculty Members	Calculated Sample	Actual Sample
1	Faculty of Arts and Humanities	96	$N_1*n/N = n_1$ 96*288/1032=27	27
2	Faculty of Behavioral and Social Sciences	90	$N_2*n/N = n_2$ 90*288/1032=25	16
3	Faculty of Commerce	46	$N_3*n/N = n_3$ 46*288/1032=13	13
4	Faculty of Economics and Management Sciences	72	$N_4*n/N = n_4$ 72*288/1032=20	20
5	Faculty of Education	65	$N_5*n/N = n_5$ 65*288/1032=18	18
6	Faculty of Engineering and Technology	77	$N_6*n/N = n_6$ 77*288/1032=21	21
7	Faculty of Islamic Studies	21	$N_7*n/N = n_7$ 21*288/1032=06	06
8	Faculty of Law	21	$N_8*n/N = n_8$ 21*288/1032=06	06
9	Faculty of Life Sciences	216	$N_9*n/N = n_9$ 216*288/1032=60	48
10	Faculty of Oriental Learning	59	$N_{10}*n/N = n_{10}$ 59*288/1032=16	16
11	Faculty of Sciences	241	$N_{11}*n/N = n_{11}$ 241*288/1032=67	54
12	Faculty of Health Sciences	11	$N_{12}*n/N = n_{12}$ 11*288/1032=03	03
13	Faculty of Pharmacy	17	$N_{13}*n/N = n_{13}$ 17*288/1032=05	05
	Total	1032	288	253
		288-253=35*		

*Partially filled = 03, Left university =11, Leave cases = 13, Not willing to answer = 08

Response rate: During the survey, a total of 253 questionnaires were filled by faculty members. However, 35 questionnaires were not filled. Out of 35, three teachers partially filled, eight of the teachers were not willing to provide information, 13 of them were on study leave and 11 faculty members had left their jobs before the time of data collection.

Therefore, the overall response rate was 87.85 (253/288*100) percent. This response rate achieved by introducing myself as a Ph.D. scholar, showing student cards and permission letters as well. Therefore, teachers filled the questionnaire without hesitation at a large level. Moreover, a letter issued from the supervisor was also supportive in achieving the response rate.

3.8 Techniques and Tools for Data Collection

This section consists of techniques, tools, the data, scales, pretesting procedures and procedures of data collection. For the present research, two techniques were used; a) content analysis and b) survey.

3.8.1 Content Analysis

Content analysis was done to check the trends of the top three position holders' gender and geographical location of master level programmes. These results were obtained from the result books comprising sessions from 2004-06 to 2013-15 available in the office of the Controller of Examination.

Tools of data collection: The datasheet was used for secondary data by employing content analysis for skimming the top three position holders' gender and geographical location.

Data sheet: For content analysis, a comprehensive datasheet for the top three position holders of master/s programme of two campuses of the University of the Punjab, Lahore (Quaid-i-Azam Campus, and Allama-Iqbal Campus) was developed. This data sheet consisted of the followings items; Faculty Name, Name of Institute/ College/ Center/ Department, and Degree Program Title. It also contained gender and geographic location of the top three position holders in master level examinations of session 2004-06 to 2013-

15. Further, matriculation, intermediate and bachelor degree-awarding institutions' name of first position holders in session 2013-15 also enlisted (See Appendix-A).

The data: This research is based on secondary and primary data. Secondary data were collected from the office of the controller of examination. It consisted of gender and geographical location of the top three position holders. It is also pertinent to mention that it comprised the master level examinations of the session 2004-06 to 2013-2015.

Procedures of data collection: For secondary data collection from the Office of the Controller of Examination, University of the Punjab, I visited Office of the Controller of Examination. The administrative staff referred me to the registrar office for approval. So, I visited the Office of the Registrar and submitted my permission letter, student, and identity card there. After four working days, they called me to consult the Office of the Controller of Examination and they also informed me that my application had been moved to the concerned office. The next morning, I visited it and received approval data collection of result records of examinations. Furthermore, I filled myself a datasheet of the top three position holders' gender and their geographical location. The officials provided me student files and convocation records of top position holders.

3.8.2 Survey

A survey method was also employed as a technique of data collection. This technique was used for the purpose of collecting primary data. The survey method was used to cover a large sample size to underhand the issue in hands from a large number of university teachers of the University of the Punjab.

Tool for data collection: For the survey, a well-structured questionnaire was used as a tool for data collection. The target population for the survey was literate and a questionnaire

was suitable to be distributed and get filled by the respondents himself/herself and returned. The detail of these two measurement tools is as under;

Questionnaire: In the survey for data collection, a well-structured questionnaire was distributed to faculty members for collecting primary data. It consisted of different parts including identification, the socio-economic profile of teachers, household determinants, the role of social media, the role of the peer group, the role of the social construction of educational self, educational determinants, the role of gender-specific study culture, motivation and commitment, self-fulfilling prophecy, gender differentials in academic performance, and sociological analysis (sociological factors). The questionnaire consisted of close-ended questions. Nevertheless, some open-ended questions were incorporated to get a detailed response. It comprised 122 questions, including open and close-ended (See Appendix-C).

Questionnaire scale: The six-point attitudinal scale was used to measure the perception of the university teachers. It was coded in the following way;

Table 3.2

Questionnaire Scale

Category	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
Code	SA	A	SLA	SLD	D	SD
	6	5	4	3	2	1

Pre-testing: A pilot study was conducted to check the workability of the measurement instrument. A sample of 30 respondents was selected based on proportional allocation to a different segment of the units for pre-testing.

Table 3.3

Pre-testing

Sr. #	Variable name	Codes	No. of Items	Cronbach's Alpha
i.	Students' home background (favorable socialization)	SHB	6	.737
ii.	Socio-economic status of the family	SES	6	.804
iii.	Parental involvement (favorable to females)	PAI	6	.711
iv.	Role of social media	RSM	6	.726
v.	Role of peer group	RPG	6	.709
vi.	Role of the social construction of educational self	RSC	6	.723
vii.	Educational background of the students	EDB	6	.771
viii.	Student-teacher interaction	STI	6	.755
ix.	Teachers' competency and gender	TCG	7	.746
x.	Classroom environment	CLE	6	.798
xi.	Role of gender-specific study culture	RGS	6	.780
xii.	Motivation and commitment	MOC	6	.723
xiii.	Self-fulfilling prophecy	SFP	6	.771
xiv.	Gender differentials in academic performance	GDI/ GDA	9	.795
xv.	Historical factors	HIF	6	.758
xvi.	Cultural factors	CUF	6	.716
xvii.	Structural factors	STF	6	.790
xviii.	Critical factors	CRF	6	.731
xix.	Household determinants (i+ii+iii)	HHD	18	.774
xx.	Educational determinants (vii+viii+ix+x)	EDU/ EDD	25	.857
xxi.	Motivation & commitment and self-fulfilling prophecy (xii+xiii)	MSF	12	.741
xxii.	Sociological factors (xv+xvi+xvii+xviii)	SOF	24	.804
	Overall		112	.939

This data was computerized and Cronbach's Alpha statistical test (measure of internal consistency) was applied to test the reliability of the measurement tool. The calculated value of Cronbach's Alpha was ranging from 0.709 to 0.857 of each set of questions under one variable. Further, this value was calculated as a whole (112 items)

which resulted in .939. Therefore, the tool of data collection was finalized for final data collection. It was noted that the response of the 30 cases was not included in the final data collection process and analysis.

The data: Primary data was collected from university teachers. This data consisted of teachers' perspectives on students' academic performance in higher education. An attitudinal scale was used to record data from teachers.

Procedures for data collection: For primary data collection, I developed a consent form and got an authority letter from my University (Department of Sociology, International Islamic University Islamabad). In the first step, I visited the offices of Dean/Director/Principal to get permission to collect from departments under his/her supervision. I showed them my student card, permission letter, and the consent form along with an authority letter issued from the department. I introduced myself as a Ph.D. Scholar. Secondly, I visited the office of Chairperson/Chairman/Head of Department/Coordinator to get approval to collect data from faculty members. Here again, I tried to create a friendly environment for the purpose of collection of data. After these steps, I approached university teachers who were selected as a study sample and collected data. I handed over the questionnaires along with the consent form and permission letter and requested them to fill it. On the second day, I visited their office to collect the distributed questionnaire. This day, some offices were locked and some teachers had not filled questionnaires and excused that they were busy. So, I visited their offices the next day. It was a very difficult task to collect primary data. Mostly, university teachers said that questionnaire was lengthy but I managed properly to collect my primary data in 44 working days.

Data Coding and Editing: After pre-testing, coding of variables and items were finalized. Out of 122 total questions, six questions were open-ended i.e. name of department, faculty, age, experiences, monthly income, and suggestion of the respondents. These questions were coded (transform-recode into a different variable) after data entry. Further, the other 117 questions assigned codes before final data collection. These included gender (1=male, 2=female), educational qualification (1=16 years, 2=18 years, 3=above 18 years), designation (1=professor, 2=associate professor, 3=assistant professor, 4=lecturer, 5=lecturer/research associate) and residential background (1=rural, 2=urban). Moreover, other 112 questions were in the form of statements having an attitudinal scale of (dis)agreement. These items assigned codes form 1 (strongly disagree) to 6 (strongly agree) point scale. Furthermore, data was edited on the same day of data collection. I visited the teachers' office the next day to make clarity regarding misleading or incomplete information. Finally, the entire questionnaire assigned a unique code (001 to 253) as per faculty wise.

3.9 Data Entry

Before data entry into Statistical Package for Social Sciences (SPSS), all the questions/statements were entered into the variable view of SPSS. I entered name (unique and short name of variable e.g. C.1.i. C.1.ii … etc.), type (numeric or string), width (8), decimals (0 for current research) and label (complete name of question or statement). Similarly, values (value & label e.g. 1=male, 2=female) of these variables were also entered in the respective cell of variable view. Further, I assigned measures of all these variables i.e. scale, ordinal, and nominal. After completion of variable view data, data entry was done

in the data view. Here, I entered only 0 to 9 digits. Data view presented the number of respondents in row and variables in the column.

3.10 Data Analysis Software

To analyze secondary and primary data collected from the target population, I opted three statistical analysis software i.e. Statistical Package for Social Sciences (SPSS) 24, Statistica 7, and Amos-analysis of a moment structure 24. Data entry, univariate analysis, bi-variate Artificial Neural Network (ANN) analysis was done using SPSS. Statistica was used to confirm the factors employing Confirmatory Factor Analysis (CFA) statistical test. Structural Equation Modelling (SEM) was employed using Amos software to find the direct and indirect impact of independent variables on dependent variables.

3.11 Data Analysis

Data analysis of my dissertation has been divided into two parts a) content analysis and b) primary data analysis. Content analysis data was presented in different themes. Primary data was presented in terms of univariate, bivariate, and multivariate analysis techniques. Both methods are presented as under;

3.11.1 Content Analysis

I employed content analysis techniques on the examination results books of the University of the Punjab from 2006-2015. It is important to mention here that content analysis was carried out in line with the quantitative content analysis procedures. The content analysis focused the top three position holders of MA/MSc level programmes in the University of the Punjab, Pakistan. Using content analysis approach, I analyzed female and male students' performance along the axis of their geographical location in MA/MSc examinations. Top three positions in master level examinations have been taken as

indicators of outperformance. The analysis of result books of ten years depicts female students' outperformance and male students' underperformance in tertiary education. The analysis enables to conclude that there is a vivid trend of young females outdoing males in education at the tertiary level, especially in the social sciences and humanities discipline. The discussion in chapter 4 presented a detailed analysis of the issue in hand.

Table 3.4

Content Analysis Themes

Sr. #	Themes
Analysis of top three position holders (session 2006 to2015) along the axes of gender and geographical location in the;	
1	Faulty of Arts and Humanities
2	Faulty of Behavioral and Social Sciences
3	Faulty of Faculty of Commerce
4	Faculty of Economics and Management Sciences
5	Faculty of Education
6	Faculty of Engineering & Technology
7	Faculty of Islamic Studies
8	Faculty of Life Sciences
9	Faculty of Oriental Learning
10	Faculty of Science
11	All faculties at Masters level
12	First position holders' matriculation passing boards in session 2013-2015
13	First position holders' intermediate passing boards in session 2013-2015
14	First position holders' bachelor passing university in session 2013-2015

3.11.2 Primary Data Analysis

Chapter 5 presents the results derived from primary data on the academic performance of students (female and male) in Punjab. It is further divided into two parts: a) descriptive statistics and b) inferential statistics.

Descriptive statistics-univariate analysis: Univariate analysis is a process to analyze and summarize data and study findings in a meaningful way. It presents the patterns of data and allows inferences. Similarly, it is the simplest and clearest way of presenting raw data

in the form of frequency distribution along with percentages (f×100/N) and the mean value of the data. It allows simple interpretation and conclusion of the study findings.

Confirmatory Factor Analysis (CFA): This portion provides description on Confirmatory Factor Analysis (CFA). It is a type of factor analysis and the first step of the structural model. This test is essential to refine the factors used in the analysis but does not distinguish between exogenous and endogenous constructs. It helps to identify the factors that are significant to include for analysis and conversely, other non-significant factors to exclude for analysis.

The questionnaire was finalized by applying CFA to check whether measures of a construct were consistent with my understanding of the nature of that construct. Out of 112 statements, 107 items were confirmed and significant for further multivariate analysis. Conversely, five items (see questionnaire item no. F.vi, I.2.v, I.2.vi, K.1.v, and K.1.vi) were not significant and confirmed with a p-value less than 0.05. Further, these items were excluded from multivariate analysis i.e. Structural Equation Modelling (SEM) and Artificial Neural Network (ANN).

Inferential statistics-bivariate and multivariate analysis: This section presents the results derived from primary data on the subject regarding teachers' perspectives on students' academic performance in higher education in Punjab. It is divided into three parts: a) scale testing and bivariate analysis and multivariate analysis, b) Structural Equation Modelling (SEM) and c) Artificial Neural Network (ANN).

Normality test: This part presents the normality test based on Kolmogorov-Smirnov and Shapiro-Wilk statistical tests. It appealed constructed on the statistical tests that data followed the normal distribution at a 5 percent level of significance or not normally

distributed. It is claimed based on Kolmogorov-Smirnov that not all the variables followed the normal distribution at a 5 percent level of significance except three variables namely critical factors, household determinants, and educational determinants. These variables were not normally distributed. Furthermore, the Shapiro-Wilk test for normality also indicated that most of the considered variables did not follow the normal distribution. It suggested that the non-parametric test should be used to test the different hypotheses for these variables.

Bivariate analysis: The bivariate analysis was done based on the nature of data. The data was non-parametric. Thus Kruskal Wallis test, Kendall's tau_b, and Chi-Square statistical tests were conducted in this study.

Kruskal Wallis test: A nonparametric test is known as the Kruskal Wallis Test that is infact an extension of the Mann-Whitney U statistical test. It allows the comparison of more than two independent groups based on the sum of ranks. In this study, the independent variable consisted of three independent groups of university teachers based on their educational qualification including MA/MSc, MS/M. Phil and Ph.D. degree holders. Therefore, the Kruskal Wallis test employed to compare teachers' responses based on their educational qualification groups. Mathematically, the Kruskal Wallis test is defined by

$$KW = (N-1)\frac{\sum_{i=1}^{g} n_i(\bar{r}_i - \bar{r})^2}{\sum_{i=1}^{g}\sum_{j=1}^{n_i}(r_{ij} - \bar{r})^2}$$

Here n_i represents the number of observations in *the* ith group, r_{ij} denotes the rank of observation j from group i, $\bar{r}_i$ denotes the average rank for *the* ith group and $\bar{r}$ represents an overall average for all ranked observations.

Kendall's tau_b: Kendall's tau-b test is a non-parametric test that is used to measure the ordinal association between two measured variables. More formally, let us assume that X

and Y are two random variables in which I was interested to measure the order association. For this purpose, the Kendall tau b is defined as

$$\tau_b = \frac{P - Q}{\sqrt{(P + Q + X_0)(P + Q + Y_0)}}$$

Here, P denotes the number of concordant pairs, Q denotes the number of discordant pairs, and X_0 and Y_0 represent the number of pairs tied on X and Y, respectively.

Chi-Square test: Chi-square test for independence was used to explore the significant relationship between two categorical variables. In general, the frequency of one variable compared to the categories of another variable to determine the association between variables. Mathematically, it is assumed assume that $O_{ij}$is the observed frequency for *the i*th category of one variable and the jth category of another variable, and E_{ij} is the corresponding expected frequency. Then the χ^2 test to is defined by;

$$\chi^2 = \sum_{i=1}^{n} \sum_{j=1}^{m} \frac{(O_{ij} - E_{ij})^2}{E_{ij}}$$

Multivariate analysis: The multivariate analysis was employed to test the effects of more than two variables. This portion was based on two statistical tests: a) Structural Equation Modeling (SEM) and b) Artificial Neural Network (ANN).

Structure Equation Modeling (SEM): Structure Equation Modeling (SEM) applied to test the hypothesis. SEM is a powerful technique, combines complex path models (Bollen, 1989) with latent variables that specify confirmatory factor analysis, regression models, and complex path model. The SEM model described as (Bentler, 1995). Three models developed to identify the impact of independent variables on dependent variables. It is pertinent to mention that this portion also provides the path analysis and testing of the hypothesis based on the model. Further, this test was applied separately for 'female and

male' and 'rural and urban' faculty members. It described the differences of attitude toward input and output variables along with the existing path relationship by the axis gender and geographical location of the respondents. Moreover, the model fit values to accept or reject the model/s provided in Table 3.5.

Table 3.5

Model Fit Values

Model 1	Chi-square	df	Probability level	GFI	AGFI	CFI	TLI	IFI	RMSEA
Recommended model	---	---	≥.05	≥.90	≥.90	≥.90	≥.90	≥.90	≥.08

Artificial Neural Network (ANN): This test consisted of the results of ANN. It considered recognizing patterns based on loosely after the human brain. It used to cluster or label raw data and interpreted sensory data through a kind of machine perception. The patterns recognized as contained vectors, numerical and real-world data translated. It provided help to classify and cluster the data. This neural network was a statistical technique to create models for prediction without assumptions. Therefore, it was applied to the factors for checking the teachers' perspective on gender differentials in academic performance in terms of female students' outperformance and male students' underperformance in higher education.

3.12 Field Experiences

I had a wonderful experience while conducting the current research. After the approval of my research proposal from the Board of Advance Studies and Research (BASAR), I started a review of the literature and tried to write an introduction and methodology as well. In addition to it, I developed my questionnaire and entered the field. For the purpose to collect

secondary data, I visited the Office of the Controller of the Examination Office, University of the Punjab, Lahore. At the start of my work, I had a very bad experience. I visited the examination office and faced the disappointed behavior of lower administration staff there. They referred me to the Office of the Registrar for approval. I visited the office and submitted my application along with a consent form, a copy of the questionnaire, a student card, and a permission letter from my university. They responded me after four working days. They referred me to the Office of the Controller of the Examination. The next day, I went there and faced several questions. They asked me that I was are doing Ph.D. It will benefit me not the clerks working at university who will spare time to provide me information. Anyhow, after a lot of questions and investigation they agreed to provide me a result record of the examination. Contrary to it, during primary data collection from university teachers, I enjoyed myself. I introduced myself as a Ph.D. scholar and university teacher as well. So, all teachers gave me respect and offered tea as well. In addition to it, one female teacher refused to fill the form thinking that this might be used by the income tax department. I tried my level best, but she refused continuously during eight working days, and then I received an empty questionnaire from her. Moreover, some teachers took my questionnaire to their home and did not take back to the office. I distributed it again and tried to get it on the same day. During field data collection, I grasped to manage field activities, develop rapport, and convince the university teachers who refused firstly. Along with data collection activity, I met with great scholars and researchers as well to share scholastic ideas.

Meanwhile, I was selected for the International Research Support Initiative Program of Higher Education Commission (HEC). I was offered a six-month research

fellowship to The University of Queensland, Australia. It was a blessing for me to enrich my Ph.D. dissertation with the latest knowledge produced in the field in a developed country. Furthermore, my discussion and conclusion were also updated. In addition to it, as a research visiting student in Australia, I participated in several activities including conferences, seminars, training workshops, interactive sessions with Ph.D. scholars, and also experience the local culture. As an international student, it was a challenge for me to live with an international student at the start of my stay there. On the other side, it gave me a lot of benefit. It improved my language skills, communication skills, and research skills as well.

3.13 Informed Consent Form and Ethical Consideration

I followed all the informed consent to conduct the study (see Appendix-B). I also used a permission letter from my university (see Appendix-E) and also used university student cards for the purpose of collecting data. I followed all the rules and regulations of the educational institution to collect secondary data on result examinations. I also used the consent form and distributed to the respondents before filling the questionnaires. I also informed them about the study objectives and purpose of the study. Moreover, I also assured them to keep their information confidential as per research ethics. The privacy of the respondents was maintained and assured as a priority while conducting the whole research and that the data will only be used for academic research purposes.

3.14 Definition of Variables, Concepts, and Terms

This section of methodology provides the definitions of the main variables and concepts used in the study. It focusses on theoretical and research definitions of the variables.

Household determinants: For the present research, household determinants are the factors of female students' outscoring males in the examination at the tertiary level. In this study, the determinants are based on familial aspects and are divided into three sections; a) students' home background, b) socio-economic background, and c) parental involvement.

Determinants: Determinants are constituents that influence the output in any institutions (Kasirye, 2009). Currently, these constitute elements in any structure have an impact on the academic performance of girl students in terms of available resources, gender, culture, and familial environment of students (Cheesman, Simpson, & Wint, 2006). For the present study, the determinants are the factors of female students' outshining males in the examination results at the tertiary level.

Students' home background: Strand and Winston (2008) coined term "home educational aspirations" (i.e. magnitude of parental and familial expected outcomes). It infers the elements which mediate the aspiration of students in education. As the aspirations in education are magnified and indebted unequal socio-cultural background. Similarly, familial factors are the home background factors which provide aspiration to be students in education (Francis & Archer, 2005). It is not only the intent and motivation of parents but also the other constituents of social ambitions, aspirations, and engagement of parents in education matters. These elements constitute the opinion of parents, priority, involvement, and decisions for the children's education (Dimaki, Kaminioti, Kostaki, Psarakis, & Tsourti, 2005). It is thus imperative to know that a family certifies the aspirations among students for education. In this way, these students derive the best aspiration for education whose parents have provided the best family background (Lippman & Rivers, 2008). For the present study, students' home background variable is

used as a favorable socialization perspective to female students. It consists of male students' misbehavior acceptance, females are expected to follow family norms, biased socialization, obedience desired from female and small deviances of males are tolerated by a family member.

Socio-economic background: The socio-economic background of students (SES) has been determined by measuring the stature of parents in occupation and education (R. Erikson & Goldthorpe, 2002; Marks, 2006). A high level of education and career of parents is an indicator of the SES of the family (R. Erikson, 2016; Walpole, 2003). Moreover, SES is the main variable in the study and substantial research work coheres SES with education and career aspiration (Dornbusch, Erickson, Laird, & Wong, 2001; Okioga, 2013). In this study, socio-economic background of students is considered as the social status of family, income, wealth, parental education, occupational prestige, and economic pressure faced by male students.

Parental involvement: Parents have a foremost and vital contribution to shape the inspiration of their children (Berlin, Vinnerljung, Hjern, & Brannstrom, 2019). As parents structure and constitute the major elements of a child's learning, form the habit and aspiration to achieve the goals (Fan & Chen, 2001). Moreover, the parents expect high achievement from children in the future based on the socialization for assumed results from students (Fan, 2001). Parents provide a base for the students to perform well to achieve the best according to the expectations of children (Hill, 2015). It revealed that the achievements of parents in education are more likely to influence the aspirations of children in education with a strong correlation between progress and achievement of education (Koskei, 2014). It is asserted that female students seek help in homework from parents more than male

students while differentiation in encouragement and support of parents is less likely perceived (Chowa, Masa, & Tucker, 2013). The meaning of parental involvement for this study is the concern of parents towards their female and male students, restriction of females outside activities, monitoring, parents' preference, and parental control.

Social media: Social media constitutes a varying form of networking i.e., social networking sites, microblogs, blogs, chat platforms, open-source mapping, and photo and video sharing (Ejikeme, 2018). Generally, social media is defined as, the applications, services, and systems provide user to create, remix, and share the content (Ahmad, 2019). The use of social media is also referred to as the multiplicity of activities of the individuals participating in online. The explanation implies many online activities of students make use of social media and are concerned with the goals of making use of social media (Amin, Mansoor, Hussain, & Hashmat, 2016). The term social media attributes, for this study, are social media activities differences among female and male students, access to social media, usage, engages, joining of pages and groups, and spending time on entertainment.

Peer group: A peer group refers to the children of the age of adolescence characterized as girls and boys of the same age sharing common beliefs, fashion and fad, and prefer the similar activities (De-Paola & Scoppa, 2010). It is further explained that the adolescence period is identified by groups to maintain identity and self-respect, adolescents seek individual recognition and autonomy (Ryan, 2001). Additionally, every category of adolescents always look for an adjustment with the culture by seeking the norms and finding right and wrong patterns (Winkler, 1975). In this study, a peer group for female and male students is taken as the size of the group, time to spend with peers, outdoor and indoor activities with peer and study groups.

Social construction of educational self: Self-respect is a prime indicator in the field of sociology of education and educational psychology (Marsh & Martin, 2011). Bong and Clark (1999) used in their research as self-concept involves several dimensions revealing different latent and manifest meaning. Generally, it has one facet while carrying different facet and one of them is 'academic self-concept' (Bong & Skaalvik, 2003; Marsh & Craven, 1996). The concept of 'academic self-concept' has several characteristics in which the two constitute the Shavelson model (Marsh, 1990; Strein, 1993). The one concept is the descriptive and evaluative aspect of self-perception. Other associates with academic self-concept of focusing the scholarly competency. So, it refers to the perception of self in comparison to achievements in school (Hattie, 2014; Strein, 1993). This study uses the social construction of the educational self as females are socially bound to outperform, compete with a role model in the media industry, a matter of intelligence, heroic efforts, tendencies to occupy power positions, and instigation for religious ideology.

Educational determinants: Educational determinants is the factors linked with school, college, university, classroom, teacher, and educational environment that provided to female and male students for their academic performance. Moreover, these factors have been divided into four different variable, a) educational background of the students b) student-teacher interaction, c) teachers' competency and gender, and d) classroom environment. For this study, the educational determinants are the previous educational factors of female students outshining males in examination results at the tertiary level.

Educational background of the students: Educational background is based on previous educational grades, schooling, and learning from previous educational institutions (Isely & Singh, 2005; Taylor, Smiley, & Ramasamy, 2003). It is, specifically, the previous grades

and secondary socialization of the students (McManus, Woolf, & Dacre, 2008). Moreover, the study habits, peer and teachers' influence and the environment provided to students while study before entering at upgrade level is also linked with the educational background of the students in the field of sociology of education (Galpin, Sanders, Turner, & Venter, 2003; Selvig, Holaday, Purkiss, & Hortsch, 2015). For this study, the educational background of the students includes previous educational performance, passion to excel in a career, inclined to do homework, seriousness about teacher feedback, concerns about educational career, and seriousness about education.

Student-teacher interaction: Teacher-student interaction is defined as the reciprocal interaction between teachers and students (Manke, 1997; Schempp et al., 2004). It is expected and emerges through mentoring and have highly value for students to learn not only new skills of reading, speaking, listening and writing but also how to become more adjustable in every social environment (Ma, Du, Hau, & Liu, 2018; Rothbart, Dalfen, & Barrett, 1971; Sun, Shih, & Wang, 2007). In the present study, teacher-students interaction involves the interaction of teachers with female and male students differently, male students' indifference response to teachers, underplay in-class participation, obedience in the classroom, discipline parameters, and students' activeness to interact with teachers.

Teachers' competency and gender: Competency of a university teacher refers to standardized methods of the lecture when knowledge and skills are imparted (Drudy, 2008). It denotes the abilities of a teacher in imparting knowledge effectively and efficiently (Sudkamp, Kaiser, & Moller, 2012). The academic pursuits of teachers with professional training and skills as well as experiences of teaching were the core of this research (Mustafa, 2013). In this study, teachers' competency and gender consist of the

gender of the teacher, students' challenge to male and female teachers' authority, the cooperation of students with a teacher based on gender, obvious blame of teachers, and questions to challenge teachers' competence.

Classroom environment: The classroom setting comprises a variety of concepts in education, the seating arrangement, the psychological environ produced in a different social setting and several other teacher-related instructions and features, attitudes and behaviours (Beswick, 2005; Bull, Feldman, & Solity, 2013; Feichtner & Burstyn, 1974). As for as the concern of the classroom environment for this study, it consists of strength of students in a class, the behaviour of students in the class, moral standards, role of backbenchers, disobeying classroom norms, and the student-friendly environment in the classroom.

Gender-specific study culture: Gender-specific study culture refers to the environment provided for the study by involving students as it does not show any reciprocal measures (Houtte, 2004; Ludwig, 1983). The study culture determines several non-identical aspects that a study involvement (Blumner & Richards, 1997). Therefore, gender-specific study culture has a strong correlation with gender (Gurian, 2010a). In the present study, gender-specific study culture involves time spent for homework, outdoor activities, time to search study material, adaptation of anti-educational masculine identities, study group collaborations, and concern about lecture notes.

Motivation and commitment: Motivation refers to the theoretical construct used to confirm human behaviors (Long, Monoi, Harper, Knoblauch, & Murphy, 2007). Similarly, it is the force to provoke and stimulate humans to respond in achieving the goals (Meece et al., 2006). It also influences the behavior of the individuals leading towards the goal and

stimulates someone to the desired behavior by manipulating and creating the behaviors conversely (Solanki & Xu, 2018; Zaid, 2020). Motivation is the process that propels, drives, and triggers and contains human behaviors after the goals (Lee & Sten, 2017). Normally, it guides human beings to initiate the objective and persistently maintains the struggle until the end product is achieved according to expectation (Browman & Destin, 2015). Further, the students having motivational factors are mainly involved in achieving the academic pursuits. They enjoy and desire the task of learning (Birgit Spinath, Freudenthaler, & Neubauer, 2010). In this study, motivation and commitment include encouragement, commitment to education, consideration of education as a liberating force, matrimonial offers, and pragmatic value of education.

Self-fulfilling prophecy: Self-fulfilling prophecy indicates the person's belief in his abilities for positive turn outs to seek new, and achieve the goals accordingly (Jussim, 1986; Wineburg, 1987). Bandura and Walters (1977) emphasis on social cognitive theory, constructs of self-efficacy entailed good learning outcomes. Whereas, a person's own beliefs in his abilities has a great impact on alternative activity and struggle (Hay, 2004). It involves behaviors that are important to achieve the goal, academic pursuits, and motivation along with the development of abilities of cognition and proficient attainment (Madon, Jussim, & Eccles, 1997). Likewise, it persistently indicated the predicted academic pursuits owing to its impacts on struggle and consistency (Jussim, 1989; Merton, 1948). For instance, students demonstrating a great sense of self-fulfilling are more subjected to attempt and stick to the struggle in the long run while encountering the academic challenges (Zimmerman, Schunk, & DiBenedetto, 2017). Self-fulfilling prophecy in the context of this study involves gender advantage to complete educational

tasks, communication differences among female and male students, make relations, prone to detrimental trend at university (e.g. sectarianism, ethnic conflicts, etc.), being social and seriousness in education completion.

Gender differentials: Gender differentials are defined as the variations among females and males based on their biological determinism (Fontanella et al., 2020). In addition to the biological characteristics of females and males, it includes differences based on multiple factors (Frijters et al., 2019). It includes socio-cultural and, mainly, the factors that are socially constructed and vary from culture to culture (Bindu & Thomas, 2006; Jones & Wheatley, 1990; Marcenaro–Gutierrez, Lopez–Agudo, & Ropero-García, 2017). Scholars differentiate between females and males based on these factors which termed as gender differentials (Gentile et al., 2009; Ghazvini & Khajehpour, 2011; Kay & Lauricella, 2011). For this study, gender differentials in terms of female outshine male students in higher education consists of making big strides in higher education, educational position, maintain the narrative of gender advantage, securing enrollment, degree completion, capability to acquire employable skills, educational place in a better position, position in the classroom and better position in motivation.

Academic performance: Academic performance has been defined differently by different scholars based on their interpretations (Alhadabi & Karpinski, 2020; Vorontsova-Wenger, Ghisletta, Ababkov, & Barisnikov, 2020). Academic performance is the attainment of students in an aggregated score obtained in tests or exams in a specified subject covering the defined academic benchmark. Likewise, Hsin and Reed (2019) defined academic performance as the pedagogic terminology utilized in examining the success of a learner in academia that is determined on the basis exams. Research rated with various standards

influence the degree (Burman & Som, 2019; Lavin, 1965). Moreover, it also refers to the achievement in education obtained in a particular period in school, college, and university (Lau, Sun, & Yang, 2019). In this research, academic performance indicates the performance of female and male students in the Master level programmes at the University of the Punjab, Lahore.

Higher education: Higher education is defined as the degree level education that is offered at college or university (Ashwin et al., 2020; Kim & Maloney, 2020). Moreover, it is offered after the secondary level of education (Balzer, 2020). It helps students to gain knowledge, skills, expertise, and degree that is required to proceed with a specific career in the future life (De-Wit, 2020). For the present study, higher education is the tertiary level education specifically offered at Master level (2 years). The masters-level programmes are offered at Lahore campuses (i.e. Quaid-i-Azam and Allama Iqbal) of the University of the Punjab, Lahore.

Chapter Four

Young Females' and Males' Performance in Master Level Examinations: A Content Analysis

4.1 Secondary Data: Content Analysis

This section presents a content analysis of the top three position holders of MA/MSc level programmes in the University of the Punjab, Pakistan. I employed content analysis technique on the examination of result books of the above-mentioned university from 2006-2015. Using the content analysis approach, I analyzed female and male students' performance in MA/MSc examinations. Top three positions in master level examinations have been taken as indicators of the outperformance. The analysis of result books of ten years depicts female students' outperformance and male students' underperformance in education. The analysis enables me to conclude that there is a vivid trend of young females outdoing males in education at the tertiary level, especially in the social sciences and humanities disciplines. The forthcoming discussion presents a detailed analysis of female and male students' educational performance at the university level.

4.2 Top Three Position Holders in the Faulty of Arts and Humanities

Females do better than males in higher education in Pakistan. The focus of the content analysis in this study is to give an overview of gender differences in educational achievements in master level examinations at the University of the Punjab, Lahore. The statistics in Table 4.1 unpack differences between the performance of females and males at master level examinations conducted by the examination department. The data in the table show the top three positions during the last 10 years (2004-06 to 2013-15) in the faculty of arts and humanities. The total number of departments are eight in number.

Analysis of the top three positions along the axes of gender in session 2004-06: The analysis pointed out that 87.5 percent of females and 12.5 percent males' secured first position in the master level examinations in 2004-06. The analysis shows that 75.0 percent of the first position holders belonged to urban areas and 25.0 percent were from rural backgrounds. Females in the University of Punjab demonstrated similar results for the second position in the master level examinations, and 62.5 percent were from urban backgrounds. Similarly, 75.0 percent of females and 25.0 percent of males got third position. Among the third position holders, 84.5 percent were from urban areas and 12.5 percent from rural residential backgrounds. Females in the university outperformed males in the top three positions of the examinations held in the session 2004-06 and the position holder females belonged to urban areas.

Session 2005-07: The statistics in Table 4.1 unpack the outperformance of students in master level examinations. Females' outshined males by clinching 87.5 percent first positions while 12.5 percent males stood first in master level examinations in 2005-07. The first position holders belonged to urban areas. Similarly, out of eight-second position, 75.0 percent positions came to the part of females and two outclassed male students. Moreover, 62.5 percent second position holders belonged to urban areas and 37.5 percent were from rural areas. Similarly, as concerns third position holders, 62.5 were females and 37.5 percent were males. Out of eight third position holders, 87.5 percent were from urban areas and 12.5 percent had rural residential backgrounds. A similar proportion of outperformance was seen along the axes of gender and residential area; 87.5 percent of females and 12.5 percent males outperformed in master level examinations in 2005-07. The same proportion

has been observed in urban residential backgrounds of outperforming students in the 2005-07 examinations.

Table 4.1
Female and Male Students' Performance at Masters Level in the Faculty of Arts and Humanities (Session 2004-06 to 2013-15)

Position	Gender/Area		Years									
			2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013	2012-2014	2013-2015
1st	Gender	F [*f*(%)]	07 (87.5)	07 (87.5)	08 (100.0)	07 (87.5)	06 (75.0)	07 (87.5)	06 (75.0)	06 (75.0)	04 (50.0)	04 (50.0)
		M [*f*(%)]	01 (12.5)	01 (12.5)	00 (00.0)	01 (12.5)	02 (25.0)	01 (12.5)	01 (12.5)	01 (12.5)	03 (37.5)	03 (37.5)
	Area	R [*f*(%)]	02 (25.0)	00 (00.0)	01 (12.5)	02 (25.0)	01 (12.5)	00 (00.0)	00 (00.0)	00 (00.0)	01 (12.5)	02 (25.0)
		U [*f*(%)]	06 (75.0)	08 (100.0)	07 (87.5)	06 (75.0)	07 (87.5)	08 (100.0)	07 (87.5)	07 (87.5)	06 (75.0)	05 (62.5)
2nd	Gender	F [*f*(%)]	07 (87.5)	06 (75.0)	03 (37.5)	06 (75.0)	08 (100.0)	07 (87.5)	06 (75.0)	05 (62.5)	06 (75.0)	04 (50.0)
		M [*f*(%)]	01 (12.5)	02 (25.0)	05 (62.5)	02 (25.0)	00 (00.0)	01 (12.5)	01 (12.5)	02 (25.0)	01 (12.5)	03 (37.5)
	Area	R [*f*(%)]	03 (37.5)	03 (37.5)	05 (62.5)	02 (25.0)	02 (25.0)	02 (25.0)	02 (25.0)	00 (00.0)	01 (12.5)	02 (25.0)
		U [*f*(%)]	05 (62.5)	05 (62.5)	03 (37.5)	06 (75.0)	06 (75.0)	06 (75.0)	05 (62.5)	07 (87.5)	06 (75.0)	05 (62.5)
3rd	Gender	F [*f*(%)]	06 (75.0)	05 (62.5)	05 (62.5)	06 (75.0)	05 (62.5)	07 (87.5)	06 (75.0)	06 (75.0)	05 (62.5)	05 (62.5)
		M [*f*(%)]	02 (25.0)	03 (37.5)	03 (37.5)	02 (25.0)	03 (37.5)	01 (12.5)	01 (12.5)	01 (12.5)	02 (25.0)	01 (12.5)
	Area	R [*f*(%)]	01 (12.5)	01 (12.5)	02 (25.0)	01 (12.5)	01 (12.5)	01 (12.5)	01 (12.5)	00 (00.0)	01 (12.5)	02 (25.0)
		U [*f*(%)]	07 (84.5)	07 (87.5)	06 (75.0)	07 (87.5)	07 (87.5)	07 (87.5)	06 (75.0)	07 (87.5)	06 (75.0)	04 (50.0)
Out Performed	Gender	F [*f*(%)]	07 (87.5)	07 (87.5)	07 (87.5)	08 (100.0)	08 (100.0)	08 (100.0)	07 (87.5)	07 (87.5)	05 (62.5)	04 (50.0)
		M [*f*(%)]	01 (12.5)	01 (12.5)	01 (12.5)	00 (00.0)	00 (00.0)	00 (00.0)	00 (00.0)	00 (00.0)	02 (25.0)	03 (37.5)
	Area	R [*f*(%)]	01 (12.5)	01 (12.5)	02 (25.0)	01 (12.5)	00 (00.0)	00 (00.0)	00 (00.0)	00 (00.0)	00 (00.0)	01 (12.5)
		U [*f*(%)]	07 (87.5)	07 (87.5)	06 (75.0)	07 (87.5)	08 (100.0)	08 (100.0)	07 (87.5)	07 (87.5)	07.0 (87.5)	06 (75.0)

(Total Master Level Programme in the Faculty = 08)

Session 2006-08: The statistics also show that female students secured the first position to 100 percent in the master level examinations in 2006-08. The analysis shows that 12.5 percent belonged to urban areas and 87.5 percent were from rural backgrounds. 37.5 percent female and 62.5 percent male students secured second positions in the master level examinations. Data reported that 62.5 percent belonged to rural backgrounds and 37.5

percent were from an urban background. Similarly, 62.5 percent of females and 37.5 percent of males got the third position. Among the third position holders, 75.0 were from urban areas and 25.0 percent from rural residential backgrounds. Females in the university outperformed males by clinching top three positions in examinations held in the session 2006-08 and these females belonged to urban areas.

Session 2007-09: The data indicates that Females outshined males by clinching 87.5 percent first positions whereas 12.5 percent male students stood first in master level examinations in 2007-09. The first position holders belonged to urban areas. Similarly, out of eight-second positions, 75.0 percent positions came to the part of females whereas 25.0 percent male students outclassed. Moreover, 75.0 percent second position holders belonged to urban areas and 25.0 percent were from rural areas. Data indicate that 75.0 percent of third position holders were females and 25.0 percent were males. Out of eight third position holders, 87.5 percent were from urban areas and 12.5 percent had rural residential backgrounds. The analysis revealed that 100.0 percent of female students outperformed in master level examinations in 2007-09. It is noteworthy that a majority of these outperforming females belonged to urban areas.

Session 2008-10: Content analysis of the results reflects that 75.0 percent females and 25.0 percent males secured first positions in the master level examinations in 2008-10. The analysis further revealed that 87.5 percent of the outperformers belonged to urban areas and 12.5 percent were from rural backgrounds. Moreover, 100.0 percent of female students secured second positions in the master level examinations. Data also indicate that 75.0 percent of the second position holders were from an urban background. Similarly, 62.5 percent of females and 37.5 percent of males got third position. Among the third position

holders, 87.5 were from urban areas and 12.5 percent were from rural residential backgrounds. The data showed that 100.0 percent female students outperformed in master level examinations in the session 2008-10. The same proportion was observed in the residential background of outperforming students in the session 2008-10 examinations.

Session 2009-11: The analysis of data in the table describes the outperformance of students in master level examinations of the university. Females' outshined males by clinching 87.5 percent first positions and 12.5 percent male students stood first in master level examinations in 2009-11. All first position holders belonged to urban areas. Similarly, out of eight-second position holders, 87.5 percent position were secured by females and 12.5 percent outclassed students were males. Moreover, 75.0 percent second position holders belonged to urban areas and 25.0 percent were from rural areas. Further, 87.5 percent of the third position holders were females and 12.5 percent were males. Out of eight third position holders, 87.5 percent were from urban areas and 12.5 percent had rural residential backgrounds. In the university, female students outperformed 100 percent in master level examinations in 2009-11, and these females belonged to urban areas.

Session 2010-12: Tabulated data depict that 75.0 percent females and 12.5 percent males secured first position in the master level examinations in 2010-12. Data reported that 87.5 percent belonged to urban areas. In the university, 75.0 percent females and 12.5 percent male students secured second positions in the master level examinations, and 62.5 percent were from an urban background. Similarly, 75.0 percent females and 12.5 percent males got third position. Among the third position holders, 75.0 were from urban areas and 12.5 percent were from rural residential backgrounds. Data reported that outperformance along the axes of gender and residential area, 87.5 percent female students outperformed in

master level examinations in the session 2010-12, and these females belonged to urban areas.

Session 2011-13: The statistics in the table unpack the outperformance of female students in master level examinations. It indicates that 75.0 percent females and 12.5 percent males secured first position in the master level examinations in 2011-13. The analysis shows that 87.5 percent belonged to urban areas. The analysis indicates that 62.5 percent females and 25.0 percent males secured second positions in the master level examinations and 87.5 percent were from an urban background. The analysis further shows that 75.0 percent females and 12.5 percent males got third position. It also reveals that 87.5 percent of the third position holders were from urban areas. The analysis of outperformance along the axes of gender and residential area shows that 87.5 percent female students outperformed in master level examinations in the session 2011-13 and these females belonged to urban areas.

Session 2012-14: Here, data also reflect that 50.0 percent females and 37.5 percent males secured first position in the master level examinations in 2012-14. Data reported that 75.0 percent belonged to urban areas and 12.5 percent were from rural backgrounds. The analysis points out that 75.0 percent female and 12.5 percent male students secured second positions in the master level examinations, and that 75.0 percent were from an urban background. Similarly, 62.5 percent females and 25.0 percent males got the third position. It also highlights 75.0 percent of the third position holders were from urban areas and 12.5 percent were from rural residential backgrounds. The analysis of outperformance along the axes of gender and residential areas shows that 62.5 percent of females and 25.0 percent male students who outperformed in master level examinations belonged to urban areas.

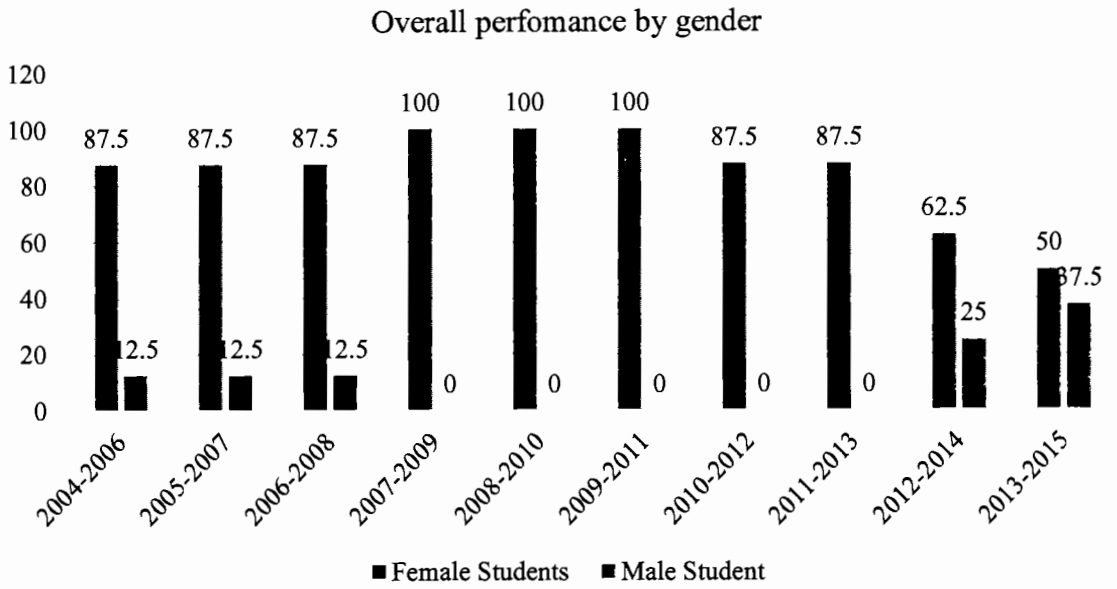


Figure 4.1. Overall performance by gender in the faculty of arts and humanities

Session 2013-15: The analysis indicates the outperformance of female students in master level examinations. It is stated that 50.0 percent females and 37.5 percent males secured first position in the master level examinations in 2013-15. The analysis also displays that 62.5 percent belonged to urban areas and 25.0 percent were having rural backgrounds. Similarly, 50.0 percent female and 37.5 percent male students secured second positions in the master level examinations. Furthermore, 62.5 percent of the second position holders belonged to urban areas and 25.0 percent were from rural backgrounds. Moreover, 62.5 percent females and 12.5 percent males got the third position. Likewise, 50.0 percent of third position holders were from urban areas and 25.0 percent were from rural residential backgrounds. The analysis of outperforming along the axes of gender reveals 50.0 percent female and 37.5 percent males. Similarly, the analysis along the line of residential

backgrounds demonstrates 75.0 percent were urban students and 12.5 percent of students were with a rural background.

4.3 Top Three Position Holders in the Faulty of Behavioral and Social Sciences

The focus of the content analysis was to give an overview of gender differences in educational achievements in master level examinations at the university. The statistics in Table 4.2 unpack differences between females' and males' performance at master level examinations conducted in PU. The data in the table shows the top three positions during the last 10 years starting from the session year 2004-06 to 2013-15 in the faculty of

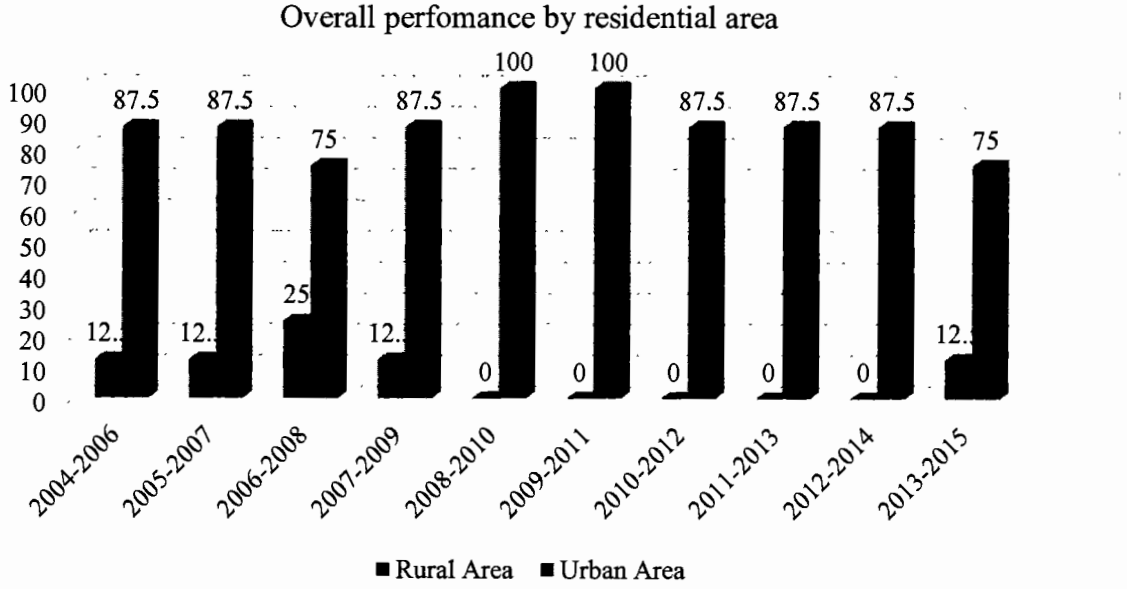


Figure 4.2 Overall performance by residential area in the faculty of arts and humanities behavioral and social science. The total number of departments were seven in number.

Analysis of the top three positions along the axes of gender in session 2004-06: In university, 85.7 percent females and 14.3 percent males secured first position in the master level examinations in 2004-06. The analysis shows that 100.0 percent of the first position holders belonged to urban areas. 71.4 percent females and 28.6 percent male students secured second positions in the master level examinations. Data reported that 71.4 percent

belonged to urban backgrounds and 28.6 percent were from rural backgrounds. Similarly, 85.7 percent females and 14.3 percent males secured third position in the master level examinations in 2004-06. The analysis shows that 100.0 percent of the first position holders belonged to urban areas. The crux of the analysis is that females have outperformed males in the top three positions of examinations held in the session 2004-06 and the position holders females belonged to urban areas.

Table 4.2
Female and Male Students' Performance at Masters Level in the Faculty of Behavioral and Social Sciences (Session 2004-06 to 2013-15)

Position	Gender/Area		Years									
			2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013	2012-2014	2013-2015
1st	Gender	F [*f* (%)]	06 (85.7)	06 (85.7)	05 (71.4)	05 (71.4)	06 (85.1)	05 (71.4)	05 (71.4)	05 (71.4)	05 (71.4)	07 (100.0)
		M [*f* (%)]	01 (14.3)	01 (14.3)	02 (28.6)	01 (14.3)	00 (00.0)	02 (28.6)	02 (28.6)	02 (28.6)	02 (28.6)	00 (00.0)
	Area	R [*f* (%)]	00 (00.0)	01 (14.3)	01 (14.3)	03 (42.9)	01 (14.3)	04 (57.1)	00 (00.0)	01 (14.3)	01 (14.3)	02 (28.6)
		U [*f* (%)]	07 (100.0)	06 (85.7)	06 (85.7)	03 (42.9)	05 (71.4)	03 (42.4)	07 (100.0)	06 (85.7)	06 (85.7)	05 (71.4)
2nd	Gender	F [*f* (%)]	05 (71.4)	04 (57.1)	03 (42.9)	05 (71.4)	05 (71.4)	06 (85.7)	05 (71.4)	05 (71.4)	05 (71.4)	04 (57.1)
		M [*f* (%)]	02 (28.6)	03 (42.1)	04 (57.1)	01 (14.3)	01 (14.3)	01 (14.3)	02 (28.6)	02 (28.6)	02 (28.6)	02 (28.6)
	Area	R [*f* (%)]	02 (28.6)	02 (28.6)	05 (71.4)	02 (28.6)	01 (14.3)	03 (42.9)	03 (42.9)	01 (14.3)	04 (57.1)	00 (00.0)
		U [*f* (%)]	05 (71.4)	05 (71.4)	02 (28.6)	04 (57.1)	05 (71.4)	04 (57.1)	04 (57.1)	06 (85.7)	03 (42.9)	06 (85.7)
3rd	Gender	F [*f* (%)]	06 (85.7)	03 (42.9)	01 (14.3)	05 (71.4)	05 (71.4)	06 (85.7)	05 (71.4)	05 (71.4)	05 (71.4)	05 (71.4)
		M [*f* (%)]	01 (14.3)	04 (57.1)	06 (85.7)	01 (14.3)	01 (14.3)	01 (14.3)	02 (28.6)	01 (14.3)	02 (28.6)	01 (14.3)
	Area	R [*f* (%)]	00 (00.0)	03 (42.9)	06 (85.7)	01 (14.3)	03 (42.9)	03 (42.9)	02 (28.6)	01 (14.3)	03 (42.9)	03 (42.9)
		U [*f* (%)]	07 (100.0)	04 (57.1)	01 (14.3)	05 (71.4)	03 (42.9)	04 (57.1)	05 (71.4)	05 (71.4)	04 (57.1)	03 (42.9)
Outperformed	Gender	F [*f* (%)]	06 (85.7)	04 (57.1)	03 (42.9)	06 (85.7)	05 (71.4)	07 (100.0)	06 (85.7)	05 (71.4)	06 (85.7)	07 (100.0)
		M [*f* (%)]	01 (14.3)	03 (42.9)	04 (57.1)	00 (00.0)	01 (14.3)	00 (00.0)	01 (14.3)	02 (28.6)	01 (14.3)	00 (00.0)
	Area	R [*f* (%)]	00 (00.0)	02 (28.6)	05 (71.4)	01 (14.3)	01 (14.3)	03 (42.9)	01 (14.3)	00 (00.0)	02 (28.6)	02 (28.6)
		U [*f* (%)]	07 (100.0)	05 (71.4)	02 (28.6)	05 (71.4)	05 (71.4)	04 (57.1)	06 (85.7)	07 (100.0)	05 (71.4)	05 (71.4)

(Total Master Level Programme in the Faculty = 07)

Session 2005-07: Data in the table unpack the outperformance of the students in master level examinations of the university. Females' outshined males by clinching 85.7 percent first positions as compared to 14.3 percent males in master level examinations in 2005-07. Data reported that 85.7 percent first position holders belonged to urban areas and 14.3 percent were from rural backgrounds. Furthermore, 57.1 percent of females and 42.1 percent male students secured second positions in the master level examinations during 2005-07. Moreover, 71.4 percent of the second position holders belonged to urban areas and 28.6 percent were from rural areas. Furthermore, 57.1 percent were male students, and 42.9 percent female students secured third positions. Out of 07 third position holders, 57.1 percent were from urban areas and 42.9 percent had rural residential backgrounds. The crux of analysis here is that 57.1 percent of females and 42.9 percent of males outperformed in master level examinations in 2005-07. It was also noted that the female students belonged to urban areas.

Session 2006-08: Examination data describe that 71.4 percent female students and 28.6 percent male students secured first positions in the master level examinations in 2006-08. The analysis shows that 85.7 percent belonged to urban areas and 14.3 percent were from rural backgrounds. Data demonstrated that 57.2 percent females and 42.9 percent male students secured second positions. Data reported that 71.4 percent belonged to rural backgrounds and 28.6 percent were from an urban background. Similarly, 85.7 percent of females and 14.3 percent of males got third positions. Among the third position holders, 85.7 were from urban areas and 14.3 percent from rural residential backgrounds. The analysis of results shows that 57.1 percent of male students and 42.9 percent female students outperformed in master level examinations in the session 2006-08. 71.4 percent

of the outperforming students were from urban areas and 28.6 percent were from rural residential backgrounds.

Session 2007-09: Top three position holders' data depict that 71.4 percent females and 14.3 percent males secured the first position in the master level examinations in 2007-09. The analysis shows that 42.9 percent of first position holders belonged to urban areas and 42.9 percent from rural residential backgrounds. Similarly, 71.4 percent females and 14.3 percent of males got the second position. Further, 57.1 percent of the second position holders were from urban areas and 28.6 percent were from rural residential background. Similarly, 71.4 percent females and 14.3 percent males secured the third position in the master level examinations in 2007-09. The analysis shows that 71.4 percent third position holders belonged to urban areas and 14.3 percent were from rural backgrounds. The crux of the analysis is that females in the university outperformed males in the top three positions of examinations held in the session 2007-09. It is also concluded that the position holder females belonged to urban areas.

Session 2008-10: The analysis shows that 85.1 percent females secured first positions in the master level examinations in 2008-10. The analysis of data presents that 71.4 percent belonged to urban areas and 14.3 percent were from rural backgrounds. Moreover, 71.4 percent of female students and 14.3 percent male students secured second positions in the master level examinations. Further, 71.4 percent were from urban backgrounds and 14.3 percent were from rural residential backgrounds. Similarly, 71.4 percent female and 14.3 percent male students got third positions. Among the third position holders, 42.9 percent were from urban areas and 42.9 percent were from rural residential backgrounds. The analysis shows that 71.4 percent female students outperformed in master level

examinations in the session 2008-10. The same proportion was observed in the residential background of outperforming students in the session 2008-10 examination.

Session 2009-11: The statistics in Table 4.2 unpack the outperformance of female students in master level examinations. Females' outshined males by clinching 71.4 percent first positions as compared to 28.6 percent male students who stood first in master level examinations in 2009-11. Further, 42.4 percent of first position holders belonged to urban areas and 57.1 percent were from rural areas. Similarly, out of 7 second positions, 85.7 percent of positions came to the part of females and 14.3 percent were outclassed by male students. Moreover, 57.1 percent second position holders belonged to urban areas and 42.9 percent were from rural areas. Additionally, 85.7 percent of the third position holders were females and 14.3 percent were males. Out of 7 third position holders, 57.1 percent were from urban areas and 42.9 percent had rural residential backgrounds. The analysis revealed that 100.0 percent of female students outperformed in master level examinations in 2009-11. The analysis further shows that 57.1 percent of the outperforming females belonged to urban areas and 42.9 percent were from rural areas.

Session 2010-12: Position holders' data report that 71.4 percent females and 28.6 percent males secured the first positions in the master level examinations in 2010-12. The analysis pointed out that 100.0 percent of the position holders belonged to urban areas. Furthermore, 71.4 percent female and 28.6 percent male students secured second positions in the master level examinations. Moreover, 57.1 percent of second position holders were from urban and 42.9 percent were from rural backgrounds. Similarly, 71.4 percent female and 28.6 percent male students got third positions. Among the third position holders, 71.4 were from urban areas and 28.6 percent were from rural residential backgrounds. The analysis

reported that outperformed along the axes of gender and residential area, 85.7 percent female students outperformed in master level examinations in the session 2010-12, and they belonged to urban areas.

Session 2011-13: The statistics in Table 4.2 describe the outperformance of female students in master level examinations. The analysis indicated that 71.4 percent females and 28.6 percent of males secured first positions in the master level examinations in 2011-13. The analysis of data also presented that 85.7 percent belonged to urban areas and 14.3 percent were from rural residential backgrounds. Moreover, 71.4 percent female and 28.6 percent male students secured second positions. Furthermore, 85.7 percent of the second position holders were from urban backgrounds. Similarly, 71.4 percent females and 14.3 percent male students got third positions. Among the third position holders, 71.4 percent were from urban areas and 14.3 percent were from rural backgrounds. The analysis along the axes of gender and residential background shows that 71.4 percent female outperformed in the session 2011-13. The analysis also unpacked that 100.0 percent position holders belonged to urban areas.

Session 2012-2014: The analysis revealed that 71.4 percent females and 28.6 percent males secured first positions in the master level examinations in 2012-14. Further, 85.7 percent belonged to urban areas and 14.3 percent were from rural backgrounds. Similarly, 71.4 percent females and 28.6 percent males secured second positions in the master level examinations. Moreover, 57.1 percent were from urban areas and 42.9 percent were from rural residential backgrounds. Similarly, 71.4 percent female and 28.6 percent male students got third position. Among the third position holders, 57.1 were from urban areas and 42.9 percent from rural residential backgrounds. Data reported that outperformance

along the axes of gender and residential area, 85.7 percent females and 14.3 percent males outperformed in the session 2012-14, and out of these students 71.4 percent were from urban areas and 28.6 percent were from rural backgrounds.

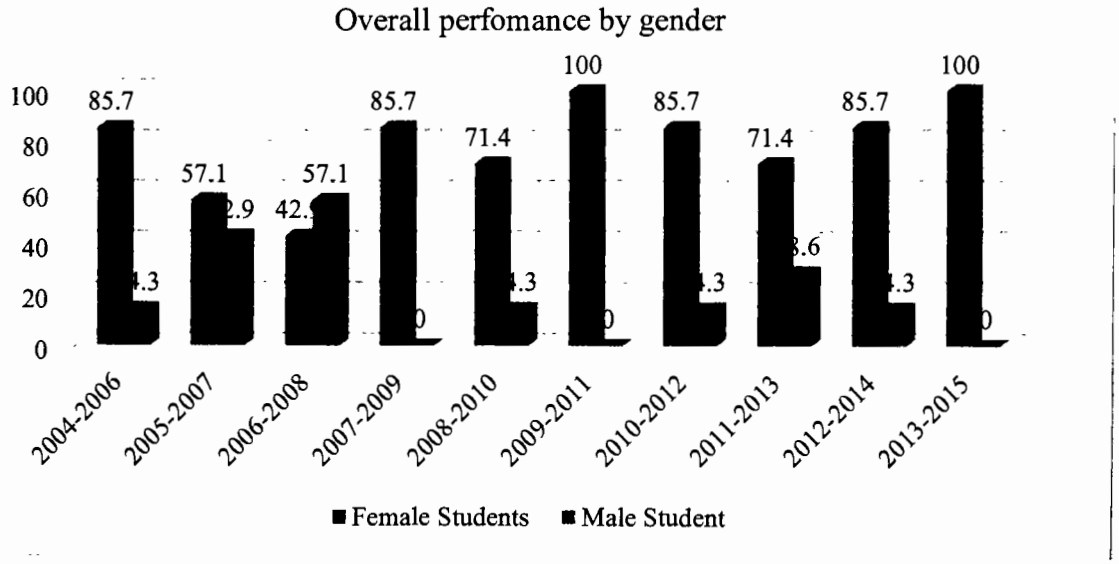


Figure 4.3. Overall performance by gender in the faulty of behavioral and social sciences

Session 2013-15: Data in the table depicts the outperformance of the students in master level examinations of the university. The analysis pointed out that 100.0 percent females secured the first positions in the master level examinations in 2013-15. Data reported that 71.4 percent belonged to urban areas and 28.6 percent were from rural backgrounds. The analysis presented that 57.1 percent females and 28.6 percent males secured second positions and 85.7 percent belonged to urban areas background. Similarly, 71.4 percent females and 14.3 percent of males got third position. Among the third position holders, 42.9 were from urban areas and 42.9 percent from rural residential backgrounds. Data reported that outperformance along gender and residential area, 100.0 percent female students outperformed in master level examinations in the session 2013-15, and 71.4 percent were from urban areas and 28.6 percent were from rural backgrounds.

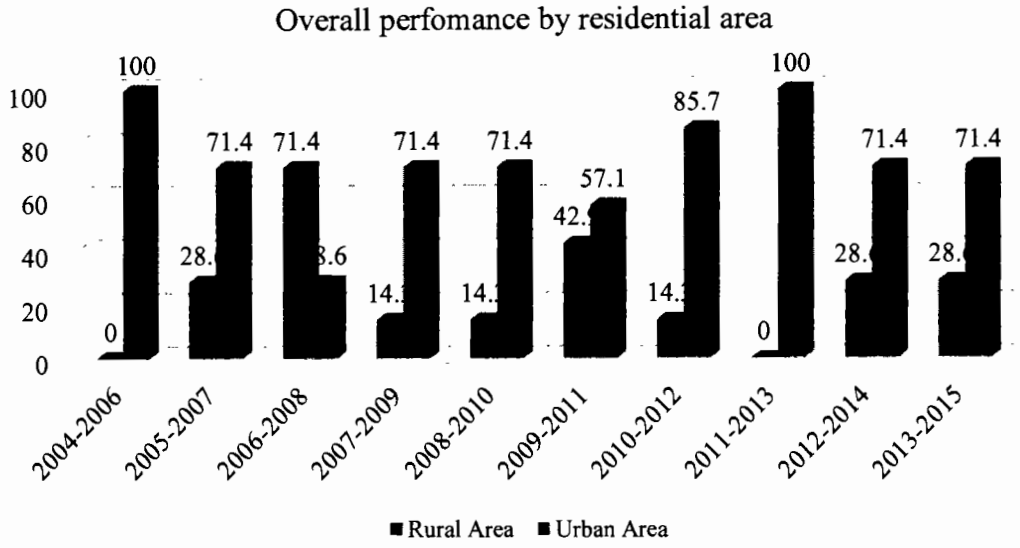


Figure 4.4. Overall performance by residential area in the faulty of behavioral and social sciences

4.4 Top Three Position Holders in the Faculty of Commerce

The focus of the content analysis was to have an overview of gender differences in educational achievements in master level examinations. The statistics in table unpack differences between the performance of females and males at master level examinations conducted by the examination department. The data in the table show the top three positions during the last 10 years starting from the session year 2004-06 to 2013-15 in the faculty of commerce. The total number of departments is three.

Analysis of the top three positions along the axes of gender in session 2004-06: The analysis pointed out that 66.7 percent of females and 33.3 percent males secured the first position in the master level examinations in 2004-06. The analysis showed that 66.7 percent of first position holders belonged to urban areas and 33.3 percent were from rural backgrounds. Females in the university demonstrated 100.0 percent possession of second positions. Data reported that 66.7 percent belonged to urban backgrounds and 33.3 percent were from rural backgrounds. Similarly, 100.0 percent female students secured third

position in the master level examinations in 2004-06. The analysis shows that 66.7 percent of first position holders belonged to urban areas and 33.3 percent were from rural residential backgrounds. Females in the university outperformed males in the top three positions of examinations held in the session 2004-06 and the position holder. 66.7 percent females were from urban areas and 33.3 percent were from rural residential backgrounds.

Session 2005-07: The statistics in the table unpack the outperformance of the students in master level examinations of the university. Females outshined males by clinching 66.7 percent first positions while 33.3 percent male students got first position in master level examinations in 2005-07. Data reported that 100.0 percent of first position holders belonged to urban areas. 33.3 percent females and 66.7 percent males secured second positions. Moreover, 66.7 percent of second position holders belonged to urban areas and 33.3 percent were from rural areas. Similarly, as third position holders are concerned, 66.7 were female students and 33.3 percent were male students. Out of three departments, 100 percent third position holders were from the urban residential background. The analysis revealed that 66.7 percent of females and 3.3 percent of males outperformed in master level examinations in 2005-07 and 100 percent female students were from urban areas.

Session 2006-08: Examination data explain that 100.0 percent female students secured the first position in the master level examinations in 2006-08. The analysis shows that 100.0 percent belonged to the urban residential background. 33.3 percent females and 66.7 percent male students secured second positions. Data reported that 66.7 percent belong to rural backgrounds and 33.3 percent were from an urban background. Similarly, 100.0 percent female students got the third position. Among the third position holders, 100.0 were from urban areas. The data showed that 66.7 percent male students and 33.3 percent

female students outperformed in master level examinations in the session 2006-08. The analysis shows that 33.3 percent were urban areas and 66.7 percent were from rural residential backgrounds.

Table 4.3
Female and Male Students' Performance at Masters Level in the Faculty of Commerce (Session 2004-06 to 2013-15)

Position	Gender/Area		Years									
			2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013	2012-2014	2013-2015
1st	Gender	F [*f*(%)]	02 (66.7)	02 (66.7)	03 (100.0)	01 (33.3)	03 (100.0)	02 (66.7)	02 (66.7)	03 (100.0)	03 (100.0)	02 (66.7)
		M [*f*(%)]	01 (33.3)	01 (33.3)	00 (00.0)	02 (66.7)	00 (00.0)	01 (33.3)	01 (33.3)	00 (00.0)	00 (00.0)	01 (33.3)
	Area	R [*f*(%)]	01 (33.3)	00 (00.0)	00 (00.0)	01 (33.3)	02 (66.7)	00 (00.0)	01 (33.3)	00 (00.0)	01 (33.3)	00 (00.0)
		U [*f*(%)]	02 (66.7)	03 (100.0)	03 (100.0)	02 (66.7)	01 (33.3)	03 (100.0)	02 (66.7)	03 (100.0)	02 (66.7)	03 (100.0)
2nd	Gender	F [*f*(%)]	03 (100.0)	01 (33.3)	01 (33.3)	00 (00.0)	03 (66.7)	02 (66.7)	02 (66.7)	03 (100.0)	02 (66.7)	03 (100.0)
		M [*f*(%)]	00 (00.0)	02 (66.7)	02 (66.7)	03 (100.0)	00 (00.0)	01 (33.3)	01 (33.3)	00 (00.0)	01 (33.3)	00 (00.0)
	Area	R [*f*(%)]	01 (33.3)	01 (33.3)	02 (66.7)	01 (33.3)	00 (00.0)	01 (33.3)	01 (33.3)	00 (00.0)	00 (00.0)	00 (00.0)
		U [*f*(%)]	02 (66.7)	02 (66.7)	01 (33.3)	02 (66.7)	03 (100.0)	02 (66.7)	02 (66.7)	03 (100.0)	03 (100.0)	03 (100.0)
3rd	Gender	F [*f*(%)]	03 (100.0)	02 (66.7)	00 (00.0)	02 (66.7)	01 (33.3)	03 (100.0)	02 (66.7)	03 (100.0)	03 (100.0)	03 (100.0)
		M [*f*(%)]	00 (00.0)	01 (33.3)	03 (100.0)	01 (33.3)	02 (66.7)	00 (00.0)	01 (33.3)	00 (00.0)	00 (00.0)	00 (00.0)
	Area	R [*f*(%)]	01 (33.3)	00 (00.0)	03 (100.0)	01 (33.3)	01 (33.3)	00 (00.0)	00 (00.0)	00 (00.0)	00 (00.0)	01 (33.3)
		U [*f*(%)]	02 (66.7)	03 (100.0)	00 (00.0)	02 (66.7)	02 (66.7)	03 (100.0)	03 (100.0)	03 (100.0)	03 (100.0)	02 (66.7)
Outperformed	Gender	F [*f*(%)]	03 (100.0)	02 (66.7)	01 (33.3)	01 (33.3)	03 (100.0)	02 (66.7)	03 (100.0)	03 (100.0)	03 (100.0)	03 (100.0)
		M [*f*(%)]	00 (00.0)	01 (33.3)	02 (66.7)	02 (66.7)	00 (00.0)	01 (33.3)	00 (00.0)	00 (00.0)	00 (00.0)	00 (00.0)
	Area	R [*f*(%)]	01 (33.3)	00 (00.0)	02 (66.7)	00 (00.0)	01 (33.3)	00 (00.0)	00 (00.0)	00 (00.0)	00 (00.0)	00 (00.0)
		U [*f*(%)]	02 (66.7)	03 (100.0)	01 (33.3)	03 (100.0)	02 (66.7)	03 (100.0)	03 (100.0)	03 (100.0)	03 (100.0)	03 (100.0)

(Total Master Level Programme in the Faculty = 03)

Session 2007-09: Data mentions that 33.3 percent females and 66.7 percent males secured the first position in the master level examinations in 2007-09. The analysis shows that 66.7 percent of first position holders belonged to urban areas and 33.3 percent were from rural residential backgrounds. The analysis pointed out that 100.0 percent female students got the second position. In the second position holders, 66.7 were from urban areas and 33.3

percent from rural residential backgrounds. Similarly, 66.7 percent females and 33.3 percent males secured the third positions. The analysis shows that 66.7 percent of third position holders belonged to urban areas and 33.3 percent were from rural backgrounds. The data showed that 66.7 percent male students and 33.3 percent female students outperform in the session 2007-09 and the position holder students belonged to urban areas.

Session 2008-10: Top position holders data depict that 100.0 percent females secured the first position in the master level examinations in 2008-10. The analysis of data presented that 33.3 percent belonged to urban areas and 66.7 percent were from rural backgrounds. Moreover, 66.7 percent of female students secured second positions and 100.0 percent were from an urban background. Similarly, 66.7 percent females and 33.3 percent male students got third positions. Among the third position holders, 66.7 were from urban areas and 33.3 percent from rural residential backgrounds. The data showed that 100.0 percent female students outperform. 66.7 percent females were from urban areas and 33.3 percent were from rural residential backgrounds who outperformed the session 2008-10 examination.

Session 2009-11: The statistics in the table unpack the outperformance of the students in master level examinations of the university. Females' outshined males by clinching 66.7 percent first positions which 33.3 percent male students stood first in master level examinations in 2009-11. 100 percent first position holders belonged to urban areas. Similarly, 66.7 percent of positions came in the part of females and 33.3 percent male outclassed. Moreover, 66.7 percent of the second position holders belonged to urban areas and 33.3 percent were from rural areas. Similarly, as the third position holders concerned, 100.0 percent were females. Out of three departments, third position holders, 100.0 percent were from the urban residential background. The analysis revealed that 66.7 percent of

female students and 33.3 percent males outperformed in 2009-11. 100 percent students belonged to urban areas.

Session 2010-12: The content analysis indicated that 66.7 percent females and 33.3 percent males secured first positions in the master level examinations in 2010-12. Data reported that 66.7 percent belonged to urban areas and 33.3 percent were from rural residential backgrounds. The analysis indicated that 66.7 percent female and 33.3 percent male student's secured second positions. 66.7 percent were from urban backgrounds, and 33.3 percent were from rural backgrounds. Similarly, 66.7 percent females and 33.3 percent males got third positions. Among the third position holders, 100.0 were from the urban residential background. Data reported that outperformance along the axes of gender and residential area, 100.0 percent female students outperformed in master level examinations in the session 2010-12, and 100 percent females belonged urban areas.

Session 2011-13: The analysis indicated the outperformance of the students in master level examinations of the university. It showed that 100.0 percent of female students secured the first position in the master level examinations in 2011-13. Calculated data presented that 100.0 percent belonged to urban areas. Similarly, 100.0 percent female students secured second positions and 100.0 percent were from urban background. Moreover, 100.0 percent females got the third position. Among the third position holders, 100.0 were from urban areas. The analysis showed that outperformance along the axes of gender and residential area, 100.0 percent female students outperformed in master level examinations in the session 2011-13, and these females belonged to urban areas.

Session 2012-14: University examination data reported that 100.0 percent female students secured first position in the master level examinations in 2012-14. Data reported that 66.7

percent belonged to urban areas and 33.3 percent were from rural backgrounds. The analysis presented that 66.7 percent females and 33.3 percent males secured second positions in the master level examinations and 100.0 percent were from an urban background. Similarly, 100.0 percent females got third positions. Among the third position holders, 100.0 percent were from the urban residential background. Data reported outperformance along the axes of gender and residential area that is 100.0 percent female students outperformed in the session 2012-14, and these females belonged to urban areas.

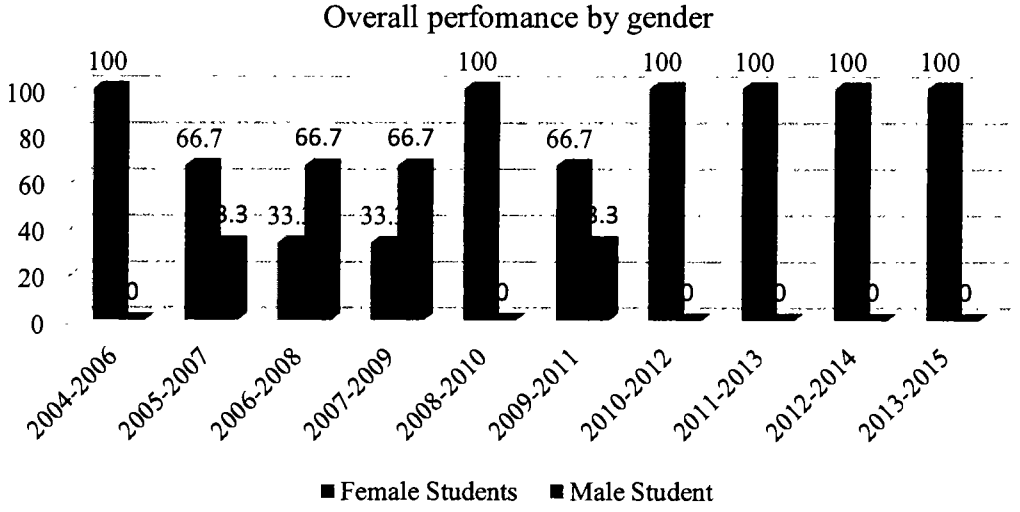


Figure 4.5. Overall performance by gender in the faculty of commerce

Session 2013-15: The statistics in the table describe the outperformance of the students in master level examinations. The analysis indicated that 66.7 percent females and 33.3 percent males secured the first positions in the master level examinations in 2013-15. Data reported that 100.0 percent belonged to urban areas. The analysis revealed that 100.0 percent female students secured second positions in the master level examinations and 100.0 percent belonged to urban areas. Similarly, 100.0 percent of females got the third positions. Among the third position holders, 66.7 were from urban areas and 33.3 percent from rural residential backgrounds. Data reported that outperformance by gender and

residential area that is 100.0 percent female students outperformed in master level examinations in the session 2013-15, and 100.0 percent females were from the urban residential background.

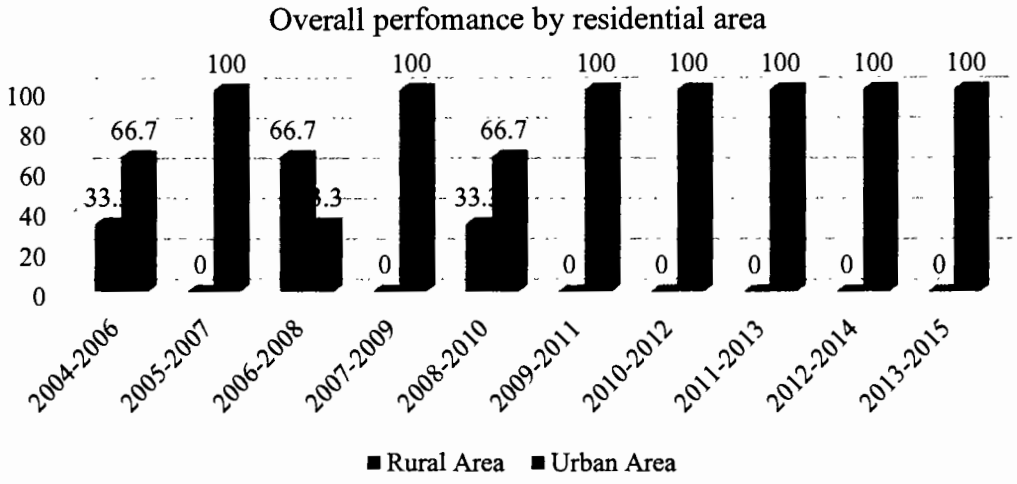


Figure 4.6. Overall performance by residential area in the faculty of commerce

4.5 Top Three Position Holders in the Faculty of Economics and Management Sciences

The focus of the content analysis is to give an overview of gender differences in educational achievements in master level examinations. The statistics in Table 4.4 unpack differences between the performance of females and males at master level examinations conducted by the examination department. The data in the table show the top three positions during the last 10 years starting from the session year 2004-06 to 2013-15 in the faculty of economics and management sciences. The total number of departments are six.

Analysis of the top three positions along the axes of gender in session 2004-06: The analysis indicated that 50.0 percent of females and 33.3 percent males secured the first positions in the master level examinations in 2004-06. The analysis shows that 50.0 percent of first position holders belonged to urban areas and 33.3 percent were from rural

backgrounds. 83.3 percent female students secured second positions in the master level examinations. Data reported that 83.3 percent belong to the urban background. The analysis presented that 66.7 percent females and 16.7 percent males secured third position in the master level examinations in 2004-06. The analysis shows that 66.7 percent of first position holders belonged to urban areas and 16.7 percent were from rural residential backgrounds. Females in the university outperformed males in the top three positions of examinations held in the session 2004-06 and the position holders' females belonged to urban areas.

Session 2005-07: The analysis indicated the outperformance of female students in master level examinations of the university. Females outshined males by clinching 83.3 percent first positions whereas 16.7 percent male students got first position in master level examinations in 2005-07. Data reported that 100.0 percent of first position holders belonged to urban areas. 50.0 percent females and 50.0 percent male students secured second positions in the master level examinations. Moreover, 83.3 percent second position holders belonged to urban areas and 16.7 percent were from rural areas. Similarly, as concerned third position holders, 100.0 percent female students got the positions. Out of 6 departments' third position holders, 100.0 percent were from the urban residential background. The analysis indicated that 100.0 percent females outperformed and these female students belonged to urban areas.

Session 2006-08: The analysis indicated that 83.3 percent female students and 16.7 percent of male students secured first positions in the master level examinations in 2006-08. The analysis shows that 100.0 percent belonged to urban areas. 66.7 percent females and 33.3 percent males secured second positions in the master level examinations. Data reported that 66.7 percent belonged to rural backgrounds and 33.3 percent were from an urban

background. Similarly, 50.0 percent females and 50.0 percent of males got the third position. Among the third position holders, 33.3 were from urban areas and 66.7 percent from rural residential backgrounds. The analysis shows that 66.7 percent of female students and 33.3 percent male students outperformed in master level examinations in the session 2006-08. The analysis shows that 66.7 percent were from urban areas and 33.3 percent were from rural residential backgrounds in the session 2006-08 examination.

Table 4.4

Female and Male Students' Performance at Masters Level in the Faculty of Economics and Management Sciences (Session 2004-06 to 2013-15)

Position	Gender/Area		Years									
			2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013	2012-2014	2013-2015
1st	Gender	F [*f* (%)]	03 (50.0)	05 (83.3)	05 (83.3)	05 (83.3)	05 (83.3)	03 (50.0)	03 (50.0)	06 (100.0)	05 (83.3)	05 (83.3)
		M [*f* (%)]	02 (33.3)	01 (16.7)	01 (16.7)	01 (16.7)	01 (16.7)	03 (50.0)	03 (50.0)	00 (00.0)	00 (00.0)	00 (00.0)
	Area	R [*f* (%)]	02 (33.3)	00 (00.0)	00 (00.0)	00 (00.0)	00 (00.0)	02 (33.3)	01 (16.7)	00 (00.0)	00 (00.0)	01 (16.7)
		U [*f* (%)]	03 (50.0)	06 (100.0)	06 (100.0)	06 (100.0)	06 (100.0)	04 (66.7)	05 (83.3)	06 (100.0)	05 (83.3)	04 (66.7)
2nd	Gender	F [*f* (%)]	05 (83.3)	03 (50.0)	02 (33.3)	05 (83.3)	04 (66.7)	03 (50.0)	05 (83.3)	05 (83.3)	04 (66.7)	04 (66.7)
		M [*f* (%)]	00 (00.0)	03 (50.0)	04 (66.7)	01 (16.7)	02 (33.3)	03 (50.0)	01 (16.7)	01 (16.7)	01 (16.7)	01 (16.7)
	Area	R [*f* (%)]	00 (00.0)	01 (16.7)	04 (66.7)	00 (00.0)	00 (00.0)	03 (50.0)	01 (16.7)	01 (16.7)	00 (00.0)	00 (00.0)
		U [*f* (%)]	05 (83.3)	05 (83.3)	02 (33.3)	06 (100.0)	06 (100.0)	03 (50.0)	05 (83.3)	05 (83.3)	05 (83.3)	05 (83.3)
3rd	Gender	F [*f* (%)]	04 (66.7)	06 (100.0)	03 (50.0)	05 (83.3)	06 (100.0)	03 (50.0)	03 (50.0)	05 (83.3)	05 (83.3)	05 (83.3)
		M [*f* (%)]	01 (16.7)	00 (00.0)	03 (50.0)	01 (16.7)	00 (00.0)	03 (50.0)	03 (50.0)	01 (16.7)	00 (00.0)	00 (00.0)
	Area	R [*f* (%)]	01 (16.7)	00 (00.0)	04 (66.7)	02 (33.3)	00 (00.0)	01 (16.7)	01 (16.7)	01 (16.7)	02 (33.3)	00 (00.0)
		U [*f* (%)]	04 (66.7)	06 (100.0)	02 (33.3)	04 (66.7)	06 (100.0)	05 (83.3)	05 (83.3)	05 (83.3)	03 (50.0)	05 (83.3)
Outperformed	Gender	F [*f* (%)]	05 (83.3)	06 (100.0)	04 (66.7)	05 (83.3)	05 (83.3)	03 (50.0)	06 (100.0)	05 (83.3)	05 (83.3)	05 (83.3)
		M [*f* (%)]	00 (00.0)	00 (00.0)	02 (33.3)	01 (16.7)	01 (16.7)	03 (50.0)	00 (00.0)	01 (16.7)	00 (00.0)	00 (00.0)
	Area	R [*f* (%)]	00 (00.0)	00 (00.0)	02 (33.3)	00 (00.0)	00 (00.0)	02 (33.3)	01 (16.7)	00 (00.0)	00 (00.0)	00 (00.0)
		U [*f* (%)]	05 (83.3)	06 (100.0)	04 (66.7)	06 (100.0)	06 (100.0)	04 (66.7)	05 (83.3)	06 (100.0)	05 (83.3)	05 (83.3)

(Total Master Level Programme in the Faculty = 06)

Session 2007-09: The content data described that 83.3 percent females and 16.7 percent males secured first position in the master level examinations in 2007-09. The analysis shows that 100.0 percent of first position holders belonged to urban areas. Similarly, 83.3 percent of females and 16.7 percent of males got the second position. Among the second position holders, 100.0 were from the urban residential background. Moreover, 83.3 percent of females and 16.7 percent of males secured third positions in the master level examinations in 2007-09. The analysis shows that 66.7 percent of third position holders belonged to urban areas and 33.3 percent from rural backgrounds. Females in the university outperformed males in the top three positions of examinations held in the session 2007-09 and the position holders' females belonged to urban areas.

Session 2008-10: Examination data of the university at masters' level described that 83.3 percent females and 16.7 percent male students secured first positions in the master level examinations in 2008-10. The analysis of data indicated that 100.0 percent belonged to urban areas. Moreover, 66.7 percent female students and 33.3 percent male students secured second positions in the master level examinations and 100.0 percent were from urban background. Similarly, 100.0 percent of female students got third positions. Among the third position holders, 100.0 were from the urban residential background. The analysis revealed that 83.3 percent females and 16.7 percent males outperformed in master level examinations in the session 2008-10. These students belonged to the urban residential background.

Session 2009-11: The statistics in the table unpack the outperformance of the students in master level examinations of the university. Females' outshined males by clinching 50.0 percent first positions while 50.0 percent male students stood first in master level

examinations in 2009-11. Among the first position holders, 66.7 percent were from urban areas and 33.3 percent were from rural backgrounds. Similarly, out of six departments' second positions, 50.0 percent positions came in the part of females, and 50.0 percent were achieved by male students. Moreover, 50.0 percent second position holders belonged to urban areas and 50.0 percent were from rural areas. Further, among the third position holders, 50.0 percent were females and 50.0 percent were males. Out of six departments' third position holders, 83.3 percent were from urban areas and 16.7 percent had rural residential backgrounds. The analysis showed that 50.0 percent females and 50.0 percent male students outperformed in master level examinations in 2009-11. 66.7 percent position holders were from urban areas and 33.3 percent were from rural residential backgrounds.

Session 2010-12: The analysis presented that 50.0 percent females and 50.0 percent males secured first positions in the master level examinations in 2010-12. Data reported that 83.3 percent belonged to urban areas and 16.7 percent were from rural backgrounds. The analysis showed that 83.3 percent females and 16.7 percent male students secured second positions. Further, 83.3 percent were from urban backgrounds and 16.7 percent were from rural backgrounds. The analysis revealed that 50.0 percent females and 50.0 percent males got third position. Among the third position holders, 83.3.0 were from urban areas and 16.7 percent from rural residential backgrounds. Data reported outperformance by gender and residential area, 100.0 percent female students outperformed in master level examinations in the session 2010-12. 83.3 percent females were from urban areas and 16.7 percent were from rural residential backgrounds.

Session 2011-13: Examination data in the table present the outperformance of the students in master level examinations of the university. The analysis showed that 100.0 percent

females secured first positions in the master level examinations in 2011-13. The analysis of data indicated that 100.0 percent belonged to urban areas. The analysis presented that 83.3 percent female and 16.7 percent male students secured second positions. Further, 83.3 percent were from urban backgrounds and 16.7 percent were from rural backgrounds. Similarly, 83.3 percent females and 16.7 percent males got third positions. Among the third position holders, 83.3 were from urban areas. The analysis showed outperformance by gender and residential area; 83.3 percent females and 16.7 percent male students outperformed and these students belonged to urban areas.

Session 2012-14: Top position holders data indicated that 83.3 percent females secured first positions in the master level examinations in 2012-14. Data reported that 83.3 percent belonged to urban areas. The analysis showed that 66.7 percent females and 16.7 percent male students secured second positions and 83.3 percent were from urban background. Similarly, 83.3 percent females got the third position. Among the third position holders, 50.0 were from urban areas and 33.3 percent from rural residential backgrounds. Data reported outperformance by gender and residential area; 83.3 percent female students outperformed and these students belonged to urban areas.

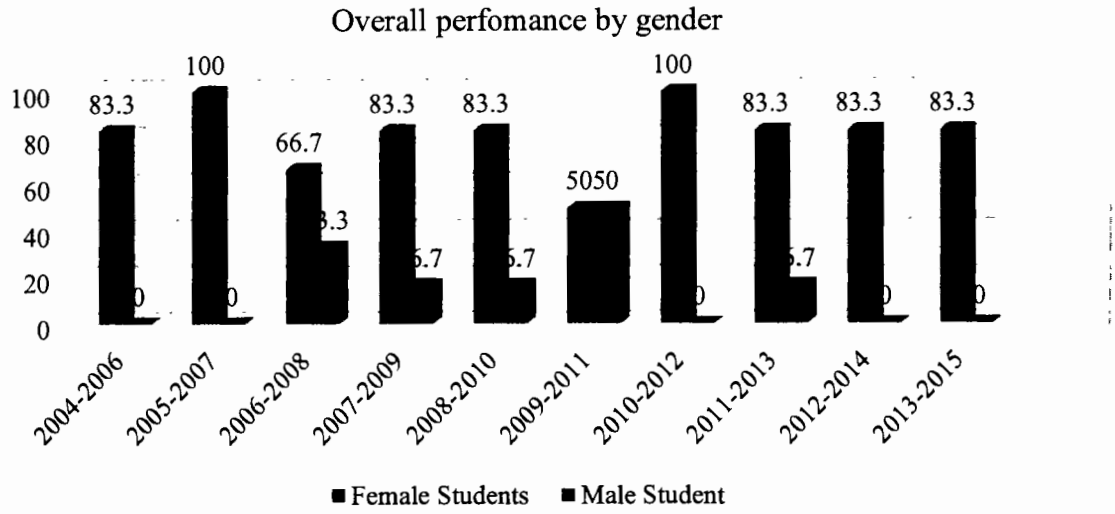


Figure 4.7. Overall performance by gender in the faculty of economics and management sciences

Session 2013-15: The statistics in the table unpack the outperformance of the students in master level examinations of the university. The analysis revealed that 83.3 percent females secured first positions in the master level examinations in 2013-15. Data reported that 66.7 percent belonged to urban areas and 16.7 percent were from rural backgrounds. The analysis showed that 66.7 percent female and 16.7 percent male students secured second positions and 83.3 percent belonged to urban areas. Similarly, 83.3 percent females got third positions. Among the third position holders, 83.3 were from the urban residential background. Data also reported outperform by gender and residential area; 83.3 percent female students outperformed in master level examinations in the session 2013-15, and 83.3 percent were from urban areas.

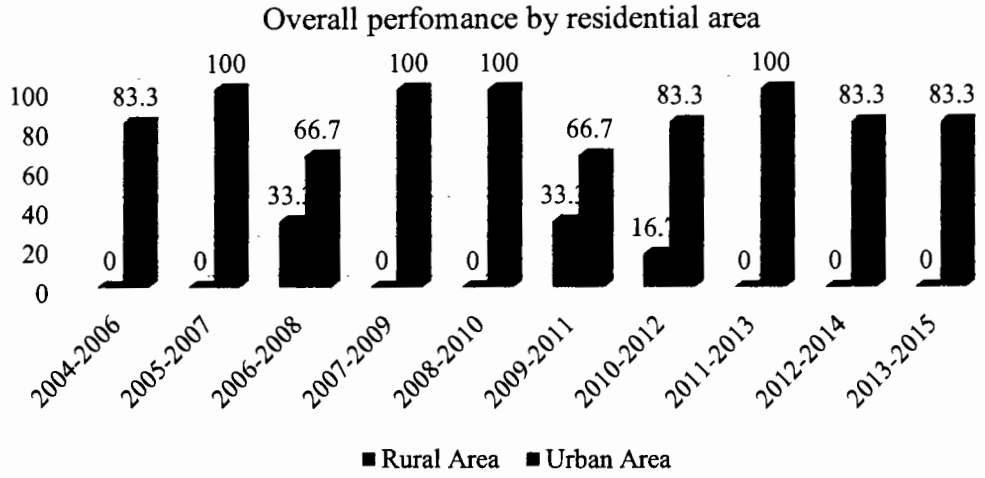


Figure 4.8. Overall performance by residential area in the faculty of economics and management sciences

4.6 Top Three Position Holders in the Faculty of Education

The focus of the content analysis is to give an overview of gender differences in educational achievements in master level examinations. The statistics in Table 4.5 unpack differences between the performance of females and males at master level examinations conducted by the examination department. The data in the table show the top three positions during the last 10 years starting from the session year 2004-06 to 2013-15 in the faculty of education. The total number of departments are ten.

Analysis of the top three positions along the axes of gender in session 2004-06: The analysis presented that 100.0 percent of females secured the first positions in the master level examinations in 2004-06. The analysis shows that 100.0 percent of first position holders belonged to urban areas. Females in the university demonstrated 90.0 percent and 10.0 percent male students secured second positions in the master level examinations. Data reported that 80.0 percent belong to urban backgrounds and 10.0 percent were from rural backgrounds. The analysis showed that 100.0 percent females secured third positions in

the master level examinations in 2004-06. The analysis showed that 80.0 percent of first position holders belonged to urban areas and 20.0 percent were from rural backgrounds. Females in the university outperformed males in the top three positions of examinations held in the session 2004-06 and the position holders' females belonged to urban areas.

Session 2005-07: The analysis indicated the outperformance of the students in master level examinations. Females' outshined males by clinching 100.0 percent first positions in master level examinations in 2005-07. Data reported that 100.0 percent of first position holders belonged to urban areas. 80.0 percent female and 20.0 percent male students secured second positions in the master level examinations. Moreover, 90.0 percent of second position holders belonged to urban areas and 10.0 percent were from rural areas. Similarly, as concerns of the third position holders, 100.0 were female students. Out of 10 departments' third position holders, 100.0 percent were from the urban residential background. The analysis revealed that 100.0 percent of females outperformed in master level examinations in 2005-07 and these female students belonged to urban areas.

Session 2006-08: The analysis showed that 60.0 percent female students and 40.0 percent male students secured first positions in the master level examinations in 2006-08. The analysis showed that 40.0 percent belonged to urban areas and 60.0 percent were from rural backgrounds. 70.0 percent female and 30.0 percent male students secured second positions in the master level examinations. Data reported that 50.0 percent belonged to rural backgrounds and 50.0 percent were from urban backgrounds. Similarly, 80.0 percent females and 20.0 percent males got third positions. Among the third position holders, 40.0 were from urban areas and 60.0 percent from rural residential backgrounds. The analysis highlighted that 80.0 percent male students and 20.0 percent female students outperform

in master level examinations in the session 2006-08. The analysis showed that 30.0 percent were urban areas and 70.0 percent were from rural residential backgrounds in the session 2006-08 examination.

Table 4.5
Female and Male Students' Performance at Masters Level in the Faculty of Education (Session 2004-06 to 2013-15)

Position	Gender/Area		Years									
			2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013	2012-2014	2013-2015
1st	Gender	F [*f*(%)]	10 (100.0)	10 (100.0)	06 (60.0)	08 (80.0)	09 (90.0)	09 (90.0)	10 (100.0)	10 (100.0)	10 (100.0)	07 (70.0)
		M [*f*(%)]	00 (00.0)	00 (00.0)	04 (40.0)	02 (20.0)	01 (10.0)	01 (10.0)	00 (00.0)	00 (00.0)	00 (00.0)	03 (30.0)
	Area	R [*f*(%)]	00 (00.0)	00 (00.0)	06 (60.0)	03 (30.0)	03 (30.0)	01 (10.0)	02 (20.0)	01 (10.0)	04 (40.0)	05 (50.0)
		U [*f*(%)]	10 (100.0)	10 (100.0)	04 (40.0)	07 (70.0)	07 (70.0)	09 (90.0)	08 (80.0)	09 (90.0)	06 (60.0)	05 (50.0)
2nd	Gender	F [*f*(%)]	09 (90.0)	08 (80.0)	07 (70.0)	10 (100.0)	08 (80.0)	09 (90.0)	10 (100.0)	09 (90.0)	10 (100.0)	10 (100.0)
		M [*f*(%)]	01 (10.0)	02 (20.0)	03 (30.0)	00 (00.0)	02 (20.0)	01 (10.0)	00 (00.0)	01 (10.0)	00 (00.0)	00 (00.0)
	Area	R [*f*(%)]	02 (20.0)	01 (10.0)	05 (50.0)	01 (10.0)	01 (10.0)	02 (20.0)	01 (10.0)	01 (10.0)	00 (00.0)	01 (10.0)
		U [*f*(%)]	08 (80.0)	09 (90.0)	05 (50.0)	09 (90.0)	09 (90.0)	08 (80.0)	09 (90.0)	09 (90.0)	10 (100.0)	09 (90.0)
3rd	Gender	F [*f*(%)]	10 (100.0)	10 (100.0)	08 (80.0)	09 (90.0)	10 (100.0)	08 (80.0)	09 (90.0)	10 (100.0)	10 (100.0)	08 (80.0)
		M [*f*(%)]	00 (00.0)	00 (00.0)	02 (20.0)	01 (10.0)	00 (00.0)	02 (20.0)	01 (10.0)	00 (00.0)	00 (00.0)	02 (20.0)
	Area	R [*f*(%)]	02 (20.0)	00 (00.0)	06 (60.0)	02 (20.0)	00 (00.0)	04 (40.0)	00 (00.0)	00 (00.0)	01 (10.0)	01 (10.0)
		U [*f*(%)]	08 (80.0)	10 (100.0)	04 (40.0)	08 (80.0)	10 (100.0)	06 (60.0)	10 (100.0)	10 (100.0)	09 (90.0)	09 (90.0)
Outperformed	Gender	F [*f*(%)]	10 (100.0)	10 (100.0)	08 (80.0)	10 (100.0)	10 (100.0)	09 (90.0)	10 (100.0)	10 (100.0)	10 (100.0)	08 (80.0)
		M [*f*(%)]	00 (00.0)	00 (00.0)	02 (20.0)	00 (00.0)	00 (00.0)	01 (10.0)	00 (00.0)	00 (00.0)	00 (00.0)	02 (20.0)
	Area	R [*f*(%)]	00 (00.0)	00 (00.0)	07 (70.0)	01 (10.0)	00 (00.0)	01 (10.0)	00 (00.0)	00 (00.0)	00 (00.0)	01 (10.0)
		U [*f*(%)]	10 (100.0)	10 (100.0)	03 (30.0)	09 (90.0)	10 (100.0)	09 (90.0)	10 (100.0)	10 (100.0)	10 (100.0)	09 (90.0)

(Total Master Level Programme in the Faculty = 10)

Session 2007-09: Top position holders data depict that 80.0 percent females and 20.0 percent males secured first positions in the master level examinations in 2007-09. The analysis showed that 70.0 percent of first position holders belonged to urban areas and 30.0 percent from rural residential backgrounds. The analysis presented that 100.0 percent

females got second positions. Among the second position holders, 90.0 were from urban areas and 10.0 percent from rural residential backgrounds. Similarly, 90.0 percent females and 10.0 percent males secured third positions in 2007-09 session. The analysis showed that 80.0 percent of third position holders belonged to urban areas and 20.0 percent to rural backgrounds. Females in the university outperformed males in the top three positions of examinations held in the session 2007-09; and 90 percent position holders females belonged to urban areas and 10.0 percent males to rural backgrounds.

Session 2008-10: University examination data describe that 90.0 percent females and 10.0 percent male students secured first position in the master level examinations in 2008-10. The analysis of data indicated that 70.0 percent belonged to urban areas and 30.0 percent were from rural backgrounds. Moreover, 80.0 percent female students and 20.0 percent male students secured second positions and 90.0 percent were from urban backgrounds and 10.0 percent from rural residential backgrounds. Similarly, 100.0 percent female students got third positions. Among the third position holders, 100.0 were from the urban residential background. The analysis indicated that 100.0 percent female students outperform and they belonged to the urban residential background.

Session 2009-11: The statistics in the table unpack the outperformance of the students in master level examinations. Females' outshined males by clinching 90.0 percent first positions and 10.0 percent male students stood first in master level examinations in 2009-11. 90.0 percent females first position holders belonged to urban areas and 10.0 percent were from rural backgrounds. Similarly, out of 10 departments' second positions, 90.0 percent of positions came in the part of females and 10.0 percent male students outclassed. Moreover, 80.0 percent second position holders belonged to urban areas and 20.0 percent

were from rural areas. Furthermore, as concerns of third position holders, 80.0 percent were females and 20.0 percent were males. Out of 10 third position holders, 60.0 percent were from urban areas and 40.0 percent had rural residential backgrounds. The analysis showed that 90.0 percent females and 10.0 percent male students outperformed in master level examinations in 2009-11 and 90 percent students belonged to urban areas and 10.0 percent from residential background.

Session 2010-12: The data indicated that 100.0 percent females secured first position in the master level examinations in 2010-12. Data reported that 80.0 percent belonged to urban areas and 20.0 percent were from rural backgrounds. The analysis revealed that 100.0 percent female students secured second positions, 90.0 percent were from urban backgrounds, and 10.0 percent were from rural backgrounds. Similarly, the concerns of third position holders, 90.0 percent were females and 10.0 percent were males. Among the third position holders, 100.0 percent were from the urban residential backgrounds. Data reported outperformance by gender and residential area; 100.0 percent female students outperformed in master level examinations in the session 2010-12, and belonged to urban areas.

Session 2011-13: The statistics in the table unpack the outperformance of the students in master level examinations. The analysis showed that 100.0 percent females secured first positions in the master level examinations in 2011-13. The analysis of data indicated that 90.0 percent belonged to urban areas. The analysis also presented that 90.0 percent of females and 10.0 percent of students secured second positions in the master level examinations. 90.0 percent toppers were from urban backgrounds, and 10.0 percent were from rural backgrounds. Similarly, 100.0 percent female students got third positions.

Among the third position holders, 100.0 percent were from urban areas. The analysis showed that outperformance by gender and residential area; 100.0 percent female students outperformed in the session 2011-13, and these females belonged to urban areas.

Session 2012-14: The analysis indicated that 100.0 percent female secured first positions in the master level examinations in 2012-14. Data reported that 60.0 percent belonged to urban areas and 40.0 percent were from rural backgrounds. The analysis showed that 100.0 percent female students secured second positions and 100.0 percent were from urban backgrounds. Similarly, 100.0 percent female students got third position. Among the third position holders, 90.0 were from urban areas and 10.0 percent from rural residential backgrounds. Data also reported outperformance along the axes of gender and residential area; 100.0 percent female students outperformed in the session 2012-14, and they belonged to urban areas.

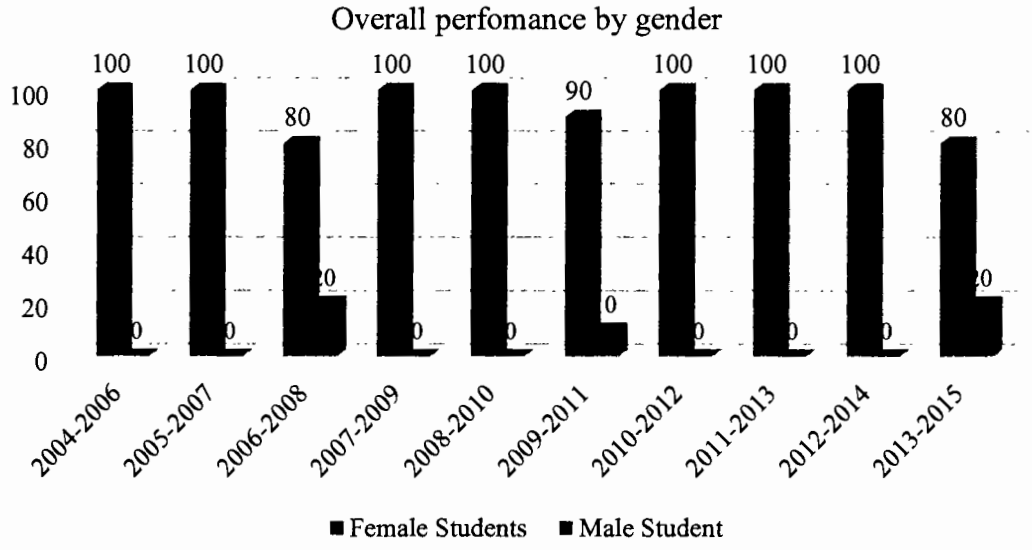


Figure 4.9. Overall performance by gender in the faculty of education

Session 2013-15: The statistics in the table indicate the outperformance of students in master level examinations of the university. The analysis revealed that 70.0 percent females

and 30.0 percent of males secured first positions in the master level examinations in 2013-15. Data reported that 50.0 percent belonged to urban areas and 50.0 percent were from rural backgrounds. The analysis showed that 100.0 percent of female students secured second positions in the master level examinations, 90.0 percent belonged to urban areas, and 10.0 percent were from rural backgrounds. Similarly, 80.0 percent females and 20.0 percent males got third positions. Among the third position holders, 90.0 were from urban areas and 10.0 percent from rural backgrounds. Data reported outperformance by gender and residential area, 80.0 percent female and 20.0 percent male students outperformed in the session 2013-15, and out of them to 90.0 percent were from urban areas and 10.0 percent were from rural backgrounds.

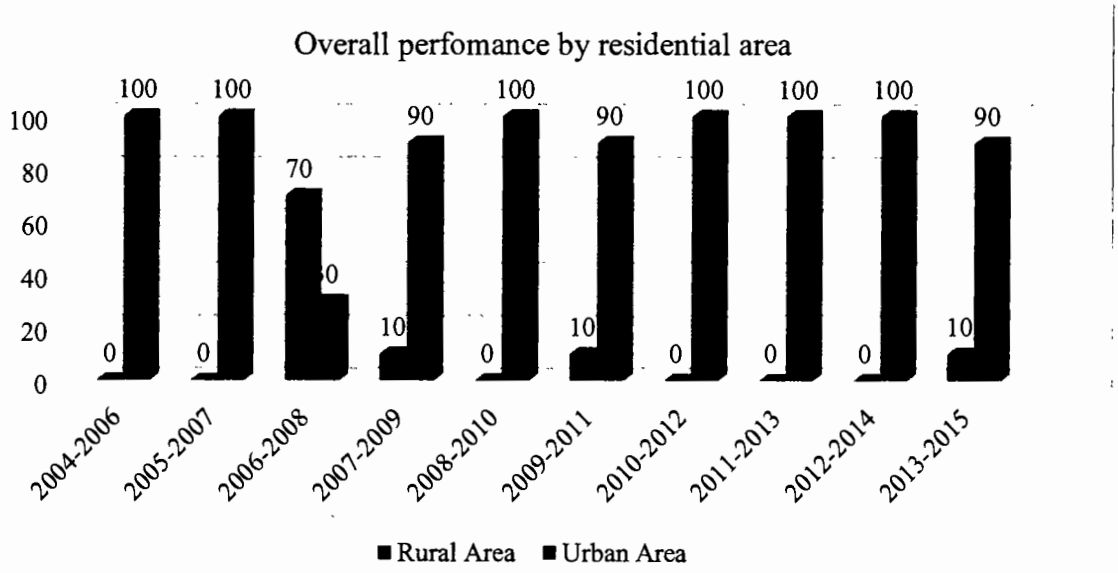


Figure 4.10. Overall performance by residential area in the faculty of education

4.7 Top Three Position Holders in the Faculty of Engineering & Technology

The focus of the content analysis is to give an overview of gender differences in educational achievements. The statistics in Table 4.6 unpack differences between the performance of

females and males at master level examinations conducted by the examination department. The data in the table show the top three positions during the last 10 years starting from the session year 2004-06 to 2013-15 in the Faculty of Engineering and Technology. The total number of departments is two.

Analysis of the top three positions along the axes of gender in session 2004-06: The analysis presented that 50.0 percent of males secured first positions in the master level examinations in 2004-06. The analysis showed that 50.0 percent of first position holders belonged to urban areas. In the university, 50.0 percent male students secured second positions in the master level examinations. Data reported 50.0 percent belong to the urban background. The analysis showed that 50.0 percent males secured third positions. The analysis showed that 50.0 percent of first positions holders belonged to urban areas. Males in the university outperformed females in the top three positions of examinations and the position holder males belonged to urban areas.

Session 2005-07: The analysis indicated the outperformance of male students in master level examinations. Males' outshined females by clinching 50.0 percent first positions student in master level examinations in 2005-07. Data reported that 50.0 percent of first position holders belonged to urban areas. The analysis indicated that 50.0 percent males secured second positions in the master level examinations. Moreover, 50.0 percent of second position holders belonged to rural areas. Similarly, as concerns of the third position holders, 50.0 were female students. Out of two departments, third position holders, 50.0 percent were from rural residential backgrounds. The analysis revealed that 50.0 percent males outperformed in master level examinations in 2005-07 and these students belonged to rural areas.

Session 2006-08: University's top positions data describe that 50.0 percent female students and 50.0 percent male students secured first positions in the master level examinations in 2006-08. The analysis showed that 100.0 percent belonged to urban areas. 50.0 percent female and 50.0 percent male students secured second positions. Data reported 50.0 percent belonged to rural backgrounds and 50.0 percent were from an urban backgrounds. Similarly, 50.0 percent females and 50.0 percent males got third positions. Among the third position holders, 100.0 were from the urban residential backgrounds. The analysis showed that 50.0 percent male students and 50.0 percent female students outperformed in master level examinations in the session 2006-08. The analysis shows that 100.0 percent were from urban areas.

Session 2007-09: The analysis highlighted that 100.0 percent males secured first position in the master level examinations in 2007-09. The analysis showed that 100.0 percent of first position holders belonged to the urban backgrounds. Similarly, 100.0 percent males got second positions. Among the second position holders, 100.0 percent were from rural residential backgrounds. Moreover, 50.0 percent females and 50.0 percent males secured third positions. The analysis showed that 100.0 percent of third position holders belonged to urban areas. In the university, 50.0 percent females and 50.0 percent males outperformed in the top three positions of examinations held in the session 2007-09 and these position holders belonged to urban areas.

Session 2008-10: The table further shows that 100.0 percent males secured first position in the master level examinations in 2008-10. The analysis of data indicated that 50.0 percent belonged to urban areas and 50.0 percent were from rural backgrounds. Moreover, 50.0 percent female students and 50.0 percent male students secured second positions. 50.0

percent second position holders were from urban backgrounds and 50.0 percent from rural backgrounds. Similarly, 50.0 percent females and 50.0 percent male students got third positions. Among third position holders, 100.0 were from the urban residential background. The analysis also revealed that 50.0 percent of female and 50.0 percent male students outperform in the session 2008-10 and these students belonged to urban backgrounds.

Session 2009-11: The analysis of data indicated that 50.0 percent females and 50.0 percent male students' secured first positions in master level examination in 2009-11. 100.0 percent position holders were from urban areas. Similarly, out of two departments' second positions, 50.0 percent of positions came in the part of females and 50.0 percent male students outclassed. Moreover, 50.0 percent second position holders belonged to urban areas and 50.0 percent were from rural areas. Further, the concerns of third position holders, 50.0 percent were females and 50.0 percent were males. Out of two departments, third position holders, 100.0 percent were from the urban background. The analysis revealed that 100.0 percent of male students outperformed in 2009-11 and they belonged to urban areas.

Session 2010-12: Secondary data of top position holders describe that 50.0 percent females and 50.0 percent males secured first position in the master level examinations in 2010-12. Data reported that 100.0 percent belonged to urban areas. Similarly, 50.0 percent of female and 50.0 percent male students secured second positions and 100.0 percent were from urban background. The analysis showed that 100.0 percent male students got third positions. Among the third position holders, 50.0 were from urban areas and 50.0 percent from rural residential backgrounds. Data reported the outperformance along the axes of

gender and residential area; 50.0 percent female and 50.0 percent male students outperformed in master level examinations in the session 2010-12, and these students belonged to urban areas.

Table 4.6

Female and Male Students' Performance at Masters Level in the Faculty of Engineering & Technology (Session 2004-06 to 2013-15)

Position	Gender/Area		Years									
			2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013	2012-2014	2013-2015
1st	Gender	F [*f* (%)]	00 (00.0)	00 (00.0)	01 (50.0)	00 (00.0)	00 (00.0)	01 (50.0)	01 (50.0)	01 (50.0)	01 (50.0)	02 (100.0)
		M [*f* (%)]	01 (50.0)	01 (50.0)	01 (50.0)	02 (100.0)	02 (100.0)	01 (50.0)	01 (50.0)	01 (50.0)	00 (00.0)	00 (00.0)
	Area	R [*f* (%)]	00 (00.0)	00 (00.0)	00 (00.0)	00 (00.0)	01 (50.0)	00 (00.0)	00 (00.0)	02 (100.0)	00 (00.0)	00 (00.0)
		U [*f* (%)]	01 (50.0)	01 (50.0)	02 (100.0)	02 (100.0)	01 (50.0)	02 (100.0)	02 (100.0)	00 (00.0)	01 (50.0)	02 (100.0)
2nd	Gender	F [*f* (%)]	00 (00.0)	00 (00.0)	01 (50.0)	00 (00.0)	01 (50.0)	01 (50.0)	01 (50.0)	01 (50.0)	00 (00.0)	02 (100.0)
		M [*f* (%)]	01 (50.0)	01 (50.0)	01 (50.0)	02 (100.0)	01 (50.0)	01 (50.0)	01 (50.0)	01 (50.0)	01 (50.0)	00 (00.0)
	Area	R [*f* (%)]	00 (00.0)	01 (50.0)	01 (50.0)	02 (100.0)	01 (50.0)	01 (50.0)	00 (00.0)	01 (50.0)	00 (00.0)	00 (00.0)
		U [*f* (%)]	01 (50.0)	00 (00.0)	01 (50.0)	00 (00.0)	01 (50.0)	01 (50.0)	02 (100.0)	01 (50.0)	01 (50.0)	02 (100.0)
3rd	Gender	F [*f* (%)]	00 (00.0)	01 (50.0)	01 (50.0)	01 (50.0)	01 (50.0)	01 (50.0)	00 (00.0)	02 (100.0)	01 (50.0)	00 (00.0)
		M [*f* (%)]	01 (50.0)	00 (00.0)	01 (50.0)	01 (50.0)	01 (50.0)	01 (50.0)	02 (100.0)	00 (00.0)	00 (00.0)	02 (100.0)
	Area	R [*f* (%)]	00 (00.0)	01 (50.0)	00 (00.0)	00 (00.0)	00 (00.0)	00 (00.0)	01 (50.0)	01 (50.0)	00 (00.0)	00 (00.0)
		U [*f* (%)]	01 (50.0)	00 (00.0)	02 (100.0)	02 (100.0)	02 (100.0)	02 (100.0)	01 (50.0)	01 (50.0)	01 (50.0)	02 (100.0)
Outperformed	Gender	F [*f* (%)]	00 (00.0)	00 (00.0)	01 (50.0)	01 (50.0)	01 (50.0)	00 (00.0)	01 (50.0)	02 (100.0)	01 (50.0)	02 (100.0)
		M [*f* (%)]	01 (50.0)	01 (50.0)	01 (50.0)	01 (50.0)	01 (50.0)	02 (100.0)	01 (50.0)	00 (00.0)	00 (00.0)	00 (00.0)
	Area	R [*f* (%)]	00 (00.0)	01 (50.0)	00 (00.0)	00 (00.0)	00 (00.0)	00 (00.0)	00 (00.0)	01 (50.0)	00 (00.0)	00 (00.0)
		U [*f* (%)]	01 (50.0)	00 (00.0)	02 (100.0)	02 (100.0)	02 (100.0)	02 (100.0)	02 (100.0)	01 (50.0)	01 (50.0)	02 (100.0)

(Total Master Level Programme in the Faculty = 02)

Session 2011-13: The analysis indicated that 50.0 percent females and 50.0 percent males secured first positions in the master level examinations in 2011-13. The analysis of data indicated that 100.0 percent belonged to rural areas. The analysis also pointed out that 50.0 percent female and 50.0 percent male students secured second positions. Further, 50.0 percent were from urban backgrounds and 50.0 percent were from rural backgrounds.

Similarly, 100.0 percent female students got third positions. Among the third position holders, 50.0 were from urban areas and 50.0 percent were from rural backgrounds. The analysis also revealed the outperformance along the axes of gender and residential area; 100.0 percent female students outperformed in the session 2011-13, and they belonged to urban areas and 50.0 percent were from rural residential backgrounds.

Session 2012-14: The analysis pointed out that 50.0 percent females secured first positions in the master level examinations in 2012-14. Data reported that 50.0 percent belonged to urban areas. The analysis showed that 50.0 percent male students secured second positions and 50.0 percent were from urban background. Similarly, 50.0 percent female students got third positions. Among the third position holders, 50.0 were from the urban background. Data reported the outperformance along the axes of gender and residential area; 50.0 percent female students outperformed in the session 2012-14, and they belonged to urban areas.

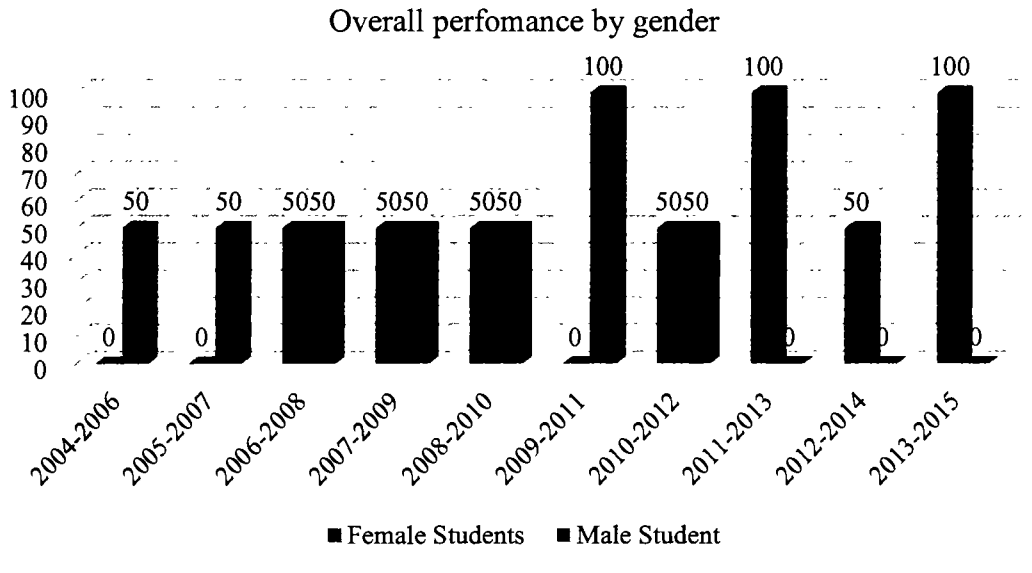


Figure 4.11. Overall performance by gender in the faculty of engineering & technology

Session 2013-15: The analysis indicated in the table indicate the outperformance of the students in master level examinations of the university. The analysis revealed that 100.0 percent females secured first position in the master level examinations in 2013-15. Data reported that 100.0 percent belonged to urban areas. The analysis also showed that 100.0 percent female students secured second positions and 100.0 percent belonged to urban areas. Similarly, 100.0 percent males got third positions. Among the third position holders, 100.0 were from the urban background. Data reported the outperformance along the axes of gender and residential area; 100.0 percent female students outperformed in master level examinations in the session 2013-15, and they belonged to urban background.

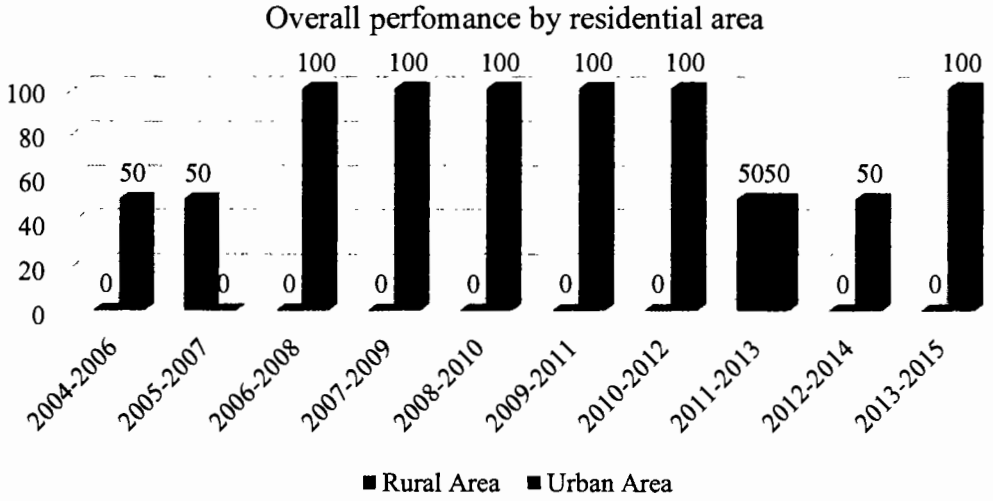


Figure 4.12. Overall performance by residential area in the faculty of engineering & technology

4.8 Top Three Position Holders in the Faculty of Islamic Studies

The statistics in Table 4.7 unpack differences between the performance of females and males at master level examinations conducted by the examination department. The data in the table showed the top three positions during the last 10 years starting from the session year 2004-06 to 2013-15 in the faculty of Islamic Studies. The total number of departments

in one in number. Here, in the top three positions, females have outshined males in all sessions and these females belonged to urban areas. It is pertinent to mention that females outperform and male underperform in the Islamic Studies department and faculty as well.

Table 4.7
Female and Male Students' Performance at Masters Level in the Faculty of Islamic Studies (Session 2004-06 to 2013-15)

Position	Gender/Area	Years									
		2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013	2012-2014	2013-2015
1st	Female (F)/Male (M)	F	F	F	F	F	F	F	M	F	M
	Rural (R)/Urban (U)	U	U	R	R	U	R	U	R	U	U
2nd	Female (F)/Male (M)	F	F	F	F	M	F	M	F	F	F
	Rural (R)/Urban (U)	U	U	R	U	U	U	U	U	U	R
3rd	Female (F)/Male (M)	M	F	F	F	F	M	F	M	M	F
	Rural (R)/Urban (U)	R	U	U	U	U	U	R	U	R	R
Outperformed	Female (F)/Male (M)	F	F	F	F	F	F	F	M	F	F
	Rural (R)/Urban (U)	U	U	R	U	U	U	U	U	U	R

(Total Master Level Programme in the Faculty = 01)

4.9 Top Three Position Holders in the Faculty of Life Sciences

Females do better than males in higher education in Pakistan. The focus of the content analysis was to give an overview of gender differences in educational achievements in master level examinations. The statistics in Table 4.8 unpack differences between the performance of females and males at master level examinations conducted by the examination department. The data in the table show the top three positions during the last 10 years starting from the session year 2004-06 to 2013-15 in the Faculty of Life Sciences. The total number of departments is seven.

Analysis of the top three positions along the axes of gender in session 2004-06: The analysis pointed out that 85.7 percent of females and 14.3 percent males' secured first positions in the master level examinations in 2004-06. The analysis showed that 85.7 percent of first positions holders belonged to urban areas and 14.3 percent were from rural

backgrounds. 85.7 percent female and 14.3 percent male students secured second positions in the master level examinations. Data reported that 100.0 percent belonged to the urban background. The analysis pointed out that 85.7 percent females and 14.3 percent males secured third positions in the master level examinations in 2004-06. The analysis showed that 85.7 percent of first positions holders belonged to urban areas and 14.3 percent were from rural backgrounds. The analysis pointed that 85.7 percent females and 14.3 percent males outperformed in master level examinations in 2004-06 and 85.7 percent females were from urban areas and 14.3 percent were from rural backgrounds.

Session 2005-07: The analysis in the table indicated the outperformance of female students in master level examinations. Females' outshined males by clinching 85.7 percent first positions and 14.3 percent males got first positions. Data reported that 100.0 percent of first position holders belonged to urban areas. Similarly, 85.7 percent females and 12.3 percent male students secured second positions in the master level examinations. Moreover, 100.0 percent of second position holders belonged to urban areas. Furthermore, the concerns of the third position holder, 100.0 percent were female students. Out of 7 departments' third position holders, 100.0 percent female students were from the urban background. The analysis revealed that 100.0 percent females outperformed in master level examinations in 2005-07 and they belonged to urban areas.

Session 2006-08: University examination data depicted that 85.7 percent female students and 14.3 percent male students secured first positions in the master level examinations in 2006-08. The analysis showed that 57.1 percent belonged to urban areas and 42.9 percent were from rural backgrounds. 57.1 percent female and 42.9 percent male students secured second positions in the master level examinations. Data reported that 57.1 percent belonged

to urban backgrounds and 42.9 percent were from rural backgrounds. Similarly, 42.9 percent females and 57.1 percent males got third positions. Among the third position holders, 28.6 percent were from urban areas and 71.4 percent from rural residential backgrounds. The analysis pointed out that 57.1 percent male students and 42.9 percent female students outperform in the session 2006-08. The analysis showed that 42.1 percent were from urban areas and 57.9 percent were from rural backgrounds in the session 2006-08.

Session 2007-09: The content analysis of data revealed that 85.7 percent females and 14.3 percent of males secured first positions in the master level examinations in 2007-09. The analysis shows that 42.9 percent of first position holders belonged to urban areas and 57.1 percent were from rural residential backgrounds. Similarly, 85.7 percent females and 14.3 percent males got second position. Among the second position holders, 57.1 were from rural areas and 42.9 percent from the urban residential background. Moreover, 100.0 percent of females secured the third position in the master level examinations in 2007-09. The analysis shows that 85.7 percent of third position holders belonged to urban areas and 14.3 percent from rural backgrounds. The analysis indicated that 85.7 percent male students and 14.3 percent female students outperform in the session 2007-09. The analysis showed that 71.4 percent were from urban areas and 28.6 percent were from rural backgrounds in the session 2007-09 examination.

Session 2008-10: The content data revealed that 85.7 percent females and 14.3 percent males secured first positions in the master level examinations in 2008-10. The analysis of data indicated that 71.4 percent belonged to urban areas and 28.6 percent were from rural backgrounds. Moreover, 71.4 percent female students and 28.6 percent male students

secured second positions in the master level examinations and 57.1 percent were from urban backgrounds and 42.9 percent from rural residential backgrounds. Similarly, 71.4 percent females and 28.6 percent male students got the third position. Among the third position holders, 100.0 percent students were from urban background. The analysis also highlighted that 85.7 percent female and 14.6 percent male students outperformed in the session 2008-10 and 71.4 percent belonged to urban areas and 28.6 percent were from rural residential backgrounds.

Table 4.8

Female and Male Students' Performance at Masters Level in the Faculty of Life Sciences (Session 2004-06 to 2013-15)

Position	Gender/Area		Years									
			2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013	2012-2014	2013-2015
1st	Gender	F [*f* (%)]	06 (85.7)	06 (85.7)	06 (85.7)	06 (85.7)	06 (85.7)	06 (85.7)	05 (71.4)	06 (85.7)	06 (85.7)	07 (100.0)
		M [*f* (%)]	01 (14.3)	01 (14.3)	01 (14.3)	01 (14.3)	01 (14.3)	01 (14.3)	02 (28.6)	01 (14.3)	01 (14.3)	00 (00.0)
	Area	R [*f* (%)]	01 (14.3)	00 (00.0)	03 (42.9)	04 (57.3)	02 (28.6)	04 (57.1)	02 (28.6)	04 (57.1)	01 (14.3)	02 (28.6)
		U [*f* (%)]	06 (85.7)	07 (100.0)	04 (57.1)	03 (42.9)	05 (71.4)	03 (42.9)	05 (71.4)	03 (42.9)	06 (85.7)	05 (71.4)
2nd	Gender	F [*f* (%)]	06 (85.7)	06 (85.7)	04 (57.1)	06 (85.7)	05 (71.4)	07 (100.0)	07 (100.0)	06 (85.7)	06 (85.7)	06 (85.7)
		M [*f* (%)]	01 (14.3)	01 (14.3)	03 (42.9)	01 (14.3)	02 (28.6)	00 (00.0)	00 (00.0)	01 (14.3)	01 (14.3)	00 (00.0)
	Area	R [*f* (%)]	00 (00.0)	00 (00.0)	03 (42.9)	04 (57.1)	03 (42.9)	04 (57.1)	02 (28.6)	01 (14.3)	02 (28.6)	03 (42.9)
		U [*f* (%)]	07 (100.0)	07 (100.0)	04 (57.1)	03 (42.9)	04 (57.1)	03 (42.9)	05 (71.4)	06 (85.7)	05 (71.4)	03 (42.9)
3rd	Gender	F [*f* (%)]	06 (85.7)	07 (100.0)	03 (42.9)	07 (100.0)	05 (71.4)	07 (100.0)	07 (100.0)	06 (85.7)	06 (85.7)	05 (71.4)
		M [*f* (%)]	01 (14.3)	00 (00.0)	04 (57.1)	00 (00.0)	02 (28.6)	00 (00.0)	00 (00.0)	01 (14.3)	01 (14.3)	01 (14.3)
	Area	R [*f* (%)]	01 (14.3)	00 (00.0)	05 (71.4)	01 (14.3)	00 (00.0)	04 (57.1)	01 (14.3)	02 (28.6)	02 (28.6)	01 (14.3)
		U [*f* (%)]	06 (85.7)	07 (100.0)	02 (28.6)	06 (85.7)	07 (100.0)	03 (42.9)	06 (85.7)	05 (71.4)	05 (71.4)	05 (71.4)
Outperformed	Gender	F [*f* (%)]	06 (85.7)	07 (100.0)	04 (57.1)	06 (85.7)	06 (85.7)	07 (100.0)	07 (100.0)	07 (100.0)	06 (85.7)	07 (100.0)
		M [*f* (%)]	01 (14.3)	00 (00.0)	03 (42.9)	01 (14.3)	01 (14.3)	00 (00.0)	00 (00.0)	00 (00.0)	01 (14.3)	00 (00.0)
	Area	R [*f* (%)]	01 (14.3)	00 (00.0)	04 (57.1)	02 (28.6)	02 (28.6)	05 (71.4)	01 (14.3)	01 (14.3)	02 (28.6)	02 (28.6)
		U [*f* (%)]	06 (85.7)	07 (100.0)	03 (42.9)	05 (71.4)	05 (71.4)	02 (28.6)	04 (85.7)	06 (85.7)	05 (71.4)	05 (71.4)

(Total Master Level Programme in the Faculty = 07)

Session 2009-11: Examination data in the table indicated the outperformance of female students in master level examinations. Females' outshined males by clinching 85.7 percent first positions and 14.3 percent male students stood first in master level examinations in 2009-11. The 42.9 percent first position holders belonged to urban areas and 57.1 percent were from rural backgrounds. The analysis pointed out that out of seven departments' second position holders, 100.0 percent female students outperformed. Moreover, 42.9 percent second position holders belonged to urban areas and 57.1 percent were from rural areas. Similarly, as concern of the third position holder, 100.0 percent were females. Out of seven departments, third position holders, 42.9 percent were from urban areas and 57.1 percent had rural residential backgrounds. The analysis pointed that 100.0 percent female students outperformed in 2009-11 and 28.6 percent females' belonged to urban areas and 71.4 percent were from rural backgrounds.

Session 2010-12: Top position holders' data described that 71.4 percent females and 28.6 percent males secured first positions in the master level examinations in 2010-12. Data reported that 71.4 percent belonged to urban areas and 42.6 percent were from rural backgrounds. The analysis revealed that 100.0 percent female students secured second positions in the master level examinations, 71.4 percent were from urban backgrounds, and 28.6 percent were from rural residential backgrounds. Similarly, 100.0 percent female students got the third position. Among the third position holders, 85.7 were from urban areas and 14.3 percent from rural backgrounds. Data reported outperformance along the axes of gender and residential area; 100.0 percent female students outperformed in the session 2010-12, 85.7 percent females belonged to urban areas and 14.3 percent were from rural backgrounds.

Session 2011-13: The statistics in the table unpacked outperformance of female students in master level examinations. The analysis pointed out that 85.7 percent females and 14.3 percent of males secured first positions in the master level examinations in 2011-13. The analysis of data indicated that 42.9 percent belonged to urban areas and 57.1 percent were from rural backgrounds. The analysis pointed out that 85.7 percent females and 14.3 percent of male students secured second positions. Among the second position holders, 85.7 percent were from urban backgrounds, and 14.3 percent were from rural backgrounds. Similarly, 85.7 percent females and 14.3 percent males got third positions. Among the third position holders, 71.4 were from urban areas and 28.6 percent were from rural backgrounds. The analysis also highlighted outperformance along the axes of gender and residential area; 100.0 percent female students outperformed in master level examinations in the session 2011-13 and 85.7 percent females belonged to urban areas and 14.3 percent were from rural backgrounds.

Session 2012-14: The analysis exposed that 85.7 percent females and 14.3 percent males secured first positions in the master level examinations in 2012-14. Data reported that 85.7 percent belonged to urban areas and 14.3 percent were from rural backgrounds. The analysis pointed out that 85.7 percent of females and 14.3 percent male students secured second positions in the master level examinations, 71.4 percent were from urban backgrounds, and 28.6 percent were from rural backgrounds. Similarly, 85.7 percent of females and 14.3 percent males got third positions. Among the third position holders, 71.4 were from urban areas and 28.6 percent from rural backgrounds. Data reported outperformance along the axes of gender and residential area; 85.7 percent females and 14.3 percent male students outperformed in master level examinations in the session 2012-

14, and out of these students belonged to 71.4 percent were from urban areas and 28.6 percent were from rural backgrounds.

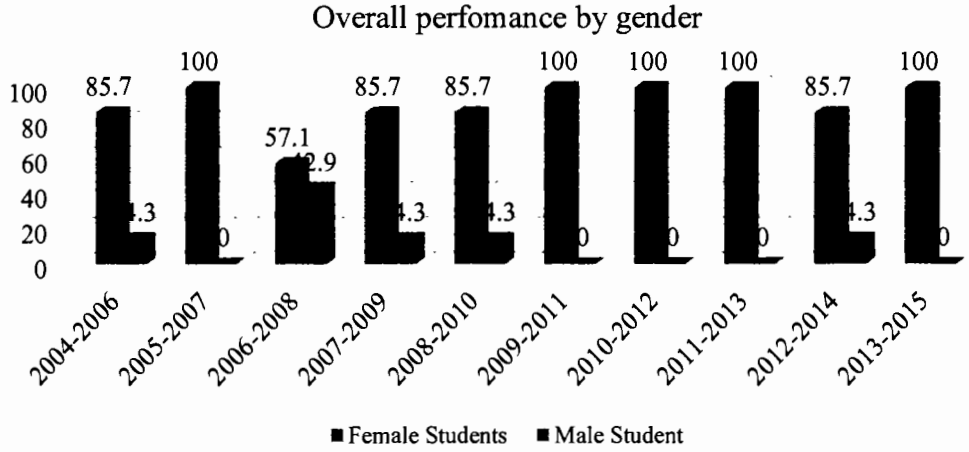


Figure 4.13. Overall performance by gender in the faculty of life sciences

Session 2013-15: Examination of data in the table revealed the outperformance of female students in master level examinations. The analysis revealed that 100.0 percent females secured first positions in the master level examinations in 2013-15. Data reported 71.4 percent belonged to urban areas and 28.6 percent were from rural backgrounds. The analysis pointed out that 85.7 percent female students secured second positions, 42.9 percent belonged to urban areas, and 42.9 percent were from rural backgrounds. Similarly, 71.4 percent females and 14.3 percent males got third positions. Among the third position holders, 71.4 were from urban areas and 14.3 percent from rural backgrounds. Data reported outperformance along the axes of gender and residential area revealed; 100.0 percent female students outperformed in master level examinations in the session 2013-15 and, out of these students, 71.4 percent were from urban areas and 28.6 percent were from rural backgrounds.

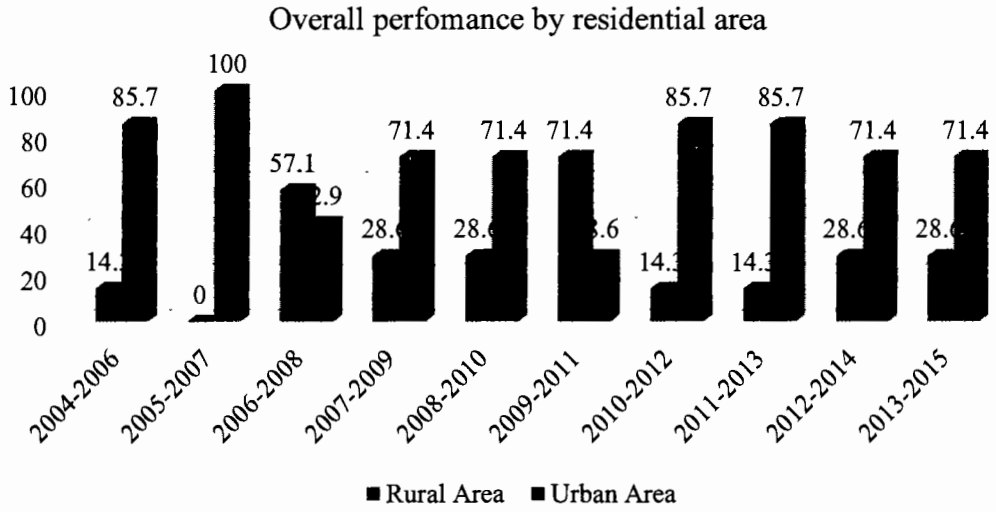


Figure 4.14. Overall performance by residential area in the faculty of life sciences

4.10 Top Three Position Holders in the Faculty of Oriental Learning

The statistics in Table 4.9 unpack differences between the performance of females and males at master level examinations conducted by the examination department. The data in the table showed the top three positions during the last 10 years starting from the session year 2004-06 to 2013-15 in the Faculty of Oriental Learning. The total number of departments is five.

Analysis of the top three positions along the axes of gender in session 2004-06: The analysis pointed out that 80.0 percent females and 20.0 percent males secured first positions in the master level examinations in 2004-06. The analysis showed that 80.0 percent of the first position holders belonged to urban areas and 20.0 percent were from rural backgrounds. 40.0 percent female and 60.0 percent male students secured second positions in the master level examinations. Data reported 80.0 percent belonged to urban backgrounds and 20.0 percent were from rural backgrounds. The analysis described that 40.0 percent females and 60.0 percent males secured third positions in the master level examinations in 2004-06. The analysis showed that 40.0 percent of the first position holders

belonged to urban areas and 60.0 percent were from rural backgrounds. The analysis revealed that 60.0 percent females and 40.0 percent males outperformed and out of these students, 60.0 percent were from urban areas and 40.0 percent were from rural residential backgrounds.

Session 2005-07: Top position holders' data in the table indicated the outperformance of female students in master level examinations. Females' outshined males by clinching 80.0 percent first positions and 20.0 percent male students stood first in master level examinations in 2005-07. Data reported that 80.0 percent of first position holders belonged to urban areas and 20.0 percent were from rural backgrounds. 80.0 percent female and 20.0 percent male students secured second positions in the master level examinations. Moreover, 60.0 percent of the second position holders belonged to urban areas and 40.0 percent were from rural areas. Similarly, as concern of the third position holders, 80.0 were male and 20.0 percent were female students. Out of the five departments' third position holders, 100.0 percent were from the urban residential background. The analysis described that 80.0 percent females and 20.0 percent males outperformed in master level examinations in 2005-07 and out of these students, 80.0 percent were from urban areas and 20.0 percent were from rural backgrounds.

Session 2006-08: The analysis showed that 60.0 percent female students and 40.0 percent male students' secured first positions in the master level examinations in 2006-08. The analysis showed that 60.0 percent belonged to urban areas and 40.0 percent were from rural backgrounds. 80.0 percent male and 20.0 percent female students secured second positions in the master level examinations. Data reported that 80.0 percent belong to rural backgrounds and 20.0 percent were from an urban background. Similarly, 60.0 percent

females and 40.0 percent males got third positions. Among the third position holders, 60.0 were from urban areas and 40.0 percent from rural backgrounds. The analysis also pointed out that 60.0 percent male students and 40.0 percent female students outperformed in master level examinations in the session 2006-08. The analysis showed that 40.0 percent were from urban areas and 60.0 percent were from rural backgrounds in the session 2006-08 examination.

Table 4.9

Female and Male Students' Performance at Masters Level in the Faculty of Oriental Learning (Session 2004-06 to 2013-15)

Position	Gender/Area		Years									
			2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013	2012-2014	2013-2015
1st	Gender	F [*f*(%)]	04 (80.0)	04 (80.0)	03 (60.0)	03 (60.0)	03 (60.0)	04 (80.0)	02 (40.0)	04 (80.0)	03 (60.0)	03 (60.0)
		M [*f*(%)]	01 (20.0)	01 (20.0)	02 (40.0)	02 (40.0)	02 (40.0)	01 (20.0)	02 (40.0)	01 (20.0)	02 (40.0)	02 (40.0)
	Area	R [*f*(%)]	01 (20.0)	01 (20.0)	02 (40.0)	02 (40.0)	03 (60.0)	02 (40.0)	03 (60.0)	01 (20.0)	02 (40.0)	03 (60.0)
		U [*f*(%)]	04 (80.0)	04 (80.0)	03 (60.0)	03 (60.0)	02 (40.0)	03 (60.0)	01 (20.0)	04 (80.0)	03 (60.0)	02 (40.0)
2nd	Gender	F [*f*(%)]	02 (40.0)	04 (80.0)	01 (20.0)	04 (80.0)	05 (100.0)	04 (80.0)	03 (60.0)	04 (80.0)	04 (80.0)	02 (40.0)
		M [*f*(%)]	03 (60.0)	01 (20.0)	04 (80.0)	01 (20.0)	00 (00.0)	01 (20.0)	01 (20.0)	01 (20.0)	01 (20.0)	03 (60.0)
	Area	R [*f*(%)]	01 (20.0)	02 (40.0)	04 (80.0)	02 (40.0)	01 (20.0)	02 (40.0)	02 (40.0)	00 (00.0)	00 (00.0)	03 (60.0)
		U [*f*(%)]	04 (80.0)	03 (60.0)	01 (20.0)	03 (60.0)	04 (80.0)	03 (60.0)	02 (40.0)	05 (100.0)	05 (100.0)	02 (40.0)
3rd	Gender	F [*f*(%)]	02 (40.0)	04 (80.0)	03 (60.0)	03 (60.0)	04 (80.0)	04 (80.0)	02 (40.0)	04 (80.0)	01 (20.0)	04 (80.0)
		M [*f*(%)]	03 (60.0)	01 (20.0)	02 (40.0)	02 (40.0)	01 (20.0)	01 (20.0)	02 (40.0)	01 (20.0)	04 (80.0)	01 (20.0)
	Area	R [*f*(%)]	03 (60.0)	00 (00.0)	02 (40.0)	03 (60.0)	02 (40.0)	00 (00.0)	02 (40.0)	02 (40.0)	02 (40.0)	04 (80.0)
		U [*f*(%)]	02 (40.0)	05 (100.0)	03 (60.0)	02 (40.0)	03 (60.0)	05 (100.0)	02 (40.0)	03 (60.0)	03 (60.0)	01 (20.0)
Outperformed	Gender	F [*f*(%)]	03 (60.0)	04 (80.0)	02 (40.0)	05 (100.0)	05 (100.0)	05 (100.0)	03 (60.0)	05 (100.0)	03 (60.0)	05 (100.0)
		M [*f*(%)]	02 (40.0)	01 (20.0)	03 (60.0)	00 (00.0)	00 (00.0)	00 (00.0)	01 (20.0)	00 (00.0)	02 (40.0)	00 (00.0)
	Area	R [*f*(%)]	02 (40.0)	01 (20.0)	03 (60.0)	02 (40.0)	03 (60.0)	01 (20.0)	02 (40.0)	00 (00.0)	01 (20.0)	04 (80.0)
		U [*f*(%)]	03 (60.0)	04 (80.0)	02 (40.0)	03 (60.0)	02 (40.0)	04 (80.0)	02 (40.0)	05 (100.0)	04 (80.0)	01 (20.0)

(Total Master Level Programme in the Faculty = 05)

Session 2007-09: The content analysis of data indicated that 60.0 percent females and 40.0 percent males secured first positions in the master level examinations in 2007-09. The

analysis showed that 60.0 percent of first position holders belonged to urban areas and 40.0 percent from rural residential backgrounds. The analysis pointed out that 80.0 percent females and 20.0 percent males got the second position. Among the second positions holders, 60.0 were from urban areas and 40.0 percent from rural backgrounds. Similarly, 60.0 percent of females and 40.0 percent of males secured the third position. The analysis showed that 40.0 percent of third position holders belonged to urban areas and 60.0 percent were from rural backgrounds. Females in the university outperformed males in the top three positions of examinations held in the session 2007-09 and among the position holders; 60.0 percent females were from urban areas and 40.0 percent were from rural backgrounds.

Session 2008-10: The analysis pointed out that 60.0 percent female and 40.0 percent male students secured first positions in the master level examinations in 2008-10. The analysis of data indicated that 40.0 percent belonged to urban areas and 60.0 percent were from rural backgrounds. Moreover, 100.0 percent female students secured second positions and 80.0 percent were from urban backgrounds and 20.0 percent from rural backgrounds. Similarly, 80.0 percent female and 20.0 percent male students got third positions. Among the third position holders, 60.0 percent were from urban areas and 40.0 percent from rural backgrounds. The analysis also showed that 100.0 percent female students outperformed in master level examinations in the session 2008-10. Out of the position holders, 60.0 percent were from rural areas and 40.0 percent had urban backgrounds.

Session 2009-11: The analysis in the table described the outperformance of female students in master level examinations. Females' outshined males by clinching 80.0 percent first positions and 20.0 percent male students stood first in master level examinations in 2009-11. Among the first position holders, 60.0 percent were from urban areas and 40.0 percent

were from rural backgrounds. Similarly, out of five departments' second positions, 80.0 percent of positions came in the part of females and 20.0 percent male students outclassed. Moreover, 60.0 percent second position holders belonged to urban areas and 40.0 percent were from rural areas. Analysis of the third position holders along the axes of gender revealed that 80.0 percent were females and 20.0 percent were male students. Out of 5 departments' the third position holders, 100.0 percent were from urban areas. The analysis described that 100.0 percent of female students outperformed in master level examinations in 2009-11 and 80.0 percent females were from urban areas and 20.0 percent were from rural backgrounds.

Session 2010-12: The analysis revealed that 40.0 percent females and 40.0 percent males secured first positions in the master level examinations in 2010-12. Data reported that 60.0 percent belonged to rural areas and 20.0 percent were from the urban background. The analysis described that 60.0 percent females and 20.0 percent male students secured second positions, 40.0 percent were from urban backgrounds, and 40.0 percent were from rural backgrounds. The analysis pointed out that 40.0 percent females and 40.0 percent males got third positions. Among the third position holders, 40.0 percent were from urban areas and 40.0 percent from rural residential backgrounds. Data reported outperformance along the axes of gender and residential area, 60.0 percent female and 20.0 percent male students outperformed in the session 2010-12, and these students belonged to 40.0 percent were from urban areas and 40.0 percent were from rural backgrounds.

Session 2011-13: Examination data in the table indicated the outperformance of female and male students in master level examinations. The analysis described that 80.0 percent females and 20.0 percent males secured first positions in the master level examinations in

2011-13. As analysis of data indicated that 80.0 percent students belonged to urban areas and 20.0 percent were from rural backgrounds. The analysis pointed out that 80.0 percent females and 20.0 percent of male students secured second positions and 100.0 percent were from urban backgrounds. Similarly, 80.0 percent females and 20.0 percent males got third positions. Among the third position holders, 60.0 were from urban areas and 40.0 percent were from rural backgrounds. The analysis also indicated outperformance along the axes of gender and residential area; 100.0 percent female students outperformed in the session 2011-13, and they belonged to urban areas.

Session 2012-14: The analysis described that 60.0 percent females and 40.0 percent males secured first positions in the master level examinations in 2012-14. Data reported 60.0 percent belonged to urban areas and 40.0 percent were from rural backgrounds. The analysis revealed that 80.0 percent females and 20.0 percent male students secured second positions and 100.0 percent were from urban background. Similarly, 80.0 percent males and 20.0 percent females got third positions. Among the third position holders, 60.0 were from urban areas and 40.0 percent from rural backgrounds. Data reported outperformance along the axes of gender and residential area; 60.0 percent females and 40.0 percent male students outperformed in the session 2012-14, and among these students 80.0 percent belonged to urban areas and 20.0 percent were from rural backgrounds.

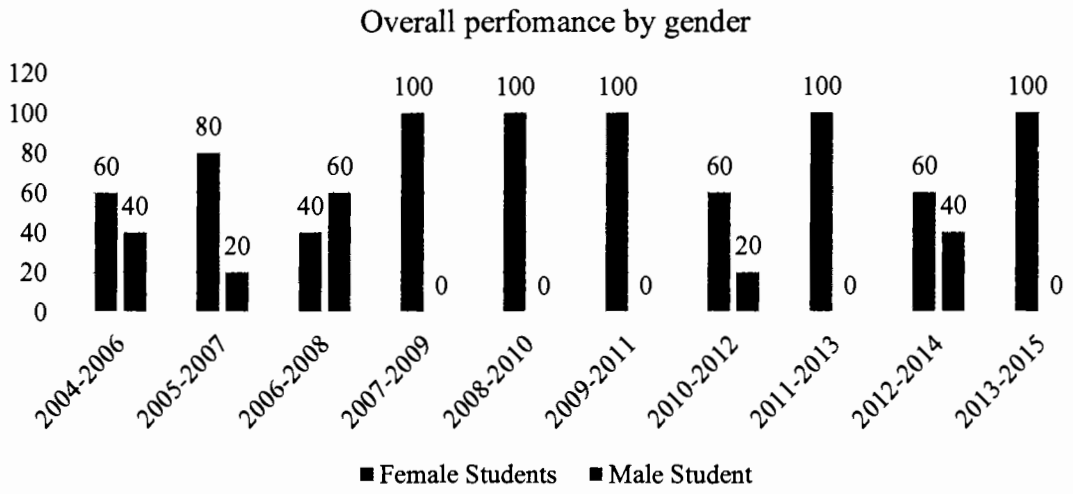


Figure 4.15. Overall performance by gender in the faculty of oriental learning

Session 2013-15: Results of top position holders in the table unpacked the outperformance of students in master level examinations. The analysis described that 60.0 percent females and 40.0 percent males secured first positions in the master level examinations in 2013-15. Data reported 40.0 percent belonged to urban areas and 60.0 percent were from rural backgrounds. The analysis pointed out that 40.0 percent female and 60.0 percent male students secured second positions, 40.0 percent belonged to urban areas and 60.0 percent were from rural backgrounds. Similarly, 80.0 percent females and 20.0 percent males got third positions. Among the third position holders, 20.0 percent were from urban areas and 80.0 percent from rural residential backgrounds. Data reported outperformance along the axes of gender and residential area; 100.0 percent female students outperformed in the session 2013-15, and among these students belonged to 20.0 percent were from urban areas and 80.0 percent were from rural backgrounds.

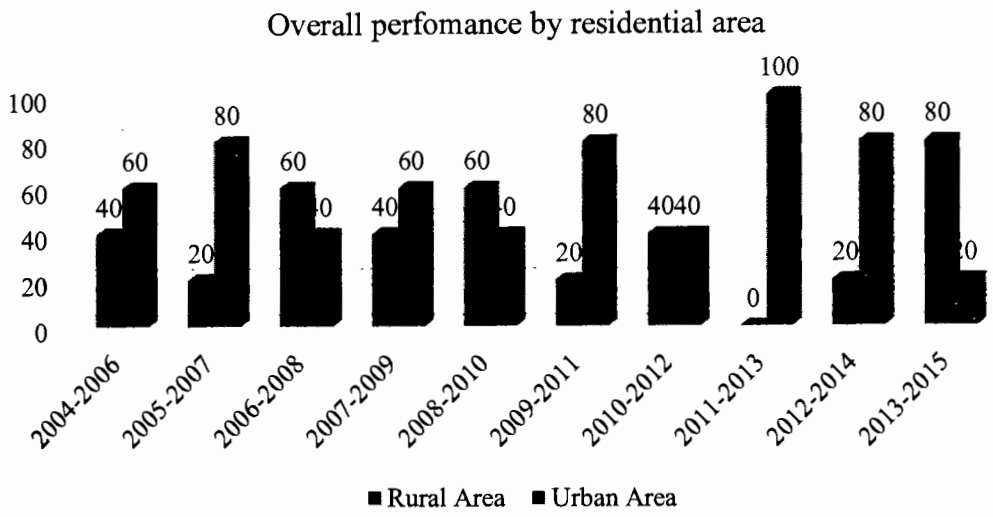


Figure 4.16. Overall performance by residential area in the faculty of oriental learning

4.11 Top Three Position Holders in the Faculty of Sciences

The focus of the content analysis was to give an overview of gender differences in educational achievements in master level examinations. The statistics in Table 4.10 unpacked differences between the performances of females and males. The data in the table showed the top three positions during the last 10 years starting from the session year 2004-06 to 2013-15 in the Faculty of Sciences. The total number of departments is twelve.

Analysis of the top three positions along the axes of gender in session 2004-06: The analysis described that 50.0 percent females and 41.7 percent males secured first positions in the master level examinations in 2004-06. The analysis showed that 58.3 percent of first position holders belonged to urban areas and 33.3 percent were from rural backgrounds. 58.3 percent female and 33.3 percent male students secured second positions. Data reported 75.0 percent belonged to urban backgrounds and 16.7 percent were from rural backgrounds. The analysis revealed that 41.7 percent females and 50.0 percent males secured third positions in the master level examinations in 2004-06. The analysis showed that 66.7 percent of the first position holders belonged to urban areas and 25.0 percent were

from rural backgrounds. The analysis described that 58.3 percent of females and 33.3 percent of males outperformed in master level examinations in 2005-07 and among the position holders, 66.7 percent belonged urban areas and 25.0 percent to rural backgrounds.

Session 2005-07: The analysis indicated in the table unpacked the outperformance of students in master level examinations. Males' outshined females by clinching 50.0 percent first positions and 41.7 percent female students stood first in 2005-07. Data reported that 66.7 percent of first position holders belonged to urban areas and 25.0 percent were from rural backgrounds. 58.3 percent female and 33.3 percent male students secured second positions in the master level examinations. Moreover, 83.3 percent second position holders belonged to urban areas and 08.3 percent were from rural areas. Similarly, as concern of third position holders, 53.3 were male students and 33.3 percent were female students. Out of the 12 departments' third position holders, 41.7 percent were from urban areas and 50.0 percent had rural residential backgrounds. The analysis pointed that 50.0 percent males and 41.7 percent females outperformed in 2005-07 and, out of these students, 83.3 percent were from urban areas and 33.3 percent were from rural backgrounds.

Session 2006-08: The analysis indicated that 75.0 percent female student and 25.0 percent male students secured first positions in the master level examinations in 2006-08. The analysis showed that 91.7 percent belonged to urban areas and 08.3 percent were from rural backgrounds. 50.0 percent female and 50.0 percent male students secured second positions in the master level examinations. Data reported that 66.7 percent belong to rural backgrounds and 33.3 percent were from urban backgrounds. Similarly, 25.0 percent females and 75.0 percent males got third positions. Among the third position holders, 33.3 were from urban areas and 66.7 percent from rural backgrounds. The analysis also

highlighted that 58.3 percent male students and 41.7 percent female students outperformed in master level examinations in the session 2006-08. The analysis also showed that 83.3 percent were from urban areas and 16.7 percent were from rural backgrounds in the session 2006-08 examination.

Table 4.10
Female and Male Students' Performance at Masters Level in the Faculty of Sciences (Session 2004-06 to 2013-15)

Position	Gender/Area		Years									
			2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013	2012-2014	2013-2015
1st	Gender	F [*f* (%)]	06 (50.0)	05 (41.7)	09 (75.0)	07 (58.3)	08 (66.7)	09 (75.0)	07 (58.3)	08 (66.7)	09 (75.0)	07 (58.3)
		M [*f* (%)]	05 (41.7)	06 (50.0)	03 (25.0)	05 (41.7)	04 (33.3)	03 (25.0)	04 (33.3)	04 (33.3)	03 (25.0)	05 (41.7)
	Area	R [*f* (%)]	04 (33.3)	03 (25.0)	01 (08.3)	07 (58.3)	04 (33.3)	04 (33.3)	04 (33.3)	04 (33.3)	06 (50.0)	05 (41.7)
		U [*f* (%)]	07 (58.3)	08 (66.7)	11 (91.7)	05 (41.7)	08 (66.7)	08 (66.7)	07 (58.3)	08 (66.7)	06 (50.0)	07 (58.3)
2nd	Gender	F [*f* (%)]	07 (58.3)	07 (58.3)	06 (50.0)	09 (75.0)	07 (58.3)	08 (66.7)	09 (75.0)	09 (75.0)	09 (75.0)	08 (66.7)
		M [*f* (%)]	04 (33.3)	04 (33.3)	06 (50.0)	03 (25.0)	05 (41.7)	04 (33.3)	02 (16.7)	02 (16.7)	03 (25.0)	04 (33.3)
	Area	R [*f* (%)]	02 (16.7)	01 (08.3)	04 (33.3)	04 (33.3)	04 (33.3)	03 (25.0)	04 (33.3)	04 (33.3)	04 (33.3)	03 (25.0)
		U [*f* (%)]	09 (75.0)	10 (83.3)	08 (66.7)	08 (66.7)	08 (66.7)	09 (75.0)	07 (58.3)	07 (58.3)	08 (66.7)	09 (75.0)
3rd	Gender	F [*f* (%)]	05 (41.7)	04 (33.3)	02 (25.0)	05 (41.7)	08 (66.7)	09 (75.0)	07 (58.3)	11 (91.7)	08 (66.7)	08 (66.7)
		M [*f* (%)]	06 (50.0)	07 (58.3)	09 (75.0)	07 (58.3)	04 (33.3)	03 (25.0)	04 (33.3)	00 (00.0)	04 (33.3)	04 (33.3)
	Area	R [*f* (%)]	03 (25.0)	06 (50.0)	08 (66.7)	04 (33.3)	04 (33.3)	07 (58.3)	05 (41.7)	03 (25.0)	04 (33.3)	06 (50.0)
		U [*f* (%)]	08 (66.7)	05 (41.7)	04 (33.3)	08 (66.7)	08 (66.7)	05 (41.7)	06 (50.0)	08 (66.7)	08 (66.7)	06 (50.0)
Outperformed	Gender	F [*f* (%)]	07 (58.3)	05 (41.7)	05 (41.7)	07 (58.3)	08 (66.7)	10 (83.3)	07 (58.3)	10 (83.3)	09 (75.0)	08 (66.7)
		M [*f* (%)]	04 (33.3)	06 (50.0)	07 (58.3)	05 (41.7)	04 (33.3)	02 (16.7)	04 (33.3)	02 (16.7)	03 (25.0)	04 (33.3)
	Area	R [*f* (%)]	03 (25.0)	01 (08.3)	02 (16.7)	05 (41.7)	03 (25.0)	04 (33.3)	03 (25.0)	03 (25.0)	03 (25.0)	04 (33.3)
		U [*f* (%)]	08 (66.7)	10 (83.3)	10 (83.3)	07 (58.3)	09 (75.0)	08 (66.7)	08 (66.7)	09 (75.0)	09 (75.0)	08 (66.7)

(Total Master Level Programme in the Faculty = 12)

Session 2007-09

The examination results of 2007-09 session showed 58.3 percent female and 41.7 percent male students got first positions in the master level examinations. Data showed that 47.7 percent first position holders belonged to urban areas where 58.3 percent were from rural

backgrounds. Similarly, 75.0 and 25.0 percent females and males respectively got second positions. Moreover, 66.7 were from urban areas and 33.3 percent from rural backgrounds. Further, 41.7 percent females and 58.3 percent males secured third positions. Data showed that 66.7 percent third position holders belonged to urban areas and 33.3 percent were from rural backgrounds. Females in the university of the Punjab outperformed males in top three positions of examinations held in the session 2007-09 and the position holder females belonged to urban areas.

Session 2008-10: The analysis indicated that 66.7 percent female and 33.3 percent male student's secured first positions in the master level examinations in 2008-10. The analysis of data indicated that 66.7 percent belonged to urban areas and 33.3 percent were from rural backgrounds. Moreover, 58.3 percent female students and 41.7 percent male students secured second positions in the master level examinations, and 66.7 percent were from urban backgrounds and 33.3 percent from rural residential backgrounds. Similarly, 66.7 percent of females and 33.3 percent of male students got the third position. Among the third position holders, 66.7 were from urban areas and 33.3 percent from rural residential backgrounds. The data showed that 66.7 percent females and 33.3 percent male students outperformed in the session 2008-10. The analysis showed that 75.0 percent were from urban areas and 25.0 percent were from rural backgrounds.

Session 2009-11: The statistics in the table indicated the outperformance of students in master level examinations. Females' outshined males by clinching 75.0 percent first positions and 25.0 percent male students stood first in master level examinations in 2009-11. Among first position holders, 66.7 percent were from urban areas and 33.3 percent were from rural backgrounds. Similarly, out of 12 departments' second positions, 66.7 percent of positions came in the part of females and 33.3 percent male students outclassed. Moreover, 75.0 percent second position holders belonged to urban areas and 25.0 percent

were from rural areas. Likewise, as concern of third position holders, 75.0 percent were females and 25.0 percent were males. Out of 12 departments' third position holders, 58.3 percent were from urban areas and 41.7 percent had rural backgrounds. The analysis pointed out that 83.3 percent female and 16.7 percent male students outperformed in 2009-11. 66.7 percent were from urban areas and 33.3 percent were from rural backgrounds.

Session 2010-12: Examination of data in the table described that 58.3 percent females and 33.3 percent males' secured first positions in the master level examinations in 2010-12. Data reported that 58.3 percent belonged to urban areas and 33.3 percent were from rural residential backgrounds. The analysis indicated that 75.0 percent females and 16.7 percent male students secured second positions, 58.3 percent were from urban backgrounds, and 33.3 percent were from rural areas. The analysis revealed that 58.3 percent females and 33.3 percent males got third positions. Among the third position holders, 41.7 were from urban areas and 50.0 percent from rural backgrounds. Data reported outperformance along the axes of gender and residential area; 58.3 percent females and 33.3 percent male students outperformed in master level examinations in the session 2010-12, and out of these students, 66.7 percent were from urban areas and 25.0 percent were from rural backgrounds.

Session 2011-13: The statistics in the table unpacked the outperformance of students in master level examinations. The analysis indicated that 66.7 percent females and 33.3 percent males secured first positions in the master level examinations in 2011-13. The analysis of data indicated that 66.7 percent belonged to urban areas and 33.3 percent were from rural backgrounds. The analysis revealed that 75.0 percent females and 16.7 percent males secured second positions, 58.3 percent were from urban backgrounds, and 33.3

percent were from rural backgrounds. Similarly, 91.7 percent female students got third positions. Among the third position holders, 66.7 were from urban areas and 25.0 percent were from rural areas. The analysis also indicated outperformance along the axes of gender and residential area; 83.3 percent females and 16.7 percent male students outperformed in the session 2011-13, and out of the position holders, 75.0 percent were from urban areas and 25.0 percent were from rural backgrounds.

Session 2012-14: The analysis indicated that 75.0 percent females and 25.0 percent males secured first positions in the master level examinations in 2012-14. Data reported 50.0 percent belonged to urban areas and 50.0 percent were from rural backgrounds. The analysis revealed that 75.0 percent female and 25.0 percent male students secured second positions, 66.7 percent were from urban backgrounds, and 33.3 percent were from rural areas. Similarly, 66.7 percent females and 33.3 percent males got third positions. Among the third position holders, 66.7 were from urban areas and 33.3 percent from rural backgrounds. Data reported outperformance along the axes of gender and residential area; 75.0 percent females and 25.0 percent male students outperformed in the session 2012-14, and among these students, 75.0 percent were from urban areas and 25.0 percent were from rural backgrounds.

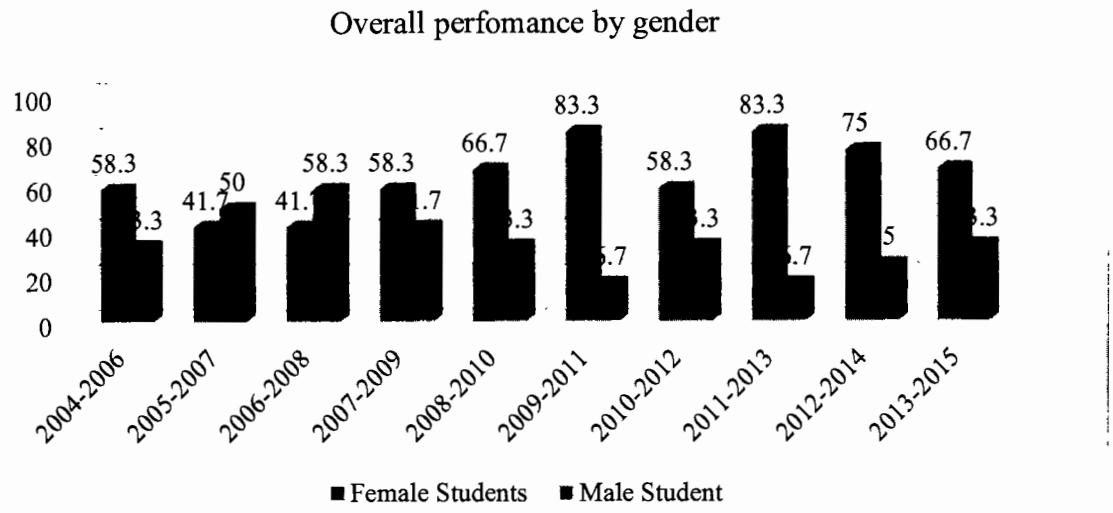


Figure 4.17. Overall performance by gender in the faculty of science

Session 2013-15: The content data in the table indicate the outperformance of students in master level examinations. The analysis indicated that 58.3 percent females and 41.7 percent males secured the first positions in the master level examinations in 2013-15. Data reported that 58.3 percent belonged to urban areas and 41.7 percent were from rural backgrounds. The analysis revealed that 66.7 percent female and 33.3 percent male students secured second positions. Moreover, 75.0 percent belonged to urban areas and 25.0 percent were from rural backgrounds. Similarly, 66.7 percent females and 33.3 percent males got third positions. Among the third position holders, 50.0 were from urban areas and 50.0 percent from rural backgrounds. Data reported outperform by gender and residential area; 66.7 percent females and 33.3 percent male students outperformed in the session 2013-15, and out of the position holders, 66.7 percent were from urban areas and 33.3 percent were from rural backgrounds.

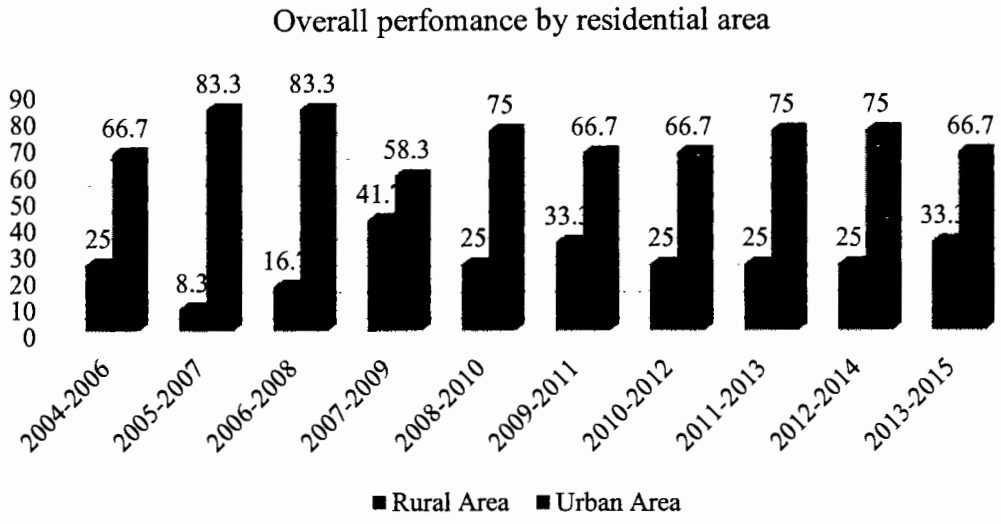


Figure 4.18. Overall performance by residential area in the faculty of science

4.12 Top Three Position Holders in the All Faculties at Masters Level

The focus of the content analysis was to give an overview of gender differences in educational achievements in master level examinations. The statistics in Table 4.11 unpacked differences between the performance of females and males at master level examinations conducted by the examination department. The data in the table showed the top three positions during the last 10 years starting from the session year 2004-06 to 2013-15 in all faculties overall. The total number of departments is sixty one.

The analysis indicated that 73.8 percent females and 21.3 percent males secured first positions in the master level examinations in 2004-06. The analysis showed that 77.0 percent first positions holders belonged to urban areas and 18.0 percent were from rural backgrounds. 73.8 percent female and 21.3 percent male students secured second positions. Data reported that 77.0 percent belonged to urban backgrounds and 18.0 percent were from rural backgrounds. The analysis also revealed that 68.9 percent females and 26.2 percent males secured third position in 2004-06. The analysis showed that 73.8 percent of first position holders belonged to urban areas and 21.3 percent were from rural backgrounds.

Females in the university outperformed males in the top three positions of examinations held in the session 2004-06 and the position holders' females belonged to urban areas.

The statistics in the table unpacked the outperformance of female students in master level examinations. Females' outshined males by clinching 75.4 percent first positions and 21.3 percent male students stood first in master level examinations in 2005-07. Data reported that 88.5 percent first position holders belonged to urban areas and 08.2 percent were from rural backgrounds. 65.6 percent female and 31.1 percent male students secured second positions. Moreover, 77.0 percent second position holders belonged to urban areas and 19.7 percent were from rural areas. Similarly, with regard to third position holders, 70.0 were male students and 26.2 percent were female students. Out of 61 departments' third position holders, 78.7 percent were from urban areas and 18.0 percent had rural residential backgrounds. The analysis indicated 75.4 percent females and 21.3 percent males outperformed in 2005-07 and 86.9 percent belonged to urban areas and only 09.8 percent had rural backgrounds.

Results of examination of data revealed that 77.0 percent female students and 23.0 percent male students secured first positions in the master level examinations in 2006-08. The analysis showed that 75.4 percent belonged to urban areas and 24.6 percent were from rural backgrounds. 45.9 percent female and 54.1 percent male students secured second positions. Data reported 55.7 percent belonged to rural backgrounds and 44.3 percent were from urban backgrounds. Similarly, 45.9 percent males and 54.1 percent females got third position. Among the third position holders, 41.0 were from urban areas and 59.0 percent were from rural residential backgrounds. The data showed that 59.0 percent female

students and 41.0 percent male students outperform in the session 2006-08. The analysis showed 54.1 percent were urban areas and 45.9 percent were from rural backgrounds.

The analysis revealed 70.5 percent females and 27.9 percent males secured first position in the master level examinations in 2007-09. The analysis showed that 60.7 percent of first position holders belonged to urban areas and 37.7 percent to rural backgrounds. The analysis indicated that 75.4 percent females and 23.0 percent males got second positions. Moreover, 68.9 were from urban areas and 29.5 percent from rural residential backgrounds. Similarly, 72.1 percent females and 26.2 percent males secured third positions. The analysis showed that 72.1 percent third positions holders belonged to urban areas and 26.2 percent from rural backgrounds. Females in the university outperformed males in the top three positions of examinations held in the session 2007-09 and the position holders' females belonged to urban areas.

Top position holders' data depicted that 77.0 percent female and 21.3 percent male students secured first positions in the master level examinations in 2008-10. The analysis of data indicated 70.5 percent belonged to urban areas and 27.9 percent were from rural backgrounds. Similarly, 77.0 percent female students and 21.3 percent male students secured second positions. Analysis indicated that 77.0 percent were from urban backgrounds and 21.3 percent were from rural backgrounds. Similarly, 75.4 percent female and 23.0 percent of male students got third positions. Among the third position holders, 80.3 were from urban areas and 18.0 percent from rural backgrounds. The data showed 85.2 percent female and 13.1 male students outperformed in the session 2008-10. Out of the position holders, 82.0 percent were from urban areas and 16.4 percent were from rural backgrounds.

Table 4.11

Female and Male Students' Performance at Masters Level in the All Faculties Overall (Session 2004-06 to 2013-15)

Position	Gender/Area		Years									
			2004-2006*	2005-2007*	2006-2008	2007-2009**	2008-2010**	2009-2011	2010-2012**	2011-2013**	2012-2014**	2013-2015**
1st	Gender	F [*f* (%)]	45 (73.8)	46 (75.4)	47 (77.0)	43 (70.5)	47 (77.0)	47 (77.0)	42 (68.9)	49 (80.3)	47 (77.0)	44 (72.1)
		M [*f* (%)]	13 (21.3)	13 (21.3)	14 (23.0)	17 (27.9)	13 (21.3)	14 (23.0)	16 (26.2)	11 (18.0)	11 (18.0)	15 (24.6)
	Area	R [*f* (%)]	11 (18.0)	05 (08.2)	15 (24.6)	23 (37.7)	17 (27.9)	18 (29.5)	13 (21.3)	14 (23.0)	16 (26.2)	20 (32.8)
		U [*f* (%)]	47 (77.0)	54 (88.5)	46 (75.4)	37 (60.7)	43 (70.5)	43 (70.5)	45 (73.8)	46 (75.4)	42 (68.9)	39 (63.9)
2nd	Gender	F [*f* (%)]	45 (73.8)	40 (65.6)	28 (45.9)	46 (75.4)	47 (77.0)	48 (78.7)	48 (78.7)	48 (78.7)	47 (77.0)	44 (72.1)
		M [*f* (%)]	13 (21.3)	19 (31.1)	33 (54.1)	14 (23.0)	13 (21.3)	13 (21.3)	10 (16.4)	11 (18.0)	11 (18.0)	13 (21.3)
	Area	R [*f* (%)]	11 (18.0)	12 (19.7)	34 (55.7)	18 (29.5)	13 (21.3)	21 (34.4)	16 (26.2)	09 (14.8)	11 (18.0)	13 (21.3)
		U [*f* (%)]	47 (77.0)	47 (77.0)	27 (44.3)	43 (68.9)	47 (77.0)	40 (65.6)	42 (68.9)	50 (82.0)	47 (77.0)	44 (72.1)
3rd	Gender	F [*f* (%)]	42 (68.9)	43 (70.5)	28 (45.9)	44 (72.1)	46 (75.4)	48 (78.7)	42 (68.9)	52 (85.2)	44 (72.1)	44 (72.1)
		M [*f* (%)]	16 (26.2)	16 (26.2)	33 (54.1)	16 (26.2)	14 (23.0)	13 (21.3)	16 (26.2)	06 (09.8)	14 (23.0)	12 (19.7)
	Area	R [*f* (%)]	13 (21.3)	11 (18.0)	36 (59.0)	16 (26.2)	11 (18.0)	20 (32.8)	14 (23.0)	10 (16.4)	16 (26.2)	19 (31.1)
		U [*f* (%)]	45 (73.8)	48 (78.7)	25 (41.0)	44 (72.1)	49 (80.3)	41 (67.2)	44 (72.1)	48 (78.7)	42 (68.9)	37 (60.7)
Outperformed	Gender	F [*f* (%)]	48 (78.7)	46 (75.4)	36 (59.0)	49 (80.3)	52 (85.2)	52 (85.2)	51 (83.6)	54 (88.5)	49 (80.3)	50 (82.0)
		M [*f* (%)]	10 (16.4)	13 (21.3)	25 (41.0)	11 (18.0)	08 (13.1)	09 (14.8)	07 (11.5)	06 (09.8)	09 (14.8)	09 (14.8)
	Area	R [*f* (%)]	08 (13.1)	06 (09.8)	28 (45.9)	13 (21.3)	10 (16.4)	16 (26.2)	08 (13.1)	05 (08.2)	08 (13.1)	15 (24.6)
		U [*f* (%)]	50 (82.0)	53 (86.9)	33 (54.1)	47 (77.0)	50 (82.0)	45 (73.8)	50 (82.0)	55 (90.2)	50 (82.0)	44 (72.1)

(Total Master Level Programme in the Faculty = 61, *Data not available, **No student)

The statistics in the table unpacked the outperformance of students in master level examinations. Females' outshined males by clinching 77.0 percent first positions and 23.0 percent male students stood first in master level examinations in 2009-11. The first position holders amounting 70.5 percent were from urban areas and 29.5 percent were from rural backgrounds. Similarly, out of 61 departments' second positions, 78.7 percent of positions came to the part of females and 21.3 percent male students outclassed. Moreover, 65.6 percent second position holders belonged to urban areas and 34.4 percent were from rural

areas. Additionally, with regard to third position holders, 78.7 percent were females and 21.3 percent were males. Out of 61 departments, 67.2 percent third position holders were from urban areas and 32.8 percent had rural backgrounds. The analysis pointed out that 85.2 percent female and 14.8 percent male students outperformed in 2009-11 and, out of these students, 73.8 percent were from urban areas and 26.2 percent were from rural residential backgrounds.

The content data described that 68.9 percent females and 26.2 percent males secured first positions in the master level examinations in 2010-12. Data reported 73.8 percent belonged to urban areas, and 21.3 percent were from rural backgrounds. The analysis revealed that 78.7 percent female and 16.4 percent male student's secured second positions. Furthermore, 68.9 percent were from urban backgrounds and 26.9 percent were from rural areas. Similarly, 68.9 percent females while 26.2 percent males got third positions. Among the third position holders, 72.1 were from urban areas and 23.0 percent from rural backgrounds. Data reported outperformance along the axes of gender and residential area; 83.6 percent females and 11.5 percent male students outperformed in the session 2010-12, and out of the students, 82.0 percent were from urban areas and 13.1 percent were from rural backgrounds.

The statistics in the table indicated the outperformance of students in master level examinations. The analysis indicated 80.3 percent females and 18.0 percent males secured first positions in the master level examinations in 2011-13. The analysis of data indicated 75.4 percent belonged to urban areas and 23.0 percent were to rural backgrounds. The analysis pointed out that 78.7 percent female and 18.0 percent of male students secured second positions and 82.0 percent were from urban backgrounds. Similarly, 85.2 percent

females and 09.8 percent males got third positions. Among the third position holders, 78.7 were from urban areas. The data showed outperformance along the axes of gender and residential area, 88.5 percent female students outperformed in the session 2011-13, and they belonged to urban areas.

Results of data described that 77.0 percent females and 18.0 percent males secured first positions in the master level examinations in 2012-14. Data reported that 68.9 percent belonged to urban areas, and 26.2 percent were from rural backgrounds. Further, 77.0 percent females and 18.0 percent male students secured second positions. Moreover, 77.0 percent were from urban backgrounds and 18.0 percent were from rural areas. Similarly, 72.1 percent females and 23.0 percent males got third positions. Among the third position holders, 68.9 were from urban areas and 26.2 percent from rural backgrounds. Data reported outperformance along the axes of gender and residential area; 80.3 percent females and 14.8 percent male students outperformed in the session 2012-14, and they students' belonged to urban areas.

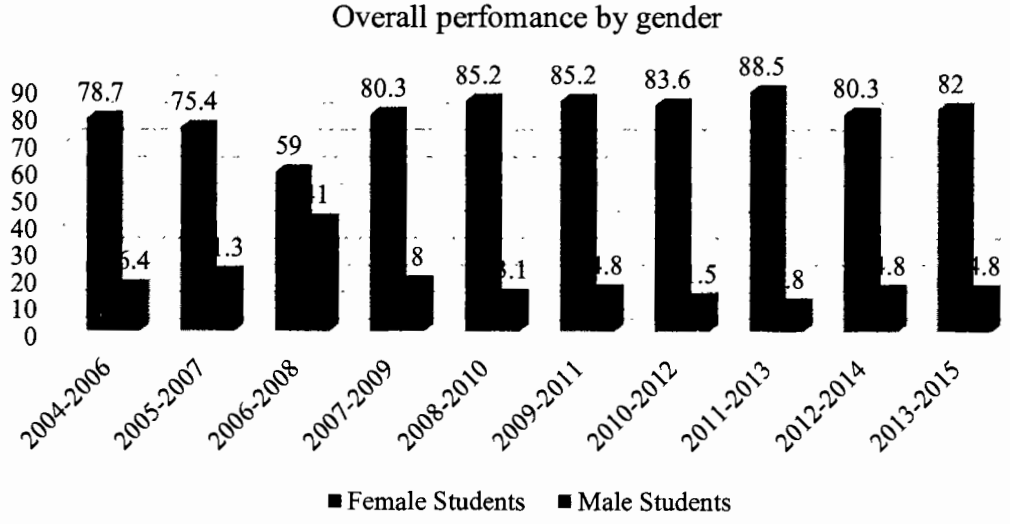


Figure 4.19. Overall performance by gender in the all faculties

The statistics in the table indicated the outperformance of students in master level examinations. The analysis revealed that 72.1 percent females and 24.6 percent of males secured first positions in the master level examinations in 2013-15. Data reported that 63.9 percent belonged to urban areas and 32.8 percent to rural backgrounds. The analysis indicated 72.1 percent female and 21.3 percent male students secured second positions. Further, 72.1 percent belonged to urban areas and 21.3 percent to rural backgrounds. Similarly, 72.1 percent females and 19.7 percent males got third positions. Among the third position holders, 60.7 were from urban areas and 31.1 percent from rural backgrounds. Data reported outperformance by gender and residential area; 82.0 percent females and 14.8 percent male students outperformed in the session 2013-15, and out of these students, 72.1 percent belonged to urban areas and 24.6 percent to rural backgrounds.

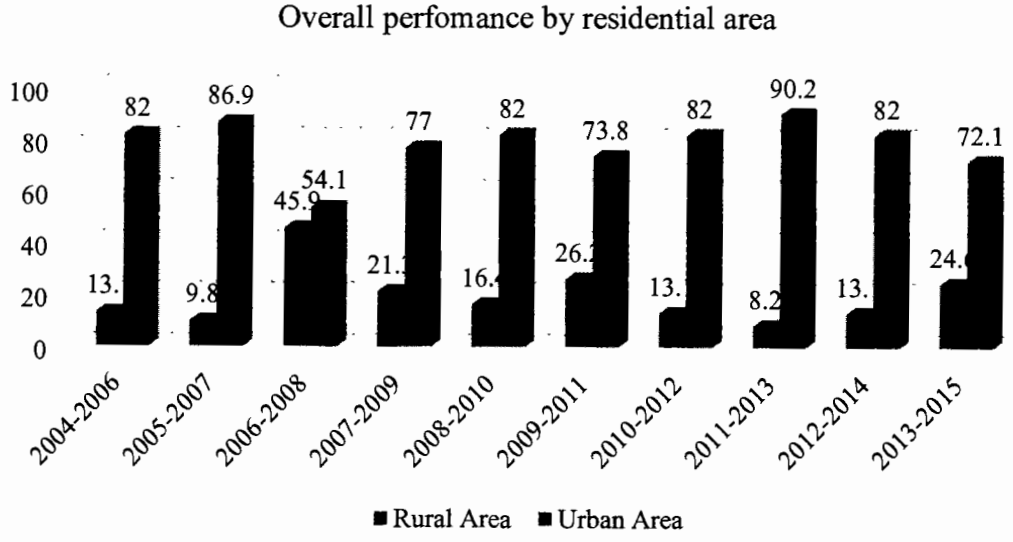


Figure 4.20. Overall performance by residential area in the all faculties

4.13 First Position Holders of Matriculation Passing Boards in Session 2013-2015

Table 4.12
Female and Male Student's Matriculation Passing Board of First Position Holders in Session 2013-2015

Sr. No.	Board Name	Frequency	Percentage
1	No Student	02	03.3
2	BISE Faisalabad	07	11.5
3	BISE Lahore	42	68.9
4	BISE Gujranwala	06	09.8
5	BISE Mirpur	01	01.6
6	Agha Khan Board	01	01.6
7	BISE Rawalpindi	01	01.6
8	BISE Quetta	01	01.6
	Total	61	100.0

The statistics in Table 4.12 described first positions (session 2013-2015) holders of matriculation. The data in the table showed that 68.9 percent of the first position holders do their matriculation from the Board of Intermediate & Secondary Education, Lahore. Similarly, 11.5 percent completed their matriculation from the Board of Intermediate & Secondary Education, Faisalabad. Here, a similar proportion (1.6%) of first position holders was observed that they did their matriculation from Rawalpindi, Quetta, Agha Khan, and Mirpur board. Data reflected that more than half of the first position holders in session 2013-2015 do their matriculation from the Lahore board.

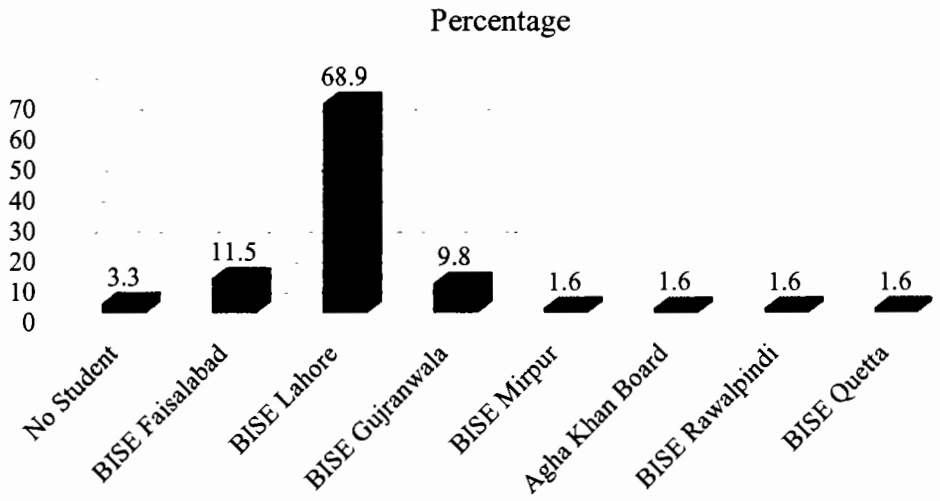


Figure 4.21. Matriculation passing board of first position holders in session 2013-2015

4.14 First Position Holders of Intermediate Passing Boards in Session 2013-2015

Table 4.13

Female and Male Student's Intermediate Passing Board of First Position Holders in Session 2013-2015

Sr. No.	Board Name	Frequency	Percentage
1	No Student	02	03.3
2	BISE Faisalabad	08	13.1
3	BISE Lahore	41	67.2
4	BISE Gujranwala	06	09.8
5	BISE Mirpur	01	01.6
6	Agha Khan Board	01	01.6
7	BISE Rawalpindi	01	01.6
8	BISE Quetta	01	01.6
	Total	61	100.0

Table 4.13 showed the first positions (session 2013-2015) holder of an intermediate board. The tabulated data depicted that 67.2 percent of the first position holders do their intermediate from the Board of Intermediate & Secondary Education, Lahore. However, 13.1 percent completed their intermediate from the Board of Intermediate & Secondary Education, Faisalabad. A similar proportion (1.6%), same as matriculation passing of first position holders was observed that they did their intermediate from Rawalpindi, Quetta,

Agha Khan, and Mirpur board. Data reflected that more than half of the first position holders in session 2013-2015 did their intermediate from Lahore board. The trend of the analysis showed that first position holders in session 2013-2015 did their matriculation and intermediate from the same board i.e. Lahore.

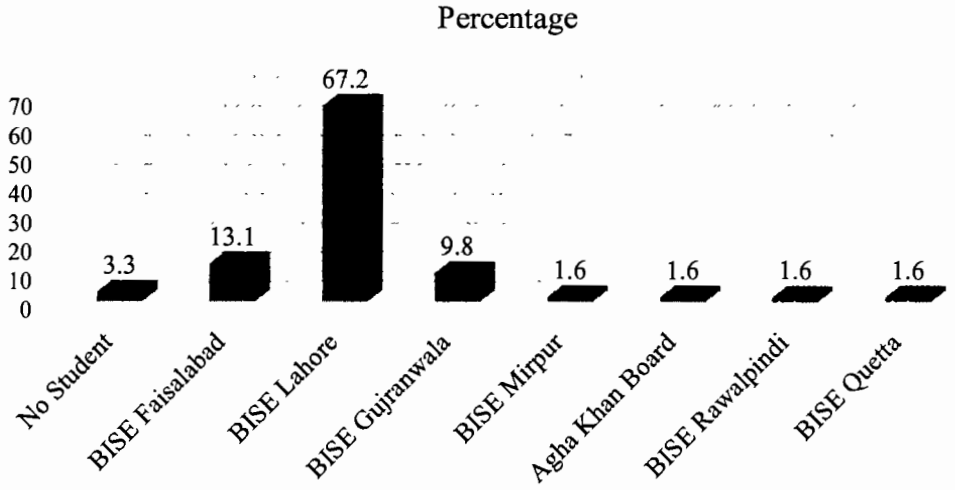


Figure 4.22. Intermediate passing board of first position holders in session 2013-2015

4.15 First Position Holders' Bachelor Passing University in Session 2013-2015

The statistics in Table 4.14 described the first position (session 2013-2015) holders' bachelor passing degree university. The data in the table show that 75.4 percent of the first position holders do their bachelor's degree from the University of Punjab. Similarly, 9.8 percent completed their bachelor's degree from Government College University Faisalabad. Here, a similar proportion (1.6%) of first position was holders observed as they did their bachelor's degree from the University of Ponch, Rawalakot, Karakorum International University, Gilgit, and University of Baluchistan, Quetta. Data reflected that more than half of the first position holders in session 2013-2015 did their bachelor's degree from Punjab University.

Table 4.14

Female and Male Student's Bachelor Passing University of First Position Holders in Session 2013-2015

Sr. No.	University Name	Frequency	Percentage
1	No Student	02	03.3
2	University of Punjab	46	75.4
3	Government College University Faisalabad	06	09.8
4	University of Gujrat	04	06.6
5	University of Poonch Rawalakot	01	01.6
6	Karakorum International University Gilgit	01	01.6
7	University of Baluchistan, Quetta	01	01.6
	Total	61	100.0

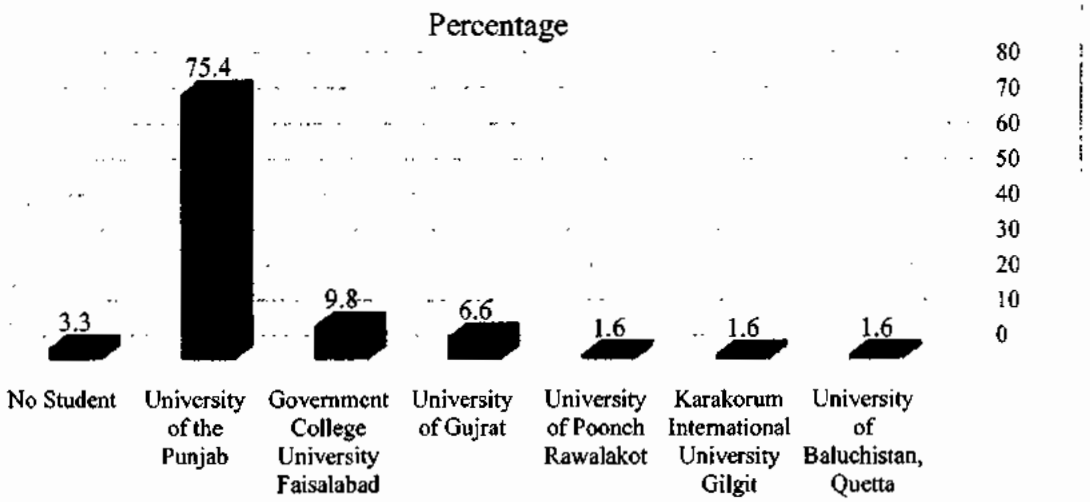


Figure 4.23. First position holders' bachelor passing university in session 2013-2015

Chapter Five

University Teachers Perspectives' on Young Females' and Males' Performance in Master Level Examinations

5.1 Primary Data: Descriptive Statistics

This section presents the results derived from primary data on the academic performance of students (female and male) in Punjab. It is divided into two parts: a) descriptive statistics and b) inferential statistics. This section is restricted to descriptive statistics. Descriptive statistics is a process to analyze and summarize data and study findings in a meaningful way. It presents the patterns of data and allows to draw conclusion. Similarly, it is the simplest and clearest way of presenting raw data in the form of frequency distribution along with percentages and mean value of the data. It allows simple interpretation and conclusion of the study findings.

5.2 Socio-economic Profile of the Respondents

Table 5.1
Respondents' Gender and Geographical Location

Area	Gender		Total
	Male	Female	
	f(%)	*f*(%)	*f*(%)
Rural	96 (37.9)	13 (05.1)	109 (43.1)
Urban	48 (19.0)	96 (37.9)	144 (56.9)
Total	144 (56.9)	109 (43.1)	253 (100.0)

Table 5.1 describes the distribution of the respondents by their gender and residential area. Data reported that 56.9 percent of the respondents were male and 43.1 percent were females who were working in the university as a faculty member. The data also reveal similar results regarding residential areas of the respondents. It is pertinent to

mention that more than half of female teachers belonged to urban areas and male teachers' residential backgrounds were rural.

Table 5.2 shows the designation and educational qualifications of the respondents. The statistics describe that more than 50 percent (53.0 %) of respondents were Assistant Professors and 27.3 percent were Lecturers. Only a smaller number (9.5 %) of the respondents were Professors and 4.0 percent were Lecturer cum Research Associate. The sample size was proportionally distributed as per the designation of the respondents (see Appendix-D). Further, data in the table also revealed that 64 percent of the respondents had more than 18 years of educational qualification. Only 3.2 percent had 16 years of education.

Table 5.2
Designation and Educational Qualification of the Respondents

Designation	Frequency	Percentage	Education	Frequency	Percentage
Professor	24	9.5	16 Years	08	3.2
Associate Professor	16	6.3	18 Years	83	32.8
Assistant Professor	134	53.0	Above 18 Years	162	64.0
Lecturer	69	27.3	Total	253	100.0
Lecturer/ Research Associate	10	4.0			
Total	253	100.0			

Table 5.3 depicts the age, experience, and monthly income of the respondents. The primary data reveals that the age of the respondents was ranging from 24 to 57 years with a mean of 36.18 years. Further, the teaching experience of the respondents was ranging from one year to 30 years in the academic field with a mean of 8.28 years. Moreover, the

monthly income of the respondents was ranging from 45000 to 245000 Pakistani rupees with a mean of PKR. 119901.19.

Table 5.3

Distribution of the Respondents by Their Age, Experience and Monthly Income

Variables	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Age (Years)	253	24	57	36.18	6.354	40.380
Teaching experience (Years)	253	1	30	8.28	6.212	38.583
Monthly income (PKR)	253	45000	245000	119901.19	40198.541	1615922736.684

5.3 Household Determinants of Students' Academic Performance

The household determinant of gender differentials in academic performance in higher education was divided into three different parts; a) students' home background (favorable socialization), b) socio-economic status of the students' family and c) parental involvement (favorable to females).

5.3.1 Student's Home Background

The statistics in Table 5.4 indicated teachers' responses toward the role of students' home background on their academic performance in higher education. Data showed that 47.8 percent of the respondents agreed and 19.4 percent slightly agreed that males' misbehavior was often tolerated by their families. Only 03.6 percent strongly disagreed to the issue of tolerance of males' misbehavior by their families. The mean value was 4.5. The results supported the statement that families socialized males differently than females. This gendered socialization continues in their later lives.

The table also described that 38.7 percent and 18.2 of the respondents agreed and strongly agreed respectively with the statement that females expected to comply with familial authority. Contrary to it, only 0.4 percent of the respondents strongly disagreed regarding females' expectations to comply with familial authority. The argument also proved by the mean value (4.71) of the statement.

Table 5.4

Teachers' Perception towards the Role of Student's Home Background

Strongly Agree = SA, Agree = A, Slightly Agree = SLA, Slightly Disagree = SLD, Disagree = D, Strongly Disagree = SD

S. N.	Statements	SA	A	SLA	SLD	D	SD	Mean
		f(%)	*f*(%)	*f*(%)	*f*(%)	*f*(%)	*f*(%)	
4.1	Males misbehavior is often tolerated by family	42 (16.6)	121 (47.8)	49 (19.4)	12 (04.7)	20 (07.9)	09 (03.6)	4.50
4.2	Females are expected to comply with familial authority	46 (18.2)	98 (38.7)	68 (26.9)	21 (08.3)	19 (07.5)	01 (00.4)	4.71
4.3	Biased gender socialization differences start from home	72 (28.5)	91 (36.0)	57 (22.5)	17 (06.7)	09 (03.6)	07 (02.8)	4.51
4.4	Females tend to assume favorable gender roles	43 (17.0)	89 (35.2)	74 (29.2)	32 (12.6)	11 (04.3)	04 (01.6)	4.43
4.5	Obedience in the family is desirable for females not males	35 (13.8)	69 (27.3)	52 (20.6)	35 (13.8)	39 (15.4)	23 (09.1)	3.83
4.6	Small deviances at home are tolerated for males not females	30 (11.9)	90 (35.6)	69 (27.3)	30 (11.9)	28 (11.1)	06 (02.4)	4.18

Primary data in Table 5.4 indicated that 36.0 percent of the respondents agreed and 28.5 percent of the respondents strongly agreed that gendered socialization started from the home and continues later on. However, it reported that only 2.8 and 3.6 percent of the respondents strongly disagreed and disagreed respectively to the statement that biased socialization differences start from home. The mean value (4.51) also supported the claim that gendered socialization started at students' homes.

Tabulated data also presented that 35.2 percent of the respondents agreed and 29.2 percent slightly agreed with the assumption that females tended to assume favorable gender roles. In contrast, 17.0 percent of the respondents strongly agreed and only 1.6 percent strongly disagreed with the statement that females tended to assume favorable gender roles. The calculated mean value was 4.43 which supported that favorable gender roles assumed by females.

Analysis of the data showed that 27.3 percent of the respondents agreed and 20.6 percent of the respondents slightly agreed that obedience in the family was desirable for females not for males. An almost, a similar proportion had been identified in terms of disagree and strongly agree regarding the statement. On the other hand, only 9.1 percent of the respondents strongly disagreed that obedience in the family is only desirable for females. In this respect, mean value (3.83) also supported the statement that obedience to family authority was desired form females only.

Moreover, in terms of the statement that small deviances at home are tolerated for males, not for females, data analysis unpacked that 35.6 percent and 27.3 percent of the respondents agreed and slightly agreed respectively. Further, the same results were reported about disagreed and strongly agreed regarding the statement. The statistics in the table indicated that only 2.4 percent of the respondents responded that they were strongly disagreed that small deviances at home were tolerated for males, not for females. These results were also supported by the mean value (4.18) of the statement.

5.3.2 Socio-economic Status of the Students' Families

The figures in Table 5.5 indicated teachers' responses toward the role of socio-economic status of students' families on their academic performances in higher education. Data in the

table showed that 36.8 percent of the teachers agreed and 26.9 percent slightly agreed that social status of family matters in students' academic performance. Similarly, 20.2 percent strongly agreed and only 2.4 percent of them strongly disagreed that the social status of the family contributed towards the academic performance of the students. These results were also supported by the mean value (4.49) that the social status of the family was a factor of academic performance.

Table 5.5
Teachers' Perception of the Role of Student's Socio-Economic Status

S. N.	Statements	SA	A	SLA	SLD	D	SD	Mean
		f(%)	*f*(%)	*f*(%)	*f*(%)	*f*(%)	*f*(%)	
5.1	Social status of family matters in students' performance	51 (20.2)	93 (36.8)	68 (26.9)	16 (06.3)	19 (07.5)	06 (02.4)	4.49
5.2	Females who reach higher education might belong to families with higher income	31 (12.3)	58 (22.9)	59 (23.3)	56 (22.1)	39 (15.4)	10 (04.0)	3.83
5.3	Females who reach higher education might belong to families with higher wealth	36 (14.2)	50 (19.8)	56 (22.1)	54 (21.3)	45 (17.8)	12 (04.7)	3.77
5.4	Females who reach higher education might belong to families with higher parental education	22 (08.7)	84 (33.2)	55 (21.7)	47 (18.6)	33 (13.0)	12 (04.7)	3.92
5.5	Females who reach higher education might belong to families with occupational prestige	19 (07.5)	82 (32.4)	63 (24.9)	45 (17.8)	40 (15.8)	04 (01.6)	3.93
5.6	Males who reach higher education might belong to families with economic pressure	39 (15.4)	64 (25.3)	57 (22.5)	47 (18.6)	41 (16.2)	05 (02.0)	3.99

The statistics indicated that 22.9 percent of the respondents agreed that females who reached higher education might belong to families with higher income groups. Similarly, 23.3 percent slightly agreed and 22.1 percent disagreed that females belong to higher-income families who got higher education. Here, only 4.0 percent respondents were strongly disagreed regarding female students' family economic background. The calculated mean value was 3.83 supporting favorably to the statement.

Another statement reveals that a similar proportion of the respondents' response slightly agreed and slightly disagreed that females who reached higher education might belong to families with higher wealth. However, 17.8 percent of respondents disagreed and 4.7 percent of them strongly disagreed that the female of wealthy family background got higher education. Further, 3.77 mean value also supported females' higher wealthy family backgrounds who were studying in higher education.

Data also presented that 33.2 percent of the teachers agreed and 21.7 percent slightly agreed that parental education matters for female students who reach higher education. Data also indicated that 16.6 percent slightly disagreed and 4.7 percent of the respondents strongly disagreed that female students who reached higher education might belong to families with higher parental educational qualifications. Here, it is pertinent to mention that the calculated mean value 3.92 also supported the parental education of female students who were studying in higher education.

The table also showed that 32.4 percent of the respondents agreed and 24.9 percent slightly agreed that female students who reached higher education might belong to families with occupation prestige. Similarly, data also presented an equal proportion of the respondents who slightly disagreed (17.8 %) and disagreed (15.8 %) that occupational

prestige of the family matters for female students' academic performance who reached higher education. Further, results were also supported with a mean value of 3.93 towards the occupational prestige of female students.

Frequency distribution in the table revealed that 25.3 percent of the respondents agreed and 22.5 percent slightly agreed that male students who reached higher education might belong to families with economic pressure. However, 18.6 percent of the teachers slightly disagreed and 2 percent strongly disagreed that male students facing economic pressure on their families reached to study at a higher educational institution. These percentages were also confirmed by the calculated mean value of the statement that was 3.99.

5.3.3 Parental Involvement

The statistics in Table 5.6 indicated teachers' responses toward the role of parental involvement in students' academic performance in higher education. Data revealed that 36.4 percent of the respondents disagreed and 19.0 percent slightly disagreed that parents least bothered regarding the educational performance of males. Whereas, only 6.7 percent strongly agreed that parents were not conscious of the educational results of their male children as compared to females. The mean value was 3.06. The results supported the statement that parents least bother in the context of males' educational performance.

The table also described that 34.0 percent and 22.5 of the respondents agreed and strongly agreed respectively with the statement that parents limit the activities of females outside the household. On the other hand, only 2.0 percent of the respondents strongly disagreed regarding the restriction of parents on female activities outside the four-boundary wall of the house. The argument was also proved by the mean value (4.46) of the statement.

Table 5.6
Teachers' Perception of the Role of Parental Involvement

S. N.	Statements	SA	A	SLA	SLD	D	SD	Mean
		f(%)	*f*(%)	*f*(%)	*f*(%)	*f*(%)	*f*(%)	
6.1	Parents least bother the educational performance of males	17 (06.7)	33 (13.0)	39 (15.4)	48 (19.0)	92 (36.4)	24 (09.5)	3.06
6.2	Parents limit the activities of females outside the household	57 (22.5)	86 (34.0)	56 (22.1)	29 (11.5)	20 (07.9)	05 (02.0)	4.46
6.3	Parents tend to monitor the educational activities of females	31 (12.3)	91 (36.0)	72 (28.5)	42 (16.6)	13 (05.1)	04 (01.6)	4.29
6.4	Parents construct a higher education of females as a worthy endeavor	25 (09.9)	108 (42.7)	79 (31.2)	25 (09.9)	13 (05.1)	03 (01.2)	4.39
6.5	Parents prefer males to become earning member of the family hence end up pressurizing them	64 (25.3)	120 (47.4)	45 (17.8)	15 (05.9)	06 (02.4)	03 (01.2)	4.84
6.6	Parental control of females end up being an asset for them	15 (05.9)	96 (37.9)	85 (33.6)	41 (16.2)	13 (05.1)	03 (01.2)	4.20

Primary data in Table 5.6 indicated that 36.0 percent of the respondents agreed and 28.5 percent of the respondents slightly agreed that parents tend to monitor the educational activities of females. Conversely, it reported that only 5.1 and 1.6 percent of the respondents disagreed and strongly disagreed respectively to the statement that educational assignments and other related activities of females are monitored by their parents. The mean value (4.29) also supported the claim that the father and mother of female students tend to observe their educational accomplishments.

Tabulated data also presented that 42.7 percent of the respondents agreed whereas 31.2 percent of the respondents slightly agreed that parents construct the higher education of females as a worthy endeavor. In contrast, 9.9 percent of the respondents strongly agreed and 1.2 percent strongly disagreed with the statement that the father and mother of female students fashioned higher education as a worthy endeavor. The calculated mean value was 4.39 which supported that higher education was worthy endeavor constructed by female students' parents.

Analysis of the data described that 47.4 percent of the respondents agreed and 25.3 percent of the respondents strongly agreed that parents prefer males to become earning members of the family hence end up pressurizing them. However, similar proportion had been identified in terms of disagreed (2.4 %) and strongly disagreed (1.2 %) regarding the statement. On the other hand, only 5.9 percent of the respondents slightly disagreed that the father and mother of male students preferred them to become earning members of their family which pressurized male students. In this respect, the mean value (4.84) also supported the statement.

Further, in terms of the statement that parental control of females ends up being an asset for them, data analysis reported that 37.9 percent and 33.6 percent of the respondents agreed and slightly agreed respectively. Whereas, the same results were reported about disagreed (5.1 %) and strongly agreed (5.9) regarding the statement. The statistics in the table indicated that only 1.2 percent of the respondents responded strongly disagreed. These results were also supported by the mean value 4.20 of the statement.

5.4 Role of Social Media in Students' Academic Performance

The data in Table 5.7 points out teachers' responses toward the role of social media on students' academic performance in higher education. In terms of 'social media activities of males and females differ significantly. The highest response was 39.9 percent in the category of 'agree' whereas the lowest response in the category of 'strongly disagree was 1.2 percent calculated. The percentage of teachers who responded in favour of 'strongly agree' was 17.4 percent in contrast to 39.9 percent 'agree' responses. The mean value (4.44) of the data also supported the claim that the exposure of social media among male and female students was significantly different.

The analysis of the data about statement 'social media access is more readily provided to males than females' indicated that the highest number of the respondents favoured 'agree' was 26.1 percent as compared with the lowest respondents who favoured strongly disagree was 3.2 percent. On the other hand, 22.5 percent and 21.7 percent of respondents opted 'disagree and 'slightly agree' respectively. The mean value (3.81) of the data analysis supported the statement that male students had greater access to social media than female students.

The analysis of data of the third statement reveals that the highest number (33.6 %) of the respondents opted 'agree' whereas the lowest number (2.0 %) of the respondents opted strongly disagreed. In contrast to it, 32.8 percent and 18.2 percent of teachers responded 'slightly agree' and 'slightly disagree' respectively that female students tended to subdue the use of social media to their studies e.g. notes exchange. The results of the statistical analysis also supported the claim as the mean value was 4.11.

Table 5.7
Teachers' Perception of the Role of Social Media

S. N.	Statements	SA *f*(%)	A *f*(%)	SLA *f*(%)	SLD *f*(%)	D *f*(%)	SD *f*(%)	Mean
7.1	Social media activities of males and females differ significantly	44 (17.4)	101 (39.9)	59 (23.3)	23 (09.1)	23 (09.1)	03 (01.2)	4.44
7.2	Social media access is more readily provided to males than females	30 (11.9)	66 (26.1)	55 (21.7)	37 (14.6)	57 (22.5)	08 (03.2)	3.81
7.3	Females tend to subdue the use of social media to their studies (e.g. notes exchange)	18 (07.1)	85 (33.6)	83 (32.8)	46 (18.2)	16 (06.3)	05 (02.0)	4.11
7.4	Social media engages males in nonproductive wastage of time	68 (26.9)	94 (37.2)	53 (20.9)	23 (09.1)	14 (05.5)	01 (00.4)	4.70
7.5	Females are more likely to join educational groups and pages on social media	22 (08.7)	62 (24.5)	78 (30.8)	41 (16.2)	38 (15.0)	12 (04.7)	3.81
7.6	Males like to spend more time on entertainment than females	62 (24.5)	88 (34.8)	37 (14.6)	24 (09.5)	36 (14.2)	06 (02.4)	4.39

In terms of the statement 'social media engages males in nonproductive wastage of time', the data analysis reflects that 26.9 percent and 37.2 percent of respondents opted strongly agree and agree as compared with 0.4 percent and 5.5 percent strongly disagree and disagree respectively. However, 20.9 percent of teachers responded slightly agree. The mean value of the data was 4.70 that endorsed the claim made in the statement that usage of social media by male students' nonproductive and wastage of time.

The analysis of data regarding teachers' perception of female students more likely to join educational groups and pages on social media. 4.7 percent and 15.0 percent teachers

strongly disagreed and disagreed respectively whereas 24.5 percent and 8.7 percent of responses were found in terms of agreeing and strongly agree. Therefore, most of the respondents were found in favour of the statement. The mean value of the data was 3.81 that was also evidence in favour of the imbued claim.

The statement that males liked to spend more time on entertainment than females proved and overall, 73.9 percent of the teachers were found in favour of different terms of the agreement to the statement. Contrarily, 26.1 percent of respondents opted terms given in favour of disagreement with the claim. The highest number (34.8 %) of respondents responded 'agree' as compared with 2.4 percent of respondents who strongly disagreed. The mean value (4.39) of the data also confirmed the results.

5.5 Role of Peer Group in Students' Academic Performance

The statistics in Table 5.8 indicated teachers' responses toward the role of peer group on students' academic performance in higher education. Data revealed that half (50.6 %) of the respondents agreed and 18.2 percent slightly agreed that female students preferred to have small groups in the university. Whereas, only 0.8 percent strongly disagreed regarding the preference of small social groups in university by female students. The mean value was 4.64. The results supported the statement that female students had their priority to have small groups.

The table also described that 42.7 percent and 23.3 percent of the respondents agreed and slightly agreed respectively with the statement that male students prefer to have a large group in university. In opposition, only 4.3 percent of the respondents disagreed. The argument was also proved by the mean value (4.52) of the statement.

Table 5.8
Teachers' Perception of the Role of Peer Group

S. N.	Statements	SA	A	SLA	SLD	D	SD	Mean
		f(%)	*f*(%)	*f*(%)	*f*(%)	*f*(%)	*f*(%)	
8.1	Female students prefer to have in small groups in university	42 (16.6)	128 (50.6)	46 (18.2)	26 (10.3)	09 (03.6)	02 (00.8)	4.64
8.2	Male students prefer to have a large group in the university	50 (19.8)	108 (42.7)	59 (23.3)	23 (09.1)	11 (04.3)	02 (00.8)	4.52
8.3	Male students spent more time with peers than females	35 (13.8)	100 (39.5)	77 (30.4)	25 (09.9)	10 (04.0)	06 (02.4)	4.42
8.4	Male students prefer outdoor activities after evening	72 (28.5)	113 (44.7)	42 (16.6)	20 (07.9)	04 (01.6)	02 (00.8)	4.88
8.5	Female students are bound to live in boundary wall after evening	69 (27.3)	109 (43.1)	48 (19.0)	16 (06.3)	07 (02.8)	04 (01.6)	4.81
8.6	Female students are more likely to join study groups than males	35 (13.8)	88 (34.8)	71 (28.1)	27 (10.7)	20 (07.9)	12 (04.7)	4.22

Primary data in Table 5.8 indicated that 39.5 percent of the respondents agreed and 30.4 percent slightly agreed that male students spent more time with peers than females. Conversely, it was reported that only 2.4 and 4.0 percent of the respondents strongly disagreed and disagreed respectively to the statement. The mean value (4.42) also supported the claim that male students at university spent more time with peers than females.

Tabulated data also presented that 44.7 percent of the respondents agreed whereas 28.5 percent of the respondents strongly agreed that male students prefer outdoor activities

after evening. In contrast, 1.6 percent of the respondents disagreed and only 0.8 percent strongly disagreed with the statement that outdoor activities of male students after the evening were preferred than female students. The calculated mean value was 4.88 which also supported that male student performed more outdoor activities after evening as compared to siting in rooms.

Analysis of the data described that 43.1 percent of the respondents agreed and 27.3 percent of the respondents strongly agreed that female students were bound to live in boundary walls after evening. Moreover, different proportions had been identified in terms of disagree (2.8 %) and slightly agree (19.0 %) regarding the statement. On the other hand, only 1.6 percent of the respondents strongly disagreed that female students were bound to live, after evening, in boundary walls. In this regard, the mean value (4.81) also supported the statement.

Moreover, in terms of the statement that female students were more likely to join study groups than males. Data analysis reported that 34.8 percent and 28.1 percent of the respondents agreed and slightly agreed respectively. Further, different results were reported about disagreed (7.9 %) and strongly agreed (13.8) regarding the statement. The statistics in the table indicated that only 4.7 percent of the respondents responded strongly disagreed that female students prefer to join study groups in the university more than male students. These results were also supported by the mean value 4.22 of the statement.

5.6 Role of Social Construction of Educational Self

The data in Table 5.9 highlights teachers' response toward the role of the social construction of educational self on students' academic performance in higher education. In terms of 'females are socially bound to outperform in education' the highest response was 33.6

percent in the category of 'agree' whereas the lowest response in the category of 'strongly disagree' that was 2.0 percent. The percentage of teachers who responded in favour of 'strongly agree' was 12.3 percent in contrast to 25.7 percent 'agree' responses. The mean value (4.13) of the data also supported the claim that the female students were socially bound to outclass in education.

The analysis of data of the statement 'females are trying to compete with role model females in media industry' indicated that the highest number of the respondents favoured 'agree' was (33.6 %) as compared with the lowest respondents who favoured strongly disagree which was 2.8 percent. On the other hand, 27.7 percent and 22.5 percent of respondents opted 'slightly agree and 'slightly disagree' respectively. The mean value (4.11) of the data analysis supported the statement that female students were trying to contest with role model females in the mass media industry.

The data analysis of the third statement reveals that the highest numbers (23.7 %) of the respondents opted 'slightly agree' whereas the lowest number (4.7 %) of the respondents strongly disagreed to the claim. In contrast to it, 22.9 percent and 19.0 percent of teachers responded 'agree' and 'disagree' respectively to the statement that female students were taught that they were less intelligent than their counterpart male students. The results of the statistical analysis also support the claim as the mean value was 3.61.

In terms of the statement 'feminist discourses tend to promote education as a heroic effort of females', the data analysis revealed that 10.3 percent and 26.1 percent of respondents opted strongly agree and agree as compared with 02.0 percent and 11.5 percent strongly disagree and disagree respectively. However, 36.4 percent of teachers responded slightly agree. The mean value of the data was 4.04 that endorsed the claim made in the

statement about the feminist discourses tended to encourage education as an epic struggle of females.

Table 5.9
Teachers' Perception of the Role of Social Construction of Educational Self

S. N.	Statements	SA	A	SLA	SLD	D	SD	Mean
		f (%)	*f* (%)	*f* (%)	*f* (%)	*f* (%)	*f* (%)	
9.1	Female are socially bound to outperform in education	31 (12.3)	85 (33.6)	65 (25.7)	34 (13.4)	33 (13.0)	05 (02.0)	4.13
9.2	Females are trying to compete with role model females in the media industry	22 (08.7)	85 (33.6)	70 (27.7)	57 (22.5)	12 (04.7)	07 (02.8)	4.11
9.3	Females are taught that they are less intelligent than their counterpart	17 (06.7)	58 (22.9)	60 (23.7)	58 (22.9)	48 (19.0)	12 (04.7)	3.61
9.4	Feminist discourses tend to promote education as a heroic effort of females	26 (10.3)	66 (26.1)	92 (36.4)	35 (13.8)	29 (11.5)	05 (02.0)	4.04
9.5	Females tend to occupy power positions in educational institution and politics	25 (09.9)	90 (35.6)	63 (24.9)	40 (15.8)	26 (10.3)	09 (03.6)	4.08
9.6	Religious ideology instigates a need for educated mothers	41 (16.2)	114 (45.1)	59 (23.3)	27 (10.7)	08 (03.2)	04 (01.6)	4.56

The analysis of the data regarding teachers' perception of females tended to occupy power positions in educational institutions and politics revealed that 3.6 percent and 10.3 percent of teachers strongly disagreed and disagreed respectively whereas 35.6 percent and 9.9 percent of responses were found in terms of agree and strongly agree. Therefore, most of the respondents were found in favour of the statement. The mean value of the data was 4.08 that was also an indication in favour of the imbued claim.

The statement that religious ideology instigated a need for educated mothers was proved as 84.6 percent of the teachers were found in favour of different terms of the agreement to the statement. Contrarily, 15.5 percent of respondents opted terms given in favour of disagreement with the claim. The highest number (45.1 %) of respondents responded 'agree' as compared with 1.6 percent of respondents who strongly disagreed. The mean value (4.56) of the data also confirmed the results.

5.7 Educational Determinants of Students' Academic Performance

The educational determinant of gender differentials in academic performance in higher education was divided into four different parts a) educational background of the students, b) student-teacher interaction, c) teachers' competency and gender, and d) classroom environment.

5.7.1 Role of Educational Background of the Students

The statistics in Table 5.10 indicated teachers' response toward the role of the educational background of the students on their academic performance in higher education. Data revealed that 22.9 percent of the respondents disagreed and 23.7 percent slightly agreed that males had a poor educational background. Only 4.3 percent strongly agreed regarding male students had a poor educational background in the context of the previous schooling. The mean value was 3.46. The results supported the statement that male students had poor schooling backgrounds who enter higher education.

The table also described that 39.9 percent and 30.8 percent of the respondents agreed and slightly agreed respectively with the statement that females were more passionate to excel from the very start of educational career. Contrary to it, only 2.4 percent

of the respondents strongly disagreed regarding the statement. The argument was also proved by the mean value (44.37) of the statement.

Table 5.10
Teachers' Perception of the Role of Educational Background of the Student

S.N.	Statement	SA	A	SLA	SLD	D	SD	Mean
		f(%)	*f*(%)	*f*(%)	*f*(%)	*f*(%)	*f*(%)	
10.1	Males have a poor education background	11 (04.3)	57 (22.5)	60 (23.7)	51 (20.2)	58 (22.9)	16 (06.3)	3.46
10.2	Females are more passionate to excel from the very start of educational career	29 (11.5)	101 (39.9)	78 (30.8)	31 (12.3)	08 (03.2)	06 (02.4)	4.37
10.3	Females are more inclined to do their homework from the very start	53 (20.9)	110 (43.5)	61 (24.3)	19 (07.5)	05 (02.0)	05 (02.0)	4.68
10.4	Females are more serious about teachers' feedback about their works from the very start of educational career	59 (23.3)	103 (40.7)	61 (24.1)	23 (09.1)	02 (00.8)	05 (02.0)	4.71
10.5	Males are less concerned about their education from the very start of educational career	21 (08.3)	90 (35.6)	69 (27.3)	44 (17.4)	21 (08.3)	08 (03.2)	4.09
10.6	Males tend to be serious about education at the later stages of educational career	37 (14.6)	104 (41.1)	70 (27.7)	25 (09.9)	11 (04.3)	06 (02.4)	4.45

Primary data in Table 5.10 indicated that 43.5 percent of the respondents agreed while 24.3 percent slightly agreed that females were more inclined to do their homework from the very start. However, it was reported that only 2.0 percent of the respondents strongly disagreed and disagreed respectively to the statement. The mean value (4.68) also

supported the claim that female students highly performed their coursework tasks from an earlier career.

Tabulated data also presented that 40.7 percent of the respondents agreed whereas 24.1 percent slightly agreed that females were more serious about teachers' feedback about their works from the very start of educational career. In contrast, 23.3 percent of the respondents strongly agreed and only 2.0 percent strongly disagreed to the statement that female students performed feedback tasks more seriously. The calculated mean value was 4.71 that also supported that female students were more serious regarding teachers' feedback about their study.

Analysis of the data described that 35.6 percent of the respondents agreed and 27.3 percent slightly agreed that males were less concerned about their education from the very start of educational career. Moreover, a similar proportion had been identified in terms of disagreed and strongly agreed regarding the statement. On the other hand, only 3.2 percent strongly disagreed that male students were less concerned regarding their educational career. In this respect, the mean value (4.09) also supported the statement.

Moreover, in terms of the statement that males tended to be serious about education at the later stages of educational career, data analysis reported that 41.1 percent and 27.7 percent of the respondents agreed and slightly agreed respectively. Further, different results were reported about disagree (4.3 %) and strongly agree (14.6 %) regarding the statement. The statistics in the table indicated that only 2.4 percent of the respondents responded that they were strongly disagreed that male students were motivated for the educational future at the later stages of their education. These outcomes were also supported by the mean value 4.45 of the statement.

5.7.2 Role of Student-Teacher Interaction

The information in Table 5.11 specified teachers' response toward the role of student-teacher interaction on their academic performance in higher education. In terms of 'teachers interact differently with female and male students; the highest response was 26.9 percent in the category of 'slightly agree' whereas the lowest response in terms of 'disagree that was 5.5 percent calculated. The percentage of teachers who responded in favour of 'strongly agree' was 23.5 percent in contrast to 25.3 percent 'agree' responses. The mean value (4.27) of the data also supported the claim that the teachers interact differently with the female and male students.

The analysis of the data of the statement 'males tend to display indifference towards their interaction with their teachers' indicated that the highest number of the respondents favoured 'slightly agree, that is 32.8 percent, as compared with the lowest respondents who favoured strongly disagree, 1.2 percent. On the other hand, 30.4 percent and 20.67 percent of respondents opted 'agree and 'slightly disagree' respectively. The mean value (4.09) of the data analysis supported the statement that male students have a greater tendency to be indifferent as regards their interaction with their teachers.

The analysis of data of the third statement reveals that the highest number (40.3 %) of the respondents opted 'slightly agree' whereas the least respondents strongly disagreed with the claim. In contrast to it, 26.5 percent and 9.5 percent of teachers responded 'agree' and 'disagree' respectively to the statement that male students did not interplay actively in the class participation as compared with the female students. The results of the statistical analysis also support the claim as the mean value was 3.99.

In terms of the statement 'demeanors of females reflects more obedience than males', the data analysis reflects that 13.0 percent and 32.8 percent of respondents opted strongly agree and agree as compared with 02.0 percent and 12.6 percent strongly disagree and disagree respectively. However, 27.3 percent of teachers responded slightly agree. The mean value of the data was 4.15 percent that endorsed the claim made in the statement about the obedience of male and female students.

Table 5.11
Teachers' Perception of the Role of Student-Teacher Interaction

S.N.	Statement	SA	A	SLA	SLD	D	SD	Mean
		f(%)	*f*(%)	*f*(%)	*f*(%)	*f*(%)	*f*(%)	
11.1	Teachers interact differently with female and male students	60 (23.7)	64 (25.3)	68 (26.9)	27 (10.7)	14 (05.5)	20 (07.9)	4.27
11.2	Males tend to display indifference towards their interaction with their teachers	21 (08.3)	77 (30.4)	83 (32.8)	52 (20.6)	17 (06.7)	03 (01.2)	4.09
11.3	Males tend to underplay the role of class participation	14 (05.5)	67 (26.5)	102 (40.3)	44 (17.4)	24 (09.5)	02 (00.8)	3.99
11.4	Demeanors of females reflect more obedient than males	33 (13.0)	83 (32.8)	69 (27.3)	31 (12.3)	32 (12.6)	05 (02.0)	4.15
11.5	Teachers are more suspicious about males' discipline	34 (13.4)	91 (36.0)	72 (28.5)	28 (11.1)	20 (07.9)	08 (03.2)	4.26
11.6	Females are more active than males in interacting with teachers	46 (18.2)	73 (28.9)	61 (24.1)	40 (15.8)	26 (10.3)	07 (02.8)	4.21

The analysis of data of the third statement reveals that the highest number (40.3 %) of the respondents opted 'slightly agree' whereas the least respondents strongly disagreed

with the claim. In contrast to it, 26.5 percent and 9.5 percent of teachers responded 'agree' and 'disagree' respectively to the statement that male students did not interplay actively in the class participation as compared with the female students. The results of the statistical analysis also support the claim as the mean value was 3.99.

In terms of the statement 'demeanors of females reflects more obedience than males', the data analysis reflects that 13.0 percent and 32.8 percent of respondents opted strongly agree and agree as compared with 02.0 percent and 12.6 percent strongly disagree and disagree respectively. However, 27.3 percent of teachers responded slightly agree. The mean value of the data was 4.15 percent that endorsed the claim made in the statement about the obedience of male and female students.

The analysis of the data regarding teachers' perceptions of male students' discipline displays that 3.2 percent and 7.9 percent of teachers strongly disagreed and disagreed respectively whereas 36.0 percent and 13.4 percent of responses were found in terms of agree and strongly agree. Therefore, most of the respondents were found in favour of the statement. The mean value of the data was 4.26 that was also evidence in favour of the imbued claim.

The statement that females were more active than males in interacting with teachers proved and overall, 71.2 percent of the teachers were found in favour of different terms of the agreement to the statement. Contrarily, 28.8 percent of respondents opted the terms given in favour of disagreement with the claim. The highest number (28.9 %) of respondents responded 'agree' as compared with 2.8 percent of respondents who strongly disagreed. The mean value (4.21) of the data also confirmed the results.

5.7.3 Role of Teachers' Competency and Gender

The statistics in Table 5.12 indicated the role of teachers' competency and gender on students' academic performance in higher education. Data revealed that 30.8 percent of the respondents agreed and 25.3 percent slightly agreed that the gender of the teacher influenced students' performance differently. Only 2.0 percent strongly disagreed regarding the performance of students was inspirited by the gender of the teacher differently. The mean value was 4.17. The results supported the statement that male and female teachers influenced their students' performance differently.

The table also described that 29.2 percent and 21.7 of the respondents slightly agreed and agreed respectively with the statement that male teachers consider males a challenge to their authority. Contrary to it, 5.1 percent of the respondents strongly disagreed that the authority of male teachers considered a challenge by male students in higher education. The argument was also proved by the mean value (3.65) of the statement.

Primary data in Table 5.12 indicated that 32.8 percent of the respondents slightly agreed and 22.1 percent of the respondents slightly disagreed that female teachers considered males a challenge to their authority. However, it was reported that only 4.3 and 13.4 percent of the respondents strongly disagreed and disagreed respectively to the statement that male students in class challenged the authority of female teachers. The mean value (3.74) also supported.

Tabulated data also presented that 38.7 percent of the respondents agreed and 27.7 percent of the respondents slightly agreed that teachers of both genders considered females more cooperative whereas 6.3 percent of the respondents disagreed and 5.1 percent strongly disagreed with the statement. The calculated mean value was 4.38 that also

supported that male and female teacher at university considered female students more cooperative.

Table 5.12
Teachers' Perception of the Role of Teachers' Competency and Gender

S.N.	Statement	SA	A	SLA	SLD	D	SD	Mean
		f(%)	*f*(%)	*f*(%)	*f*(%)	*f*(%)	*f*(%)	
12.1	Gender of teacher influences students' performance differently	41 (16.2)	78 (30.8)	64 (25.3)	28 (11.1)	37 (14.6)	05 (02.0)	4.17
12.2	Male teachers consider males a challenge to their authority	18 (07.1)	55 (21.7)	74 (29.2)	46 (18.2)	47 (18.6)	13 (05.1)	3.65
12.3	Female teachers consider males a challenge to their authority	21 (08.3)	48 (19.0)	83 (32.8)	56 (22.1)	34 (13.4)	11 (04.3)	3.74
12.4	Teachers of both genders consider females more cooperative	35 (13.8)	98 (38.7)	70 (27.7)	31 (12.3)	16 (06.3)	03 (01.2)	4.38
12.5	Males are the obvious choice of teachers' blame	30 (11.9)	54 (21.3)	61 (24.1)	58 (22.9)	37 (14.6)	13 (05.1)	3.77
12.6	Frequent questions of males challenge teachers' competence	17 (06.7)	58 (22.9)	67 (26.5)	60 (23.7)	41 (16.2)	10 (04.0)	3.68
12.7	Frequent questions of females endorsee teachers' competence	24 (09.5)	67 (26.5)	61 (24.1)	60 (23.7)	32 (12.6)	09 (03.6)	3.86

Analysis of the data described that 24.1 percent of the respondents slightly agreed and 22.9 percent slightly disagreed that males were the obvious choice of teachers' blame. Moreover, similar proportions had been identified in terms of disagree (14.6 %) and strongly agree (11.9) regarding the statement. On the other hand, only 5.1 percent of the

respondents strongly disagreed that teachers mostly blamed male students. In this respect, the mean value (3.77) also supported the statement.

Moreover, in terms of the statement that frequent questions of males challenge teachers' competence, data analysis reported 26.5 percent and 16.2 percent of the respondents agreed (22.9 %) and slightly disagreed (23.7) respectively. Further, the same results were reported about disagreed and strongly agreed regarding the statement. The statistics in the table indicated that only 4.0 percent of the respondents responded that they strongly disagree that frequent questions asked by male students challenged teachers' competence. The results were also supported by the mean value 3.68 of the statement.

Further, concerning female students' questions, 26.5 percent of the teachers agreed and 24.1 percent slightly agreed that these questions endorsed teachers' competence. Conversely, 12.6 percent disagreed and only 3.6 percent strongly disagreed that female students raised questions to endorse teachers' competence. These results were also proved by the mean value of the statement (3.86).

5.7.4 Role of Classroom Environment

The data in Table 5.13 directed teachers' responses toward the role of the classroom environment on students' academic performance in higher education. In terms of 'classrooms are dominated by female strength', the highest response was 30.8 percent in the category of 'strongly agree' whereas the lowest response was in the category of 'strongly disagree that was 1.6 percent. The percentage of teachers who responded in favour of 'agree' was 24.5 percent in contrast to 17.8 percent 'slightly agree' responses. The mean value (4.46) of the data also supported the claim that the classrooms were dominated by female students' strengths.

The analysis of the data of the statement 'females are considered more punctual' indicated that the highest number of the respondents who favoured 'agree' was 35.6 percent as compared with the lowest respondents who favoured strongly disagree was 1.2 percent. On the other hand, 24.9 percent and 27.3 percent of respondents opted 'strongly agree and 'slightly agree' respectively. The mean value (4.67) of the data analysis supported the statement that female students had a greater tendency to be more punctual.

Table 5.13
Teachers' Perception of the Role of Classroom Environment

S.N.	Statement	SA	A	SLA	SLD	D	SD	Mean
		f(%)	*f*(%)	*f*(%)	*f*(%)	*f*(%)	*f*(%)	
13.1	Classrooms are dominated by female strength	78 (30.8)	62 (24.5)	45 (17.8)	38 (15.0)	26 (10.3)	04 (01.6)	4.46
13.2	Females are considered more punctual	63 (24.9)	90 (35.6)	69 (27.3)	19 (07.5)	09 (03.6)	03 (01.2)	4.67
13.3	Females are considered having higher moral standards	48 (19.0)	72 (28.5)	78 (30.8)	28 (11.1)	21 (08.3)	06 (02.4)	4.32
13.4	Males often play roles of backbenchers	46 (18.2)	68 (26.9)	71 (28.1)	35 (13.8)	26 (10.3)	07 (02.8)	4.21
13.5	Deviance from classroom norms is expected from males	34 (13.4)	102 (40.3)	72 (28.5)	25 (09.9)	18 (07.1)	02 (00.8)	4.41
13.6	Females are considered more friendly for a class environment	41 (16.2)	94 (37.2)	78 (30.8)	24 (09.5)	11 (04.3)	05 (02.0)	4.45

The analysis of data of the third statement reveals that the highest number (30.8 %) of the respondents opted 'slightly agree' whereas the lowest number (2.4 %) of the

respondents strongly disagreed with the claim. In contrast to it, 28.5 percent and 8.3 percent of teachers responded 'agree' and 'disagree' respectively to the statement that female students were considered having higher moral standards. The results of the statistical analysis also supported the claim as the mean value was 4.32.

In terms of the statement, 'males often play roles of backbenchers', the data analysis reflects that 18.2 percent and 26.9 percent of respondents opted strongly agree and agree as compared with 2.8 percent and 10.3 percent strongly disagree and disagree respectively. However, 28.1 percent of teachers responded slightly agree. The mean value of the data was 4.21 that endorsed the claim made in the statement.

The analysis of the data regarding teachers' perception of deviance from classroom norms was expected from male students that only 0.8 percent and 7.1 percent of teachers strongly disagreed and disagreed respectively whereas 40.3 percent and 13.4 percent of responses were found in terms of agree and strongly agree. Therefore, most of the recomposes found in favour of the statement. The mean value of the data was 4.41 that was also a confirmation in favour of the imbued assertion.

The statement that females considered friendlier for class environment were proved and as overall, 84.2 percent of the teachers were found in favour of different terms of the agreement to the statement. Contrarily, 15.8 percent of respondents opted terms given in favour of disagreement to the claim. The highest number (37.2 %) of respondents responded 'agree' as compared with 2.0 percent of respondents who strongly disagreed. The mean value (4.45) of the data also confirmed the results.

5.8 Role of Gender-Specific Study Culture in Academic Performance

The statistics in Table 5.14 directed teachers' responses toward the role of gender-specific study culture on students' academic performance in higher education. In terms of 'females spent more time on homework', the highest response was 45.5 percent in the category of 'agree' whereas the lowest response in the category of 'strongly disagree that was calculated 1.2 percent. The percentage of teachers who responded in favour of 'strongly agree' was 26.1 percent in contrast to 20.2 percent 'slightly agree' responses. The mean value (4.84) of the data also supported the claim that female students spent their time more on homework and study than male students.

The analysis of the data of the statement 'males spent more time in outdoor activities' indicated that the highest number of the respondents favoured 'agree', 41.9 percent, as compared with the lowest respondents who favoured strongly disagree was 0.8 percent. Conversely, 30.8 percent and 17.4 percent of respondents opted 'strongly agree and 'slightly agree' respectively. The mean value (4.89) of the data analysis supported the statement that male students had a greater tendency to spend more time in outdoor accomplishments.

The analysis of data of the third statement reveals that the highest number of the respondents (47.4 %) opted 'agree' whereas the lowest number of the respondents (01.6 %) strongly disagreed with the claim. In contrast to it, 13.8 percent and 23.3 percent of teachers responded 'strongly agree' and 'slightly agree' respectively to the statement that females tended to spend more time on searching study material as compared with the male students. The results of the statistical analysis also support the claim as the mean value was 4.52.

In terms of the statement 'males adopt anti-educational masculine identities', the data analysis reflects that 10.3 percent and 32.0 percent of respondents opted strongly agree and agree as compared with 02.0 percent and 7.9 percent strongly disagree and disagree respectively. However, 32.4 percent of teachers responded slightly agree. The mean value of the data was 4.15 that endorsed the claim made in the statement about the adaptation of anti-education male characteristics.

Table 5.14
Teachers' Perception of the Role of Gender-Specific Study Culture

S. N.	Statements	SA	A	SLA	SLD	D	SD	Mean
		f (%)	*f* (%)	*f* (%)	*f* (%)	*f* (%)	*f* (%)	
14.1	Females spent more time on homework	66 (26.1)	115 (45.5)	51 (20.2)	11 (04.3)	07 (02.8)	03 (01.2)	4.84
14.2	Males spent more time on outdoor activities	78 (30.8)	106 (41.9)	44 (17.4)	15 (05.9)	08 (03.2)	02 (00.8)	4.89
14.3	Females tend to spend more time on searching study material	35 (13.8)	120 (47.4)	59 (23.3)	23 (09.1)	12 (04.7)	04 (01.6)	4.52
14.4	Males adopt anti-educational masculine identities	26 (10.3)	81 (32.0)	82 (32.4)	39 (15.4)	20 (07.9)	05 (02.0)	4.15
14.5	Females are more inclined to study group collaborations	25 (09.9)	105 (41.5)	73 (28.9)	29 (11.5)	11 (04.3)	10 (04.0)	4.29
14.6	Females are more concerned about lecture notes	67 (26.5)	117 (46.2)	41 (16.2)	15 (05.9)	06 (02.4)	07 (02.8)	4.80

The analysis of the data regarding teachers' perception of females was more inclined to study group collaborations as 4.0 percent and 4.3 percent teachers strongly

disagreed and disagree respectively whereas 41.5 percent and 28.9 percent of responses were found in terms of agreeing and slightly agree. Therefore, the recomposes were found in favour of the testimonial. The mean value of the data was 4.29 that was also an indication in favour of the imbued assertion.

The statement that females were more concerned about lecture notes was proved and overall, 88.9 percent of the teachers found in favour of different terms of agreement of the statement. Contrarily, 11.1 percent of respondents opted the terms given in favour of disagreement to the claim. The highest number (46.2 %) of the teachers responded 'agree' as compared with 2.4 percent of respondents who disagreed. The mean value (4.80) of the data also confirmed the results.

5.9 Motivational Factors of Students' Academic Performance

Motivational factors of gender differentials in academic performance in higher education were divided into two different parts a) motivation and commitment b) self-fulfilling prophecies.

5.9.1 Role of Motivation and Commitment

The statistics in Table 5.15 indicated teachers' response toward the role of motivation and commitment to students' academic performance in higher education. Data revealed that 42.3 percent of the respondents agreed and 26.1 percent strongly agreed that females were encouraged to perform well as compared with males. Only 0.8 percent strongly disagreed regarding the encouragement of female students to perform well as compared to male students. The mean value was 4.72. The results supported the statement that female students were encouraged to perform well in higher education as compared to male students.

The table also described that 44.7 percent and 20.9 of the respondents agreed and strongly agreed respectively with the statement that females were more committed to their education than males. Contrary to it, only 2.8 percent of the respondents disagreed regarding more commitment of female students to their education than male students. The argument proved by the mean value (4.70) of the statement.

Table 5.15
Teachers' Perception of the Role of Motivation and Commitment

S. N.	Statement	SA	A	SLA	SLD	D	SD	Mean
		f(%)	*f*(%)	*f*(%)	*f*(%)	*f*(%)	*f*(%)	
15.1	Females are encouraged to perform well as compared with males	66 (26.1)	107 (42.3)	42 (16.6)	21 (08.3)	15 (05.9)	02 (00.8)	4.72
15.2	Females are more committed to their education than males	53 (20.9)	113 (44.7)	51 (20.2)	29 (11.5)	07 (02.8)	00 (00.0)	4.70
15.3	Education is considered a liberating force for females	38 (15.0)	113 (44.7)	63 (24.9)	24 (09.5)	11 (04.3)	04 (01.6)	4.52
15.4	Education is linked with better matrimonial offers for females	46 (18.2)	106 (41.9)	69 (27.3)	20 (07.9)	11 (04.3)	01 (00.4)	4.60
15.5	Males consider education a liability while females an asset	22 (08.7)	107 (42.3)	65 (25.7)	30 (11.9)	26 (10.3)	03 (01.2)	4.24
15.6	Education has more pragmatic value for females than males	25 (09.9)	108 (42.7)	72 (28.5)	20 (07.9)	20 (07.9)	08 (03.2)	4.29

Primary data in Table 5.15 indicated that 44.7 percent of the respondents agreed and 24.9 percent of the respondents slightly agreed that education was considered a liberating force for females. However, it was reported that 4.3 and 1.6 percent of the

respondents disagreed and strongly disagreed respectively to the statement that education was considered as a liberating force for female students. The mean value (4.52) also supported the claim that education was deliberated as a liberating force for female students in higher education.

Tabulated data also presented that 41.9 percent of the respondents agree whereas 27.3 percent slightly agreed that education was linked with better matrimonial offers for females. In contrast, 4.3 percent of the respondents disagreed and only 0.4 percent strongly disagreed with the statement that education was a key factor and connected with better conjugal matches for female students. The calculated mean value was 4.60 that also supported that education was counted for the better mate selection process for female students.

Analysis of the data described that 42.3 percent of the respondents agreed and 25.7 percent of the respondents slightly agreed that males considered education a liability while females an asset. Moreover, a similar proportion had been identified in terms of disagree (10.3 %) and slightly disagree (11.9 %) regarding the statement. On the other hand, only 1.2 percent of the respondents strongly disagreed that females considered education an asset while males a liability. In this respect, the mean value (4.24) also supported the statement.

Moreover, in terms of the statement, education had more pragmatic value for females than males, data analysis reported that 42.7 percent and 28.5 percent of the respondents agreed and slightly agreed respectively. Further, the same results were reported about disagree (7.9 %) and slightly disagree (7.9 %) regarding the statement.

The statistics in the table indicated that only 3.2 percent of the respondents

responded that they strongly disagreed that education had more value that was matter-of-fact for female students than male students. These results were also supported by the mean value (4.29) of the statement.

5.9.2 Role of Self-Fulling Proficiency

The data in Table 5.16 showed teachers' responses toward the role of self-fulfilling proficiency in students' academic performance in higher education. In terms of 'females had gender advantage to complete educational tasks', the highest response was 30.8 percent in the category of 'agree' whereas the lowest response in the category of 'strongly disagree' was calculated 2.8 percent. The percentage of teachers who responded in favour of 'strongly agree' was 14.6 percent in contrast to 25.3 percent 'slightly agree' responses. The mean value (4.16) of the data also supported the claim that the female students had their gender advantage to complete educational responsibilities.

The analysis of the data of the statement 'females are better communicators than males' indicated that the highest number of the respondents favoured 'slightly agree', 33.6 percent as compared with the lowest respondents who favoured strongly disagree 4.0 percent. In contrast, 25.7 percent and 15.0 percent of respondents opted 'agree and 'slightly disagree' respectively. The mean value (3.93) of the data analysis supported the statement that female students had a greater tendency as better communicators than male students.

The data analysis of data of the third statement reveals that the highest numbers (28.9 %) of the respondents opted 'slightly agree' whereas the lowest number (7.5 %) of the respondents strongly disagreed with the claim. In contrast to it, 22.5 percent and 14.2 percent of teachers responded 'agree' and 'disagree' respectively to the statement that female

students were better at making relations than the male student. The results of the statistical analysis also supported the claim as the mean value was 3.72.

Table 5.16
Teachers' Perception of the Role of Self-Fulfilling Proficiency

S. N.	Statement	SA	A	SLA	SLD	D	SD	Mean
		f(%)	*f*(%)	*f*(%)	*f*(%)	*f*(%)	*f*(%)	
16.1	Females have a gender advantage to complete educational tasks	37 (14.6)	78 (30.8)	64 (25.3)	44 (17.4)	23 (09.1)	07 (02.8)	4.16
16.2	Females are better communicators than males	24 (09.5)	65 (25.7)	85 (33.6)	38 (15.0)	31 (12.3)	10 (04.0)	3.93
16.3	Females are better at making relations than males	23 (09.1)	57 (22.5)	73 (28.9)	45 (17.8)	36 (14.2)	19 (07.5)	3.72
16.4	Females are less prone to detrimental trend at university (e.g. sectarianism, ethnic conflicts, drug usages)	51 (20.2)	83 (32.8)	70 (27.7)	30 (11.9)	18 (07.1)	01 (00.4)	4.46
16.5	Females are less social than males	24 (09.5)	72 (28.5)	63 (24.9)	40 (15.8)	41 (16.2)	13 (05.1)	3.84
16.6	Males are less serious than females in educational completion	28 (11.1)	72 (28.5)	67 (26.5)	42 (16.6)	35 (13.8)	09 (03.6)	3.96

In terms of the statement 'females are less prone to detrimental trend at university (e.g. sectarianism, ethnic conflicts, drug usages)', the data analysis reflects that 20.2 percent and 32.8 percent respondents opted strongly agree and agree as compared with 7.1 percent and 0.4 percent disagree and strongly disagree respectively. However, 27.7 percent of teachers responded slightly agree. The mean value of the data was 4.46 that endorsed the claim made in the statement about less harmful trends of female students at university.

It is concluded that female students were less involved in sectarianism, drug activities, and ethnic engagement as well.

The analysis of the data regarding teachers' perception of social behavior of female students revealed that only 5.1 percent and 16.2 percent teachers strongly disagreed and disagreed respectively. However, 28.5 percent and 24.9 percent of responses were found in terms of agree and slightly agree. Hence, the responses were found in favour of the assertion. The mean value of the data was 3.84 that was also a proof in favour of the imbued assertion.

The statement that male students were less serious than female students in educational completion was proved. 66.1 percent of the teachers were found in favour of different terms of the agreement to the statement. Contrarily, 33.9 percent of respondents opted terms given in favour of disagreement with the claim. The highest number (28.5 %) of respondents responded 'agree' as compared with 3.6 percent of respondents who strongly disagreed. The mean value (3.96) of the data also confirmed the results.

5.10 Gender Differentials in Academic Performance

The statistics in Table 5.17 indicated teachers' responses toward gender differentials in academic performance in higher education. Data revealed that 38.3 percent of the respondents disagreed and 35.6 percent slightly agreed that females were making big strides in higher education. Only 0.4 percent strongly disagreed regarding female students were making immense paces higher education. The mean value was 4.54. The results supported the statement that female students were making great progress in tertiary education.

The table also described that 36.8 percent and 29.2 percent of the respondents agreed and slightly agreed respectively with the statement that females were able to educationally place themselves in a better position due to prior gender differences family. Contrary to it, only 2.0 percent of the respondents strongly disagreed regarding the educational ability of female students who placed themselves in an improved position based on the aforementioned gender differences in the family. The argument also proved by the mean value (4.25) of the statement.

Primary data in Table 5.17 indicated that 36.0 percent of the respondents agreed whereas 36.8 percent of the respondents slightly agreed that females were able to maintain the narrative of female advantage at higher education institutions. On the other hand, it was reported that only 5.5 and 1.2 percent of the respondents disagreed and strongly disagreed respectively to the statement that female students capable to uphold the storyline of female advantage at degree-awarding institutions. The mean value (4.43) also supported the claim.

Tabulated data also presented that 35.2 percent respondents agreed whereas 30.4 percent slightly agreed that females were able to secure better enrollment in higher education institutions. In contrast, 4.0 percent respondents disagreed and only 1.2 percent strongly disagreed to the statement. The calculated mean value was 4.51 that also supported that the female position in enrollment at the time of admission was highly secured by them.

Table 5.17

Teachers' Perception of the Role of Gender Differentials in Academic Performance

S. N.	Statements	SA	A	SLA	SLD	D	SD	Mean
		f(%)	*f*(%)	*f*(%)	*f*(%)	*f*(%)	*f*(%)	
17.1	Females are making big strides in higher education	39 (15.4)	97 (38.3)	90 (35.6)	16 (06.3)	10 (04.0)	01 (00.4)	4.54
17.2	Females can educationally place themselves in a better position due to prior gender differences at family	24 (09.5)	93 (36.8)	74 (29.2)	51 (20.2)	06 (02.4)	05 (02.0)	4.25
17.3	Females can maintain the narrative of female advantage in higher education at HEIs	36 (14.2)	91 (36.0)	93 (36.8)	16 (06.3)	14 (05.5)	03 (01.2)	4.43
17.4	Females can secure better enrollment in HEIs	48 (19.0)	89 (35.2)	77 (30.4)	26 (10.3)	10 (04.0)	03 (01.2)	4.51
17.5	Females are more capable of completing their degrees from HEIs than males	42 (16.6)	93 (36.8)	83 (32.8)	25 (09.9)	09 (03.6)	01 (00.4)	4.52
17.6	Females are more capable to acquire employable skills from HEIs than males	19 (07.5)	73 (28.9)	83 (32.8)	50 (19.8)	24 (09.5)	04 (01.6)	4.00
17.7	Females are more able to educationally place themselves in a better position than males	29 (11.5)	95 (37.5)	63 (24.9)	28 (11.1)	34 (13.4)	04 (01.6)	4.18
17.8	Females are more able to educationally place themselves in a better position in the classroom environment than males	28 (11.1)	89 (35.2)	87 (34.4)	24 (09.5)	20 (07.9)	05 (02.0)	4.26
17.9	Females can educationally place themselves in a better position in motivation and identity than males	29 (11.5)	69 (27.3)	79 (31.2)	38 (15.0)	32 (12.6)	06 (02.4)	4.03

Analysis of the data described that 36.8 percent respondents agreed and 32.8 percent respondents slightly agreed that females were more capable of completing their degrees from higher education institutions than males. In contrast, different proportions were identified in terms of disagreed (3.6 %) and strongly agreed (16.6 %) regarding the statement. On the other hand, 0.4 percent respondents strongly disagreed that female students were more talented in completing their degree from degree-awarding institutions than male students. In this respect, the mean value (4.52) also supported the account.

Moreover, in terms of the statement that females were more capable to acquire employable skills from higher education institutions than males, data analysis reported that 32.8 percent and 28.9 percent of the respondents slightly agreed and agreed respectively. Further, the same results were reported about disagreed (9.5 %) and strongly agreed (7.5 %) regarding the statement. The statistics in the table indicated that only 1.6 percent strongly disagreed. These findings were also supported by the mean value 4.0 of the statement.

The analysis of the data of the statement 'females were more able to educationally place themselves in a better position than males' indicated that the highest number of the respondents favoured 'agree', 37.5 percent, as compared with the lowest respondents who favoured strongly disagree, 1.6 percent. On the other hand, 24.9 percent and 11.1 percent of respondents opted 'slightly agree and 'slightly disagree' respectively. The mean value (4.18) of the data analysis supported the statement that female students had a greater tendency to place themselves in a better position in education than male students.

In terms of the statement 'females are more able to educationally place themselves in a better position in a classroom environment than males', the data analysis reflects that

11.1 percent and 35.2 percent respondents opted strongly agree and agree as compared with 2.0 percent and 7.9 percent strongly disagree and disagree respectively. However, 34.4 percent of teachers responded slightly agree. The mean value of the data was 4.26 that endorsed the claim made in the statement about a better position in the classroom environment made by female students.

The statement that females were more active than males in interacting with teachers was proved and overall, 70.0 percent of the teachers were found in favour of different terms of the agreement to the statement. Contrarily, 30.0 percent of respondents opted terms given in favour of disagreement with the claim. The highest number (31.2 %) of respondents responded 'slightly agree' as compared with 2.4 percent of respondents who strongly disagreed. The mean value (4.03) of the data also confirmed the outcomes.

5.11 Sociological Analysis (Sociological Factors)

Sociological analysis of gender differentials in academic performance in higher education was divided into four different parts a) historical factors b) cultural factors, c) structural factors and d) critical factors.

5.11.1 Role of Historical Factors

The information in Table 5.18 displayed teachers' responses toward the role of historical factors on students' academic performance in higher education. In terms of 'females were trained to believe that they are incapable', the highest response was 26.5 percent in the category of 'agree' whereas the lowest response in the category of 'strongly disagree that was calculated 4.3 percent. The percentage of teachers who responded in favour of 'strongly agree' was 7.1 percent in contrast to 20.2 percent 'slightly agree' responses. The mean value

(3.60) of the data also supported the claim that female students were socialized to have belief that they were incapable as compared with male students.

The analysis of the data of the statement 'females have been less visible in the texts' indicated that the highest number of the respondents favoured 'agree' was 28.1 percent as compared with the lowest respondents who favoured strongly agree was 1.0 percent. Alternatively, 19.8 percent and 26.1 percent of respondents opted 'disagree and 'slightly agree' respectively. The mean value (3.80) of the data analysis supported the statement that female students had a greater tendency to be less visible in the text.

The analysis of data of the third statement reveals that the highest number (36.8 %) of the respondents opted 'agree' whereas the lowest number (2.4 %) of the respondents strongly disagreed to the claim. In contrast to it, 31.6 percent and 10.3 percent of teachers responded 'slightly agree' and 'disagree' respectively to the statement. The results of the statistical analysis also support the claim as the mean value was 4.13.

In terms of the statement 'females have fewer responsibilities than males', the data analysis reflects that 7.5 percent and 31.2 percent respondents opted strongly agree and agree as compared with 09.1 percent and 14.6 percent who opted strongly disagree and disagree respectively. However, 21.3 percent of teachers responded slightly agree. The mean value of the data was 3.74 that endorsed the claim made in the statement about the fewer responsibilities of female students as compared with male ones.

The analysis of the data regarding teachers' perception of the role feminism in female students' education 2.4 percent and 6.7 percent teachers strongly disagreed and disagreed respectively whereas 34.8 percent and 29.2 percent responses were found in terms of agreeing and slightly agree. Therefore, most of the responses were found in favour

of the statement. The mean value of the data was 4.19 that was also an indication in favour of the imbued assertion.

Table 5.18
Teachers' Perception of the Role of Historical Factors

S. N.	Statement	SA	A	SLA	SLD	D	SD	Mean
		f(%)	*f*(%)	*f*(%)	*f*(%)	*f*(%)	*f*(%)	
18.1	Females were trained to believe that they are incapable	18 (07.1)	67 (26.5)	51 (20.2)	41 (16.2)	65 (25.7)	11 (04.3)	3.60
18.2	Females have been less visible in the texts	18 (0.1)	71 (28.1)	66 (26.1)	43 (17.0)	50 (19.8)	05 (02.0)	3.80
18.3	Females were represented in subordinate roles in past	19 (07.5)	93 (36.8)	80 (31.6)	29 (11.5)	26 (10.3)	06 (02.4)	4.13
18.4	Females have fewer responsibilities than males	19 (07.5)	79 (31.2)	54 (21.3)	41 (16.2)	37 (14.6)	23 (09.1)	3.74
18.5	Feminism has played a significant role in females' education	27 (10.7)	88 (34.8)	74 (29.2)	41 (16.2)	17 (06.7)	06 (02.4)	4.19
18.6	Women empowerment has decreased the long-lasting gender gap in higher education	23 (09.1)	113 (44.7)	66 (26.1)	31 (12.3)	13 (05.1)	07 (02.8)	4.32

The statement that women empowerment had decreased the long-lasting gender gap in higher education was proved. Overall, 79.9 percent of the teachers were found in favour of different terms of the agreement to the statement. Contrarily, 20.1 percent of respondents opted terms given in favour of disagreement to the claim. The highest number (44.7 %) of respondents responded 'agree' as compared with 2.8 percent of respondents who strongly disagreed. The mean value (4.32) of the data also confirmed the outcomes.

5.11.2 Role of Cultural Factors

The statistics in Table 5.19 indicated teachers' response toward the role of cultural factors on students' academic performance in higher education. Data revealed that 37.2 percent of the respondents agreed and 31.2 percent slightly agreed to the statement that males were cultured to do as they pleased. Only 2.8 percent strongly disagreed regarding the socialization of male students. The mean value was 4.36. The results supported the statement that the socialization process of male students was to perform different activities, as they felt satisfied.

The table also described 38.3 percent and 31.6 of the respondents agreed and strongly agreed respectively with the statement that females remained restricted in their actions. Contrary to it, only 0.8 percent of the respondents strongly disagreed regarding female students remained constrained to a routine in their action. The argument was also proved by the mean value (4.50) of the statement.

Primary data in Table 5.19 indicated that 39.1 percent of the respondents agreed and 31.6 percent slightly agreed that educated females were preferred for mate selection. However, it reported that only 5.9 and 2.8 percent of the respondents disagreed and strongly disagreed respectively to the statement that several families for mate selection preferred educated females. The mean value (4.30) also supported the assertion that educated females were given priority during the mate selection process.

Tabulated data also presented that 27.3 percent of the respondents agreed whereas 24.5 percent of the respondents slightly agreed that parents preferred the girl child for better education over males. In contrast, 14.6 percent of the respondents disagreed and only 7.1 percent strongly disagreed with the statement that parents preferred their daughters for

better education over their sons. The calculated mean value was 3.68 that also supported the statement.

Table 5.19
Teachers' Perception of the Role of Cultural Factors

S. N.	Statement	SA	A	SLA	SLD	D	SD	Mean
		f(%)	*f*(%)	*f*(%)	*f*(%)	*f*(%)	*f*(%)	
19.1	Males are cultured to do as they are pleased	34 (13.4)	94 (37.2)	79 (31.2)	27 (10.7)	12 (04.7)	07 (02.8)	4.36
19.2	Females remain restricted in their actions	41 (16.2)	97 (38.3)	80 (31.6)	20 (07.9)	13 (05.1)	02 (00.8)	4.50
19.3	Educated females are preferred for mate selection	27 (10.7)	99 (39.1)	80 (31.6)	25 (09.9)	15 (05.9)	07 (02.8)	4.30
19.4	Parents prefer the girl child for better education over males	15 (05.9)	69 (27.3)	62 (24.5)	52 (20.6)	37 (14.6)	18 (07.1)	3.68
19.5	Socio-cultural milieu reinforces parents to educate females	24 (09.5)	101 (39.9)	73 (28.9)	40 (15.8)	10 (04.0)	05 (02.0)	4.29
19.6	Changeling situation in education is welcomed by females	22 (08.7)	71 (28.1)	77 (30.4)	43 (17.0)	28 (11.1)	12 (04.7)	3.92

Analysis of the data described that 39.9 percent of the respondents agreed and 28.9 percent of the respondents slightly agreed that socio-cultural milieu reinforced parents to educate females. Moreover, the different proportions had been identified in terms of slightly disagreed (15.8 %) and strongly agreed (9.5 %) regarding the statement. In opposition, only 2.0 percent of the respondents strongly disagreed that social and cultural

background strengthened parents to educate their female family members. In this respect, the mean value (4.29) also supported the statement.

Moreover, in terms of the statement that the challenging situation in education welcomed by females, data analysis reported that 28.1 percent and 30.4 percent of the respondents agreed and slightly agreed respectively. Further, different outcomes reported about disagree (11.1 %) and strongly agree (8.7 %) regarding the statement. The statistics in the table indicated that only 4.7 percent of the respondents responded that they strongly disagreed female students welcomed the challenging situation in higher education. The results were also supported by the mean value 3.92 of the statement.

5.11.3 Role of Structural Factors

The measurements in Table 5.20 described teachers' responses toward the role of structural factors on students' academic performance in higher education. In terms of 'Religious norms favor the education of females', the highest response was 41.9 percent in the category of 'agree' whereas the lowest response in the category of 'disagree was calculated 2.0 percent. The percentage of teachers who responded in favour of 'strongly agree' was 17.8 percent in contrast with 22.1 percent 'agree' responses. The mean value (4.49) of the data also supported the claim that the religious norms were supportive of female students' education.

The analysis of the data of the statement 'economic participation of females incites their educational training', indicated that the highest number of the respondents favoured 'agree' (40.7 %) as compared with the lowest respondents who favoured strongly disagree was 1.2 percent. On the other hand, 11.1 percent and 36.4 percent of respondents opted

'slightly disagree and 'slightly agree' respectively. The mean value (4.45) of the data analysis supported the statement.

Table 5.20
Teachers' Perception of the Role of Structural Factors

S. N.	Statement	SA	A	SLA	SLD	D	SD	Mean
		f(%)	*f*(%)	*f*(%)	*f*(%)	*f*(%)	*f*(%)	
20.1	Religious norms favor the education of females	45 (17.8)	106 (41.9)	56 (22.1)	24 (09.5)	17 (06.7)	05 (02.0)	4.49
20.2	Economic participation of females incites their educational training	25 (09.9)	103 (40.7)	92 (36.4)	28 (11.1)	03 (01.2)	02 (00.8)	4.45
20.3	Family is encouraging female education	40 (15.8)	100 (39.5)	71 (28.1)	27 (10.7)	14 (05.5)	01 (00.4)	4.48
20.4	Political agenda of women empowerment favorably encourages female education	40 (15.8)	102 (40.3)	76 (30.0)	16 (06.3)	12 (04.7)	07 (02.8)	4.48
20.5	Mass media promotes educated females as role models (e.g. Burka Avengers)	48 (19.0)	87 (34.4)	68 (26.9)	31 (12.3)	14 (05.5)	05 (02.0)	4.43
20.6	Civil society heavily depends on the feminist agenda of educated women	38 (15.0)	85 (33.6)	79 (31.2)	29 (11.5)	17 (06.7)	05 (02.0)	4.33

The analysis of data of the third statement reveals that the highest number (39.5 %) of the respondents opted 'agree'. However, the lowest number (0.4 %) of the respondents strongly disagreed to the claim. In contrast, 28.1 percent and 15.8 percent of teachers responded 'slightly agree' and 'strongly agree' respectively to the statement that family was encouraging female education. The results of the statistical analysis also support the claim as the mean value was 4.48.

In terms of the statement 'political agenda of women empowerment favorably encourages female education', the data analysis reflected that 15.8 percent and 40.3 percent of respondents opted strongly agree and agree as compared with 2.8 percent and 4.7 percent strongly disagree and disagree responses respectively. Conversely, 30.0 percent of teachers responded slightly agree. The mean value of the data was 4.48 that endorsed the claim made in the statement that the political agenda encouraged women empowerment significantly.

The analysis of the data regarding teachers' perception of educated females promotion as a role model through mass media, 2.0 percent and 5.5 percent teachers strongly disagreed and disagreed respectively whereas 34.4 percent and 26.9 percent responses were found in terms of agree and slightly agree. Consequently, most of the responses were found in favour of the statement. The mean value of the data was 4.43 that was also a confirmation of the imbued statement.

The statement that civil society heavily depended on the feminist agenda of educated women was proved. Overall, 79.8 percent of the teachers were in favour of different terms of the agreement to the statement. Contrarily, 20.2 percent of respondents opted terms given in favour of disagreement with the claim. The highest number (33.6%) of respondents responded 'agree' as compared with 2.0 percent of respondents who strongly disagreed. The mean value (4.33) of the data also confirmed the results.

5.11.4 Role of Critical Factors

The statistics in Table 5.21 indicated teachers' response toward the role of critical factors on students' academic performance in higher education. Data revealed that 34.8 percent of the respondents slightly agreed and 28.9 percent agreed that the status of females was

fixed and based on structural ascriptions from birth. Only 2.4 percent strongly disagreed regarding females' status was constructed and fixed on structural ascriptions from birth. The mean value was 4.34. The outcomes supported the statement that the position of females was constructed on ascription and attached to them from the time of birth.

Table 5.21
Teachers' Perception of the Role of Critical Factors

S. N.	Statement	SA	A	SLA	SLD	D	SD	Mean
		f(%)	*f*(%)	*f*(%)	*f*(%)	*f*(%)	*f*(%)	
21.1	Status of females is fixed and based on structural ascriptions from birth	43 (17.0)	73 (28.9)	88 (34.8)	32 (12.6)	11 (04.3)	06 (02.4)	4.34
21.2	Males' position as compared with females in the social structure is more flexible	48 (19.0)	102 (40.3)	77 (30.4)	18 (07.1)	08 (03.2)	00 (00.0)	4.65
21.3	Males as compared with females acquire better social mobility by factors other than education	46 (18.2)	114 (45.1)	58 (22.9)	23 (09.1)	09 (03.6)	03 (01.2)	4.62
21.4	Males as compared with females acquire more power by factors other than education	55 (21.7)	105 (41.5)	57 (22.5)	25 (09.9)	08 (03.2)	03 (01.2)	4.65
21.5	Males as compared with females acquire more income by factors other than education	59 (23.3)	90 (35.6)	59 (23.3)	22 (08.7)	16 (06.3)	07 (02.8)	4.53
21.6	Males as compared with females acquire more prestige by factors other than education	44 (17.4)	93 (36.8)	56 (22.1)	34 (13.4)	14 (05.5)	12 (04.7)	4.33

The table also described that 40.3 percent and 30.4 of the respondents agreed and slightly agreed respectively to the statement that males' position as compared with females in social structure was more flexible. Contrary to it, only 3.2 percent of the respondents

disagreed regarding the statement. The argument was also proved by the mean value (4.65) of the statement.

Tabulated data also presented that 41.5 percent of the respondents agreed whereas 22.5 percent slightly agreed that males as compared with females acquired more power by factors other than education. In contrast, 21.7 percent of the respondents strongly agreed and only 1.2 percent strongly disagreed with the statement. The calculated mean value was 4.65 that also supported that males acquired power through several factors as compared with females.

Analysis of the data described that 35.6 percent of the respondents agreed and 23.3 percent of the respondents slightly agreed that males as compared with females acquired more income by factors other than education. Moreover, different proportions identified in terms of disagreed (6.3 %) and strongly agreed (23.3 %) regarding the statement. On the other hand, only 6.3 percent of the respondents strongly disagreed to the statement. In this regard, the mean value (4.53) also supported the statement.

Moreover, in terms of the statement that males as compared with females acquired more prestige by factors other than education, data analysis reported 36.8 percent and 22.1 percent of the respondents agreed and slightly agreed respectively. Further, different results reported about disagreed (5.5 %) and strongly agreed (17.4 %) regarding the statement. The statistics in the table indicated that only 4.7 percent of the respondents responded strongly disagree that males acquired more prestige as compared with females by several factors other than education. These results were also supported by the mean value 4.33 of the statement.

5.12 Overall Descriptive Statistics and Variable Codes

Table 5.22

Overall Descriptive Statistics and Codes of Variables (n=253)

Variable name	Codes	Items	Mini.	Maxi.	Mean	Std. Devi.
Students' home background (favorable socialization)	SHB	6	9	36	26.15	4.681
Socio-economic status of the family	SES	6	9	36	23.92	5.715
Parental involvement (favorable to females)	PAI	6	9	36	25.23	3.783
Role of social media	RSM	6	12	36	25.25	4.708
Role of peer group	RPG	6	12	36	27.59	4.094
Role of the social construction of educational self	RSC	6	12	33	24.53	3.999
Educational background of the students	EDB	6	6	35	25.75	4.271
Student-teacher interaction	STI	6	12	35	24.98	4.570
Teachers' competency and gender	TCG	7	7	40	27.25	5.706
Classroom environment	CLE	6	6	36	26.51	4.658
Role of gender-specific study culture	RGS	6	6	36	27.50	4.593
Motivation and commitment	MOC	6	12	36	27.07	4.321
Self-fulfilling prophecy	SFP	6	10	34	24.07	4.432
Gender differentials in academic performance	GDI/ GDA	9	15	54	38.72	6.230
Historical factors	HIF	6	12	34	23.77	4.287
Cultural factors	CUF	6	11	36	25.06	4.176
Structural factors	STF	6	15	36	26.65	4.229
Critical factors	CRF	6	13	36	27.11	4.421
Household Determinants	HHD	18	32	97	75.31	10.293
Educational Determinants	EDU/ EDD	25	49	135	104.50	14.706
Motivation & Commitment and Self-fulfilling Prophecy	MSF	12	24	69	51.13	7.430
Sociological Factors	SOF	24	61	131	102.60	12.167

Table 5.22 presents overall descriptive statistics of variables and their codes were used for further analysis. It showed the name of the independent and dependent variable and the number of items for each. Further, the minimum and maximum value of each variable along with mean and standard deviation was also provided. The items of each variable ranged from six to nine items. At the end of the table, household determinants consisting of three sub-variables and educational determinants were calculated on four sub-variables. Similarly, motivation and commitment and self-fulfilling prophecy were also combined as motivational factors. Along with these variables, sociological analysis was calculated on its four sub-variables named historical, cultural, structural, and critical factors.

5.13 Primary Data: Inferential Statistics

This section presents the results derived from primary data on the academic performance of students (female and male) in Punjab. It is divided into three parts: a) scale testing and bivariate analysis, b) Structural Equation Modelling and c) Neural Network. This section is restricted to scale testing and bivariate analysis.

5.13.1 Scale Testing

In this section, confirmatory analysis was applied to confirm the items of variables through model estimates and their probability value, either these items were significant or not for further analysis. Further, normality test, Kruskal Wallis Test, Kendall's tau-b, and Chi-square statistical were applied to test bivariate relations.

Conformity Factor Analysis (CFA): This portion provides Confirmatory Factor Analysis (CFA). It is a type of factor analysis and the first step of the structural model. This test is essential to refine the factors used in the analysis but it does not distinguish between

exogenous and endogenous constructs. It helps to identify the factors that are significant to include for analysis and conversely, other non-significant factors to exclude from analysis. The model estimate of CFA of students' home background in Table 5.23.1 consisted of six items that were tested for confirmation. Results indicated that the item 'males misbehavior is often tolerated by family' had high parameter estimate value that was 0.858 as compared with other variables in the factor. Hence, this item was more significant for the factor. Further, the item 'females tend to assume favorable gender roles' had the lowest (0.354) value of parameter estimate as compared with other items in the students' home background. Therefore, this item was less important for factors as compared with other items. It is concluded that the p-value of all the items was significant and did not support the null hypothesis. Consequently, the null hypothesis was rejected and alternate hypothesis accepted that all items were significant and selected for further analysis.

Table 5.23.1

Model Estimates of CFA Analysis of Students' Home Background

S.N.	Statements	Parameter Estimates	Standard Errors	T Statistics	Prob. Level
i	Males misbehavior is often tolerated by family	0.858	0.087	9.832	0.000
ii	Females are expected to comply with familial authority	0.704	0.079	8.946	0.000
iii	Biased gender socialization differences start from home	0.651	0.085	7.677	0.000
iv	Females tend to assume favorable gender roles	0.354	0.083	4.272	0.000
v	Obedience in the family is desirable for females not males	0.718	0.110	6.551	0.000
vi	Small deviances at home are tolerated for males not females	0.534	0.090	5.943	0.000

The variable in Table 5.23.2, socio-economic status of the family consisted of six items. The model estimate of CFA was tested for confirmation. The p-value of all the items was significant. Results rejected the null hypothesis that six factors were not significant for variables. Therefore, the alternate hypothesis was accepted that all factors were significant and contributing to the social-economic status of the students' family. It revealed that the item 'females who reach higher education might belong to families with higher income' was highly significant with a parameter estimate value of 1.271 as compared with to other items. Further, the item 'social status of family matters in students' performance' was less significant as compared with other items with a parameter estimate of 0.384. So, all the items were included in further analysis.

Table 5.23.2

Model Estimates of CFA Analysis of Socio-Economic Status of the Family

S.N.	Statements	Parameter Estimates	Standard Errors	T Statistics	Prob. Level
i	Social status of family matters in students' performance	0.384	0.080	4.803	0.000
ii	Females who reach higher education might belong to families with higher income	1.192	0.072	16.464	0.000
iii	Females who reach higher education might belong to families with higher wealth	1.271	0.075	16.914	0.000
iv	Females who reach higher education might belong to families with higher parental education	0.903	0.078	11.518	0.000
v	Females who reach higher education might belong to families with occupational prestige	0.877	0.072	12.146	0.000
vi	Males who reach higher education might belong to families with economic pressure	0.515	0.088	5.852	0.000

The model estimate of CFA of parental involvement consisted of six items that were tested for confirmation in Table 5.23.3. Results indicated that the item 'parents limit the activities of females outside the household' had high parameter estimate value that was 0.689 as compared with other variables in the factor. Hence, this item was more significant for the factor. Further, the item 'parents construct the higher education of females as a worthy endeavor' had the lowest (0.244) value of parameter estimate as compared with other items in the variable. Therefore, this item was less important for factors as compared with other items. It was concluded that the p-value of all the items was significant and did not support the null hypothesis. Consequently, the null hypothesis was rejected and alternate hypothesis was accepted that all items were significant and selected for further analysis.

Table 5.23.3

Model Estimates of CFA Analysis of Parental Involvement (Favorable to Females)

S.N.	Statements	Parameter Estimates	Standard Errors	T Statistics	Prob. Level
i	Parents least bother the educational performance of males	0.492	0.120	4.087	0.000
ii	Parents limit the activities of females outside the household	0.689	0.114	6.048	0.000
iii	Parents tend to monitor the educational activities of females	0.469	0.096	4.863	0.000
iv	Parents construct a higher education of females as a worthy endeavor	0.244	0.088	2.780	0.005
v	Parents prefer males to become earning member of the family hence end up pressurizing them	0.516	0.090	5.762	0.000
vi	Parental control of females end up being an asset for them	0.317	0.087	3.658	0.000

The variable in Table 5.23.4 the role of social media consisted of six items. The model estimate of CFA was tested for confirmation. The p-value of all the items was significant. The results rejected the null hypothesis as six factors were not significant for variables. Therefore, the alternate hypothesis was accepted that all factors were significant and contributing to the role of social media. It revealed that the item 'males like to spend more time on entertainment than females' was highly significant with a parameter estimate value of 1.036 as compared with other items. Moreover, the item 'females tend to subdue the use of social media to their studies (e.g. notes exchange)' was less significant as compared with other items with a parameter estimate of 0.381. Consequently, all the items were included in further analysis.

Table 5.23.4

Model Estimates of CFA Analysis of Role of Social Media

S.N.	Statements	Parameter Estimates	Standard Errors	T Statistics	Prob. Level
i	Social media activities of males and females differ significantly	0.535	0.086	6.224	0.000
ii	Social media access is more readily provided to males than females	0.578	0.102	5.668	0.000
iii	Females tend to subdue the use of social media to their studies (e.g. notes exchange)	0.381	0.080	4.770	0.000
iv	Social media engages males in nonproductive wastage of time	0.413	0.082	5.011	0.000
v	Females are more likely to join educational groups and pages on social media	0.891	0.093	9.633	0.000
vi	Males like to spend more time on entertainment than females	1.036	0.101	10.285	0.000

The model estimate of CFA of the role of the peer group consisted of six items that was tested for confirmation in Table 5.23.5. Results indicated that the item 'female students

are more likely to join study groups than males' had high parameter estimate value that was 0.677 as compared to other variables in the factor. Hence, this item was more significant for the factor. Further, the item 'male students spent more time with peers than females' had the lowest (0.409) value of parameter estimate as compared with other items in the role of the peer group. Therefore, this item was less important for factors as compared with other items. It is concluded that the p-value of all the items was significant and did not support the null hypothesis that the items did not confirm for factors. Consequently, the null hypothesis was rejected and alternate hypothesis accepted, that all items were significant and selected for further analysis.

Table 5.23.5

Model Estimates of CFA Analysis of Role of Peer Group

S.N.	Statements	Parameter Estimates	Standard Errors	T Statistics	Prob. Level
i	Female students prefer to have in small groups in university	0.589	0.075	7.878	0.000
ii	Male students prefer to have a large group in the university	0.535	0.079	6.814	0.000
iii	Male students spent more time with peers than females	0.409	0.082	4.965	0.000
iv	Male students prefer outdoor activities after evening	0.588	0.073	8.082	0.000
v	Female students are bound to live in boundary wall after evening	0.569	0.079	7.228	0.000
vi	Female students are more likely to join study groups than males	0.677	0.095	7.165	0.000

The variable in Table 5.23.6, the role of the social construction of the educational self consisted of six items. The model estimate of CFA was tested for confirmation. The p-value of five items was significant. It reported that the item 'religious ideology instigates a need for educated mothers' had p-value (0.497) greater than 0.05. Results rejected the null

hypothesis that five factors were not significant for variables. Therefore, the alternate hypothesis was accepted that is five factors were significant and contributing to the role of the social construction of the educational self. It revealed that the item 'female are socially bound to outperform in education' was highly significant with a parameter estimate value of 0.855 as compared to other items. Moreover, the item 'females tend to occupy power positions in an educational institution and politics' was less significant as compared to other items with a parameter estimate of 0.258. As a result, five items were included in further analysis, and the last item excluded for further analysis.

Table 5.23.6

Model Estimates of CFA Analysis of Role of Social Construction of Educational Self

S.N.	Statements	Parameter Estimates	Standard Errors	T Statistics	Prob. Level
i	Female are socially bound to outperform in education	0.855	0.107	7.994	0.000
ii	Females are trying to compete with role model females in the media industry	0.711	0.094	7.566	0.000
iii	Females are taught that they are less intelligent than their counterpart	0.489	0.103	4.768	0.000
iv	Feminist discourses tend to promote education as a heroic effort of females	0.507	0.093	5.481	0.000
v	Females tend to occupy power positions in educational institution and politics	0.258	0.100	2.589	0.010
vi	Religious ideology instigates a need for educated mothers	0.057	0.085	0.678	0.497

The model estimate of CFA of the educational background of the students consisted of six items in Table 5.23.7 that were tested for confirmation. Results indicated that the

item 'females are more passionate to excel from the very start of educational career' had high parameter estimates value that was 0.772 as compared to other variables in the factor. Hence, this item was more significant for the factor. Further, the item 'males have poor education background' had the lowest (0.233) value of parameter estimate as compared with other items in the variable. Therefore, this item was less important for factors as compared to other items. It was concluded that the p-value of all the items was significant and did not support the null hypothesis that items did not confirm for factors. Consequently, the null hypothesis was rejected and alternate hypothesis was accepted that all items were significant and selected for further analysis.

Table 5.23.7

Model Estimates of CFA Analysis of Educational Background of the Students

S.N.	Statement	Parameter Estimates	Standard Errors	T Statistics	Prob. Level
i	Males have a poor education background	0.233	0.096	2.434	0.015
ii	Females are more passionate to excel from the very start of educational career	0.772	0.070	11.039	0.000
iii	Females are more inclined to do their homework from the very start	0.740	0.069	10.723	0.000
iv	Females are more serious about teachers' feedback about their works from the very start of educational career	0.747	0.069	10.850	0.000
v	Males are less concerned about their education from the very start of educational career	0.433	0.085	5.126	0.000
vi	Males tend to be serious about education at the later stages of educational career	0.524	0.077	6.781	0.000

The variable Table 5.23.8, student-teacher interaction, consisted of six items. The model estimate of CFA was tested for confirmation. The p-value of all the items was significant. Results rejected the null hypothesis, that six factors were not significant for variables. Therefore, the alternate hypothesis was accepted that all factors were significant and contributing to student-teacher interaction.

It also revealed that the item 'teachers are more suspicious about males' discipline' was highly significant with a parameter estimate value of 0.763 as compared to other items. Further, the item 'males tend to display indifference towards their interaction with their teachers' was less significant as compared to other items with a parameter estimate of 0.4000. Consequently, all the items were included in further analysis.

Table 5.23.8

Model Estimates of CFA Analysis of Student-Teacher Interaction

S.N.	Statement	Parameter Estimates	Standard Errors	T Statistics	Prob. Level
i	Teachers interact differently with female and male students	0.457	0.109	4.184	0.000
ii	Males tend to display indifference towards their interaction with their teachers	0.400	0.081	4.943	0.000
iii	Males tend to underplay the role of class participation	0.624	0.075	8.307	0.000
iv	Demeanors of females reflect more obedient than males	0.727	0.091	7.969	0.000
v	Teachers are more suspicious about males' discipline	0.763	0.088	8.638	0.000
vi	Females are more active than males in interacting with teachers	0.728	0.096	7.601	0.000

The model estimate of CFA of teachers' competency and gender consisted of seven items were tested for confirmation in Table 5.23.9. Results indicated that the item 'male teachers considered males a challenge to their authority' had high parameter estimates

value, that was 0.866 as compared to other variables in the factor. Hence, this item was more significant for the factor.

Further, the item 'teachers of both genders consider females more cooperative' had lowest (0.511) value of parameter estimate as compared with other items in the variable. Therefore, this item was less important for factors as compared with other items. It was concluded that the p-value of all the items was significant and did not support the null hypothesis. Therefore, the items did not confirm for factors. Consequently, the null hypothesis was rejected and alternate hypothesis was accepted that's all items were significant and selected for further analysis.

Table 5.23.9

Model Estimates of CFA Analysis of Teachers' Competency and Gender

S.N.	Statement	Parameter Estimates	Standard Errors	T Statistics	Prob. Level
i	Gender of teacher influences students' performance differently	0.719	0.091	7.941	0.000
ii	Male teachers consider males a challenge to their authority	0.866	0.087	9.955	0.000
iii	Female teachers consider males a challenge to their authority	0.794	0.083	9.537	0.000
iv	Teachers of both genders consider females more cooperative	0.511	0.078	6.568	0.000
v	Males are the obvious choice of teachers' blame	0.787	0.092	8.511	0.000
vi	Frequent questions of males challenge teachers' competence	0.687	0.086	7.964	0.000
vii	Frequent questions of females endorsee teachers' competence	0.563	0.090	6.275	0.000

The variable classroom environment consisted of six items in Table 5.23.10. The model estimate of CFA was tested for confirmation. The p-value of all the items was

significant. Results rejected the null hypothesis that's six factors were not significant for variables. Therefore, the alternate hypothesis was accepted. All the factors were significant and contributing to the classroom environment.

It exposed that the item 'females are considered having higher moral standards' was highly significant with a parameter estimate value of 0.950 as compared with other items. Further, the item 'classrooms are dominated by female strength' was less significant as compared with other items with a parameter estimate of 0.340. Hence, all the items were included in further analysis.

Table 5.23.10

Model Estimates of CFA Analysis of Classroom Environment

S.N.	Statement	Parameter Estimates	Standard Errors	T Statistics	Prob. Level
i	Classrooms are dominated by female strength	0.340	0.100	3.411	0.001
ii	Females are considered more punctual	0.604	0.074	8.165	0.000
iii	Females are considered having higher moral standards	0.950	0.081	11.696	0.000
iv	Males often play roles of backbenchers	0.933	0.086	10.910	0.000
v	Deviance from classroom norms is expected from males	0.582	0.074	7.810	0.000
vi	Females are considered more friendly for a class environment	0.482	0.077	6.259	0.000

The model estimate of CFA of gender-specific study culture consisted of six items that were tested for confirmation in Table 5.23.11. Results indicated that the item 'females tend to spend more time on searching study material' had high parameter estimate value, that was, 0.778 as compared to other variables in the factor. Hence, this item was more significant for the factor.

Further, the item 'males adopt anti-educational masculine identities' had the lowest (0.526) value of parameter estimate as compared with other items in the variable named gender-specific study culture. Therefore, this item was less important for factors as compared to other items. It was concluded that the p-value of all the items was significant and did not support the null hypothesis, that's items did not confirm for factors. Consequently, the null hypothesis was rejected and alternate hypothesis was accepted that all items were significant and selected for further analysis.

Table 5.23.11

Model Estimates of CFA Analysis of Role of Gender-Specific Study Culture

S.N.	Statements	Parameter Estimates	Standard Errors	T Statistics	Prob. Level
i	Females spent more time on homework	0.768	0.062	12.424	0.000
ii	Males spent more time on outdoor activities	0.720	0.065	11.020	0.000
iii	Females tend to spend more time on searching study material	0.778	0.066	11.706	0.000
iv	Males adopt anti-educational masculine identities	0.526	0.077	6.804	0.000
v	Females are more inclined to study group collaborations	0.584	0.077	7.605	0.000
vi	Females are more concerned about lecture notes	0.634	0.073	8.691	0.000

The variable motivation and commitment consisted of six items in Table 5.23.12. The model estimate of CFA was tested for confirmation. The p-value of all the items was significant. Results rejected the null hypothesis that was six factors were not significant for variables. Therefore, the alternate hypothesis was accepted, that was, all factors were significant and contributing to the motivation and commitment of the students.

It is shown that the item 'males consider education a liability while females an asset' was highly significant with a parameter estimate value of 0.739 as compared with other items. Further, the item 'females are encouraged to perform well as compared with males' was less significant as compared to other items with a parameter estimate of 0.488. Hence, all the items were included in further analysis.

Table 5.23.12

Model Estimates of CFA Analysis of Motivation and Commitment

S.N.	Statement	Parameter Estimates	Standard Errors	T Statistics	Prob. Level
i	Females are encouraged to perform well as compared with males	0.488	0.082	5.986	0.000
ii	Females are more committed to their education than males	0.637	0.068	9.334	0.000
iii	Education is considered a liberating force for females	0.586	0.075	7.810	0.000
iv	Education is linked with better matrimonial offers for females	0.537	0.071	7.532	0.000
v	Males consider education a liability while females an asset	0.739	0.078	9.455	0.000
vi	Education has more pragmatic value for females than males	0.688	0.081	8.490	0.000

The model estimate of CFA of self-fulling prophecy consisted of six items that was tested for confirmation in Table 5.23.13. Results indicated that the item 'females are better communicators than males' had high parameter estimates value, that was 0.888 as compared with other variables in the factor. Hence, this item was more significant for the factor.

Further, the item 'females are less prone to detrimental trend at university (e.g. sectarianism, ethnic conflicts, drug usages)' had the lowest (0.467) value of parameter estimate as compared with other items in the variable. Therefore, this item was less

important for factors as compared with other items. It noted that the two last items were not significant as per the p-value greater than 0.05. These items were excluded for further analysis. It was concluded that the p-value of four items was significant and not support the null hypothesis that items did not confirm for factors. Consequently, the null hypothesis was rejected and alternate hypothesis was accepted, that the first four items were significant and selected for further analysis.

Table 5.23.13

Model Estimates of CFA Analysis of Self-Fulfilling Prophecy

S.N.	Statement	Parameter Estimates	Standar d Errors	T Statistics	Prob. Level
i	Females have a gender advantage to complete educational tasks	0.760	0.093	8.192	0.000
ii	Females are better communicators than males	0.888	0.094	9.447	0.000
iii	Females are better at making relations than males	0.861	0.101	8.547	0.000
iv	Females are less prone to detrimental trend at university (e.g. sectarianism, ethnic conflicts, drug usages)	0.467	0.086	5.453	0.000
v	Females are less social than males	0.026	0.104	0.245	0.806
vi	Males are less serious than females in educational completion	0.143	0.100	1.427	0.154

The variable gender differentials in academic performance consisted of nine items in Table 5.23.14. The model estimate of CFA was tested for confirmation. The p-value of all the items was significant. Results rejected the null hypothesis that nine factors were not significant for variables. Therefore, the alternate hypothesis was accepted that all factors were significant and contributing to gender differentials in academic performance. It revealed that the item 'females are more able to educationally place themselves in a better position than males' was highly significant with a parameter estimate value of 0.782 as

compared with other items. Further, the item 'females are making big strides in higher education' was less significant as compared with other items with a parameter estimate of 0.425. Consequently, all the items were included in further analysis.

Table 5.23.14

Model Estimates of CFA Analysis of Gender Differentials in Academic Performance

S.N.	Statements	Parameter Estimates	Standard Errors	T Statistics	Prob. Level
i	Females are making big strides in higher education	0.425	0.066	6.465	0.000
ii	Females can educationally place themselves in a better position due to prior gender differences at family	0.472	0.072	6.577	0.000
iii	Females can maintain the narrative of female advantage in higher education at HEIs	0.491	0.070	6.961	0.000
iv	Females can secure better enrollment in HEIs	0.618	0.071	8.707	0.000
v	Females are more capable of completing their degrees from HEIs than males	0.633	0.064	9.839	0.000
vi	Females are more capable to acquire employable skills from HEIs than males	0.721	0.072	10.024	0.000
vii	Females are more able to educationally place themselves in a better position than males	0.782	0.080	9.824	0.000
viii	Females are more able to educationally place themselves in a better position in the classroom environment than males	0.753	0.071	10.559	0.000
ix	Females can educationally place themselves in a better position in motivation and identity than males	0.656	0.082	7.956	0.000

In Table 5.23.15, the model estimate of CFA of historical factors of female outperformance and male underperformance in higher education consisted of six items that were tested for confirmation. Results indicated that the item 'females have been less visible

in the texts' had high parameter estimates value that was 0.883 as compared with other variables in the factor. Hence, this item was more significant for the factor. Further, the item 'females have fewer responsibilities than males' had the lowest (0.370) value of parameter estimate as compared with other items in the variable. Therefore, this item was less important for factors as compared to other items. Here, the last two items were not significant with a p-value of greater than 0.05. It was concluded that the p-value of four items was significant and did not support the null hypothesis that items did not confirm for factors. Consequently, the null hypothesis was rejected and alternate hypothesis was accepted that the first four items were significant and selected for further analysis.

Table 5.23.15

Model Estimates of CFA Analysis of Historical Factors

S.N.	Statement	Parameter Estimates	Standard Errors	T Statistics	Prob. Level
i	Females were trained to believe that they are incapable	0.867	0.100	8.684	0.000
ii	Females have been less visible in the texts	0.883	0.093	9.478	0.000
iii	Females were represented in subordinate roles in past	0.793	0.085	9.331	0.000
iv	Females have fewer responsibilities than males	0.370	0.108	3.440	0.001
v	Feminism has played a significant role in females' education	0.102	0.088	1.160	0.246
vi	Women empowerment has decreased the long-lasting gender gap in higher education	0.132	0.085	1.559	0.119

The variable cultural factors of female outperformance and male underperformance in higher education consisted of six items in Table 5.23.16. The model estimate of CFA was tested for confirmation. The p-value of all the items was significant. Results rejected the null hypothesis that six factors were not significant for variables. Therefore, the

alternate hypothesis was accepted, that was, all factors were significant and contributing to cultural factors. It revealed that the item 'females remain restricted in their actions' was highly significant with a parameter estimate value of 0.772 as compared with other items. Further, the item 'parents prefer the girl child for better education over males' was less significant as compared with other items with a parameter estimate of 0.257. Consequently, all the items were included in further analysis.

Table 5.23.16

Model Estimates of CFA Analysis of Cultural Factors

S.N.	Statement	Parameter Estimates	Standard Errors	T Statistics	Prob. Level
i	Males are cultured to do as they are pleased	0.718	0.084	8.584	0.000
ii	Females remain restricted in their actions	0.772	0.079	9.799	0.000
iii	Educated females are preferred for mate selection	0.462	0.084	5.528	0.000
iv	Parents prefer the girl child for better education over males	0.257	0.101	2.539	0.011
v	Socio-cultural milieu reinforces parents to educate females	0.471	0.079	5.944	0.000
vi	Changeling situation in education is welcomed by females	0.508	0.094	5.397	0.000

The model estimate of CFA in Table 5.23.17 of structural factors of female students' outperformance and male underperformance in higher education consisted of six items that was tested for confirmation. Results indicated that the item 'mass media promotes educated females as role models (e.g. Burka Avengers)' had high parameter estimates value that was 0.765 as compared with other variables in the factor. Hence, this item was more significant for the factor. Further, the item 'civil society heavily depends on the feminist agenda of educated women' had the lowest (0.231) value of parameter estimate as compared with

other items in the variable. Consequently, this item was less important for factors as compared with other items.

It concluded that the p-value of all the items was significant and did not support the null hypothesis that items did not confirm for factors. Therefore, the null hypothesis was rejected and alternate hypothesis was accepted, that all items were significant and selected for further analysis.

Table 5.23.17

Model Estimates of CFA Analysis of Structural Factors

S.N.	Statement	Parameter Estimates	Standard Errors	T Statistics	Prob. Level
i	Religious norms favor the education of females	0.475	0.083	5.742	0.000
ii	Economic participation of females incites their educational training	0.636	0.058	10.913	0.000
iii	Family is encouraging female education	0.710	0.069	10.234	0.000
iv	Political agenda of women empowerment favorably encourages female education	0.763	0.074	10.369	0.000
v	Mass media promotes educated females as role models (e.g. Burka Avengers)	0.765	0.078	9.834	0.000
vi	Civil society heavily depends on the feminist agenda of educated women	0.231	0.084	2.753	0.006

The variable critical factors of female outperformance and male underperformance in higher education consisted of six items in Table 5.23.18. The model estimate of CFA was tested for confirmation. The p-value of all the items was significant. Results rejected the null hypothesis that six factors were not significant for variables. Therefore, the alternate hypothesis was accepted, that was, all factors were significant and contributing to critical factors.

It revealed that the item 'males as compared with females acquire more income by factors other than education' was highly significant with a parameter estimate value of 0.844 as compared with other items. Further, the item 'status of females is fixed and based on structural ascriptions from birth' was less significant as compared with other items with a parameter estimate of 0.204. Hence, all the items were included in further analysis.

Table 5.23.18

Model Estimates of CFA Analysis of Critical Factors

S.N.	Statement	Parameter Estimates	Standard Errors	T Statistics	Prob. Level
i	Status of females is fixed and based on structural ascriptions from birth	0.204	0.084	2.442	0.015
ii	Males' position as compared with females in the social structure is more flexible	0.470	0.066	7.133	0.000
iii	Males as compared with females acquire better social mobility by factors other than education	0.683	0.070	9.808	0.000
iv	males as compared with females acquire more power by factors other than education	0.718	0.071	10.117	0.000
v	Males as compared with females acquire more income by factors other than education	0.844	0.082	10.277	0.000
vi	Males as compared with females acquire more prestige by factors other than education	0.830	0.086	9.601	0.000

5.13.2 Normality test

Table 5.24 presented the normality test based on Kolmogorov-Smirnov and Shapiro-Wilk statistical tests. It was claimed from the table based on Kolmogorov-Smirnov that not all the variables followed the normal distribution at a 5 percent level of significance except three variables namely critical factors, household determinants, and educational determinants. These variables were not normally distributed. Furthermore, the Shapiro-

Wilk test for normality also indicated that most of the considered variables did not follow the normal distribution. This was suggested that the non-parametric test should be used to test the different hypotheses for these variables.

Table 5.24

Normality Test

Variables	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Students' home background (favorable socialization)	.089	251	.000	.969	251	.000
Socio-economic status of the family	.072	251	.003	.982	251	.003
Parental involvement (favorable to females)	.082	251	.000	.966	251	.000
Role of social media	.103	251	.000	.976	251	.000
Role of peer group	.105	251	.000	.979	251	.001
Educational determinants	.086	251	.000	.981	251	.002
Educational background	.118	251	.000	.921	251	.000
Student-teacher interaction	.097	251	.000	.980	251	.002
Teachers' competency and gender	.066	251	.010	.983	251	.004
Classroom environment	.097	251	.000	.954	251	.000
Gender-specific study culture	.104	251	.000	.950	251	.000
Motivation and commitment	.087	251	.000	.978	251	.001
Self-fulfilling prophecy	.115	251	.000	.982	251	.002
Gender differentials in academic performance	.109	251	.000	.967	251	.000
Historical factors	.069	251	.005	.988	251	.031
Cultural factors	.118	251	.000	.970	251	.000
Structural factors	.073	251	.003	.986	251	.014
Critical factors	.064	251	.014	.983	251	.004
Household Determinants	.058	251	.037	.975	251	.000
Educational Determinants	.058	251	.042	.961	251	.000
Motivation, Commitment, and Self-fulfilling Prophecy	.096	251	.000	.981	251	.002
Sociological Factors	.072	251	.003	.989	251	.058

a. Lilliefors Significance Correction

5.14 Bivariate Analysis

This section deals with the bivariate analysis of the variables. It consists of Ktuskal Wallis test, Kendall's tau-b test, and Chi-square test. The results are as follows.

Kruskal Wallis test (educational qualification): Table 5.25.1 depicts a nonparametric test known as the Kruskal Wallis Test that is in fact an extension of the Mann-Whitney U statistical test. It allows the comparison of more than two independent groups based on the sum of ranks. In this case, the independent variable consists of three independent groups of university teachers based on their educational qualifications including MA/MSc, MS/M. Phil and Ph.D. degree holders.

The statistical results in the table shows that the role of motivation and commitment of the students was significantly different for three groups of teachers with a p-value of 0.015 (p-value < 0.05). Similarly, the results also support that the self-fulfilling prophecy of the students in academic performance was also significantly different for university teachers' educational groups.

Table 5.25.1

Kruskal Wallis Test (Educational Qualification)

Variables	Chi-square	df	Asymp. Sig.
Motivation and commitment	8.392349	2	.015
Self-fulfilling prophecy	5.751449	2	.056
Structural factors	8.167260	2	.017
Critical factors	11.753622	2	.003
Sociological Factors	6.285516	2	.043
Motivation & Commitment and Self-fulfilling Prophecy	7.453608	2	.024
Role of gender-specific study culture	1.904991	2	.386
Teachers' competency and gender	2.789526	2	.248

Further, structural factors and critical factors of the academic performance of the students was significantly different for MA/MSc, MS/M. Phil and Ph.D. degree holder teachers with a p-value of 0.017 and 0.003 respectively. Moreover, the results supported the hypothesis that motivational factors and sociological factors of gender differentials in the academic performance of the students were significantly different from the p-value of .024 and .043 respectively concerning teachers' educational qualifications. This meant that the responses of master's degree holders were different from M. Phil and Ph.D. degree holder teachers as well. Conversely, the last two variables were not significantly different with a p-value of 0.386 and 0.248, higher than the significance level (0.05). Therefore, the results supported that there was no significant difference in the role of gender-specific study culture and teachers' competency and gender concerning three groups of university teachers based on their educational qualification.

Kendall's tau-b statistical test 1: Table 5.25.2 depicts nonparametric measure of the direction and strength of association between two variables on ordinal scale. Kendall's tau_b statistical test results showed that there was significant positive correlation (tau_b = .335) between parental involvement and home background of the students regarding favorable socialization. Further, home background of the students had also significant positive correlation with socio-economic status (tau_b = .128), social media exposure (tau_b = .132) and gender differentials in academic performance of students (tau_b = .170). Moreover, socio-economic status of the students also had significant positive correlation with parental involvement (tau-b = .124) and gender differential in academic performance (tau-b = .192). On the other hand, it had not significant correlation (tau_b = .010) with social media exposure (p-value = .815). Furthermore, parental involvement had also similar

positive significant correlation with social media (tau_b = .235) and gender differentials in academic performance (tau_b = .222)

Table 5.25.2

Kendall's tau_b of Household Determinants, Social Media and Gender Differentials in Academic Performance

Variables	SHB	SES	PAI	RSM	GDI /GDA
SHB	1.000	.128**	.335**	.132**	.170**
		.004	.000	.003	.000
SES		1.000	.124**	.010	.192**
			.006	.815	.000
PAI			1.000	.235**	.222**
				.000	.000
RSM				1.000	.163**
					.000
GDI/ GDA					1.000

**. Correlation is significant at the 0.01 level (2-tailed).

Kendall's tau-b statistical test 2: Table 5.25.3 highlighted Kendall's tau-b statistical test between two variables on ordinal scales. It provided a nonparametric measure of the direction and strength of association. The results supported that there was a significant positive correlation (tau_b = .315) between the role of the peer group and the educational background of the students. Further, the role of peer group had also significant positive moderate correlation with educational determinants (tau_b = .251), student-teacher interaction (tau_b = .343) and gender differentials in academic performance of students (tau_b = .265). Moreover, educational determinants of the students also had significant positive correlation with student-teacher interaction (tau-b = .246) and gender differential in academic performance (tau-b = .236). On the other hand, it had a less significant

correlation (tau_b = .173) with an educational background of the students. Furthermore, educational background of the students had also similar positive significant correlation with student-teacher interaction (tau_b = .296) and gender differentials in academic performance (tau_b = .254).

Table 5.25.3

Kendall's tau_b of Peer Group, Educational Determinants and Gender Differentials in Academic Performance

Variables	RPG	EDD	EDB	STI	GDI/ GDA
RPG	1.000	.251**	.315**	.343**	.265**
		.000	.000	.000	.000
EDD		1.000	.173**	.246**	.236**
			.000	.000	.000
EDB			1.000	.296**	.254**
				.000	.000
STI				1.000	.168**
					.000
GDI/ GDA					1.000

**. Correlation is significant at the 0.01 level (2-tailed).

Kendall's tau-b statistical test 3: Table 5.25.4 showed a nonparametric measure of the direction and strength of the association between two variables on the ordinal scale. Kendall's tau_b statistical test results showed that there was a significant positive correlation (tau_b = .314) between classroom environment and teachers' competency and gender. Further, teachers' competency and gender had also significant positive correlation with gender-specific study culture (tau_b = .295), motivation and commitment (tau_b = .279) and self-fulfilling prophecy (tau_b = .266).

Table 5.25.4

Kendall's tau_b of Educational and Motivational Factors and Gender Differentials in Academic Performance

Variables	TCG	CLE	RGS	MOC	SFP	GDI/ GDA
TCG	1.000	.314**	.295**	.279**	.266**	.190**
		.000	.000	.000	.000	.000
CLE		1.000	.356**	.425**	.231**	.327**
			.000	.000	.000	.000
RGS			1.000	.378**	.321**	.298**
				.000	.000	.000
MOC				1.000	.294**	.351**
					.000	.000
SFP					1.000	.404**
						.000
GDI/ GDA						1.000

**. Correlation is significant at the 0.01 level (2-tailed).

Moreover, classroom environment had significant moderate positive correlation with motivation and commitment (tau-b = .425), gender-specific study culture and gender differential in academic performance (tau-b = .327). On the other hand, gender-specific study culture had positive significant correlation with motivation and commitment (tau_b = 378), self-fulfilling prophecy (tau_b = .321) and gender differentials in academic performance of the students (tau_b = .298). Furthermore, motivation and commitment had also similar positive significant correlation with self-fulling prophecy (tau_b = .294) and gender differentials in academic performance (tau_b = .351). Moreover, self-fulling prophecy had moderate positive correlation with gender differentials in academic performance of the students.

Kendall's tau-b statistical test 4: Moreover, cultural factors also had significant positive correlation with structural factors (tau-b = .260) and critical factors (tau_b = .284). On the other hand, it had a moderate positive correlation with gender differentials in the academic performance of students (tau_b = .334). Furthermore, structural factors had a moderate positive correlation (tau_b = .324) with critical factors and had a positive significant relationship with gender differentials in the academic performance of the students. It was also reported that critical factors had a positive significant correlation (tau_b = .236) with gender differentials in academic performance.

Table 5.25.5

Kendall's tau-b Sociological Analysis and Gender Differentials in Academic Performance

Variables	HIF	CUF	STF	CRF	GDI/ GDA
HIF	1.000	.291**	.146**	.206**	.145**
		.000	.001	.000	.001
CUF		1.000	.260**	.284**	.334**
			.000	.000	.000
STF			1.000	.324**	.257**
				.000	.000
CRF				1.000	.236**
					.000
GDI/ GDA					1.000

**. Correlation is significant at the 0.01 level (2-tailed).

Table 5.25.5 presents Kendall's tau-b statistical test between two variables on ordinal scales. It provided a nonparametric measure of the direction and strength of association. The results supported that there was a significant positive correlation (tau_b = .206) between historical and critical factors. Further, the historical factors had also

significant positive correlation with cultural factors (tau_b = .219), structural factors (tau_b = .146) and gender differentials in academic performance of students (tau_b = .145).

Overall Kendall's tau_b statistical analysis: Table 5.25.6 shows a nonparametric measure of the direction and strength of the association between two variables on the ordinal scale. Kendall's tau_b statistical test results showed that there was a significant positive correlation (tau_b = .304) between household determinants and sociological factors. Further, these household determinants also had significant positive correlation with educational determents (tau_b = .274), motivation and self-fulling prophecy (tau_b = .274) and gender differentials in academic performance of students (tau_b = .266). Moreover, educational determinants of the students had significant moderate positive correlation with motivation and self-fulling prophecy (tau-b = .396) and sociological factors (tau_b = .360). It also had a positive significant correlation with gender differential in academic performance (tau-b = .288).

Table 5.25.6

Overall Kendall's tau-b Statistical Analysis

Variables	HHD	EDD	MSF	SOF	GDI/ GDA
HHD	1.000	.274**	.273**	.304**	.266**
		.000	.000	.000	.000
EDD		1.000	.396**	.360**	.288**
			.000	.000	.000
MSF			1.000	.412**	.452**
				.000	.000
SOF				1.000	.345**
					.000
GDI/ GDA					1.000

**. Correlation is significant at the 0.01 level (2-tailed).

On the other hand, motivation and self-fulling prophecy had a moderate positive correlation with sociological facts (tau_b = .412) and gender differentials in the academic performance of the students (tau_ = .452). Furthermore, sociological factors also had a similar moderate positive correlation with gender differentials in academic performance (tau_b = .345).

Chi-Square statistical test: Table 5.26 described the results of the non-parametric Chi-square statistical test. It presented the association between two categorical variables. It stated that the p-value (.000) was less than the significance level (0.05). Therefore, null hypothesis was rejected. Thus, it was concluded that there was an association between students' home background (favorable socialization) and gender differentials in the academic performance of the students. Similarly, results supported the hypothesis with a p-value of .000 that there was an association between parental involvement and gender differentials in academic performance. Further, Pearson Chi-Square value (44.359 [a]) with a p-value of .000 proved an association between the role of social media and gender differentials in students' academic performance.

Moreover, non-parametric test results also supported the argument that the role of the peer group and gender differentials in the academic performance of the students were associated with p-value (.000) less than the level of significance (0.05). It was also observed that there was an association between the role of the social construction of educational self and gender differentials in the academic performance of the students. These results were supported with Chi-square value of 29.770 and with a p-value of .000. Similarly, the alternate hypothesis was also proved with a p-value of .000 that there was an

association between the educational background of the students and gender differentials in the academic performance of the students.

Table 5.26

Chi-Square Statistical Test (Dependent Variable = Gender Differentials in Academic Performance)

Independent Variables	Pearson Chi-Square Value	df	Asymp. Sig. (2-sided)
Students home background	20.933[a]	4	.000
Socio-economic status of the family	12.868[a]	4	.012
Parental involvement	58.693[a]	4	.000
Role of social media	44.359[a]	4	.000
Role of peer group	29.623[a]	4	.000
Role of the social construction of educational self	29.770[a]	4	.000
Educational background	49.056[a]	4	.000
Student-teacher interaction	20.410[a]	4	.000
Teachers' competency and gender	38.722[a]	4	.000
Classroom environment	63.661[a]	4	.000
Gender-specific study culture	46.933[a]	4	.000
Motivation and commitment	65.109[a]	4	.000
Self-fulfilling prophecy	62.167[a]	4	.000
Historical factors	12.027[a]	4	.017
Cultural factors	34.918[a]	4	.000
Structural factors	18.930[a]	4	.001
Critical factors	23.742[a]	4	.000
Household Determinants	61.799[a]	4	.000
Educational Determinants	75.975[a]	4	.000
Motivation, Commitment, and Self-fulfilling Prophecy	204.646[a]	4	.000
Sociological Factors	91.298[a]	4	.000
Total number of observations (n) = 253			

Further, Chi-square results proved that there was an association between student-teacher interaction and gender differentials in the academic performance of the students. Here again, the null hypothesis was rejected and alternate hypothesis was accepted with a p-value of .000. Similar results were calculated to support the hypothesis that there was an

association of teachers' competency and gender with gender differentials in the academic performance of the students with a p-value of .000 that was less than the significance level (0.05). Moreover, the p-value of .000 proved an association between classroom environment and gender differentials in academic performance.

In the table, data reflected that the null hypothesis was rejected with a p-value of .000 less than the significance level (0.05). Conversely, the alternate hypothesis was accepted that there was an association between gender-specific study culture and gender differentials in academic performance. Further, results also supported in the same way that there was an association of motivation and commitment with students' academic performance concerning their gender. It was concluded that the results proved significant, with a p-value of .000. Here, it was noted that the self-fulling prophecy of the students also had an association with their gender differentials in academic performance.

Moreover, non-parametric test results also supported the argument that the cultural factors and gender differentials in the academic performance of the students were associated with p-value (.000) less than the level of significance (0.05). It was also observed that there was an association between structural factors and students' academic performance by their gender. These results were supported with Chi-square value of 18.930 and with a p-value of .001. Similarly, the alternate hypothesis was also proved with a p-value of .000 that there was an association between critical factors and gender differentials in the academic performance of the students.

Similarly, the results of household determinants had a significant association with the academic performance of the student by their gender. Here, the null hypothesis was rejected and alternate hypothesis was accepted with p-value .000, less than the significance

level (0.05). On the other hand, educational determinants and motivational factors also had an association with gender differentials in the academic performance of the students. The association of these variables was approved with p-value .000, less than the significance level (0.05). In the last part, the Chi-square test proved that the association of sociological factors with gender differentials in the academic performance of the students was significant with p-value .000.

5.15 Multivariate analysis

In this section, I implement two multivariate techniques namely Structural Equation Modelling (SEM) and Artificial Neural Network (ANN). Section 5.15.1 investigates the Structural Equation Modelling to identify the impact of different variables on gender differentials in academic performance of the students. It is pertinent to mention here that this section provides results of three models, whereas, section 5.15.2 predicts the gender differentials in academic performance based on factors using ANN.

5.15.1 Structure Equation Modelling (SEM)

Structure Equation Modeling (SEM) was applied to test hypothesis. SEM is a powerful technique, combine complex path models (Bollen, 1989) with latent variables which specify confirmatory factor analysis, regression models and complex path model, as the SEM model described (Bentler, 1995). Here, three models are developed to identify the impact of independent variables on dependent variables. It is pertinent to mention that this portion also provides the path analysis and testing of hypothesis based on the models.

Results of Model 1: I established a model describing the structural relationship among socio-economic factors, cultural factors and educational determinants. I, then, analyzed its impacts on predicting gender differentials in academic performance in higher education. Based on the relevant literature and consulting subject experts in the field of educational sociology, higher education and academic performance, three factors contributing towards gender differentials of students in academic performance in terms of females' outperformance and males' underperformance were outlined. These factors were carefully studied and corresponding into an appropriate coding within the framework of the Structural Equation Modelling (SEM). The independent variables (factors) include socio-

economic and cultural factors. The dependent variable represents gender differentials of students in academic performance in higher education in terms of females' outperformance and males' underperformance. Furthermore, educational determinant variables have been used as mediators. Likewise, the direct and indirect effects of the model is shown in conceptual framework model 1.

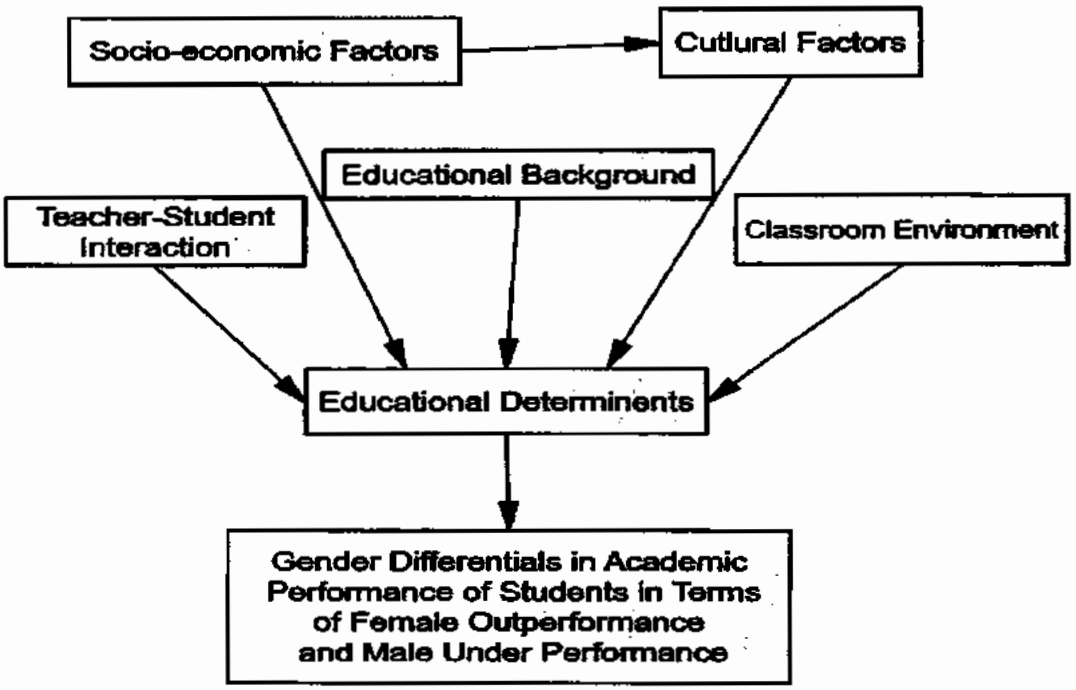


Figure 5.24. Conceptual framework of model 1

Table 5.27 presents model fit summary of the model which was estimated to explain theoretical model. A best fit indicated the perfect correspondence between the observations matrix and estimated matrix. Therefore, to examine the global fit model, the absolute measures of adjustment was observed. The chi-square of the proposed model was 96.002 (degree of freedom = 61) with p-value of 0.003, less than the significance level (0.05). Further, chi-square calculated value near zero was adequate and model yielded a satisfactory goodness of fit. Moreover, the table also indicated the proposed value of GFI

(.946), AGFI (.919), CFI (.956), TLI (.944) and IFI (.957). These values also confirmed the proposed model fitness. Here, RMSEA value (.048) was lower than .08 and did not exceed the lower bound of the 90 percent interval confidence. Therefore, the model fitted well and is acceptable.

Hypothesis testing: This section is based on the hypothesis testing. Here, the results of hypotheses are discussed based on the model 1.

Socio-economic status and educational determinants: Socio-economic statuses of the students' families have positive direct impact on educational determinants. Here, both variables were measured by ordinal scale (6 point). SEM results proved hypothesis 1 with β-value of .134 and p-value of .060 less than the level of significance (0.10). Therefore, it is argued that socio-economic status of the family had significant effects on educational determinants of gender differentials in academic performance of the students. Female students from families with higher social status, income and wealth had good educational background. Consequently, these factors were contributing towards educational determinants in terms of differences of female students' outperformance and male students' underperformance in higher education.

Impact of socio-economic status and cultural factors on students' academic performance: Hypothesis 2 is based on direct impact of socio-economic status and cultural factors on gender differentials in academic performance of the students. Here, results of SEM statistical analysis supported the hypothesis with β-value of .166 and p-value of .031, less than level of significance (0.05). Consequently, it confirmed that socio-economic status of students' families had positive impact on cultural factors of gender differentials in

academic performance. Socio-economic status of students' families and the cultural factors were measured with the items based on attitudinal scale (6 point) of (dis)agreement.

Table 5.27

Model Fit Summary and Regression Weights of the Model 1

Model fit summary									
Model 1	Chi-square	df	Probability level	GFI	AGFI	CFI	TLI	IFI	RMSEA
Proposed model	96.002	61	.003	.946	.919	.956	.944	.957	.048
Recommended model	---	---	≥.05	≥.90	≥.90	≥.90	≥.90	≥.90	≥.08

Regression weights of the model

Variables			Standardized Estimate	Estimate	S.E.	C.R.	P
SES	--->	CUF	.166	.098	.045	2.160	.031
SES	--->	EDU	.134	.255	.136	1.883	.060
CUF	--->	EDU	.592	1.906	.381	4.996	***
EDU	--->	GDI	.639	.170	.035	4.844	***
EDU	--->	G.1	.523	1.000			
CUF	--->	K.2.i	.601	1.000			
GDI	--->	J.vi	.519	1.000			
GDI	--->	J.v	.639	1.098	.174	6.325	***
GDI	--->	J.iv	.701	1.299	.199	6.533	***
GDI	--->	J.iii	.574	1.028	.171	5.998	***
EDU	--->	G.3	.626	1.600	.251	6.371	***
EDU	--->	G.4	.740	1.542	.229	6.730	***
SES	--->	C.2.i	.324	.340	.066	5.183	***
SES	--->	C.2.iii	.816	1.000			
CUF	--->	K.2.iii	.341	.564	.127	4.440	***
CUF	--->	K.2.ii	.827	1.272	.201	6.321	***
SES	--->	C.2.ii	.979	1.145	.141	8.095	***

Educational determinants and gender differentials in academic performance: The results supported hypothesis that educational determinants had positive direct impact on gender differentials in academic performance. These variables consisted of attitudinal scale (6 point). Independent variable of this hypothesis was constructed on three attributes including educational background, teachers' competency and gender and classroom

environment. The regression results demonstrated that the impact of educational determinants on gender differentials in academic performance was significant. It was confirmed through β-value of .639 and p-value of .000, less than significance level (0.05). It also revealed that educational background of female and male students differed them to perform differently in higher education. It resulted in female students' outperformance and male students' underperformance in higher education.

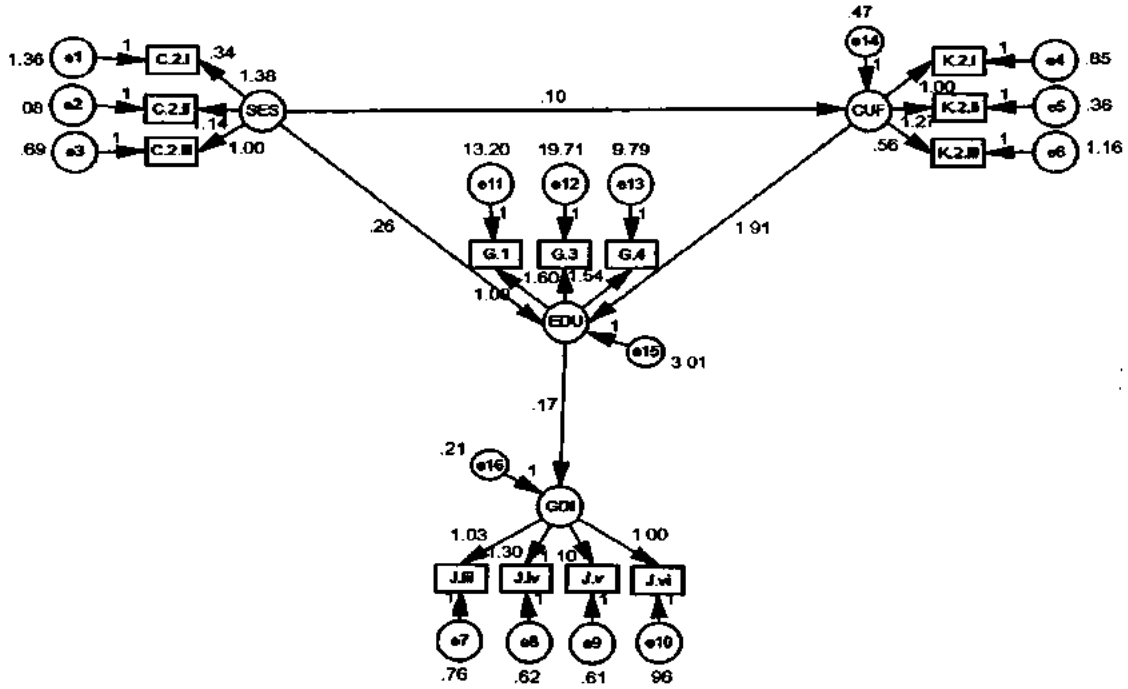


Figure 5.25. Path diagram predicting gender differential of model 1

Cultural factors and educational determinants of students' academic performance: The fourth hypothesis represented the direct path of cultural factors with educational determinants of students' academic performance. The structural results also indicated that cultural factors had positive significant impact on educational determinants of students. Similarly, the value of β (.592) and p-value of .000, less than significance level (0.05) confirmed hypothesis 4. Here, both variables were measured through attitudinal scale of

(dis)agreement. It reported that the cultural preferences of parents were different for their female and male children that resulted differently in educational achievements for them.

Mediation results and indirect path of model 1: Hypothesis 5 consisted of indirect effect of socio-economic status of students' family on educational determinants via cultural factors of gender differentials in academic performance. The results of indirect effect in model with 2000 bootstrap samples indicated support for hypothesis 5. The standardized indirect estimate value (β = .099) and p-value (.038) less than level of significance (0.05) proved that socio-economic status of student's family had indirect effect on educational determinant in academic performance. These results showed partial mediation via cultural factors of gender differentials in academic performance. Moreover, these three variables consisted of items and measured using attitudinal scale of (dis)agreement.

The results also supported hypothesis, that 6-cultural factor of family had indirect significant effects on gender differentials in academic performance in higher education via educational determinants. The standardized indirect estimates value (β = .378) and p-value of .038, less than significance level (0.05) indicated indirect effect of cultural factor as significant. These results had full mediation via educational determinants of students. The measurement of the variables consisted of attitudinal 6-point scale of (dis)agreement. In addition, these results of indirect effect in model were applied with 2000 bootstrap samples. Hypothesis 7 consisted of indirect effect of socio-economic status of students' family on gender differentials in academic performance via cultural factors and educational determinants. Here, the results supported the full mediation of cultural factors and educational determinants between socio-economic status of students' family and gender differentials. The variables consisted of the attitudinal scale of (dis)agreement. The

standardized indirect estimate value (β = .063) and p-value (.004) less than level of significance (0.05) proved that socio-economic status of student family had indirect effect on gender differentials in academic performance. The results of indirect effect in model with 2000 bootstrap samples showed support for hypothesis 7.

Table 5.28

Mediation Path, Indirect Effects and Variances of the Model 1

Mediation path and indirect effects of the model						
Hypothesis	Indirect Path	Lower	Upper	P-Value	Standardized Estimate	Mediation
H5	SES→ CUF→ EDU	.021	.185	.038	.099	Partial
H6	CUF→EDU→GDI	.277	.488	.001	.378	Full
H7	SES→ CUF→ EDU→GDI	.063	.246	.004	.063	Full
Variances of the model						
		Estimate	S.E.		C.R.	P
SES		1.377	.235		5.866	***
e14		.466	.110		4.232	***
e15		3.007	.855		3.516	***
e16		.209	.061		3.454	***
e3		.689	.170		4.059	***
e2		.079	.207		.379	.705
e1		1.355	.122		11.084	***
e4		.848	.102		8.358	***
e5		.359	.111		3.244	.001
e6		1.158	.108		10.723	***
e10		.955	.098		9.780	***
e9		.615	.073		8.466	***
e8		.618	.084		7.393	***
e7		.758	.082		9.285	***
e12		19.707	2.257		8.731	***
e13		9.792	1.475		6.638	***
e11		13.199	1.346		9.808	***

Group analysis of model 1 by gender of the respondents: This initial model testing of the SEM statistical analysis with the entire 253 sample of university teachers showed adequate model fit. Further, this model was applied separately for female and male faculty

members. It described the differences of attitude toward input and output variables along with existing path relationship by the gender of the respondents. The results for female and male teachers described in figure 5.3 (female and male teachers separately). The model summary of SEM verified good fit to data for both female and male teachers (GFI = .900, AGFI = .870, CFI = .934 and RMSEA = .039). Here, the value of GFI, CFI and RMSEA confirmed the model. On the other side, the value of AGFI was lightly less than .900. Overall, the model fit summery results proved the model gender based group analysis was fit and significant. Table 5.29 described p-values and standardized regression weights for female and male faculty members. Group analysis data reported that the socio-economic status of students' family had no significant impact on cultural factors of students' academic performance (p-value = .661, β = .044) and this impact was significant (p-value = .011, β = .290) for female teachers at 0.05 significance level. Conversely, the impact of socio-economic status of students' family on educational determinants was not significant at .784 p-value and β = -.027 for female teachers and this impact was significant for male teachers (p-value = .009, β = .268). It was also noted that the impact of cultural factors on educational determinants was less significant (p = .001) for male teachers as compared with female teachers (p = .000). It was proved that there was significant differences of attitude among female and male teachers towards factors of gender differentials in academic performance.

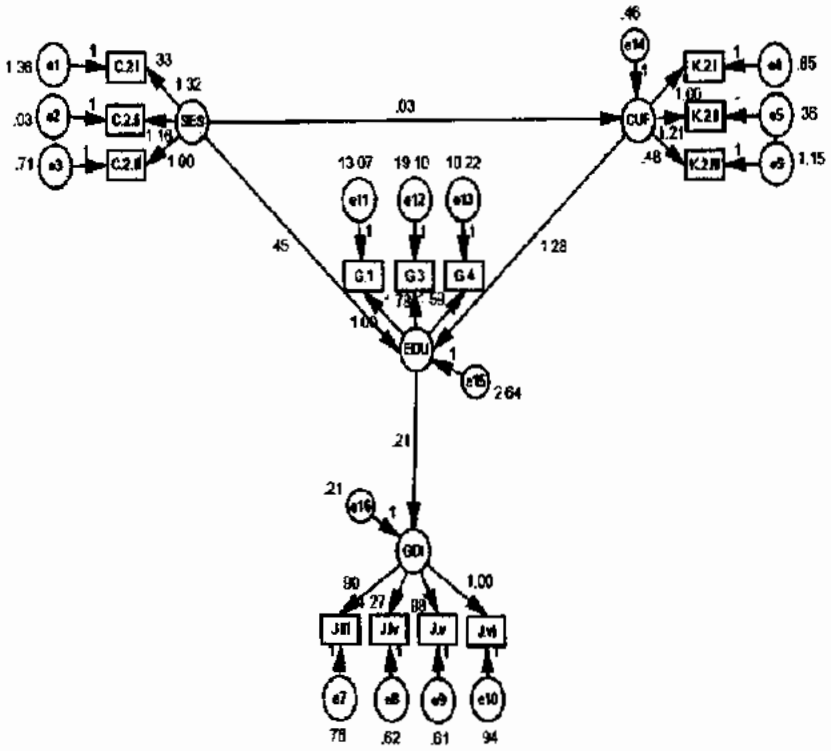


Figure 5.26 a. Male teachers' response

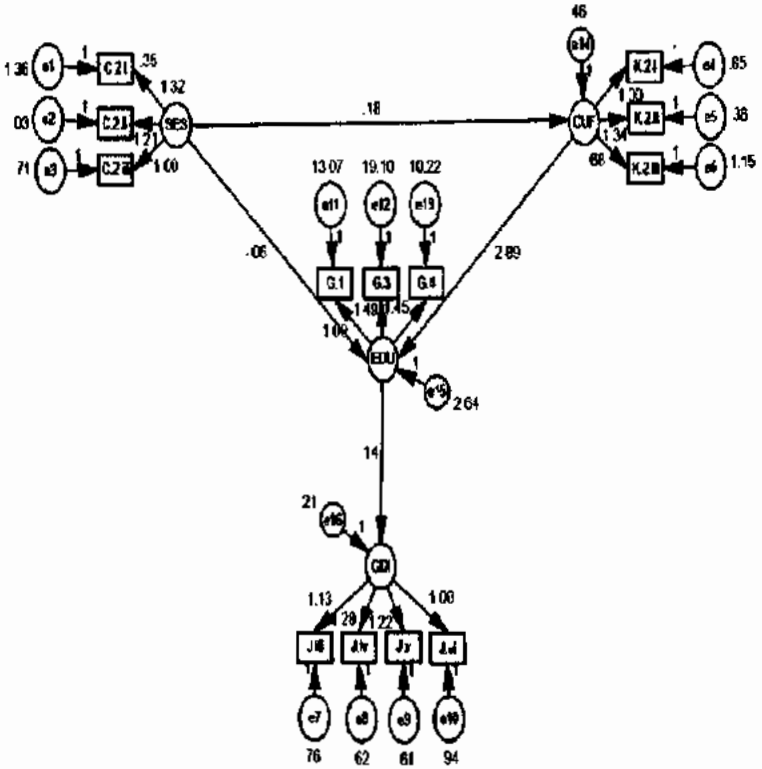


Figure 5.26b. Female teachers' response

Figure 5.26. Group analysis of gender differentials in academic performance (based on teachers' gender)

Table 5.29

Estimates of the Model Group Analysis (Female and Male Teachers' Comparison)

Variables			Male teachers response					Female teachers response				
			Standardized Regression Weights	Estimate	S.E.	C.R.	P	Standardized Regression Weights	Estimate	S.E.	C.R.	P
SES	--->	CUF	.044	.026	.059	.438	.661	.290	.179	.071	2.532	.011
SES	--->	EDU	.268	.448	.172	2.601	.009	-.027	-.061	.224	-.274	.784
CUF	--->	EDU	.452	1.282	.391	3.280	.001	.788	2.892	.624	4.633	***
EDU	--->	GDI	.657	.210	.054	3.874	***	.628	.144	.038	3.797	***
EDU	--->	G.1	.469	1.000				.583	1.000			
CUF	--->	K.2.i	.592	1.000				.609	1.000			
GDI	--->	J.vi	.535	1.000				.523	1.000			
GDI	--->	J.v	.611	.978	.185	5.294	***	.683	1.225	.230	5.321	***
GDI	--->	J.iv	.702	1.266	.220	5.763	***	.694	1.279	.239	5.349	***
GDI	--->	J.iii	.537	.902	.186	4.834	***	.612	1.132	.230	4.915	***
EDU	--->	G.3	.617	1.782	.355	5.013	***	.664	1.493	.271	5.500	***
EDU	--->	G.4	.690	1.585	.298	5.315	***	.763	1.454	.240	6.050	***
SES	--->	C.2.i	.310	.331	.088	3.784	***	.325	.349	.101	3.466	***
SES	--->	C.2.iii	.806	1.000				.806	1.000			
CUF	--->	K.2.iii	.289	.477	.164	2.904	.004	.409	.679	.179	3.788	***
CUF	--->	K.2.ii	.807	1.212	.211	5.743	***	.845	1.344	.211	6.358	***
SES	--->	C.2.ii	.991	1.159	.146	7.931	***	.992	1.209	.148	8.150	***

Table 5.30

Model Fit Summary and Estimates of Group Analysis (Female and Male Teachers' Comparison)

Model fit summary				
Model 1	GFI	AGFI	CFI	RMSEA
Proposed model	.900	.870	.934	.039
Recommended model	≥.90	≥.90	≥.90	≥.08
Variances				
	Estimate	S.E.	C.R.	P
SES	1.318	.224	5.893	***
e14	.459	.108	4.264	***
e15	2.635	.801	3.289	.001
e16	.214	.061	3.490	***
e3	.711	.159	4.475	***
e2	.033	.203	.163	.871
e1	1.357	.122	11.090	***
e11	13.071	1.328	9.842	***
e4	.850	.100	8.502	***
e5	.361	.105	3.457	***
e6	1.147	.107	10.723	***
e10	.940	.097	9.686	***
e9	.607	.072	8.425	***
e8	.623	.084	7.454	***
e7	.758	.081	9.327	***
e12	19.103	2.225	8.586	***
e13	10.221	1.447	7.064	***

Group analysis of the model 1 by geographic location of faculty members: This initial model testing of the SEM statistical analysis with the entire 253 sample of university teachers showed adequate model fit. Further, this model was applied separately for rural and urban faculty members. It described the differences of attitude toward input and output variables with existing path relationship by the geographic location of faculty members.

The results for rural and urban residential backgrounds of teachers were described in figure 5.4 (rural and urban area teachers separately). The model summary of SEM verified good fit to data for both female and male teachers (GFI = .906, AGFI = .877, CFI = .949 and RMSEA = .034). Here, the value of GFI, CFI and RMSEA confirmed the model. On the other side, the value of AGFI was lightly less than .900. Overall, the model fit summery results proved that the model geographic location based group analysis was fit and significant.

Table 5.31 described p-values and standardized regression weights for faculty members based on their residential backgrounds. Group analysis data reported that the socio-economic status of students' family had no significant impact on cultural factors of students' academic performance (p-value = .520, β = .075) for faculty members who belonged to rural areas, the impact was significant (p-value = .023, β = .229) for teachers belonging to urban backgrounds at 0.05 significance level. Similarly, the impact of socio-economic status of students' family on educational determinants was also not significant at .543 p-value and β = .069 for faculty members from rural areas, the impact was significant for teachers belonging to urban geographic location (p-value = .094, β = .155) at p-value less than 0.10. It was also noted that the other results were the same for both residential areas.

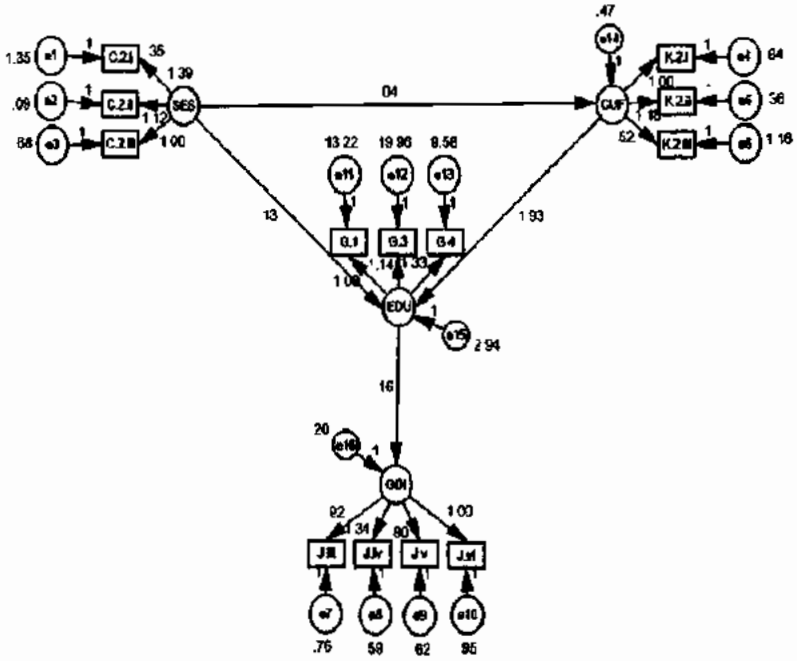


Figure 5.27a. Rural area teacher response

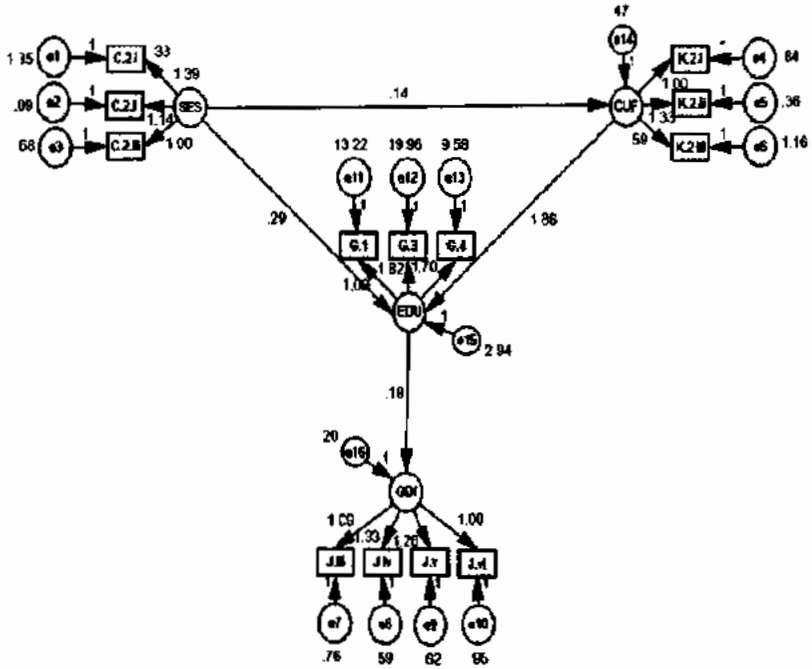


Figure 5.27b. Urban area teacher response

Figure 5.27. Group analysis of gender differentials in academic performance (based on teachers' geographical location

Table 5.31

Estimates of the Model Group Analysis (Rural and Urban Teachers' Comparison)

Variables			Rural area teachers response					Urban area teachers response				
			Standardized Regression Weights	Estimate	S.E.	C.R.	P	Standardized Regression Weights	Estimate	S.E.	C.R.	P
SES	--->	CUF	.075	.044	.068	.644	.520	.229	.137	.060	2.266	.023
SES	--->	EDU	.069	.127	.209	.609	.543	.155	.292	.175	1.675	.094
CUF	--->	EDU	.608	1.934	.549	3.520	***	.586	1.862	.444	4.198	***
EDU	--->	GDI	.617	.163	.050	3.268	.001	.660	.178	.042	4.212	***
EDU	--->	G.1	.514	1.000				.523	1.000			
CUF	--->	K.2.i	.598	1.000				.607	1.000			
GDI	--->	J.vi	.508	1.000				.525	1.000			
GDI	--->	J.v	.506	.801	.201	3.993	***	.695	1.259	.214	5.871	***
GDI	--->	J.iv	.706	1.337	.264	5.054	***	.720	1.327	.224	5.926	***
GDI	--->	J.iii	.518	.920	.225	4.081	***	.601	1.090	.204	5.335	***
EDU	--->	G.3	.484	1.136	.295	3.846	***	.672	1.818	.313	5.806	***
EDU	--->	G.4	.683	1.327	.272	4.885	***	.775	1.701	.273	6.224	***
SES	--->	C.2.i	.333	.348	.099	3.506	***	.321	.334	.086	3.873	***
SES	--->	C.2.iii	.820	1.000				.820	1.000			
CUF	--->	K.2.iii	.313	.517	.186	2.787	.005	.361	.594	.159	3.739	***
CUF	--->	K.2.ii	.805	1.181	.218	5.419	***	.843	1.332	.212	6.270	***
SES	--->	C.2.ii	.974	1.124	.146	7.715	***	.975	1.141	.142	8.020	***

Table 5.32

Model Fit Summary and Estimates of Group Analysis (Rural and Urban Teachers' Comparison)

Model fit summary				
Model	GFI	AGFI	CFI	RMSEA
Proposed model	.906	.877	.949	.034
Recommended model	≥.90	≥.90	≥.90	≥.08
Variances of model				
	Estimate	S.E.	C.R.	P
SES	1.391	.235	5.920	***
e14	.467	.110	4.244	***
e15	2.937	.851	3.452	***
e16	.205	.060	3.428	***
e3	.675	.169	4.006	***
e2	.094	.202	.465	.642
e1	1.353	.122	11.060	***
e11	13.222	1.355	9.757	***
e4	.845	.101	8.326	***
e5	.356	.110	3.252	.001
e6	1.156	.108	10.709	***
e10	.952	.097	9.769	***
e9	.616	.071	8.702	***
e8	.594	.084	7.072	***
e7	.763	.082	9.354	***
e12	19.964	2.214	9.018	***
e13	9.579	1.462	6.551	***

Conclusion of model 1: The overall results of this study support and extend the findings of previous studies carried out in different socio-cultural contexts. The study's findings enable us to associate females' outperformance and males' underperformance in higher education in Pakistan with socio-economic, cultural and educational factors as well as female and male students' attitudes towards education. The main finding of the study is consistent with our expectation that deposition and traits of individuals influence educational attainments. Documenting and presenting the main possible explanations for gender reverse change in education performance, it believes that this gender reverse change is likely to persist in coming decades and need to regularly analysis it to know and understand its other possible social consequences.

Results of Model 2: I established a model 2 describing the structural relationship among socio-economic factors, cultural factors, motivation and commitment, and educational determinants. Further, it explored its impacts on predicting gender differentials in academic performance in higher education in terms of female students' outperformance and male students' underperformance. Based on the relevant literature and consulting subject experts in the field of Sociology of Knowledge, higher education, and academia, four major factors contributing towards gender differentials in academic performance in terms of female students' outperformance and male students' underperformance outlined. These factors were carefully studied and corresponding into an appropriate coding within the framework of the Structural Equation Modelling (SEM). The independent variable (factors) include socio-economic factors and cultural factors. The dependent variable represents gender differentials of students in academic performance in higher education. AMOS statistical tool was used to employ SEM to draw results of an established model describing the

structural relationship among socio-economic factors, cultural factors, educational determinants, and motivation and commitment. Moreover, it explored its impacts on predicting gender differentials in academic performance in higher education in terms of female students' outperformance and male students' underperformance. Additionally, this model was also employed to check the group analysis of male and female teachers, and then, rural and urban residential background of teachers. Moreover, conceptual framework model 2 presents direct and indirect effects of variables as followings.

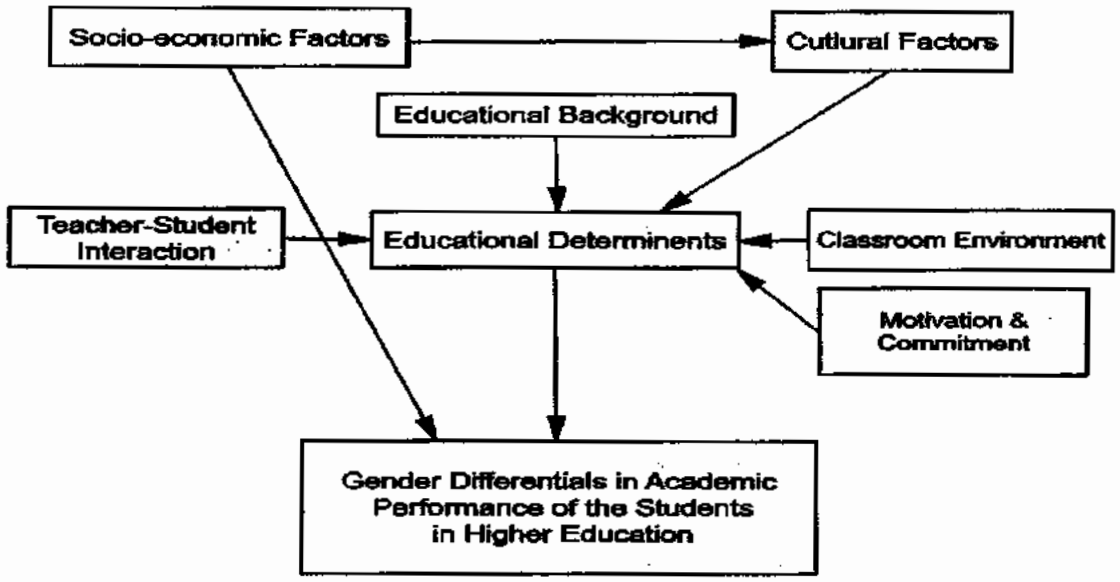


Figure 5.28. Conceptual framework of model 2

Table 5.33 presents the model fit summary and regression weights of the model that were estimated to explain the theoretical model. The best fit indicated the perfect correspondence between the observation matrix and the estimated matrix. Therefore, to examine the global fit model, the absolute measures of adjustment were observed. The chi-square of the proposed model was 198.502 (df = 100) with a p-value of 0.000, less than the significance level (0.05). Further, chi-square calculated value near zero was adequate and the model yields satisfactory goodness of fit. Moreover, the table also indicated the proposed value

of GFI (.912), AGFI (.880), CFI (.903), TLI (.884), and IFI (.905). These values also confirmed the proposed model of fitness. Here, RMSEA (.063) was lower than .08 and did not exceed the lower bound of the 90 percent interval confidence. Therefore, again the model fitted well and acceptable.

Hypothesis testing: This section is based on the hypothesis testing. Here, the results of hypotheses have been discussed based on the model 2.

Socio-economic status and cultural factors of students' academic performance: Hypothesis 1 of the model indicated the impact of the socio-economic status of the students on cultural factors of students' academic performance. The result demonstrated that the socio-economic status of students' families had positive significant effects on cultural factors of students' academic performance. It also confirmed hypothesis 1 through the value of β (.308) and p-value of .000, less than the level of significance (0.05). As a result, teachers perceive socioeconomic differences between students' families had differences in cultural aspects of female outperformance and male underperformance (Akos, Rose, & Orthner, 2014; Destin, Hanselman, Buontempo, Tipton, & Yeager, 2019; Seginer & Vermulst, 2002; Walpole, 2003).

Socio-economic status and gender differentials in academic performance: The second hypothesis was between the socio-economic status of students' family and gender differentials in academic performance. Regression weight supported hypothesis 2 with β value .156 and p-value .052, less than the significance level (0.10). Therefore, there was a significant positive effect of the socio-economic status of the students' family on female outperformance and male underperformance in higher education. It was contended that female students might belong to families with high social status, income, and wealth who

performed well in higher education (S. W. Kim et al., 2019; Yamamoto & Brinton, 2010). Conversely, male students might belong to families with economic pressure who underperformed in tertiary level educational results (Perry & McConney, 2013; Reisel, 2011).

Table 5.33
Model 1 Fit Summary and Regression Weights

Model fit summary									
Model	Chi-square	df	Probability level	GFI	AGFI	CFI	TLI	IFI	RMSEA
Proposed model	198.502	100	.000	.912	.880	.903	.884	.905	.063
Recommended model	---	---	≥.05	≥.90	≥.90	≥.90	≥.90	≥.90	≥.08

Regression Weights							
Variables			Standardized Estimate	Estimate	S.E.	C.R.	P
SES	--->	CUF	.308	1.000			
CUF	--->	MOC	.710	.509	.096	5.288	***
MOC	--->	EDU	.886	5.576	1.021	5.461	***
EDU	--->	GDI	.578	.100	.020	5.038	***
SES	--->	GDI	.156	.395	.203	1.946	.052
SES	--->	C.2.i	.195	1.000			
EDU	--->	G.3	.601	1.000			
CUF	--->	K.2.i	.644	1.000			
GDI	--->	J.vi	.517	1.000			
GDI	--->	J.v	.641	1.107	.174	6.357	***
GDI	--->	J.iv	.712	1.330	.202	6.597	***
GDI	--->	J.iii	.566	1.020	.171	5.972	***
EDU	--->	G.1	.495	.615	.098	6.302	***
MOC	--->	I.1.i	.470	1.000			
SES	--->	C.2.iii	.876	5.372	1.139	4.718	***
MOC	--->	I.1.iii	.481	.964	.186	5.193	***
EDU	--->	G.4	.802	1.091	.129	8.434	***
SES	--->	C.2.ii	.913	5.345	1.163	4.596	***
CUF	--->	K.2.iii	.349	.526	.113	4.660	***
CUF	--->	K.2.ii	.803	1.142	.145	7.866	***
MOC	--->	I.1.ii	.641	1.195	.199	6.010	***

Cultural factors and students' motivation & commitment to academic performance: The result supported hypothesis 3 that cultural factors of students' academic performance had

a positive significant impact on their motivation and commitment towards studies. Further, this hypothesis was confirmed from the value of β (.710) with a p-value of .000, less than the significance level (0.05). These variables consisted of the item measured using an attitudinal scale of (dis)agreement. It indicated that male students were cultured as they pleased and female students remained restricted in their actions (Phipps & Young, 2015; Senadza, 2012). As in the local cultural context, educated females were preferred for mate selection (Lažnjak, Šporer, & Švarc, 2011). Therefore, these cultural factors contributed to differences in motivation and commitment between female and male students in academic performance (Li & Adamson, 1995; O. L. Liu, Bridgeman, & Adler, 2012). It also noted that female students were encouraged to perform well and committed to outperforming male students in higher education (A. Martin & Marsh, 2005).

Motivation & Commitment and educational determinants of students: The fourth hypothesis stated the direct impact of motivation and commitment on educational determinants of the students. Here, these variables also comprised of the items measured through an ordinal attitudinal scale of (dis)agreement (6 points). The hypothesis was accepted based on regression weights (β = .886) with a p-value of .000 that was less than the significance level. It is stated that female students' encouragement, commitment, and educational considerations as liberating force enhanced their motivation as compared with male students (Schneider Grings & Hentschke, 2015). Further, these different motivational aspects resulted in educational background, classroom environment, and role of teachers' competency and gender differently for female and male students' academic performance (Bull et al., 2013; Dornbusch et al., 2001; Manke, 1997).

Educational determinants and gender differentials in academic performance: Hypothesis 5 indicated the direct impact of educational determinants on gender differentials in academic performance. Here, the independent and dependent variables were measured using different items on an attitudinal six-point scale of (dis)agreement. The result supported the hypothesis 5 based on SEM statistical test showing regression weights (β = .578) and p-value of .000 that was less than the level of significance. It resulted that educational background, teachers' competency and gender, and classroom environment contributed towards female outperformance and male underperformance in higher education (Schempp et al., 2004; Strand & Winston, 2008; Sudkamp et al., 2012).

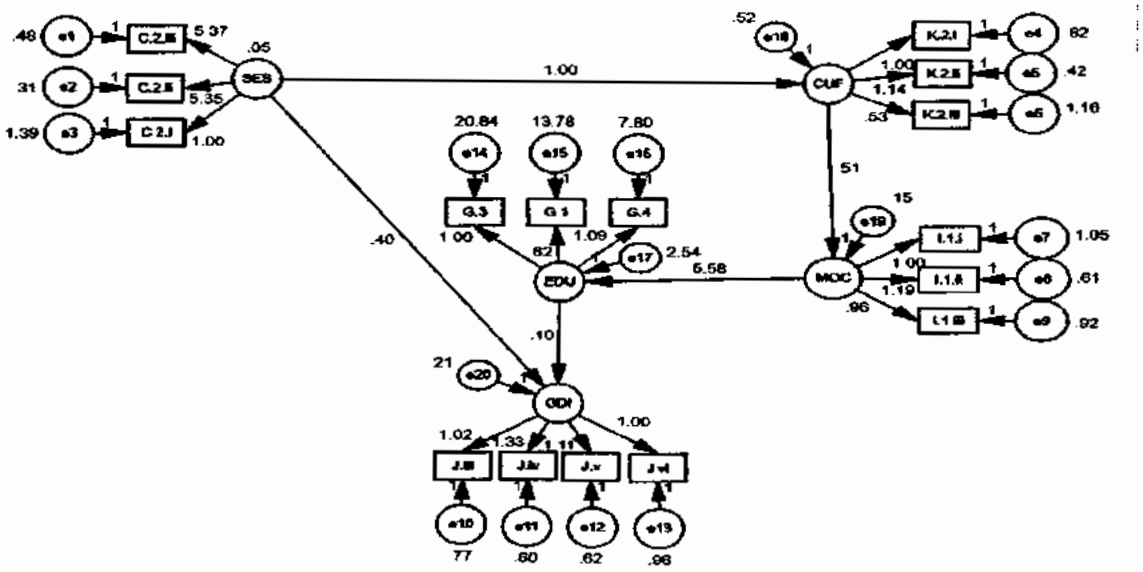


Figure 5.29. Path diagram predicting gender differential of model 2

Mediation results and indirect path of model 2: *H6:* It consisted of indirect effect of the socio-economic status of students' families on motivation and commitment via cultural factors of gender differentials in academic performance. The results of the indirect effect in model with 2000 bootstrap samples indicated support for hypothesis 5. The standardized indirect estimate value (β = .22) and p-value (.001) less than the level of significance (0.05)

proved that the socio-economic status of student's family had an indirect effect on motivation and commitment of students in academics performance. These results showed full mediation via cultural factors of gender differentials in academic performance. Moreover, these three variables consisted of items measured using an attitudinal scale of (dis)agreement.

H7: The results also supported hypothesis 7 that the cultural factor of the family had an indirect significant effect on educational determinants via motivation and commitment. The standardized indirect estimates value (β = .63) and p-value of .001, less than the significance level (0.05), indicated an indirect effect of cultural factors as significant. These results had full mediation via motivation and commitment. The measurement of the variables consisted of an attitudinal 6-points scale of (dis)agreement. Also, these results of the indirect effect in model was applied with 2000 bootstrap samples.

Table 5.34

Mediation Results and Indirect Path of the Model 2

Hypothesis	Indirect Path	Lower	Upper	P-Value	Standardized Estimate	Mediation
H6	SES→CUF→MOC	.130	.319	.001	.22	Full
H7	CUF→MOC→EDU	.504	.732	.001	.63	Full
H8	MOC→EDU→GDI	.395	.625	.001	.51	Full
H9	SES→CUF→MOC→EDU	.110	.282	.001	.19	Full
H10	CUF→MOC→EDU→GDI	.264	.467	.001	.36	Full
H11	SES→CUF→MOC→EDU→GDI	.062	.177	.000	.11	Partial

H8: It consisted of the indirect effect of motivation and commitment on gender differentials in academic performance via educational determinants. Here, the results supported the full mediation of educational determinants between motivation and commitment and gender differentials in academic performance. The variables consisted of the attitudinal scale of

(dis)agreement. The standardized indirect estimate value (β = .51) and a p-value (.001), less than the level of significance (0.05) proved that motivation and commitment had an indirect effect on gender differentials in academic performance. The results of an indirect effect in model with 2000 bootstrap samples showed support for hypothesis 8.

H9: Indirect mediation results also supported hypothesis 9 that the socio-economic status of students' families had an indirect effect on educational determinants via cultural factors and motivation and commitment. The indirect standardized estimate (β = .19) and p-value (.001), less than the level of significance (0.05), indicated the significance of indirect effects. Further, the results of the indirect effect in the model with 2000 bootstrap samples also supported. These variables consisted of the items measured through an attitudinal scale of (dis)agreement. The scale was conferment by applying CFA. Furthermore, the indirect results had an indirect full mediation via cultural factors and motivation & commitment.

H10: The tenth hypothesis was about the indirect relationship of cultural factors and gender differentials in the academic performance of the students in higher education via motivation & commitment and educational determinants. These variables were measured using an attitudinal scale of (dis)agreement and pretested. The value of indirect standardized estimate, β = .36 and p-value .001, supported the significance of relationship at the significance level (0.05). Therefore, the results confirmed the indirect effect of cultural factors on gender differentials in the academic performance of the students in higher education by the full mediation of motivation & commitment and educational determinants. Further, the result of the indirect effect in the model with 2000 bootstrap samples was also supported.

Table 5.35
Variances of the Model 2

	Estimate	S.E.	C.R.	P
SES	.055	.023	2.399	.016
e18	.525	.108	4.850	***
e19	.148	.048	3.062	.002
e17	2.542	1.181	2.153	.031
e20	.212	.060	3.537	***
e3	1.387	.124	11.175	***
e2	.314	.189	1.661	.097
e14	20.840	2.175	9.582	***
e4	.818	.097	8.413	***
e5	.416	.088	4.715	***
e6	1.158	.108	10.745	***
e13	.962	.098	9.847	***
e12	.615	.072	8.526	***
e11	.601	.083	7.261	***
e10	.771	.082	9.423	***
e15	13.783	1.337	10.307	***
e7	1.049	.103	10.233	***
e1	.482	.194	2.485	.013
e8	.610	.070	8.665	***
e9	.920	.090	10.172	***
e16	7.805	1.312	5.950	***

H11: This hypothesis was between the indirect effects of the socio-economic status of students' families on gender differentials in the academic performance of the students by the mediation of cultural factors, motivation and commitment, and educational determinants. In this hypothesis 11 of the model, the variables consisted of the items measured using a 6-point scale of (dis)agreement. The result of the indirect effect in the model with 2000 bootstrap samples was also supported. The indirect standardized estimate value (β = 11) and p-value (.000) less than the significance level (0.05) indicated support to signify the indirect effect of socio-economic status of students' family on gender differentials in academic performance by the partial mediation of cultural factors, motivation and commitment and educational determinants.

Group analysis of model 2 by gender of the respondents: This initial model testing of the SEM statistical analysis with the entire 253 samples of university teachers showed an adequate model fit. Further, this model was applied separately on female and male faculty members. It described the differences of attitude towards input and output variables along with the existing path relationship by the gender of the respondents.

The results for female and male teachers described have been in figure 5.7 (female and male teachers separately). The model summary of SEM verified good fit to data for both female and male teachers (GFI = .854, AGFI = .816, CFI = .854 and RMSEA = .053). Here, the value of GFI, CFI, and AGFI was less than the recommended value. Here, only the value of RMSEA was less than the recommended value ($\geq$.08). Therefore, this model was partially good and fit.

Table 5.36 described p-values and standardized regression weights for female and male faculty members. Group analysis data reported that the socio-economic status of students' families had no significant impact on gender differentials in academic performance of the students (p-value = .110, β = .164) and this impact was significant (p-value = .052, β = .200) for female teachers at 0.100 significance level. Further, in this model, all other variables' impact was significant with a p-value of less than 0.05, level of significance for both female and male teachers. Therefore, the results of the model described that splitting samples into female and male teachers separately had similar results as the whole sample had. Only one impact was different between both groups that was the impact of the socio-economic status of the students' family on gender differentials in the academic performance of the students.

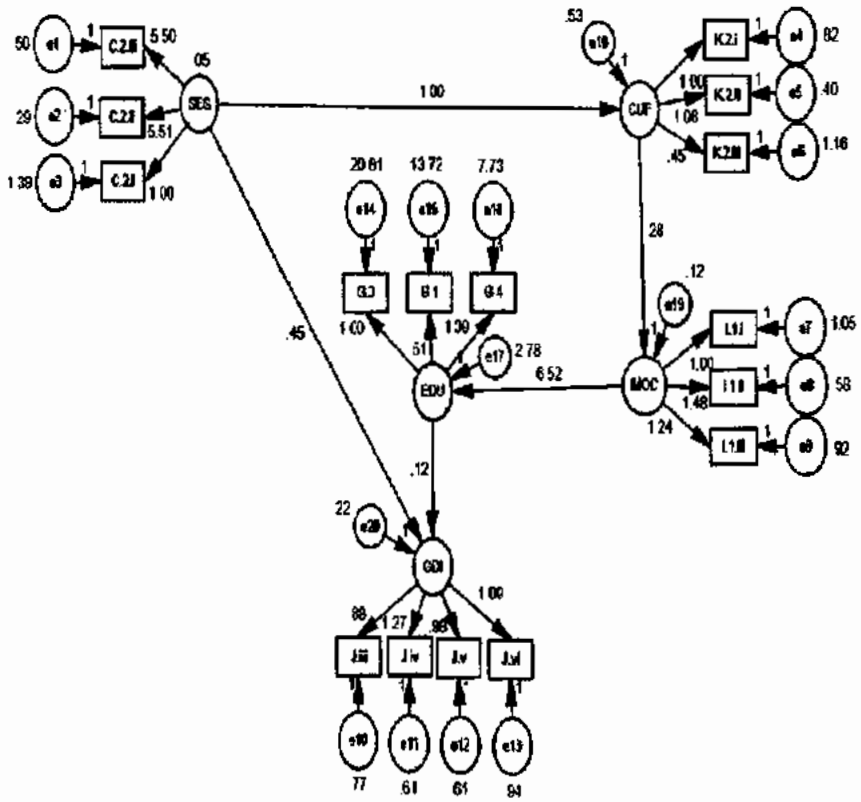


Figure 5.30a. Male teachers' response

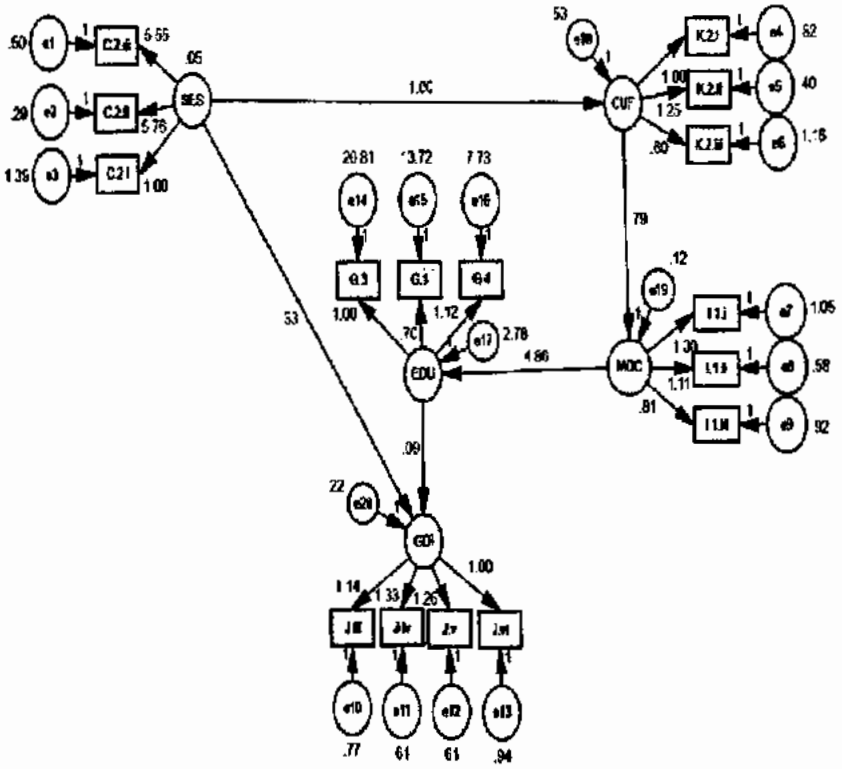


Figure 5.30b. Female teachers' response

Figure 5.30. Model 2 fit path diagram of group analysis of teachers' gender

Table 5.36

Estimates of the Model 2 Group Analysis (Female and Male Teachers' Comparison)

Variables			Male teachers response					Female teachers response				
			Standardized Regression Weights	Estimate	S.E.	C.R.	P	Standardized Regression Weights	Estimate	S.E.	C.R.	P
SES	--->	CUF	.294	1.000				.305	1.000			
CUF	--->	MOC	.531	.280	.085	3.301	***	.677	.444	.102	4.338	***
MOC	--->	EDU	.844	6.521	1.752	3.723	***	.937	7.456	1.516	4.918	***
EDU	--->	GDI	.615	.122	.031	3.980	***	.573	.083	.019	4.278	***
SES	--->	GDI	.164	.451	.282	1.598	.110	.200	.496	.255	1.942	.052
SES	--->	C.2.i	.187	1.000				.196	1.000			
EDU	--->	G.3	.563	1.000				.662	1.000			
CUF	--->	K.2.i	.645	1.000				.655	1.000			
GDI	--->	J.vi	.536	1.000				.512	1.000			
GDI	--->	J.v	.612	.976	.182	5.356	***	.692	1.296	.222	5.833	***
GDI	--->	J.iv	.707	1.268	.217	5.852	***	.734	1.396	.234	5.965	***
GDI	--->	J.iii	.527	.881	.183	4.807	***	.595	1.118	.212	5.280	***
EDU	--->	G.1	.392	.507	.134	3.782	***	.569	.636	.107	5.942	***
MOC	--->	I.1.i	.365	1.000				.444	1.000			
SES	--->	C.2.iii	.867	5.496	1.243	4.421	***	.886	5.382	1.183	4.548	***
MOC	--->	I.1.iii	.463	1.241	.340	3.651	***	.496	1.077	.247	4.359	***
EDU	--->	G.4	.774	1.091	.181	6.021	***	.836	1.031	.129	8.013	***
SES	--->	C.2.ii	.917	5.507	1.288	4.275	***	.902	5.251	1.163	4.514	***
CUF	--->	K.2.iii	.305	.452	.145	3.119	.002	.365	.545	.142	3.834	***
CUF	--->	K.2.ii	.792	1.075	.158	6.790	***	.814	1.188	.158	7.495	***
MOC	--->	I.1.ii	.614	1.479	.348	4.251	***	.685	1.450	.276	5.259	***

Table 5.37

Model 2 Fit Summary and Variances of Group Analysis Based on Teachers' Gender

Model fit summary

Model	GFI	AGFI	CFI	RMSEA
Proposed model	.851	.816	.854	.053
Recommended model	≥.90	≥.90	≥.90	≥.08

Variances

	Estimate	S.E.	C.R.	P
SES	.050	.022	2.302	.021
e18	.530	.109	4.869	***
e19	.116	.045	2.587	.010
e17	2.783	1.165	2.390	.017
e20	.216	.061	3.555	***
e3	1.387	.124	11.158	***
e2	.287	.200	1.437	.151
e14	20.811	2.172	9.582	***
e4	.817	.097	8.445	***
e5	.400	.086	4.662	***
e6	1.155	.107	10.771	***
e13	.945	.097	9.744	***
e12	.606	.072	8.452	***
e11	.611	.083	7.382	***
e10	.769	.081	9.448	***
e15	13.724	1.325	10.360	***
e7	1.050	.102	10.327	***
e1	.501	.196	2.549	.011
e8	.585	.070	8.352	***
e9	.916	.091	10.089	***
e16	7.731	1.318	5.864	***

Group analysis of model 2 by geographic location of faculty members: This initial model testing of the SEM statistical analysis with the entire 253 samples of university teachers showed an adequate model fit. Further, this model was applied separately for faculty members based on their rural and urban backgrounds. It described the differences of attitude toward input and output variables along with the existing path relationship by the geographic location of faculty members.

The results for rural and urban residential backgrounds of teachers was described in figure 5.8 (rural and urban area teachers separately). The model summary of SEM verified good fit to data for both female and male teachers (GFI = .864, AGFI = .833, CFI = .887 and RMSEA = .046). Here, the value of GFI, CFI, and AGFI was less than the recommended model value. On the other side, the value of AGFI was less than .08 as per the recommended value.

Table 5.38 described p-values and standardized regression weights members of faculty based on their residential backgrounds. Group analysis data reported that the socio-economic status of students' family had no significant impact on gender differentials in academic performance of the students (p-value = .368, β = .105) members of faculty who belonged to rural areas and this impact was significant (p-value = .052, β = .200) for teachers belonged to urban backgrounds at 0.100 significance level. Furthermore, the impact of motivation and commitment on educational determinants (p-value = .002, β = .776) and the impact of educational determinants on gender differentials (p-value = .003, β = .622) was less important for teachers belonged to rural area. It was noted that these impacts on teachers belonging to urban areas were significant at a p-value of 0.000.

Furthermore, all other impacts were significant for all teachers who belonged to rural and urban areas.

Conclusion of model 2: The overall conclusion that I reach from the data collected form university teachers is that there is a trend of female students' outperformance and male students' underperformance in higher education. The review and study findings revealed that the socio-economic background of the students and the cultural factors were creating differences in the academic performance of the students. Parental involvement and economic status of the family is more favorable for female students to outperform male students academically. Moreover, teachers perceive that female and male students' previous educational background is also widening this gender gap at tertiary level educational performance. Likewise, the classroom environment and student-teacher interaction are also favorable to female outperformance. In the company of these factors, the motivation and commitment of female students is higher towards studies as compared to male students. The findings of the study also supported the argument that gender and geographical location of the university teachers have different perspectives on gender differentials in academic performance in terms of female students' outperformance and male students' underperformance in higher education.

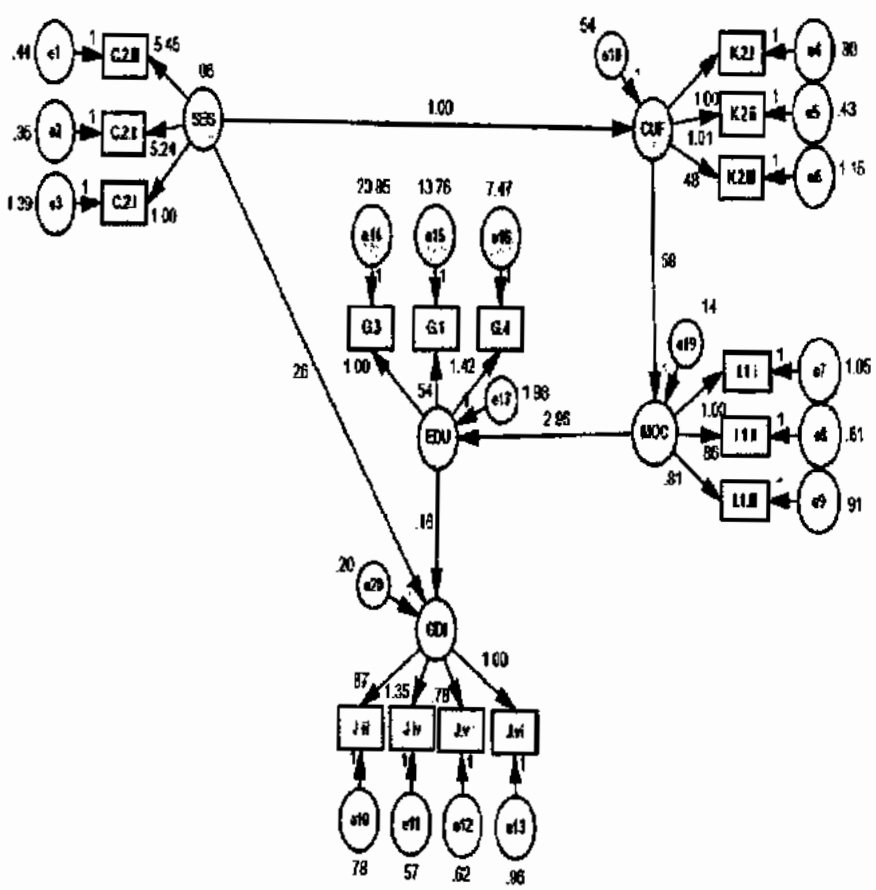


Figure 5.31a. Rural area teachers' response

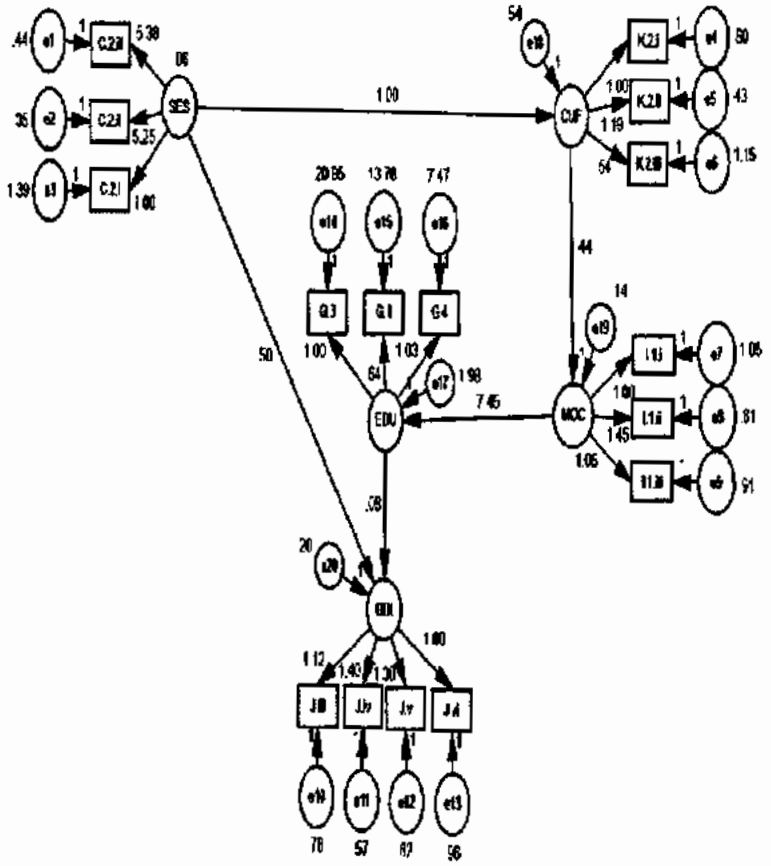


Figure 5.31b. Urban area teachers' response

Figure 5.31. Model fit path diagram of teachers' geographical location

Table 5.38

Estimates of the Model Based on Group Analysis (Teachers' Geographic Location)

Variables			Rural area teachers response					Urban area teachers response				
			Standardized Regression Weights	Estimate	S.E.	C.R.	P	Standardized Regression Weights	Estimate	S.E.	C.R.	P
SES	--->	CUF	.305	1.000				.305	1.000			
CUF	--->	MOC	.770	.583	.148	3.928	***	.677	.444	.102	4.338	***
MOC	--->	EDU	.776	2.962	.946	3.133	.002	.937	7.456	1.516	4.918	***
EDU	--->	GDI	.622	.164	.055	2.999	.003	.573	.083	.019	4.278	***
SES	--->	GDI	.105	.262	.291	.900	.368	.200	.496	.255	1.942	.052
SES	--->	C.2.i	.196	1.000				.196	1.000			
EDU	--->	G.3	.439	1.000				.662	1.000			
CUF	--->	K.2.i	.655	1.000				.655	1.000			
GDI	--->	J.vi	.514	1.000				.512	1.000			
GDI	--->	J.v	.502	.779	.193	4.032	***	.692	1.296	.222	5.833	***
GDI	--->	J.iv	.726	1.351	.258	5.233	***	.734	1.396	.234	5.965	***
GDI	--->	J.iii	.500	.867	.215	4.030	***	.595	1.118	.212	5.280	***
EDU	--->	G.1	.312	.545	.220	2.474	.013	.569	.636	.107	5.942	***
MOC	--->	I.1.i	.497	1.000				.444	1.000			
SES	--->	C.2.iii	.888	5.449	1.219	4.470	***	.886	5.382	1.183	4.548	***
MOC	--->	I.1.iii	.447	.815	.234	3.486	***	.496	1.077	.247	4.359	***
EDU	--->	G.4	.758	1.420	.339	4.194	***	.836	1.031	.129	8.013	***
SES	--->	C.2.ii	.901	5.242	1.182	4.436	***	.902	5.251	1.163	4.514	***
CUF	--->	K.2.iii	.329	.484	.163	2.975	.003	.365	.545	.142	3.834	***
CUF	--->	K.2.ii	.766	1.007	.158	6.366	***	.814	1.188	.158	7.495	***
MOC	--->	I.1.ii	.541	.861	.214	4.018	***	.685	1.450	.276	5.259	***

Table 5.39

Model Fit Summary of Group Analysis (Teachers' Geographic Location)

Model fit summary

Model	GFI	AGFI	CFI	RMSEA
Proposed model	.864	.833	.887	.046
Recommended model	≥.90	≥.90	≥.90	≥.08

Variances

	Estimate	S.E.	C.R.	P
SES	.056	.023	2.388	.017
e18	.543	.111	4.910	***
e19	.139	.048	2.911	.004
e17	1.983	1.017	1.950	.051
e20	.200	.058	3.467	***
e3	1.388	.124	11.151	***
e2	.353	.183	1.925	.054
e14	20.855	2.134	9.774	***
e4	.798	.097	8.209	***
e5	.428	.086	4.966	***
e6	1.155	.108	10.716	***
e13	.961	.097	9.864	***
e12	.622	.070	8.836	***
e11	.567	.083	6.867	***
e10	.777	.081	9.537	***
e15	13.756	1.320	10.419	***
e7	1.047	.103	10.184	***
e1	.441	.196	2.249	.025
e8	.614	.069	8.915	***
e9	.912	.090	10.192	***
e16	7.474	1.305	5.727	***

Results of Model 3: The model 3 portrayed the causal relationship between the socio-economic status of the students and gender differentials in academic performance. It focused on the moderator role of cultural factors and educational determinants. Here, the socio-economic statuses of students' families are independent variables (exogenous), gender differentials in academic performance are dependent variable (endogenous) and two variables used as moderator variables named cultural factors and educational determinants. On the questions of measuring variables, teachers were asked to express their (dis)agreement with certain relevant statements on a 6-level Likert scale. Likewise, the direct and indirect effects of the model is shown in the conceptual framework model 3.

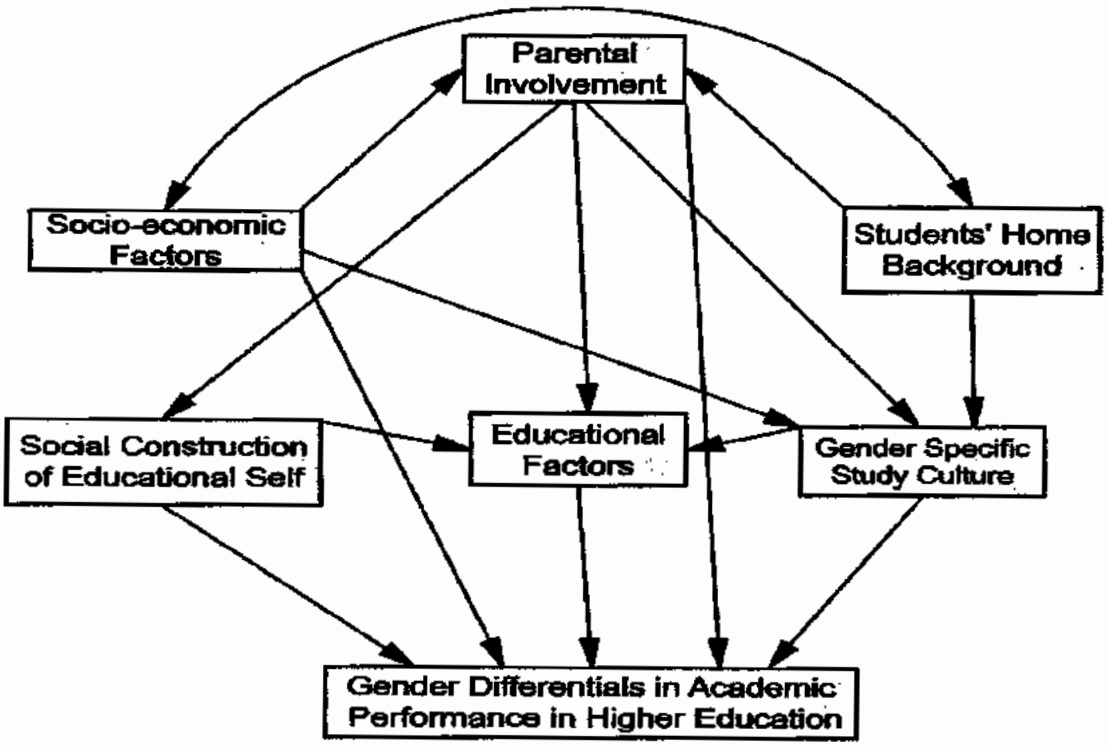


Figure 5.32. Conceptual framework of model 3

Table 5.40 presents the model fit summary that was estimated to explain the theoretical model. The best fit indicated the perfect correspondence between the observation matrix and the estimated matrix. Therefore, to examine the global fit model, the absolute measures

of adjustment is observed. The chi-square of the proposed model was 12.278 (degree of freedom = 6) with a p-value of 0.056, less than the significance level (0.10). Further, chi-square calculated value near zero was adequate and the model yield satisfactory goodness of fit. Moreover, the table also indicated the proposed value of GFI (.986), AGFI (.937), CFI (.983) TLI (.942) and IFI (.984). These values also confirmed the proposed model of fitness. Here, RMSEA (.064) was lower than .08 and did not exceed the lower bound of the 90 percent interval confidence (Davies & Fillery-Travis, 2020). Therefore, again the model is acceptable and fits good.

Hypothesis testing of the model 3: This section is based on the hypothesis testing. Here, the results of hypotheses are discussed based on the model 1.

Socio-economic status and gender differentials in academic performance: Hypothesis 1 of the model showed the impact of socio-economic status of the students' families on gender differentials in academic performance in higher education. Both variables consisted of items measured through an ordinal 6-point scale of (dis)agreement. SEM results indicated the acceptance of hypothesis 1 by regression weights (β = .118) and the p-value was .028 less than the significance level (0.05). It revealed that females who belonged to high social status, family income, wealth and occupational prestige outshined in higher education. Moreover, male students who belonged to families with high economic pressure underperformed in their academic achievement (Ogunshola & Adewale, 2012; Walpole, 2003). Moreover, the study findings are also similar to the study findings of Ogunshola and Adewale (2012).

Table 5.40

Model Fit Summary and Regression Weights, Covariances and Variances

Model fit summary of Model									
Model	Chi-square	df	Probability level	GFI	AGFI	CFI	TLI	IFI	RMSEA
Proposed model	12.278	6	.056	.986	.937	.983	.942	.984	.064
Recommended model	---	-- -	≥.05 & 0.10	≥.90	≥.90	≥.90	≥.90	≥.90	≥.08

Regression weights of model						
Variables			Standardized Estimate	Estimate	S.E.	C.R.	P
SHB	--->	PAI	.491	.397	.044	9.009	***
SES	--->	PAI	.119	.079	.036	2.181	.029
SHB	--->	RGS	.224	.220	.068	3.258	.001
PAI	--->	RSC	.280	.296	.064	4.633	***
PAI	--->	RGS	.125	.152	.084	1.809	.070
SES	--->	RGS	.122	.098	.049	2.025	.043
PAI	--->	EDD	.322	1.240	.200	6.211	***
RGS	--->	EDD	.424	1.343	.158	8.483	***
RSC	--->	EDD	.151	.550	.183	3.014	.003
RSC	--->	GDI	.118	.182	.085	2.126	.033
EDD	--->	GDI	.254	.108	.029	3.711	***
RGS	--->	GDI	.211	.284	.083	3.412	***
SES	--->	GDI	.118	.128	.058	2.190	.028
PAI	--->	GDI	.131	.213	.100	2.134	.033
Covariance							
SHB	<-->	SES		4.905	1.707	2.874	.004
Variances							
SHB				21.822	1.944	11.225	***
SES				32.536	2.899	11.225	***
e1				10.312	.919	11.225	***
e4				18.354	1.635	11.225	***
e2				14.675	1.307	11.225	***
e3				123.236	10.979	11.225	***
e5				26.061	2.322	11.225	***

Parental involvement and gender differentials in academic performance: The second hypothesis was between parental involvement and gender differentials in academic

performance in higher education. Here again, both variables were operationalized and ordinal scale was used to measure the response of university teachers. The results of regression weights supported hypothesis 2 with the value of β (.131) and p-value of .033 that is less than the value of significance level (0.05). It exposed that the role of parents was more favourable for female students than males. Parental monitoring of females' educational activities, bothering and limiting their outside activities, and preference of males as earning members of the family contributed to female outperformance and male underperformance in higher education (Chowa et al., 2013; Fan & Chen, 2001). Furthermore, the results are also supported by the research findings of Fan and Chen (2001) *The social construction of educational self and gender differentials in academic performance:* The results of hypothesis 3 confirmed the impact of the social construction of educational self on gender differentials in academic performance. It was noted that these two variables consisted of the items measured through the ordinal scale of (dis)agreement. Here, the last item of independent variable was excluded which not confirmed through CFA significance. SEM results confirmed the significant impact through regression weights (β = .118) and the value of p (.033) was less than the level of significance (0.05). It showed that female students were socially bound to outperform in education. Further, female students tried to compete with role model females in the media industry and feminist discourses were also inclined to promote education as a heroic effort of females. Moreover, females also tended to occupy power positions in educational institutions and politics (Madon et al., 1997; Marsh & Craven, 1996). Therefore, these factors contributed to female students' outperformance and male students' underperformance in university education (Lyng, 2007; Wineburg, 1987).

Gender-specific study culture and gender differentials in academic performance: Under hypothesis 4, the direct impact of gender specific-study culture on gender differentials in academic performance was tested. The standardized estimate results ($\beta = .211$) and p-value (.000), less than significance level (0.05), supported positive impacts between variables. Further, these variables consisted of a 6-point attitudinal scale of (dis)agreement. It was observed that female students spent more time on homework and males in outdoor activities (Selvig et al., 2015). Further, female students tended to spend more time on searching study material and male students adopted anti-educational masculine identities (Jussim, 1986). Moreover, university teachers perceived that female students were more inclined to study in group, collaborate with each other and showed great concerned about lecture notes (Hattie, 2014). Consequently, it resulted in female students' outperformance and male students' underperformance in higher education institutions (Blumner & Richards, 1997).

Educational determinants and gender differentials in academic performance: Hypothesis 5 in the model indicated the impact of educational determinants of the students on gender differentials in academic performance. Here in this hypothesis, the independent and dependent variable consisted of items having an ordinal scale of (dis)agreement. All the items were confirmed through CFA to be included in further analysis. Therefore, results supported the hypothesis 5 through the regressions weights ($\beta = .254$) and p-value of .000 that was less than significance criteria value (0.05). It showed that the educational background of the students (Taylor et al., 2003), student-teacher interaction (Manke, 1997), teachers' competency and gender (Rothbart et al., 1971), and classroom environment (Bull et al., 2013) were contributing to female students' outperformance in higher education.

Covariation between students' home background and socio-economic status: The results supported hypothesis 6 that there was covariance between students' home background and socio-economic status of the family. These results were also confirmed with the p-value of .004, less than the level of significance. It was argued that both variables had an impact on each other with positive significant.

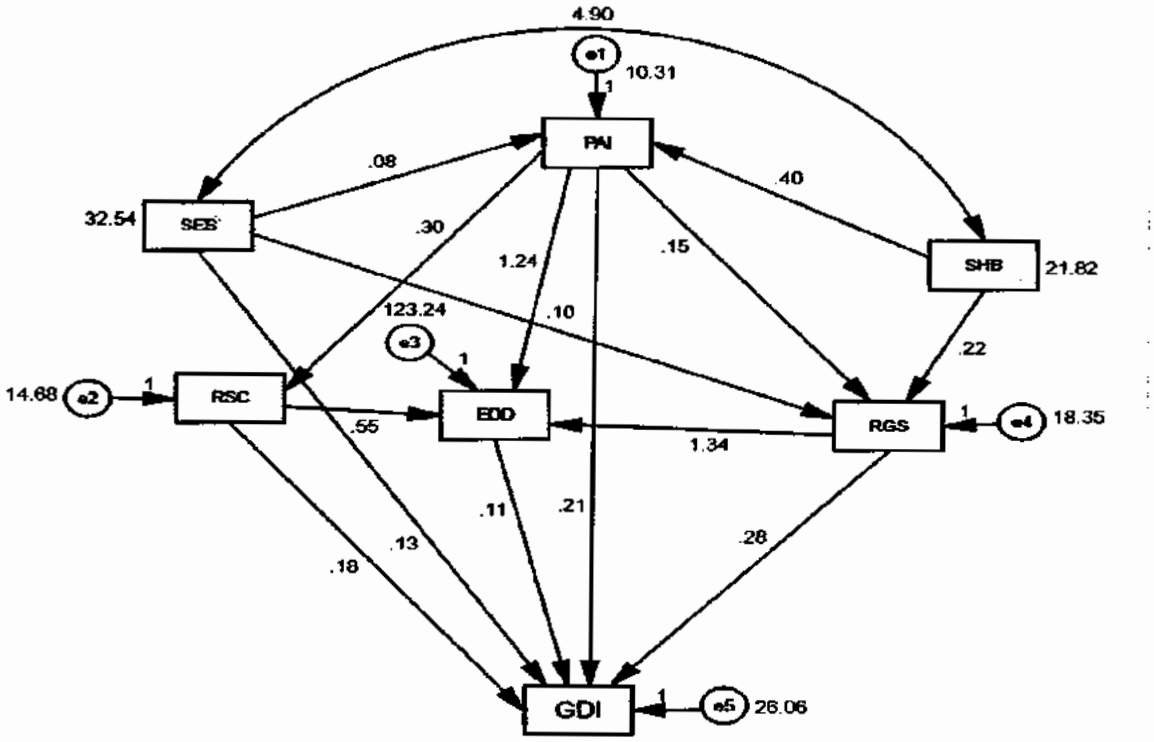


Figure 5.33. Model 3 fit path diagram

Mediation results and indirect path of the model: The results of the indirect path of model and mediation of variables indicated that the socio-economic status of the students' family had indirect effects on the role of the social construction of reality, the role of gender-specific study culture, educational determinants and gender differentials in academic performance by the mediation of parental involvement. Further, results also reported the indirect effects of the socio-economic status of students' families on educational determinants and gender differentials by the mediation of the role of gender-specific study

culture. The standardized estimate (β-value) and p-value less than the significance level (0.05) confirmed the indirect effects of the socio-economic status of the students' family through parental involvement. The measurement of the variable consisted of the different relevant items and an attitudinal scale of (dis)agreement was used. Further, these results of the indirect effect in model were applied with 2000 bootstrap samples also indicated the indirect effects on dependent variables.

In this model, indirect effects of students' home background (in the context of favourable socialization) measured the role of the social construction of educational self, the role of gender-specific study culture, educational determinants and gender differentials in academic performance by the mediation of parental involvement calculated. Further, the indirect relationship of students' home background and educational determinants by the mediation of the role of gender-specific study culture and gender differentials through the role of the social construction of educational-self analyzed. The standardized indirect estimates (β-value) confirmed the indirect effect of students' home background on the role of gender-specific study culture and educational determinants by the mediation of parental involvement with a p-value less than 0.05.

As a result, students' home backgrounds also had indirect effects on the role of the social construction of educational-self and educational determinants by the meditation of parental involvement were confirmed with a p-value less than 0.001. Further, students' home background had indirect effect on educational determinants and gender differentials in academic performance by the mediation of the role of gender-specific study culture also confirmed the significance with p-value 0.001.

Table 5.41

Mediation Results and Indirect Path of the Model 3

Indirect Path	Unstandardized Estimate	Lower	Upper	P-Value	Standardized Estimate
SES --> PAI --> RSC	0.023	0.007	0.048	0.024	0.033*
SES --> PAI --> RGS	0.012	0.002	0.034	0.032	0.015*
SES --> PAI --> EDD	0.098	0.021	0.217	0.026	0.038*
SES --> PAI --> GDI	0.017	0.003	0.043	0.036	0.016*
SES --> RGS --> EDD	0.132	0.027	0.254	0.042	0.052*
SES --> RGS --> GDI	0.028	0.007	0.066	0.025	0.026*
SHB --> PAI --> RSC	0.118	0.072	0.173	0.001	0.138***
SHB --> PAI --> RGS	0.060	0.012	0.119	0.033	0.062*
SHB --> PAI --> EDD	0.492	0.282	0.774	0.000	0.158***
SHB --> PAI --> GDI	0.084	0.022	0.158	0.032	0.064*
SHB --> RGS --> EDD	0.296	0.154	0.476	0.001	0.095***
SHB --> RGS --> GDI	0.062	0.028	0.117	0.000	0.047***
PAI --> RSC --> EDD	0.163	0.060	0.291	0.004	0.042**
PAI --> RSC --> GDI	0.054	0.011	0.117	0.034	0.033*
PAI --> RGS --> EDD	0.204	0.043	0.429	0.034	0.053*
PAI --> RGS --> GDI	0.043	0.008	0.103	0.027	0.026*
PAI --> EDD --> GDI	0.133	0.067	0.229	0.000	0.082***
RSC --> EDD --> GDI	0.059	0.024	0.115	0.002	0.038**
RGS --> EDD --> GDI	0.144	0.075	0.228	0.001	0.108***

Significance of Estimates: *** $p < 0.001$, ** $p < 0.010$, * $p < 0.050$, † $p < 0.100$

Moreover, the indirect effects of parental involvement in the academic performance of the students on educational determinants (β=0.042, $p < 0.010$) and gender differentials (β=0.0332, $p < 0.050$) by the mediation of the role of the social construction of

educational self. Here, parental involvement had almost similar significant indirect effects on gender differentials (β=0.026, p <0.050) and educational determinants (β=0.053, p <0.010) by the mediation of the role of gender-specific study culture. However, it had an indirect effect (β=0.082) on gender differentials by the mediation of educational determinants at 0.001 level of significance.

At the end of these indirect effects, it also reported the indirect relationship of the role of the social construction of the educational self (β=0.038, p <0.050) and the role of gender-specific study culture (β=0.108, p <0.001) on gender differentials in academic performance of the students.

Group analysis of model 3 based on teachers' gender: This initial model testing of the SEM statistical analysis with the entire 253 samples of university teachers showed an adequate model fit. Further, this model was applied separately on female and male members of faculty. It described the differences of attitude toward input and output variables along with the existing path relationship by the gender of the respondents.

The results for female and male teachers were described in figure 5.11 (female and male teachers separately). The model summary of SEM verified good fit to data for both female and male teachers (GFI = .972, AGFI = .918, CFI = .983 and RMSEA = .036). Here, the value of GFI, GFI, CFI, and RMSEA confirmed the model well. Overall, the model fit summary results proved that the model gender-based group analysis was fit and significant.

Table 5.42 described p-values and standardized regression weights for female and male faculty members. Group analysis data reported that the socio-economic status of students' family had no significant impact on parental involvement of students' academic

performance (p-value = .205, β = .061) and this impact was significant (p-value = .060, β = .103), for female teachers at 0.10 significance level. Conversely, the impact of students' home background (in context of favourable socialization) on the role of gender-specific study culture was not significant at .493 p-value and β = .067 for female teachers and this impact was significant for the male teachers (p-value = .000, β = .413). It was also noted that the impact of parental involvement on the role of the social construction of the educational self was not significant (p = .119, β = .157) for female teachers as compared with male teachers (p = .000).

Conversely, it was described that the impact of parental involvement on the role of gender specific study culture was significant (β = .237, p-value = .063) at 0.10 significance level for female teachers and it was not significant (β = .036, p-value = .747) for male teachers. Similarly, the SEM gender group results reported that the impact of socio-economic status of students' family was significant (β = .152, p-value = .039) for female teachers, and not significant (β = .057, p-value = .370) for male teachers. Further, the results mentioned that the impact of role of social construction of educational self on educational determinants of students' academic performance was less significant (β = .479, p-value = .048) for male teachers as compared with female teachers (β = .695, p-value = .012).

Group analysis of model showed that the impact of role of social construction of educational self on gender differentials in academic performance was not significant (β = .082, p-value = .534) for female teachers and was significant (β = .212, p-value = .059) for male teachers at 0.100 level of significance. Moreover, the impact of socio-economic status of students' family and parental involvement on gender differentials in academic performance was not significant (p-value = .522 & .659, β = .057 & .068 respectively) for

female teachers and was significant (p-value = .021 & .015, β = .157 & .315 respectively) for male teachers at 0.05 level of significance. The role of gender specific study culture was less significant (β = .175, p-value = .098) effecting gender differentials in academic performance for male students as compared with female teachers (β = .415, p-value = .001). The value of β (.099) at .025 level of significance showed that the impact of educational determinants on gender differentials in academic performance was less significant for female teachers as compared with male teachers (p = .000). Further, the results of covariance reported that covariation for female teachers between students' home backgrounds (favourable socialization) and socio-economic status of students' families was less important (p = .060) as compared with male teachers (p = .022).

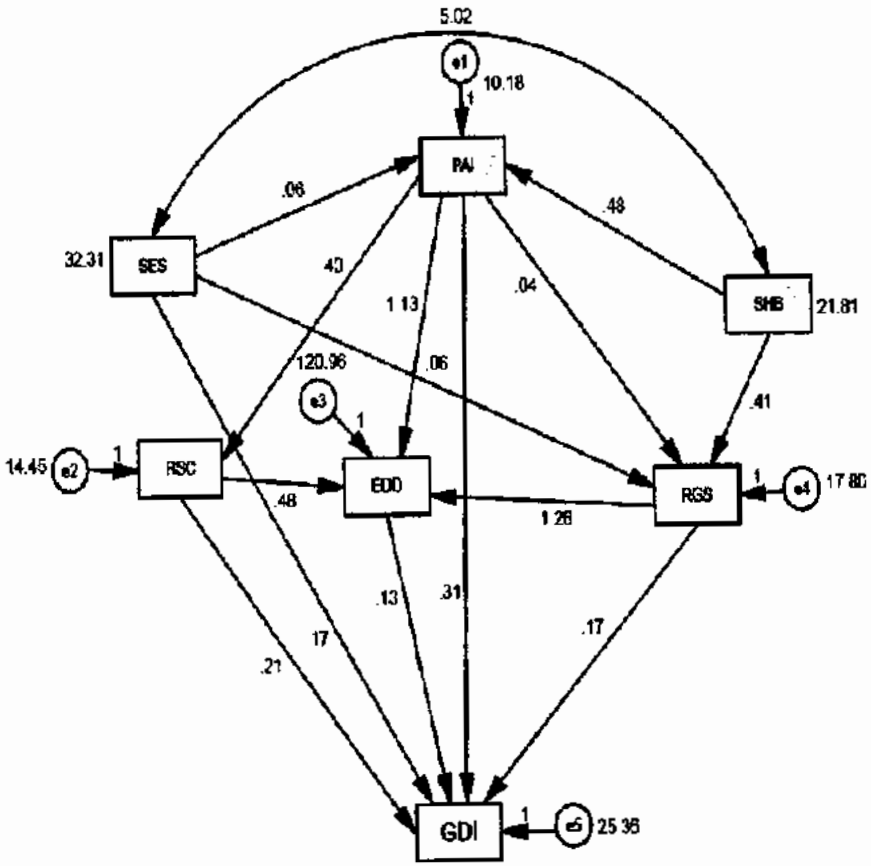


Figure 5.34a. Male teachers' response

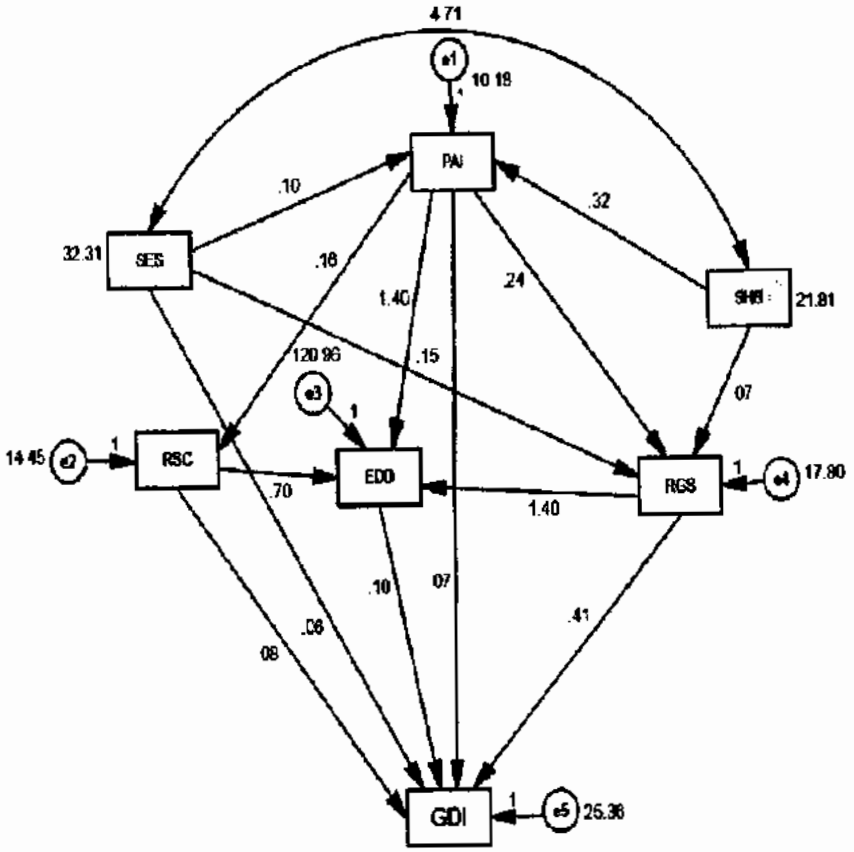


Figure 5.34b. Female teachers' response

Figure 5.34. Group analysis based on teachers' gender

Table 5.42

Model Fit Summary and Estimates Based on Group Analysis of Teachers' Gender

Model fit summary										
Model			GFI		AGFI		CFI		RMSEA	
Proposed model			.972		.918		.983		.036	
Recommended model			≥.90		≥.90		≥.90		≤.08	
Estimates of model										
Variables			Male teachers response				Female teachers response			
			Estimate	S.E.	C.R.	P	Estimate	S.E.	C.R.	P
SHB	--->	PAI	.477	.058	8.192	***	.324	.067	4.857	***
SES	--->	PAI	.061	.048	1.266	.205	.103	.055	1.884	.060
SHB	--->	RGS	.413	.093	4.424	***	.067	.097	.686	.493
PAI	--->	RSC	.404	.081	5.003	***	.157	.101	1.559	.119
PAI	--->	RGS	.036	.111	.322	.747	.237	.127	1.862	.063
SES	--->	RGS	.057	.064	.897	.370	.152	.074	2.062	.039
PAI	--->	EDD	1.130	.262	4.312	***	1.404	.306	4.588	***
RGS	--->	EDD	1.264	.203	6.212	***	1.399	.245	5.710	***
RSC	--->	EDD	.479	.242	1.978	.048	.695	.278	2.499	.012
RSC	--->	GDI	.212	.112	1.891	.059	.082	.131	.622	.534
EDD	--->	GDI	.126	.038	3.295	***	.099	.044	2.247	.025
RGS	--->	GDI	.175	.105	1.656	.098	.415	.130	3.189	.001
SES	--->	GDI	.175	.076	2.303	.021	.057	.089	.640	.522
PAI	--->	GDI	.315	.129	2.442	.015	.068	.155	.441	.659
Covariance										
SHB	<-->	SES	5.016	2.194	2.286	.022	4.709	2.504	1.881	.060
Variances										
			Estimate		S.E.		C.R.		P	
SHB			21.809		1.947		11.203		***	
SES			32.310		2.884		11.203		***	
e1			10.177		.908		11.203		***	
e2			14.454		1.290		11.203		***	
e4			17.799		1.589		11.203		***	
e3			120.956		10.797		11.203		***	
e5			25.364		2.264		11.203		***	

Group analysis of model 3 based on teachers' geographical location: This initial model testing of the SEM statistical analysis with the entire 253 samples of university teachers showed an adequate model fit. Further, this model was applied separately for faculty members based on their rural and urban locations. It described the differences of attitude toward input and output variables along with the existing path relationship by the geographic location of faculty members.

The results for rural and urban residential backgrounds of teachers was described in figure 5.12 (rural and urban area teachers separately). The model summary of SEM verified good fit to data for both female and male teachers (GFI = .972, AGFI = .917, CFI = .981 and RMSEA = .038). Here, the value of GFI, AGFI, CFI, and RMSEA was higher than the recommended model value. Overall, the model fit summary results of the model were good and best fit.

Table 5.43 designated p-values and standardized regression weights for faculty members based on their residential backgrounds. Group analysis data reported that the socio-economic status of students' families had no significant impact on parental involvement (p-value = .807, β = .013) for faculty members belonged to rural areas and this impact was significant (p-value = .011, β = .122) for teachers who belonged to urban backgrounds at 0.05 significance level. Furthermore, the impact of students' home background on the role of gender-specific study culture was less significant (p = 0.030) for teachers who belonged to rural areas as compared with teachers who belonged to urban areas (p = 0.013).

Moreover, the impact of parental involvement on the role of gender-specific study culture was not significant for all teachers belonging to rural and urban areas (p-value =

.560 & .121 respectively). Besides, the impact of the socio-economic status of students' families on the role of gender-specific study culture was not significant for teachers who belonged to a rural areas and was significant (β = .136 and p-value = .037) for urban teachers at 0.05 significance level. As well as the concern of the role of the social construction of educational self, it was found not significant (β = .351 and p-value = .198) affecting educational determinants of academic performance for rural background teachers but significant at a p-value of 0.003, less than the significance level of 0.05.

Conversely, the impact of the role of the social construction of educational self and the socio-economic status of students' families on gender differentials in academic performance was not significant for teachers who belonged to urban areas (p = .357 & .328 respectively). It was significant for teachers belonging to rural areas at .018 and .053 significance level. The results also pointed out that the impact of the role of gender-specific study culture on gender differentials in academic performance was significant at 0.05 level of significance for urban area teachers and not significant for a rural areas at 0.385.

Similarly, the impact of parental involvement on gender differentials had significant at 0.100 with β value of .219 and not significant for rural teachers at .257 significance level (β = .169). In the model, covariance between students' home background and socio-economic status of their family was significant (p = .015, β = 5.351) for teachers who belonged to urban areas and not significant (p = .104, β = 4.098) for rural area teachers. Further, all other impacts were significant for all teachers who belonged to rural and urban areas.

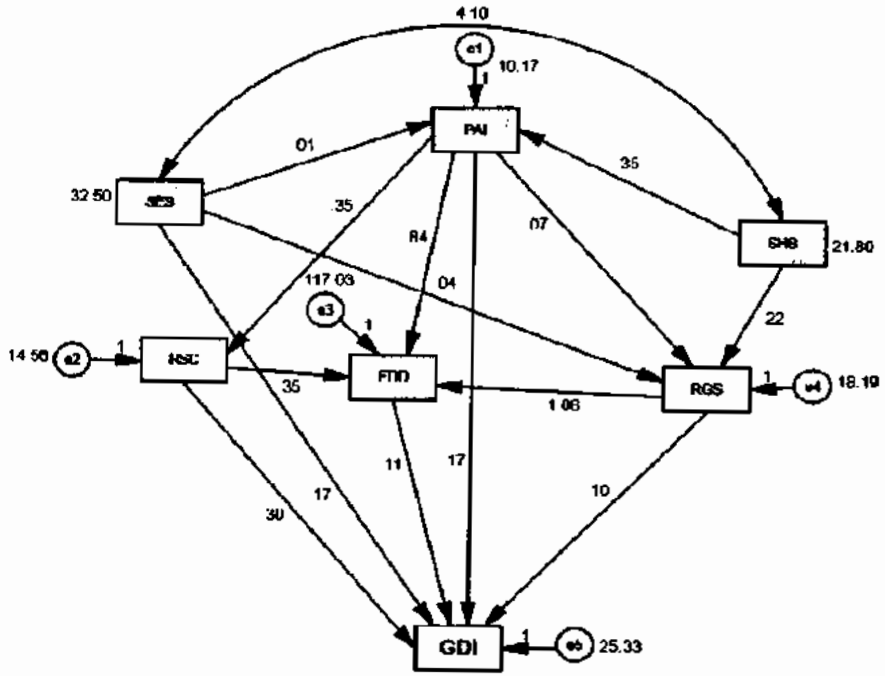


Figure 5.35a. Rural area teachers' response

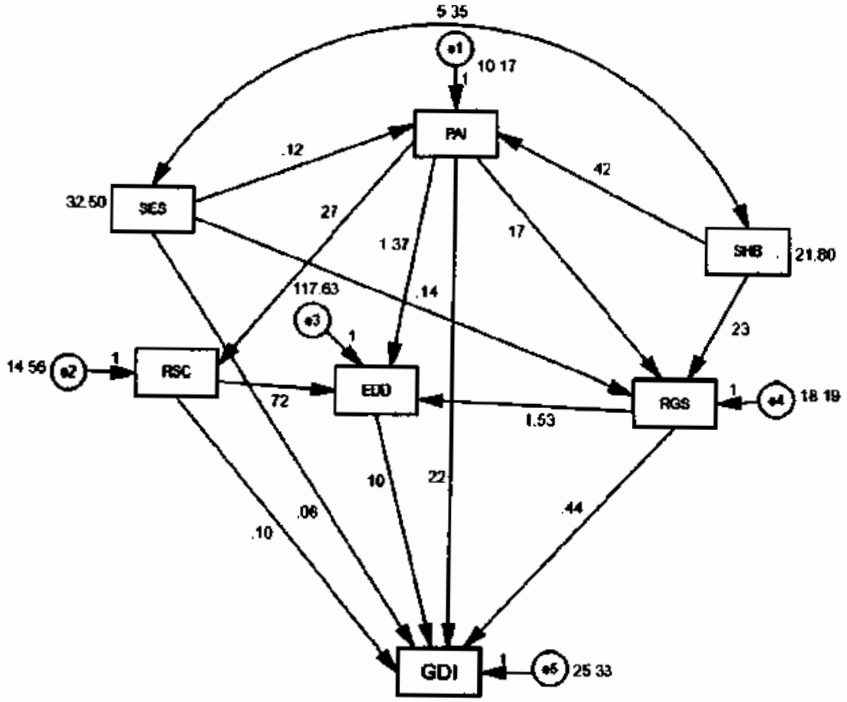


Figure 5.35b. Urban area teachers' response

Figure 5.35. Group analysis based on teachers' geographical location

Table 5.43

Model 3 Fit Summary and Estimates Based on Group Analysis of Teachers' Geographical Location

Model Fit Summary

Model	GFI	AGFI	CFI	RMSEA
Proposed model	.972	.917	.981	.038
Recommended model	≥.90	≥.90	≥.90	≥.08

Estimates of Model

Variables			Rural area teachers response				Urban area teachers response			
			Estimate	S.E.	C.R.	P	Estimate	S.E.	C.R.	P
SHB	--->	PAI	.352	.066	5.292	***	.420	.058	7.207	***
SES	--->	PAI	.013	.054	.245	.807	.122	.048	2.557	.011
SHB	--->	RGS	.217	.100	2.176	.030	.227	.091	2.493	.013
PAI	--->	RSC	.351	.102	3.436	***	.269	.082	3.274	.001
PAI	--->	RGS	.075	.129	.582	.560	.173	.112	1.549	.121
SES	--->	RGS	.038	.073	.527	.598	.136	.065	2.086	.037
PAI	--->	EDD	.839	.310	2.708	.007	1.369	.254	5.382	***
RGS	--->	EDD	1.055	.239	4.422	***	1.531	.205	7.476	***
RSC	--->	EDD	.351	.273	1.286	.198	.715	.238	3.009	.003
RSC	--->	GDI	.302	.128	2.362	.018	.105	.114	.920	.357
EDD	--->	GDI	.107	.045	2.409	.016	.105	.039	2.704	.007
RGS	--->	GDI	.105	.121	.869	.385	.439	.113	3.868	***
SES	--->	GDI	.165	.085	1.932	.053	.076	.078	.977	.328
PAI	--->	GDI	.169	.149	1.133	.257	.219	.132	1.662	.096
Covariance										
SHB	<-->	SES	4.098	2.523	1.624	.104	5.351	2.197	2.436	.015

Variances

	Estimate	S.E.	C.R.	P
SHB	21.801	1.946	11.203	***
SES	32.505	2.901	11.203	***
e1	10.174	.908	11.203	***
e2	14.561	1.300	11.203	***
e4	18.193	1.624	11.203	***
e3	117.632	10.500	11.203	***
e5	25.326	2.261	11.203	***

Conclusion of model 3: The overall conclusion that I reach from the analysis of our data show a vivid trend of female students' outperformance and male students' underperformance in higher education. This gender reverse change in education performance in tertiary education stems from various sociological, economic and geographical factors. The series of factors noted in the published literature and findings of this study include the socio-economic status and home background of the students. Socio-economic status and home background of the students do create differences in the academic performance of the students. Parental involvement and economic status of the families is more favourable for female students to outperform male students academically. Moreover, female and male students' previous educational background was noted one of the key factors that widens this gap in tertiary educational performance. Likewise, the classroom environment and student-teacher interaction are also favourable to female outperformance. In the presence of these factors, the educational self of female students is higher towards studies as compared to male students. The study findings also support the argument that gender and geographical location of the university teachers have different perspectives on gender differentials in academic performance in terms of female students' outperformance and male students' underperformance in higher education.

5.15.2 Artificial Neural Network

Neural network: This section consisted of the results of a neural network. It considered recognizing patterns based on loosely after the human brain. It was used to cluster or label raw data and interpreted sensory data through a kind of machine perception (Luque Martínez & Doña Toledo, 2019). The patterns recognized are contained vectors, numerical and real-world data translated (Iyanda, Ninan, Ajayi, & Anyabolu, 2018; Mohd & Yahya,

2019). It provided help to classify and cluster data (Sana, Siddiqui, & Arain, 2019). This neural network was a statistical technique to create models for prediction without assumptions (Rivas et al., 2019). Therefore, it was applied to the factors for checking the gender differentials in terms of performance in higher education.

Case processing summary: The case processing summary presents that 178 respondents, selected for training samples, were 70.4 percent of all respondents. Conversely, 75 respondents were selected for testing that was 29.6 percent. It showed that all 253 respondents were valid for both training and testing. No excluded sample was identified in case processing summary.

Network information: Table 5.44 presents the network information based on input layers, hidden layers and output layers along with their important components. According to the information provided in the network information, there were 25 covariates in input layers including sociological factors, educational determinants, motivational factors, household determinants, critical factors, structural factors, cultural factors, etc. to monthly income, teaching experience, and age of the respondents. Further, the number of units were 25 and standardized method was used for rescaling method for covariates. Moreover, it showed one hidden layer and five number of units in the hidden layer.

The hyperbolic tangent was used for activation function. In network-information, only one dependent variable named gender differentials in academic performance had three units (low, medium and high). In the output layer, the Softmax activation function and error function used cross-entropy. It was noted that excluding the bias unit was not found.

Table 5.44
Network Information

			Network Information
Input Layer	(Covariates)	1	Sociological factors (SOF)
		2	Educational determinants (EDD)
		3	Motivation, commitment and self-fulfilling prophecy (MSF)
		4	Household determinants (HHD)
		5	Critical factors (CRF)
		6	Structural factors (STF)
		7	Cultural factors (CUF)
		8	Historical factors (HIF)
		9	Social and cultural factors (SCF)
		10	Self-fulfilling prophecy (SFP)
		11	Motivation and commitment (MOC)
		12	Role of gender-specific study culture (RGS)
		13	Classroom environment (CLE)
		14	Teachers' competency and gender (TCG)
		15	Student-teacher interaction (STI)
		16	Educational background of the students (EDB)
		17	Role of social construction of educational self (RSC)
		18	Role of peer group (RPG)
		19	Role of social media (RSM)
		20	Parental involvement (favorable to females) (PAI)
		21	Socio-economic status of the family (SES)
		22	Students' home background (favorable socialization) (SHB)
		23	Monthly income (PKR) (Income)
		24	Teaching experience (years) (Experience)
		25	Age (years) (Age)
	Number of Units[a]		25
	Rescaling Method for Covariates		Standardized
Hidden Layer(s)	Number of Hidden Layers		1
	Number of Units in Hidden Layer 1[a]		5
	Activation Function		Hyperbolic tangent
Output Layer	Dependent Variables	1	Gender differentials in academic performance
	Number of Units		3
	Activation Function		Softmax
	Error Function		Cross-entropy

a. Excluding the bias unit

Model summary: The model summary presents the information about training results and final network was applied to the testing samples. Moreover, cross-entropy error based on the input layer used the activation function Softmax. In this error function, the network struggle was reduced for the period of training. In cross-entropy, the small values specify the improved performance of the model for forecasts. It also reported that cross-entropy error for training was less than testing. Therefore, the model was good for prediction. It presented the percentage of incorrect predictions that were 14.7. It was interpreted that about 15 decisions out of 100 were predicted incorrectly based on the model of pretesting.

Estimated neural network: The estimated neural network automatically selected hyperbolic activation function for hidden layers. These layers joined the weighted sum of value to the next layer and Softmax function was applied on output layers. It created the resulted value. In the figure, dark blue lines showed a strong negative relationship and dark gray lines presented strong positive relations. Moreover, gray color lines depicted the positive weights and blue color presented the negative weights. Further, thin blue lines described the weak negative and thin gray lines represented the weak positive relationship accordingly.

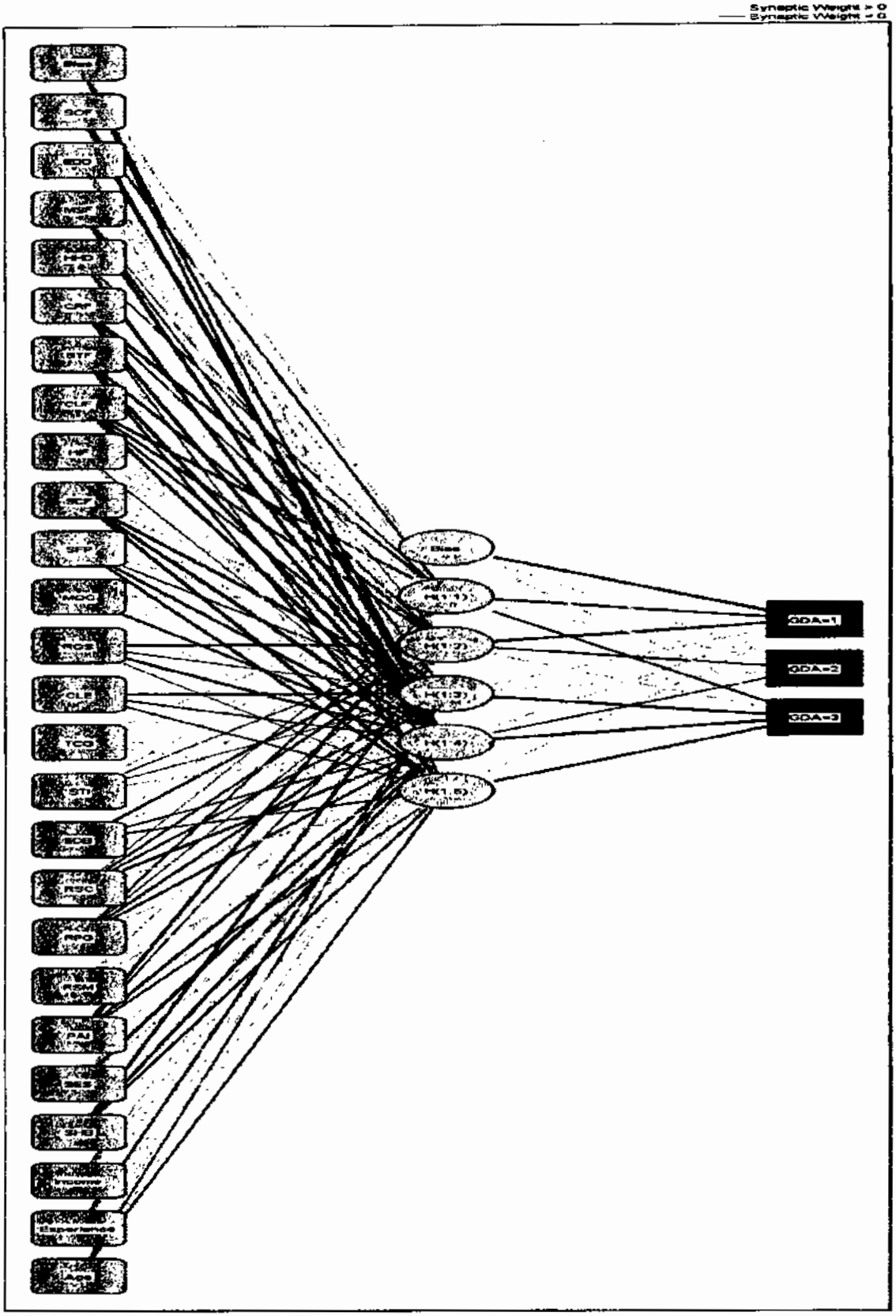


Figure 5.36. Estimated neural network

Classification: Classification Table 5.45 presents the results of an artificial neural network. It provided the correct decision i.e. low, medium and high for the prediction thorugh the model for both samples. It also showed incorrect decisions low, medium and high for both samples expressing both diagonals. In training section of the table, 19 respondents were correctly calssified in low response category. On the other hand, only 02 respondents were incorrectly classified in medium category and no respondent fell incorrectly in high response category. It was concluded that 90.5 percent of the respondents fell correctly in the low category in a sample of training. Moreover, 70 respondents were correctly fallen in medium response category in the training sample. Conversely, only one respondent incorrectly fell in the low category and no respondent was reported in high category incorrectly. Here again, 98.6 percent of the respondents were correctly in the medium category of training sample. Moreover, 86 respondents were correctly in the category of high in the training sample. There was no respondent in low and medium response category incorrectly. Therefore, 100 percent of respondents correctly fell in high response category. It was concluded that overall 98.3 percent of the respondents were correctly specified in three types i.e. low, medium and high in training sample.

In the testing section, 9 respondents were correctly specified in low response category and only three respondents were incorrectly fell in medium category. On the other hand, no respondent fell in the high category in the testing sample. Overall, 75.0 percent of the respondents correctly in the low category of testing. Further, 24 respondents were in the medium category correctly in testing sample. Conversely, six and one respondent were in low and high category incorrectly respectively. It was concluded as 77.4 percent of the respondents were in the medium category correctly in the testing sample. Moreover, 31

respondents were correctly in high category and only one respondent was in medium incorrectly. But no respondent was in low category incorrectly. Therefore, 96.9 percent of the respondents were incorrect specification in high response category. In the end, it is concluded that 85.3 percent of the resondents were incorrect specification in the testing sample.

Table 5.45

Classification Table

Classification					
Sample	Observed	Predicted			Percent Correct
		Low	Medium	High	
Training	Low	19	2	0	90.5
	Medium	1	70	0	98.6
	High	0	0	86	100.0
	Overall Percent	11.2	40.4	48.3	98.3
Testing	Low	9	3	0	75.0
	Medium	6	24	1	77.4
	High	0	1	31	96.9
	Overall Percent	20.0	37.3	42.7	85.3

Dependent Variable: Gender differentials in academic performance

It was noted that the percentage of both training and testing was above 80 percent to be considered as accurate. It showed the correctly identify a high percentage of correct classification. Similarly, overall, correct classification in training was 98.3 percent and in the testing sample was 85.3 percent. This was recommended that the overall model was good and all 25 independent variables had significant effects on dependent variable in three units. These results were also supported by ROC curve numerical value. The area under the ROV curve near 1.0 showed the best model. This model had area 0.987 and under the

ROC curve in three units i.e. low, medium and high that confirmed the accuracy of model classification.

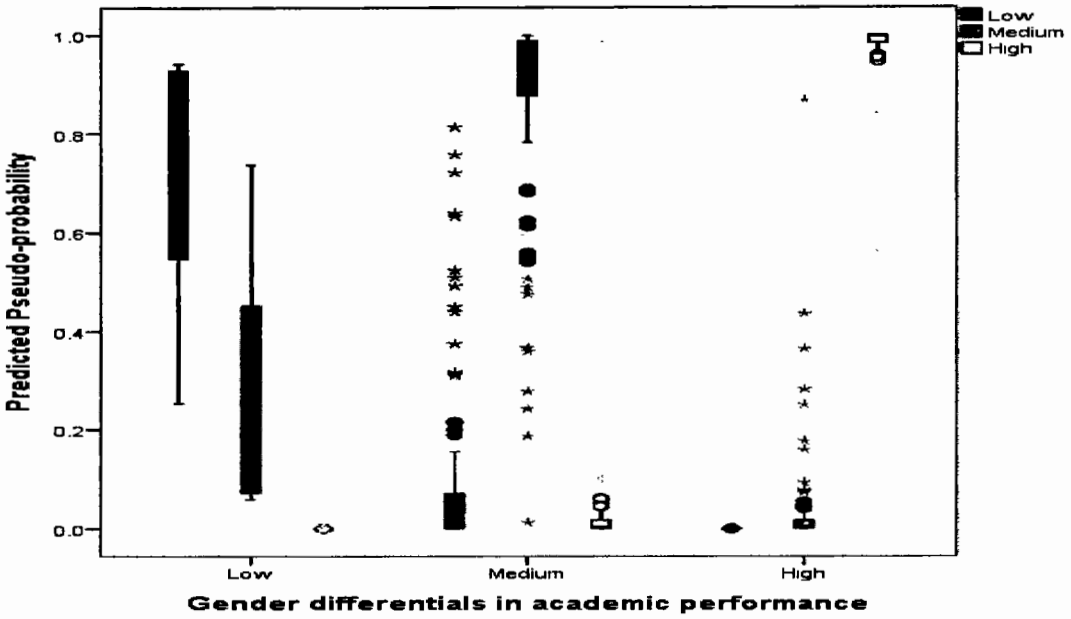


Figure 5.37. Predicted pseudo-probability

Predicted Pseudo-Probability was the graphical presentation of the classification table of three categories (low, medium and high) of dependent variable. It presented a cluster box plot. Here, y-axis presented predicted p. probability and x-axis depicted the observed response of the dependent variable. The value below 0.05 on y-axis presented incorrect classification and above 0.05 presented correct classification of low, medium and high categories of dependent variable i.e. gender differentials in academic performance.

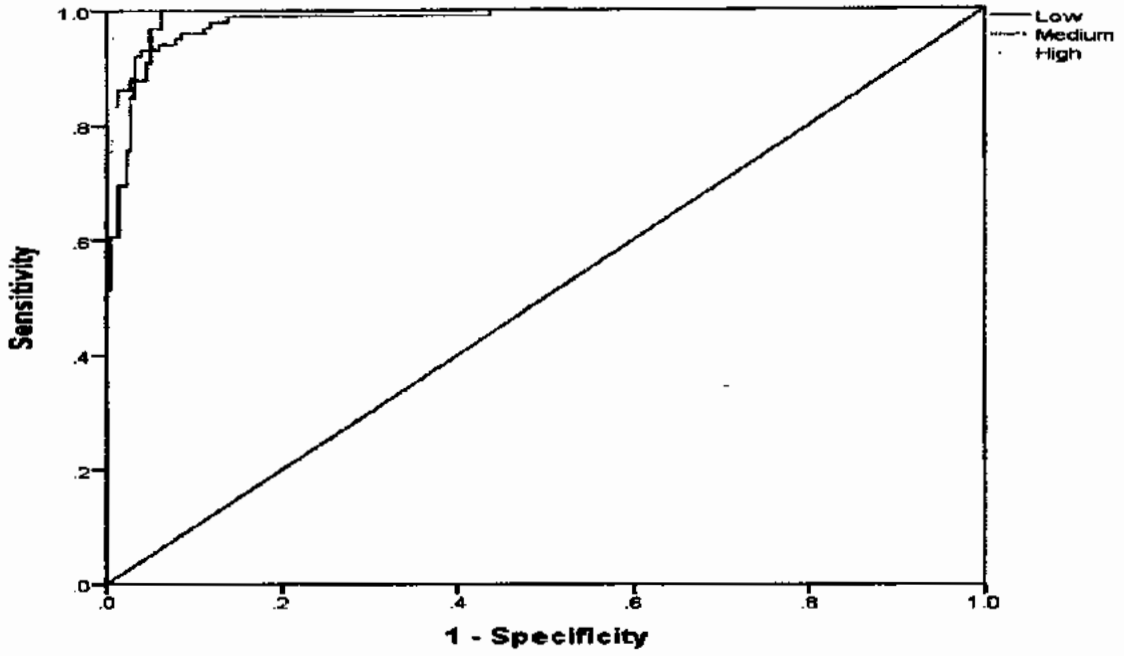
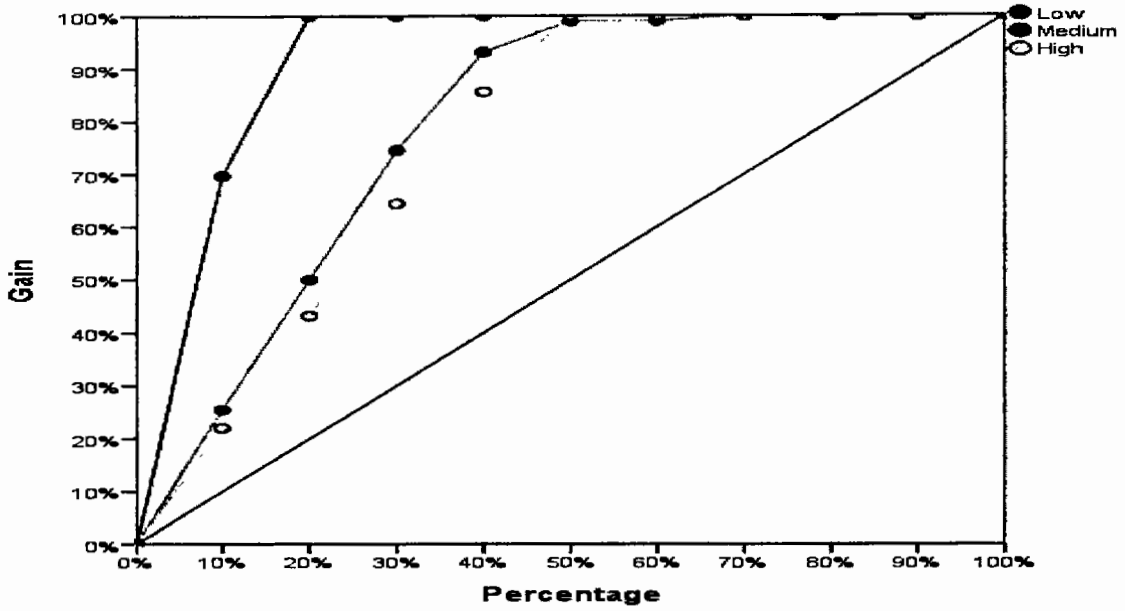


Figure 5.38. Receiver Operating Characteristics Curve (ROC)

Sensitivity analysis curve was helpful to examine the power of the model. It presented three different colors curves for three decisions i.e. low, medium and high. It also delivered a graphical presentation for specificity and sensitivity. Further, the curve demonstrated the settlement between the accurate negative rate of specificity and positive rate or sensitivity. In this figure, the curve for low, medium and high categories was closer to the upper left corner and beyond the centerline. Therefore, it was predicted that the model was good and the curves indicated the appropriate probability for accurate conclusions of three categories (low, medium and high) of gender differentials in academic performance.



Dependent Variable: Gender differentials in academic performance

Figure 5.39. Gain chart

The gain chart indicated that top 10 percent of the cases contained approximately 70 percent of the respondents belonged to low category of dependent variable i.e. gender differentials in academic performance in higher education in terms of female students' outperformance and male students' underperformance. It was reported that by sorting all the cases and score a dataset by predicted pseudo-probability of low category, it would expect the top 10 percent to contain 70 percent of all the cases which take the category low. Similarly, 20 percent contains 100 percent of the respondents in low category of gender differentials in academic performance in higher education. Furthermore, medium and high category of the respondents also presented in the gain chart. Concisely, the selection of 50 percent of scored dataset, it obtained all the respondents in the dataset. It resulted that 50 percent of the respondents was appropriate rather than 253 respondents.

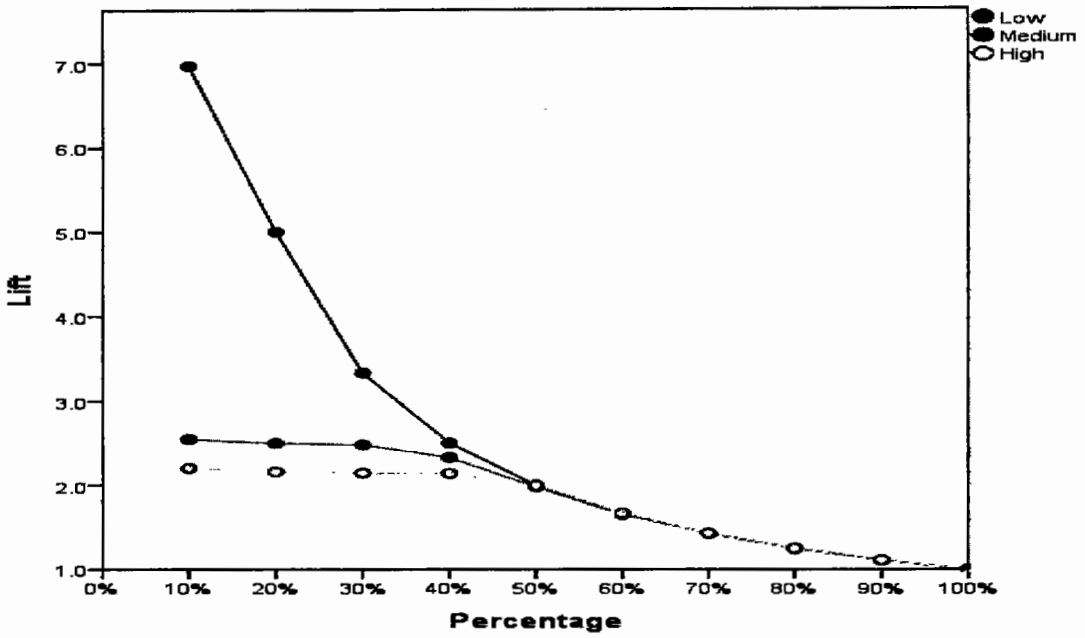


Figure 5.40. Lift chart adjusted from the gain chart

This chart is resulting from above gain chart. Here, graph indicated that the values on the y-axis correspond to the ratio of the gain for each curve to the baseline. Therefore, the lift at 10 percent for low category of gender differentials in academic performance in higher education in terms of female students' outperformance and male students' underperformance is (70%/10%) 7.0, for medium category is (25%/10%) 2.5 and for high category is (about 22%/10%) 2.2. The lift chart delivers information in an alternate way of looking at the information in the gain chart. Furthermore, both lift and gain charts are constructed on the combine testing and training samples (30% & 70% respectively)

Conclusion ANN model: In this article, the ANN model is used for predicting and evaluating teachers' perspectives on factors of females' outperformance and males' underperformance in higher education in Pakistan. To predict and evaluate the performance of ANN, case processing summary, network information, model summary, estimated neural network, classification table, Predicted Pseudo-Probability, ROC, Gain and Lift chart was developed. Overall, the results of ANN achieved a good prediction accuracy of

85.3 percent. This performance of ANN makes a useful technique for teachers' perspectives on factors of females' outperformance and males' underperformance in higher education in the Punjab, Pakistan. To sum up the results, it is highly believed that education-modeling setting employing ANN helps to determine gender differentials in the academic performance of the students. The future models may use other factors such as curricular, classes, e-learning system, course feedbacks, and the role of teachers. I strongly believe that gender differentials in the academic performance of the students with an artificial intelligence-based analytics setting can further minimize this gender-gap in academic performance within higher education institutions in Pakistan and other countries as well.

Chapter Six

Key Findings and Debate: A Critical Analysis

6.1 Introduction

The objectives of the study were: a) to examine the top three position holders across the axis of gender and b) to unpack the underlying factors of females' outperformance and males' underperformance at the university level in the Punjab University. This chapter is based on chapter four and five which described the overall trends of top three position holders' along the axes of gender and geographic location. Chapter four and five provided detailed description of secondary and primary data on the subject of gender differentials in academic performance in the Punjab, Pakistan. I have divided this chapter into two sections. Section one gives a succinct account key findings of content analysis (see chapter 4). Section two engages primary data collected from university teachers (see chapter 5). Section three establishes links between concepts and variables and applies theory to data (see chapter 2). Last but not the least, these sections generate critical debate and adds new insights to the existing body of literature and scholarship in the field of sociology of gender issues and sociology of education.

6.2 Secondary Data: Content Analysis

This section presents a content analysis of the top three position holders of MA/MSc level programs at University of the Punjab, Pakistan. I employed content analysis techniques on the examination result books of the above-mentioned university from 2006-2015. Using the content analysis approach, I analyzed female and male students' performance in MA/MSc examinations. Top three positions in master level examinations have been taken as indicators of outperformance. The analysis of results books of ten years depicts female

students' outperformance and male students' underperformance in education. The analysis allows me to conclude that there is a vivid trend of young females' outdoing males in education at the tertiary level. The forthcoming discussion presents key findings and debate of female and male students' educational performance at the university level.

6.2.1 Faculty-wise Analysis of Top Three Position Holders

Faulty of Arts and Humanities: The study findings show that females do better than males at the tertiary level in the faculty of arts and humanities. The statistics in Table 4.1 (see chapter 4) unpack differences between the performance of females and males at master level examinations conducted by the University of the Punjab. The data in the table show the top three positions during the last 10 years (2004-06 to 2013-15) in the faculty along the axes of gender and geographical location. It is pertinent to mention here that the data of the top position holders are from eight departments. The overall content data revealed that female students outperformed male students in examination results during the last ten years in the faculty. It is noteworthy that a majority of these outperforming females belong to urban areas. It is worth mentioning here that the study supports the findings of previous studies by Ellefsen and Karlsen (2019), Makkawi (2011), and Zimdars, Sullivan, and Heath (2009). This study's findings, thus, further, the results of the studies in different countries around the world (see empirical review in chapter 2).

Faulty of Behavioral and Social Sciences: The crux of the content analysis is that female students have outperformed males in the top three positions of examinations held during the last ten years in the faculty of behavioral and social sciences. It is also noted that the female students belong to urban areas. It is pertinent to mention here that male students also achieve top position in one-year examination results in session 2006-2008 and they

belong to rural areas. The statistics in Table 4.2 (see chapter 4) unpack the differences between females and males' performance at master level examinations conducted in PU. The content data of the faculty is based on seven academic departments. It is important to mention here that similar findings are revealed by Shu (2020). My point of assertion here is that female students perform better in behavioral and social sciences, and this good performance may be attributed to their early socialization and gender roles.

Faculty of Commerce: Female students at the University of Punjab outperformed males in the top three positions of examinations held during the last ten years in the Faculty of Commerce. It is noteworthy to highlight here that the majority of these outperforming females belong to urban areas. The statistics in Table 4.3 (see chapter 4) unpack differences between the performance of females and males at master level examinations conducted by the examination department. It is pertinent to mention here that the analysis is based on three departments from the aforementioned faculty. It is a coincidence that the study findings are similar to the study findings of Lin (2017), Siddiqi (2005), Yousef (2017), and Abdullah (2011). My point of assertion here is that female students are also shining in the commerce field of study for the purpose to join business, e-commerce, and entrepreneurs in modern contingencies of the world. However, motivational factors along with economic empowerment for females support to perform in the commerce field and it varies from area to area and culture to culture.

Faculty of Economics and Management Sciences: The analysis of top three position holders along the axes of gender and geographical location indicates that female students clinch overall in the faculty of economics and management sciences. Moreover, it is important to mention here that most of the outperforming females belonged to urban areas.

Further, the statistics in Table 4.4 (see chapter 4) unpack these differences between the performance of females and males at master level examinations conducted by the examination department, the University of Punjab. This data is based on six departments from the faculty. It reveals that the study of Holtsch, Brückner, Förster, and Zlatkin-Troitschanskaia (2019) also supports female outscoring in the field of economic and management. Similarly, El-Massah and Fadly (2017) support the argument in the field of finance. I assert here that most of the outperforming female students are from urban geographical locations-the hub of economic opportunities for females and males. Thus, female students outshine males in this field for economic participation and independence in future.

Faculty of Education: The study findings reveal that female students at the University of Punjab outperformed males in the top three positions of examinations in the faculty of education. It is noteworthy to mention here that the top position holding females belonged to urban areas. Further, the statistics in Table 4.5 (see chapter 4) unpack differences between the performance of females and males at master level examinations. The data in the table show top three positions during the last 10 years starting from the session year 2004-06 to 2013-15 in the faculty of education. It is important to mention that the total number of departments are ten in this faculty. Female teachers are preferred in schools as an instructor (Al-Sahel, 2005; Dee, 2006a, 2006b; Driessen, 2007; El-Emadi et al., 2019). I argue and agree with the study findings of teachers' perception that female teachers are best for female and male students. Thus, this teaching profession motivates female students to perform better than male students in the Faculty of Education and join schools as a teacher.

Faculty of Engineering & Technology: The analysis indicates that the outperformance of female and male students in master level examinations in the Faculty of Engineering & Technology is very competitive. Males' outshine females by clinching half of the top three positions in master level examinations held during the last ten years. Here, it is argued that female students are also competing with their counterparts in the field of engineering. It is noteworthy that almost all the female position holders and male students belong to urban areas. Moreover, the content data in Table 4.6 (see chapter 4) presents the differences between the performance of females and males at master level examinations. These results of content are based on two departments in the faculty offering master level on-campus program. It is pertinent to mention here that it was believed that the engineering and technology field is for males only. Moreover, biological proponents also argue that females do not properly perform in the field of engineering based on their body characteristics and small brain size (see also theoretical review in chapter 2). Contrary to it, my empirical review rejects the notion of biological determinism. Several studies reveal that females are actively participating in the engineering field and are also competing with their counterparts (Blumner & Richards, 1997; Cheruvalath, 2018; Rodríguez-Rodríguez, Rodríguez, Bueno-Delgado, & Elizondo-Moreno, 2019; Yasin et al., 2020; Zengin-Arslan, 2002). My assertion here is the rejection of biological determinism. My stance is that the biological characteristics and brain size of females and males are not the determinants of their educational performance. Moreover, the content analysis results of ten years confirm that female students occupy half of the top three positions in the field of engineering and technology.

Faculty of Islamic Studies: Female students in the Faculty of Islamic Studies outperformed males in almost all top three positions of examinations held during the last ten years. It is noteworthy that the majority of these outperforming females belong to urban areas. The statistics in Table 4.7 (see chapter 4) reveal differences between the performance of females and males at master level examinations conducted by the examination department. It is pertinent here to mention that the analysis is based on only one department from the faculty offering the on-campus master level program. These results are similar to the findings of Mehran (2009) and El-Safty (2004) that female students are outplaying males in Islamic studies. I assert here that it is obvious that major religion in Pakistan is Islam and children are socialized from their early ages in the light of Islamic values. Furthermore, this subject is compulsory at all levels and, hence, female students join teaching in the field of Islamic studies. Contrary to it, I believe that males' underperformance in the field of Islamic Studies is based on their lower level of motivation and commitment to join the teaching profession at the school level. Thus, it is pertinent here to mention that teaching is preferred as a modest job for females in Pakistan.

Faculty of Life Sciences: The crux of the content analysis is that female students have outperformed males in the top three positions of examinations held during the last ten years in the faculty of life sciences. It is also mentioned that these female students belong to urban areas. The statistics in Table 4.8 (see chapter 4) depict these differences between females and males' performance at master level examinations. The content data in the faculty is based on seven academic departments. It is important to mention here that my findings are not aligned with the biological deterministic approach. As this approach argued that science subjects are only for males and female perform in arts and social

sciences. Moreover, my findings are supported by the empirical review in chapter 2 (Khondker, 2001; Lažnjak et al., 2011; Morgan, Farkas, Hillemeier, & Maczuga, 2016; Saad et al., 2009; Zimdars et al., 2009). My point of assertion here is that female students achieve high marks in intermediate in the pre-medical group for the purpose to enroll in medical education in Pakistan. The females who cannot enroll themselves in medical, prefer to join life sciences and perform better based on their previous educational successes. At this point, I agree with the assumption of gender role socialization theory, feminist approach to study gender and education, and modeling approach (see chapter 2 section theoretical review).

Faculty of Oriental Learning: The study findings reveal that female students outperformed males in the top three positions of examinations in the faculty of oriental learning. It is noteworthy here to mention that the top position holder females belonged to urban areas. The statistics in Table 4.9 (see chapter 4) show differences between the performance of females and males. The data in the table show the top three positions during the last 10 years starting from the session year 2004-06 to 2013-15 in the faculty of oriental learning. The total number of departments is five. It is argued, based on the empirical review that females are outnumbering and outshining males in the file of language subjects (Abidin et al., 2012; Agirdag & Vanlaar, 2016; Al-Sohbani, 2015; Pherali, 2011; Taqavi & Rezaei, 2019). I assert here that females perform better than male students in oriental learning because of their motivation and familial support including parents. As the key positions in the field of communication such as secretary, assistant, and translator are dominated by females in Pakistan. Thus, parents and family supported female more than male students in language-oriented subjects. At this point, I also agree to the theory of

social learning theory that female and male learning is different based on the environment provided to them by family, previous schools, teachers, and other factors such as peers, media, and self-fulfilling prophecy.

Faculty of Science: The study findings show that females outperformed males at the tertiary level in the faculty of science. The statistics in Table 4.10 (see chapter 4) unpack these differences between the performance of females and males at master level examinations conducted by the examination department. The data in the table show the top three positions during the last 10 years (2004-06 to 2013-15) in the faculty along the axes of gender and geographical location. It is pertinent here to mention that the data of the top position holders are from twelve departments. The overall content data reveal that female students outperformed male students by securing the top three positions during the last ten years in the faculty. It is noteworthy that the majority of these outperforming females belong to urban areas. My study findings are not aligned with the biological deterministic approach which argues that science subjects are only for males, and that females perform better only in arts and social sciences. Moreover, my findings are supported by the empirical review in chapter 2 (Barton, 1998; Cavallo & Laubach, 2001; Cheruvalath, 2018; Eshiwani, 1985; Harskamp et al., 2008; Heller & Ziegler, 1996). My point of assertion here is that female students achieve high marks in intermediate in the pre-medical group for the purpose to enroll in medical education in Pakistan. The females who cannot enroll themselves in medical, prefer to join life sciences and perform better based on their previous educational successes. At this point, I agree to the assumption of gender role socialization theory, feminist approach, and modeling approach to study gender education (see chapter 2 section theoretical review).

6.2.2 Analysis of Top Three Position Holders in All Faculties at Masters Level

The overall crux of the content analysis is that female students have outperformed males in the top three positions of examinations held during the last ten years in all faculties. It is also noted that these female students almost belong to urban areas. The statistics in Table 4.11 (see chapter 4) unpack the differences between females and males' performance at master level examinations conducted in PU. The data in the table show the top three positions during the last 10 years starting from the session year 2004-06 to 2013-15. The content data in all faculties is based on sixty-one academic departments.

6.2.3 First Position Holders Previous Board and University-Session 2013-2015

Matriculation Passing Boards in Session 2013-2015: The statistics in Table 4.12 (see chapter 4) describe the first position (session 2013-2015) holder's matriculation passing boards. The data showed that more than half (68.9%) of the first position holders do their matriculation from the Board of Intermediate & Secondary Education, Lahore. Similarly, other students completed their matriculation from the Board of Intermediate & Secondary Education Faisalabad, Rawalpindi, Quetta, Agha Khan, and Mirpur. It is concluded that more than half of the first position holders in session 2013-2015 did their intermediate from the Lahore board.

Intermediate Passing Boards in Session 2013-2015: Table 4.13 (see chapter 4) shows the first position (session 2013-2015) holders' intermediate passing board. The tabulated data depict that more than half (67.2%) of the first position holders did their intermediate from the Board of Intermediate & Secondary Education Lahore. However, other female and male students completed their intermediate from the Board of Intermediate & Secondary Education Faisalabad, Rawalpindi, Quetta, Agha Khan, and Mirpur. The trend

of the analysis shows that first position holders in session 2013-2015 did their matriculation and intermediate from the same board i.e. Lahore.

Bachelor Passing University in Session 2013-2015: The statistics in Table 4.14 (see chapter 4) describe the first position (session 2013-2015) holder's bachelor passing degree university. The data show that more than half (75.4%) of the first position holders did their bachelor's degree from the University of Punjab. Similarly, other female and male students had completed their bachelor's degree from Government College University Faisalabad, University of Ponch, Rawalakot, Karakorum International University Gilgit, and the University of Baluchistan Quetta. Data reflected that more than half of first position holders in session 2013-2015 did their bachelor's degree from Punjab University.

6.3 Primary data: Survey from University Teachers

The primary data for the study come from university teachers. For primary data, faculty members/teachers of the University of Punjab were the study population. It consisted of 1119 faculty members. The target population consisted of the faculty members working at two campuses. Moreover, 87 faculty members were on study leave or deputation. Therefore, these faculty members were excluded. Thus, a total of 1032 faculty members in the two Lahore based campuses of the University of Punjab constituted the target population of the study. A sample of 288 faculty members was drawn through a proportionate random sampling technique. The actual data was collected from 253 faculty members on the subject underhand.

6.3.1 Primary Data: Descriptive Statistics

This section presents the results derived from primary data on the academic performance of students (female and male) in Punjab, Pakistan. It is divided into two parts: a) descriptive statistics and b) inferential statistics (see chapter 5).

Socio-Economic Profile of the Respondent: The study findings reveal that the sample of university teachers is based on females and males having the rural and urban geographical location of residences ((see chapter 5 for details). Similarly, the sample consists of faculty members from the rank of lecturer to professor level. The age of university teachers ranged from 24 to 57 with up to 30 years of experience in the field of academics.

Household Determinants of Students' Academic Performance: A household determinant of gender differentials in academic performance in higher education was divided into three different parts: a) students' home background-favorable socialization, b) socio-economic status of the students' family and c) parental involvement-favorable to females.

Students' Home Background: The data presented in Chapter 5 under the same heading show that the early socialization of students started from their homes. Survey data from university teachers reflect that family socializes their children differently. It is noteworthy to mention here that teachers perceive that male students' misbehavior is often tolerated by family members. Moreover, females are expected to comply with the familial authority and tend to assume favorable gender roles such as obedience in family and submissive roles. Furthermore, data also reveal that small deviances at home are tolerated for male students, and not for females. As a result of family home background factors, teachers perceive that gendered socialization started at home. It is pertinent to mention here that Strand and

Winston (2008) coined the term "home educational aspirations" (i.e. the magnitude of parental and familial expected outcomes) infers the elements which mediate the aspiration of students in education. As the aspirations in education are magnified and indebted in unequal socio-cultural background. Similarly, familial factors are the home background factors which are providing aspiration among students in education (Francis & Archer, 2005). It is not only the intent and motivation of family but also many other constituents of social and ambitions, aspirations, and engagement of parents in education matters. These elements constitute the opinion of family members, priority, involvement, and decisions for the female and male children's education (Dimaki et al., 2005). It is thus imperative to know that family certifies the aspirations among students for education. In this way, normally the students derive the best aspiration for education whose family has provided the best family background (Lippman & Rivers, 2008). My point here is that male students are provided a dominant and masculine environment in the family and they prefer to show misbehavior before others. However, female students prefer to show obedience and follow familial norms. Thus, these gender differential roles create differences in academic performance in tertiary education. As male students enter tertiary education, they perform their roles and behavior as their family socialize them, which results in underperformance. However, female students follow the institutional norms, follow instructions, show obedience to their teachers based on their socialization, and perform better in tertiary education.

Socio-economic Background: Survey data from university teachers in Chapter 5 also pointed out the socio-economic background of students as a variable to create a difference in their academic performance in tertiary education. The study findings reveal that teachers

perceive the social status of family as a contributing factor in female and male students' performance in tertiary education. Moreover, teachers favor the argument that female students who reach higher education might belong to families with higher income, wealth, parental education, and occupational prestige. Further, they also perceive that male students who reach higher education might belong to families with economic pressure. It is important here to mention that the socio-economic background (SES) of female and male students has been determined by measuring the stature of parents in occupation and education (Erikson & Goldthorpe, 2002; Marks, 2006). Similarly, high level of education and career of parents is also an indicator of the SES of the family (Erikson, 2016; Walpole, 2003). Likewise, SES is the main variable in the study and substantial research work coheres SES with education and career aspiration (Dornbusch et al., 2001; Okioga, 2013). The main point to be noted here is that content analysis of ten years examination results shows similar nature of results that female students who outperformed belonged to urban areas. I assert here that mostly female students in tertiary education belong to urban areas with higher income, wealth, occupational prestige, and parental education. They have more opportunities in their life and perform better than male students who belong to rural areas having lesser opportunities. Moreover, it is pertinent to mention here that families with high incomes and wealth or parental jobs are motivated to migrate an urban area for their children's education. Thus, I assert here that female students perform better based on their familial SES and urban geographical location as compared to male students who belong to families having economic pressure and reside in rural areas. Besides, a male in Pakistan is also considered as an earning member of the family and have to manage economic resources particularly in a rural area and generally in urban geographical locations.

Parental Involvement: Data described in Chapter 5 reveal the teachers' perceptions regarding parental involvement in terms of female students outshine male students in tertiary education. University teachers perceive that parents least bother about male students regarding their educational performance in tertiary education. Nonetheless, teachers perceive that parents limit the activities of female students outside the household and also monitor their educational activities. Similarly, university faculty members also perceive that parents consider higher education of females as a worthy endeavor in the future. Moreover, the study findings also reveal that parents prefer a male to become earning members of the family and it ends up pressurizing them. I argue here that parental involvement in female and male students' educational performance is different in Punjab. In our society, parents strictly monitor the activities of their females for their honour. Moreover, they prefer female education over males for matrimonial purposes. I also assert that male economic status is preferred for matrimonial offers in Pakistan. Thus, parents prefer and focus more on their daughters' education. It is pertinent here to mention that several pieces of research also support the argument that parents have a foremost and vital contribution to shape the inspiration of their children (Berlin et al., 2019). For instance, parents structure and constitute the major elements of a female and male child's learning form the habit, and aspire to achieve the goals (Fan & Chen, 2001). Moreover, the parents expect high achievement from a female child over a male child in future based on the socialization for assumed results from students (Fan, 2001). They also provide a different base for the female and male students to perform well to achieve better according to the expectations of children (Hill, 2015). It revealed that the achievements of parents in education are more likely to influence the aspirations of females and males in education

with a strong correlation between progress and achievement of education (Koskei, 2014). It is asserted that female students seek help in homework from parents more than male students while differentiation in encouraging and support of parents is less likely perceived (Chowa et al., 2013). Based on these study findings and results of this study, it is argued that teachers perceive that parental involvement is more favorable to female students as compared to male students in gender differentials in academic performance in tertiary education. It is worth mentioning here that gender structure coerces the females and males to make decisions and take responsibilities according to their gender. However, the role of father and mother is of great concern in the society where parents socialize the children in respective gender to take up the responsibilities while creating bifurcation of gender roles in society. The parents are expecting their children to prioritize their academia. These differences are rare in society now because society undergoes a change at a great speed and these differences are minimized to socialize females and males equally in academia.

Social Media: Data from university teachers in Chapter 5 assert social media as a variable to differentiate female and male students' academic performance in tertiary education. The survey results in university faculty members reveal that female and male students have different between social media activities significantly. Moreover, the results also support that social media access is more readily provided to male students than females. Furthermore, teachers perceive that female students tend to subdue the use of social media to their studies such as notes exchange, sharing of ideas, educational discussion, questions, and answers, etc. Contrary to it, faculty members perceive that male students are engaged in nonproductive wastage of time such as making friends, discuss politics of teachers and class, discuss masculine activities, and visiting different social networking sites.

Conversely, female students are more likely to join educational groups and educational pages on social media. On the other hand, male students like to spend more time on entertainment and other related game activities. Based on these female and males students' social media exposure, university teachers perceive that female students outplay males in academic performance in tertiary education. Moreover, the study findings of Ejikeme (2018) highlight that social media constitutes a varying form of networking among female and male students (Ejikeme, 2018). Generally, it is noted that applications, services, and systems provide female and male students differently to create, remix, and share the content (Ahmad, 2019). The use of social media is also linked to the multiplicity of the activities of female and male students to participate in online differently. Similarly, the explanation implies that multiple online activities of female and male students make use of social media that affects their educational performance differently (Amin et al., 2016). My point of assertion here is that social media users create differences in educational performance among female and male students. As I have observed that males have high exposure towards social media and excessive use that results in wastage of time. Moreover, it also affects the peripheral and cognitive routes of students in a negative way. Furthermore, I argue that male students having high social media exposure are mentally absent in classrooms and also have a sleeping disorder. Thus, in examinations, they cannot perform better as compared to female students.

Peer Group: In Chapter 5, university teachers assert that peer group is also a factor of gender differentials in terms of female outplay male students in higher education. They perceive that female students prefer to have in small groups in university and male students prefer to have a large group. Similarly, they also perceive that male students spend more

time with peers than females and prefer outdoor activities with friends in the evening. Moreover, university teachers also revealed that female students are bound to live in boundary walls after evening and are more likely to join a study group than male students. It is pertinent to mention here that peer group refers to the children of the age of adolescence characterized as girls and boys of the same age sharing common beliefs, fashion and fad prefer the similar activities (De-Paola & Scoppa, 2010). It is further argued that the adolescence period is identified by groups to maintain identity and self-respect, adolescents seek individual recognition and autonomy (Ryan, 2001). Moreover, every category of adolescents always looks for an adjustment to the culture by seeking the norms and finding right and wrong patterns (Winkler, 1975). It is important here to mention that the findings of this study show that peer group is one of the reasons for students' academic performance. I assert that female and male students join peer groups in the university according to their own choice. As the findings of this study show that female and male students are socialized differently from their homes and their choices are also different to join the groups. I argue that based on previous socialization of female students, they prefer to live in a small group in university for curricular and extracurricular activities. Most of their time is engaged in discussion and group work to get a high score in the examination. Here, it is important to mention that females in Pakistan are bound to follow family norms and prefer to live in the home in the evening. So, they use their time to study and do household activities. Contrary to it, males prefer to have a large group and spend more time with friends. Similarly, male students prefer to do outdoor activities after eventing. Thus, most of the time is engaged with friends and outdoor activities rather the focusing on study. Hence, I believe that female students give more time to study and males prefer to do

outdoor activities after the evening. This notion creates the differences in their examination results at the university level.

Social Construction of Educational Self: Data presented in Chapter 5 from university teachers assert the social construction of the educational self as a factor of female outscore male students at the university level. Teachers report that female students are socially bound to outperform in education and try to compete with role model females in the media industry. Similarly, teachers also perceive that females are taught that they are less intelligent than their counterparts and this notion motivates them to develop their educational self. Moreover, feminist discourses tend to promote education as a heroic effort of females. Further, the study findings also reveal that females tend to occupy power positions in educational institutions. It is noteworthy here to mention that university teachers perceive that religious ideology instigates a need for educated mothers. Based on these study findings and theoretical review regarding the social construction of gender roles, female and male students try to develop their education self from their early socialization. As the empirical review (see Chapter 2) shows that female and male students have a different educational self. Moreover, it is based on the environment and opportunities provided to them in their early education. Thus, this different educational self creates differences between female and male students' academic performance. Moreover, a study reveals that the educational self is a prime indicator in the field of sociology of education and educational psychology (Marsh & Martin, 2011). However, Bong and Clark (1999) used the term in their research as self-concept involves several dimensions revealing different latent and manifest meaning. Generally, it has one facet while carrying different facet and one of them is 'academic self-concept' (Bong & Skaalvik, 2003; Marsh &

Craven, 1996). The concept of 'academic self-concept' has several characteristics in which two constitute the Shavelson model (Marsh, 1990; Strein, 1993). The one concept is the descriptive and evaluative aspect of self-perception. Other associates academic self with the concept of focusing the scholarly competency. So, it is linked to the perception of self in comparison to achievements at the tertiary level (Hattie, 2014; Strein, 1993). My argument here is that the social construction of the educational self of female and male students which is based on the environment provided to them has multiple bases such as family, previous school, teachers, peer group and personal efforts of the students, etc. This differential environment shapes their educational self differently. Thus, this difference in educational self results in gender differentials in terms of female outplays male students at the tertiary level.

Educational Determinants: Educational determinism is the factors linked with school, college, university, classroom, teacher, and educational environment that is provided to female and male students for their academic performance. Moreover, these factors are divided into four different variables: a) educational background of the students b) student-teacher interaction, c) teachers' competency and gender, and d) classroom environment. For this study, the educational determinants are the previous educational background, interaction with teacher, and classroom environment as a factor of female students outshine males in examination results at the tertiary level.

Educational Background of the Students: Chapter 5 demonstrates university teachers' perception about the educational background of the students and gender differentials in academic performance at the tertiary level. Our respondents asserted that male students come to tertiary education with poor academic background and least serious about

education. Unlike males, teachers' argued, female students are more seriousness and passionate to excel in education from the very outset of their education journey. Moreover, the findings also reveal that female students are more serious about their teachers' feedback on their works. The previous grades and secondary socialization of the students contribute to their performance in higher education (McManus et al., 2008). Moreover, the study habits, peer group and teachers' influence and the environment provided to students while studying before entering at upgrade level are also linked with the educational background of the students in the field of sociology of education (Galpin et al., 2003; Selvig et al., 2015). Therefore, I argue here that female students in their early education get better grades which affect favorable positive in their tertiary results. Moreover, the educational background provided to female students before tertiary education is different from male students in Pakistan such as teachers' care, homework, parental involvement, and classroom enrolment of the schools, etc. Contrary to it, male students are engaged in household economic activities during their early education and their intention is diverted which result in their underperformance at the tertiary level. In addition to it, parental and teachers' differential attention to male and female early education are also very important factors of gender reversal change in academic performance at the tertiary level.

Student-teacher Interaction: My respondents also pointed out student-teacher interaction as a key factor of female students' outperformance and male students' underperformance in higher education. The findings highlight that teachers interact differently with female and male students at the university. Moreover, the results of teachers' perception assert that male students demonstrate indifference towards their interaction with teachers. Similarly, male students also tend to underplay the role of class participation. Contrary to it, teachers

perceive that demeanors of female students reflect more obedience than male students. Further, female students are more active than males in interacting with teachers. The study also shows that teachers are more suspicious about male students' discipline. It is important here to mention that several studies also assert that teacher-student interaction is a very important factor contributing to gender differentials in academic performance among female and male students at the tertiary level (Manke, 1997; Schempp et al., 2004). Moreover, it is worth mention here that the interaction between teacher and student emerges through mentoring and is highly valued for students to learn not only new skills of reading, speaking, listening and writing but also how to become more adjustable in every social environment (Ma et al., 2018; Rothbart et al., 1971; Sun et al., 2007). My point of assertion here is that female students are favored and given importance by teachers as per the Pakistani value system as 'they are female'. The point to be highlighted here is that female students are preferred and given attention from female and male teachers at the university level. I believe that female students have limited time to stay at campus and they try to use and get the favor of interaction from teachers. This notion results in their higher performance than males having less importance in teachers' interaction. Moreover, I also argue that females show obedience and submission role in the classroom and in front of teachers as compared to male students. Thus based on empirical review and teachers' perception, I assert that teacher-student interaction is also a very important factor of gender reversal change in terms of female students outscore males at tertiary level examinations.

Teachers' Competency and Gender: University teachers' perception in Chapter 5 shows that teachers' competency and gender is a factor of gender reversal change in terms of female outscore male students in examinations. The study findings reveal that the gender

of the teacher influences students' performance differently. Moreover, it describes that female and male teachers at university consider male students a challenge to their authority. Contrary to it, findings show that teachers of both genders consider female students more cooperative. Students' frequent questions endorse teachers' competence. However, male students are the obvious choice of teachers' blame and frequent questions of males challenge teachers' competence. It is important to mention that the competency of a university teacher is based on standardized methods of the lecture when knowledge and skills are imparted (Drudy, 2008). Moreover, it denotes the abilities of the teacher in imparting knowledge effectively and efficiently (Sudkamp et al., 2012). The study findings of Mustafa (2013) revealed that the academic pursuits of teachers with professional training and skills as well as experiences of teaching are very important for female and male students' learning. My point of assertion here is to illustrate that teachers' competence to manage the class and teaching is to some extent different for female and male students. However, I assert that the attention and gender of teacher matters and contributes to gender reversal change in terms of female outshine male students at the tertiary level. As female and male teachers give more attention to a female student in the class and also show support to them. Thus, female students outplay males at the tertiary level.

Classroom Environment: Chapter 5 also presents teachers' perceptions of students' academic performance in terms of the classroom environment. The study findings reveal that classrooms are dominated by female students' strength and they are considered more punctual. Similarly, female students are considered to have good classroom ethics (Ullah, 2018, April 19). On the other hand, teachers perceive male students as backbenchers-students who wish to sit at the back of the class. Male students are considered more deviant

in the classroom and deviate from the classroom norms. It is argued that the classroom setting circumscribes a variety of concepts in education, the seating arrangement, the psychological environment produced in a different social settings and several other teacher-related instructions and features, attitudes and behaviours (Beswick, 2005; Bull et al., 2013; Feichtner & Burstyn, 1974). My argument here is that the physical classroom environment is contributing less as compared to the social aspects of the classroom. I believe that social interaction and classroom discussion is more important for female and male students' learning. As university teachers perceive and empirical review also supports that teacher and student interaction is contributing factor to gender differentials in academic performance in terms of female outperform male students in tertiary education. I assert that classrooms are dominated by female students by following the moral standards and norms of the classrooms. It is important here to mention that this nature of females' attitude leads to seriousness in educational performance. Thus, the crux of this debate is that the classroom environment is contributing as a factor of female students outscore males at tertiary level examinations.

Gender-specific Study Culture: Data presented in Chapter 5 from university teachers' perception assert gender-specific study culture as a factor of female outscore male students at the university level. The study findings reveal that teachers perceive that female students spend more time on homework and male students spend more time on outdoor activities. It is also important here to mention that teachers also perceive that female students tend to spend more time on searching for study material. On the other hand, results reveal that male students adopt anti-educational masculine identities at university. It is noteworthy here to mention that teachers perceive that female student are more inclined to study group

collaborations and are also more concerned about lecture notes. It is important here to mention that the research findings report that gender-specific study culture is a very important environment provided for the study by involving female and male students as it does not show any reciprocal measures (Houtte, 2004; Ludwig, 1983). Moreover, the study culture determines multiple non-identical aspects than study involvement for female and male students (Blumner & Richards, 1997). Therefore, gender-specific study culture has a strong correlation with gender in terms of female outperform male students at tertiary level examinations (Gurian, 2010a).

Motivation and Commitment: The study findings of university teachers (see Chapter 5) also reveal motivation and commitment as a factor of female students' outperformance and male students' underperformance in higher education. Teachers perceive that female student are encouraged to perform better as compared with males. Similarly, female students are more committed to their education than males. Moreover, teachers also perceive that education is considered a liberating force for female students. It is pertinent here to mention that teachers perceive that education is linked with better matrimonial offers for female students. By the same token, education has more pragmatic value for female students than male students. However, the teachers' point of view is that male students consider education a liability while female students an asset. Likewise, the study findings of Long et al. (2007) assert that motivational theoretical constructs are used to confirm human behaviors differently among students. Thus, female and male students perform differently in academic performance based on motivational differences. Similarly, motivation is revealed as the force to provoke and stimulate female and male students differently to respond in achieving the goals i.e. examination results (Meece et al., 2006).

Moreover, it also influences the behavior of the individuals leading towards the goal and stimulates students to achieve desired results by manipulating and creating the behaviors conversely (Solanki & Xu, 2018; Zaid, 2020). The study of Lee and Sten (2017) points out motivation as the process that propels, drives, triggers and contains female and male students' behaviors after the goals. Normally, it guides female and male students to initiate the objective (study) and persistently maintain the struggle until the examination results are achieved according to expectation (Browman & Destin, 2015). Further, the female and male students having different motivational factors are mainly involved in achieving the academic pursuits differently and desire the task of learning (Birgit Spinath et al., 2010). It is important to argue here that the motivational aspects of female and male students are different. Similarly, they set their goals and try to achieve based on motivation. Thus, I assert here that the females' goal of educational success has motivational aspects that are favorable from home, family, parents, and teachers as compared to male students. These motivational differences contribute to gender reversal change in terms of female students outperform males at the tertiary level. Moreover, it is pertinent here to mention that educated females are preferred in Pakistan for matrimonial offers. Resultantly, female students try to develop a pragmatic approach and start competing in their early educational careers which result in good grades at the tertiary level.

Self-fulfilling Prophecy: University teachers' perception in Chapter 5 assert that self-fulfilling prophecy is a factor of gender reversal change in terms of female outplays male students in examinations. The study findings reveal that teachers perceive that female students have a gender advantage to complete educational tasks. Similarly, study findings also show that female students are better communicators than male students. Moreover,

faculty members also perceive that female students are less prone to detrimental trends at university such as sectarianism, ethnic conflicts, and drug usages, etc. It is important to mention here, that the study also shows, that female students are better at making important relations and are less social than male students. On the other hand, the study also reveals that teachers also perceive that male students are less serious than female students in educational completion. As it is argued that the self-efficacy prophecy indicates the female and male student's belief in their abilities for positive turnouts to seek new and achieve the goals accordingly (Jussim, 1986; Wineburg, 1987). It is noteworthy to mention here that Bandura and Walters (1977) emphasis on social cognitive theory, constructs of self-efficacy entailed good learning outcomes, whereas, a female and male student's own beliefs in their abilities have a great impact on alternative activity and struggle (Hay, 2004). Moreover, it involves behaviors which are important to achieve the goal, academic pursuits, and motivation, along with the development of abilities of cognitions and proficient attainment among students (Madon et al., 1997). Likewise, it persistently indicates the predicted academic pursuits owing to its impacts on struggle and consistency (Jussim, 1989; Merton, 1948). For instance, female and male students demonstrating a great sense of self-efficacy are more subject to attempt and stick to the struggle in the long run while encountering the academic challenges (Zimmerman et al., 2017). Hence, I argue that female students try to compete with their counterparts based on their previous gender advantage, communication, and completion of educational tasks on time. It is worth mentioning that self-fulling prophecy is a very important factor of female outscoring male students at tertiary level examinations. My point of assertion here is that female student are less prone to detrimental trends at university such as conflict, usage of drugs, etc. as

happing in educational institutions in Pakistan. Thus, female students are focused to study and perform better than male students in examinations at the tertiary level.

Sociological Analysis: The sociological analysis model focuses on four important factors. Analyzing any social phenomena, it is important to take into consideration the historical background, cultural aspects, structural and critical factors (Altbach et al., 2019). These aspects are discussed in detail in the context of teachers' perspectives on gender differentials in academic performance in terms of female students' outperformance and male students' underperformance in higher education in Chapter 5.

Historical Factors: The study findings of university teachers (see chapter 5) reveal the historical factors of female students' outperformance and male students' underperformance in higher education. The findings reveal that teachers perceive female students were trained to believe that they are incapable, and they have been less visible in the texts in the past. Similarly, females were represented in subordinate roles in the past and teachers also perceive that females have fewer responsibilities than male students. Moreover, the study findings point out that feminism has played a significant role in females' education. Further, university teachers perceive that women's empowerment has decreased the long-lasting gender gap in higher education. It is pertinent here to mention that in the past, it was believed that females cannot study and perform better than males based on their biological determinism. The biological differences among females and males were considered as a criterion of educational performance in the past (see theoretical review, Chapter 2). Gradually, as far as the female outperformance and male underperformance is concerned, it has a clear starting point related to some historical factors such as the promotion of higher education for women empowerment (Collins et al., 2000). These

historical factors have contributed, to a greater extent to female enrollment in higher education institutions (Ford & Moore, 2013). Similarly, historical trends in the gender mechanisms have given greater space to female students to outperform males, hence, joining the labor forces (Gagné et al., 2019). Here, my point of assertion is that female and male students' performance is not based on biological characteristics as perceived in the past (see Chapter 2). I reveal that female students outshine males in tertiary education based on socio-cultural and study environment including other linked factors rather than biological determinists view. It is a gaudily clearer picture from the previous review of developed, developing, and Muslim world that female students are performing better not only at school and college but also at a higher educational level. Moreover, I also assert that varying nature of emerging differences between feminine and masculine characters enable the feminist to counter the argument of exponents of the brain and innate differences which produce differences in gender equality and, ultimately, affect the achievements of female and male students at tertiary level.

Cultural Factors: Chapter 5 also presents teachers' perceptions of students' academic performance in terms of cultural factors. The study findings reveal that teachers perceive that male students are cultured to do as they are pleased and female students remain restricted in their actions. Moreover, the study also points out that educated females are preferred for mate selection. Furthermore, teachers' point of view regarding gender reversal change is that parents prefer females for better education over males and socio-cultural milieu also reinforces parents to educate females. Likewise, teachers also perceive that the changeling situation in education is welcomed by females. As the study findings of Noguera (2003) assert that cultural aspects have been playing an important role in

forming teachers' opinions which influence their behavior regarding gender differentials in academic performance. Similarly, culture entails various normative value-laden guidelines for structurally approved behaviors and attitudes for female and male students (Altbach et al., 2019). The entire culture structure is used to reproduce a specific social texture through the process of socialization (Watson et al., 2010). In the early period, boys were preferred by parents and are provided with more space for education as compared with girls (Gurian, 2010a; Park et al., 2010; Zhang et al., 2019). They perform better than girls based on a favorable environment and learning opportunities (Lytton & Romney, 1991). However, as the space and opportunity are provided to girls in learning and education, they are performing better than boys not only at school and colleges but also at the university level (Dumais, 2002). Currently, female students are not only in competition but also in outnumber and outscore male students in the examination at the tertiary level. My point of assertion here that the performance in the examination is not linked with biological determinism but with the psychological and socio-cultural domain. Moreover, gender is socially constructed and it is equally supported by the social constructionists, feminists, and gender-related theorists (see Chapter 2, theoretical review).

Structural Factors: University teachers' perception in chapter 5 asserts that structural fractures of gender reversal change in terms of female outplay male students in examinations. The study findings reveal teachers perceive that religious norms favor the education of females. Similarly, results also show that the economic participation of females incites their educational training. Moreover, teachers also perceive that family and political agenda of women empowerment favorably encourage female education. By the same token, teachers also perceive that mass media promotes educated females as role

models (e.g. burka avengers). It is worth mentioning here that civil society heavily depends on the feminist agenda of the educated women. Various social institutions have influence teachers' perspectives on female outperformance and male underperformance in higher education. Insofar as the institutions of a society are concerned, sociology assumes that there exists a congruent institutional interdependence between various systems (Gagné et al., 2019). Hence, the educational system and its subsystems have to do with other spheres of institutional ethics (Altbach et al., 2019). These include religion, economy, politics, and mass media. While the culture structure provides normative standards of behavior, the institutional arrangements help reinforcing these standards. Institutions also delegate authority and channelize power to ensure durable patterns of behavior. According to Talcott Parsons, the basic unit of institutions consist of the allocation of roles and status (Parsons et al., 1965). The Parsonian concept is useful to understand how roles and statuses within the educational institution help structuring the behavior and behavioral expectations of teachers and the female and male students (see Chapter 2). Thus, it is worth mentioning that female students outshining male students at tertiary level examinations is based on social institutions. My point of assertion here is that female student's outperformance is based on the notion of family support, female economic opportunities and labor force participation, educational access, promotion of female education through media, and political participation.

Critical Factors: Data presented in Chapter 5 from university teachers' perceptions assert the critical factor of female outplays male students at the university level. The study findings reveal that teachers perceive that the status of females is fixed and based on structural ascriptions from birth. Similarly, males' position as compared with females in

the social structure is more flexible. Furthermore, teachers perceive that males as compared with females acquire better social mobility and power by factors other than education. In the same way, university teachers also point out that males as compared with females acquire more income and prestige by factors other than education. It is important here to mention that critical factors of students' academic performance, teachers' expectation and attitude about the inequality in the treatment of students is based on gender undergone any substantial changes (Altbach et al., 2019). Critical factors have grown in the sociological analysis because many researchers who assess the educational performance based on gender tend to opt for a critical stance (Gagné et al., 2019; Najaf et al., 2019; Parsons, 2019). The main point to be highlighted here is that this perspective offers the advantage of being critical towards the status quo in higher education. My point of assertion here is that, beyond cultural norms of gender and structural constraints, the critical perspective may challenge power, prestige, status, income inequality, and exploitation that permeates the educational policy.

Gender Differentials in Academic Performance: The study findings of university teachers (see Chapter 5) reveal the historical factors of female students' outperformance and male students' underperformance in higher education. The findings reveal that teachers perceive that female students are making big strides in higher education and can educationally place themselves in a better position due to prior gender differences in the family. Similarly, the results also show that female students can maintain the narrative of female advantage at Higher Education Institutions (HEIs). Further, it reveals that female students can secure better enrollment and are more capable of completing their degrees from HEIs than males. Moreover, female students are more capable to acquire employable

skills from HEIs than males. Likewise, female students are more able to educationally place themselves in a better position than males. In the same way, teachers assert that female students are more able to educationally place themselves in a better position in the classroom environment than male students and also are in a better position in motivation and identity. It is worth mentioning here that gender differentials are defined as the variations among females and males based on their biological determinism in the past (Fontanella et al., 2020). In addition to the biological characteristics of females and males, these educational differences are based on other multiple factors (Frijters et al., 2019). It includes socio-cultural and mainly the factors which are socially constructed and vary from culture to culture (Bindu & Thomas, 2006; Jones & Wheatley, 1990; Marcenaro–Gutierrez et al., 2017). Scholars differentiate between females' and males' academic performance based on these factors (Gentile et al., 2009; Ghazvini & Khajehpour, 2011; Kay & Lauricella, 2011). Similarly, academic performance is also studied differently by different scholars based on their interpretations (Alhadabi & Karpinski, 2020; Vorontsova-Wenger et al., 2020). Moreover, they highlight that academic performance is the attainment of female and male students in an aggregated score obtained in tests or exams in a specified subject covering the defined academic benchmark. Likewise, Hsin and Reed (2019) assert academic performance as the pedagogic terminology utilized in examining for the success of learner in academia is determined by the performance in exams, and research rated with various standards influence the degree (Burman & Som, 2019; Lavin, 1965). Moreover, it is also linked to achievement in education obtained in a particular period in school, college, and university among female and male students (Lau et al., 2019). My point of assertion here is that gender differentials in terms of female students outplay males in the

examination have been observed along with multiple aspects. It is worth mentioning here that the female and male students' differences are not only observed from examination results but also seen in enrollment, successful completion of the degree, and better position in the classroom at tertiary level education.

6.3.2 Primary Data: Inferential Statistics

This section of the study consists of scale testing, bivariate, and multivariate analysis of the data. Moreover, factor analysis, model testing, and neural network results are also described in this section (see Chapter 5 inferential statistics section).

Scale Testing and Bivariate Analysis: In this section, the confirmatory analysis applied to confirm the items of variables through model estimates and their probability value. Either these items are significant or not for further analysis. Further, normality test, Kruskal Wallis Test, Kendall's tau-b, and Chi-square statistical was conducted to test bivariate relations in this section (see Chapter 5).

Conformity Factor Analysis (CFA): This section of the study provides description on CFA. It is a type of factor analysis and the first step of the structural model (see chapter 5). For my study, out of 112 statements, 107 items were confirmed and significant for further multivariate analysis. Conversely, five items (see chapter 3) were not significant and confirmed with a p-value less than 0.05. Consequently, the null hypothesis was rejected and alternate hypothesis was accepted that all items (excluding five items) were significant and selected for further analysis.

Normality Test: The study findings also present a normality test based on Kolmogorov-Smirnov and Shapiro-Wilk statistical tests. It claimed (see Chapter 5) based on Kolmogorov-Smirnov that not all the variables followed the normal distribution at a 5

percent level of significance except three variables namely critical factors, household determinants, and educational determinants. These variables were not normally distributed. Furthermore, the Shapiro-Wilk test for normality also indicated that most of the considered variables did not follow the normal distribution. This suggested that the non-parametric test should be used to test the different hypotheses for these variables.

Kruskal Wallis Test (Educational Qualification): The study findings of inferential statistics in Chapter 5 also depict a nonparametric test known as the Kruskal Wallis Test that is infecting an extension of the Mann-Whitney U statistical test. In this case, the independent variable consisted of three independent groups of university teachers based on their educational qualifications including MA/MSc, MS/M. Phil and Ph.D. degree holders. The statistical results in the table showed that the role of motivation and commitment of the students was significantly different for three groups of teachers with a p-value of 0.015 (p-value < 0.05). Similarly, the results also supported that the self-fulfilling prophecy of the students in academic performance was also significantly different for university teachers' educational groups. The present study findings are aligned with the study findings of Al-Sahel (2005), Sudkamp et al. (2012), Rothbart et al. (1971), Altun (2017), Terrier (2016), Piper, Sitabkhan, MejĆa, and Betts (2018), (Mustafa, 2013), and (Gurian, 2010b). My point of assertion here is that the competency is based on teachers' qualifications and training. Similarly, it varies from teacher to teacher and geographical location as well. Thus, the findings of the study reveal that university teachers based on their educational qualifications perceive multiple factors of female and males students' academic performance differently in terms of female outshine males in tertiary education.

Kendall's tau_b: Based on study findings in Chapter 5 (see bivariate analysis) Kendall's tau_b statistical test results show that there is a significant positive correlation among almost all variables. This correlation is varying as low, medium, and high among multiple variables. It is important to mention here that the rationale to employ Kendall's tau_b is that the data is non-parametric. Hence, the test is applied to check the correlations before moving to employ multivariate analysis (see Chapter 5 for details).

Chi-Square Statistical Test: The study findings show that almost all variables have a significant association with gender differential in academic performance in terms of female outperformance and male underperformance at tertiary level examinations (see Chapter 5). It is noteworthy to mention here that the Chi-Square test is employed to check the associations among variables before moving to further analysis.

Structure Equation Modelling (SEM): The study findings present Structure Equation Modeling (SEM) which was applied to test the hypothesis. Here, in my study, three models were developed to identify the impact of independent variables on dependent variables. It is pertinent here to mention that this section also provides the path analysis and testing of hypothesis based on the models (see Chapter 5).

Results of Model 1: Model 1 portrays the causal relationship between the socio-economic status of the students and gender differentials in academic performance and it focuses on the moderator role of cultural factors and educational determinants. To test the model, primary data from 253 university faculty members were used. Here, the socio-economic status of students' family is the independent variable (exogenous), gender differentials in academic performance are dependent variable (endogenous), and two variables used as a moderator variable named cultural factors and educational determinants. On the questions

measuring variables, teachers were asked to express their (dis)agreement with certain relevant statements on a 6-level Likert scale. Moreover, the chi-square of the proposed model is 96.002 (degree of freedom = 61) with a p-value of 0.003 less than the significance level (0.05). Further, chi-square calculated value near zero is adequate, and the model yields satisfactory goodness of fit. Moreover, the table also indicates the proposed value of GFI (.946), AGFI (.919), CFI (.956), TLI (.944), and IFI (.957). These values also confirm the proposed model of fitness. Here, RMSEA value (.048) is lower than .08 and does not exceed the lower bound of the 90 percent interval confidence. In addition to the model summary, it also provides direct and indirect effects of the variables. My point of assertion here along with the model results is that teachers' perceptions of socio-economic and cultural factors have a significant positive impact on gender differentials in academic performance in terms of female students' outperformance and male students' underperformance by the mediation of educational determinants in higher education. Moreover, this perception is also varying for the factors of female and male students' academic performance at tertiary level examinations as group analysis is employed on the gender and geographical locations of the teachers.

Results of Model 2: This model exposes the underlying relationship between the socio-economic status of the students and gender differentials in academic performance and it focused on the moderator role of cultural factors, motivation & commitment, and educational determinants. Here, the socio-economic status of students' family is the independent variable (exogenous), gender differentials in academic performance are dependent variable (exogenous), and three variables were used as a moderator variable named cultural factors, motivation & commitment and educational determinants. The study

findings show that the chi-square of the proposed model is 198.502 (degree of freedom = 100) with a p-value of 0.000 less than the significance level (0.05). Further, chi-square calculated value near zero is adequate, and the model yields satisfactory goodness of fit. Moreover, the table also indicates the proposed value of GFI (.912), AGFI (.880), CFI (.903), TLI (.884), and IFI (.905). These values also confirm the proposed model of fitness. Here, RMSEA (.063) is lower than .08 and is not exceeding the lower bound of the 90 percent interval confidence. The crux of the model is that socio-economic and cultural factors have a significant positive impact on educational determinant through the mediation of motivation and commitment of the students. Similarly, these factors have a significant positive effect on gender differentials in academic performance in terms of female students' outperformance and male students' underperformance through university teachers' points of view. Furthermore, group analysis of teachers' (teachers' gender and residential area) point of view also shows a variation on the factors of female outshine male students at tertiary level examinations.

Results of Model 3: The third model of my study portrays the causal relationship between the socio-economic status of the students and gender differentials in academic performance. It focuses on the moderator role of cultural factors and educational determinants. The study findings reveal that the chi-square of the proposed model is 12.278 (degree of freedom = 6) with a p-value of 0.056 less than the significance level (0.10). Further, chi-square calculated value near zero is adequate, and the model yields satisfactory goodness of fit. Moreover, the table also indicates the proposed value of GFI (.986), AGFI (.937), CFI (.983) TLI (.942), and IFI (.984). These values also confirm the proposed model of fitness. Here, RMSEA (.064) is lower than .08 and is not exceeding the lower bound of

the 90 percent interval confidence. The results of this model reveal that university teachers perceive that socio-economic status and students' home background have a significant positive impact on educational determinant through the mediation of parental involvement of the students. Similarly, these factors have a significant positive effect on gender differentials in academic performance in terms of female students' outperformance and male students' underperformance through university teachers' points of view. Further, group analysis of teachers (teachers' gender and residential area) point of view also shows a variation in the factors of students' performance.

Neural Network: This section consists of the results of the neural network (see chapter 5). For my study, the case processing summary presents that 178 respondents are selected for training samples that are 70.4 percent of all respondents. Conversely, 75 respondents were selected for testing that is 29.6 percent. It noted that all 253 respondents valid for both training and testing. No excluded sample is identified in the case processing summary. Moreover, the model summary presents the information about training results and the final network applying to the testing samples. The model is good for prediction and it presents the percentage of incorrect predictions which are 14.7. It interprets that about 15 decisions out of 100 predicted incorrectly are based on the model of pretesting. In the end, it concludes 85.3 percent of the respondents are incorrect specifications in the testing sample. It is noted that the percentage of both training and testing is above 80 percent to be considered accurate. It shows that it correctly identifies a high percentage of correct classification. Similarly, the overall correct classification in training is 98.3 percent and in testing, the sample is 85.3 percent. This recommends that the overall model is good and all 25 independent variables have significant effects on dependent variables' three units i.e.

low, medium, and high. These results are also supported by ROC curve numerical value. The area under the ROV curve near 1.0 shows the best model. This model had area 0.987 and more under the ROC curve in three units i.e. low, medium, and high that confirms the accuracy of the model classification.

It is important to mention here that ANN is employed by researchers to determine students' academic performance at different levels (Aybek & Okur, 2018; Burman & Som, 2019; Fujita, 2019; Lau et al., 2019; Mohd & Yahya, 2019; Xu, Wang, Peng, & Wu, 2019). Burman and Som (2019) used ANN to determine the academic performance of learners. He found model skilled enough to make suitable estimates of learners' academic performance. Similarly, Ofori, Maina, and Gitonga (2020) presented data in a conference and predicted different methods of teaching and learning. They considered two datasets for classification and prediction of students' performance using machine-learning algorithms. Further, the results of the neural network of Rivas et al. (2019) also predicted students' performance model. Moreover, the similar nature of results is predicted by students' academic performance using the neural network by Iyanda et al. (2018), Solomon (2018), Tegegne and Alemu (2018), and Kaviyarasi and Balasubramanian (2018).

Conclusion: The study findings of content analysis reveal that female students outshine males at the tertiary level except in the Faculty of Engineering & Technology. In this faculty, females achieve half of the top three positions during the last ten years of examinations in the university. Moreover, primary data collected from university teachers also assert that there are multiple factors of gender reversal change in terms of female outperform male students at the tertiary level. It is worth mention here that my empirical review supports the findings of analysis data and primary data. Contrary to it, theoretical

review regarding biological determinism is not aligned with my findings. As biological proponents argue that the gender differentials in academic performance are linked with biological characteristics and brain size of females and males. On the other hand, my study findings are aligned with psychological determinism, sociological approach, and feminist proponents. Thus, I assert here that the success of female students is not based on single or biological differences among female and male students. I conclude here that the performance of female and male students is linked with multiple factors such as familial, educational, motivational, and sociocultural domains. Furthermore, the application of theory, conclusion, and recommendations of the study is given in the next chapter.

Chapter Seven

Application of Theory, Conclusion, and Recommendations

7.1 Introduction

This chapter sums up and concludes the study findings. The previous chapters i.e.4, 5, and 6 provides overall trends of students' academic performance and teachers' perspectives on gender differentials in terms of females outperform male students at tertiary level education. This chapters deals with summary of the argument, synthesis of findings and relation with previous studies and theories. I used the theory of Bourdieu's Cultural Capital Theory. Bourdieu is perhaps best known among the sociologists for a comprehensive theoretical lens to explore the complex social structures of society. The purpose of developing a framework is to understand variables, and how these are used in the educational achievements of students coming from a rural and urban background and performing differently in examination results at the tertiary level. The variables are derived from philosophical and theoretical arguments of the experts in the field of sociology of knowledge in this study. Moreover, my conclusion is based on secondary and primary data along with the empirical and theoretical review. Furthermore, this section also provides implications, limitations and recommendations of the study.

7.2 Summary of the Argument

In this study, I use quantitative approach to examine gender reverse change in terms of females outperform male students at tertiary level in the University of Punjab. This provided me a clear picture of the trends of top positions holders and teachers perspectives on factors underlying gender differentials in academic performance. I employed content analysis techniques on the examination results books of the above-mentioned university

from 2006-2015. Using the content analysis approach, I analyzed female and male students' performance in MA/MSc examinations. Top three positions in master level examinations have been taken as indicators of outperformance. The analysis of results books of ten years depicts female students' outperformance and male students' underperformance in education. The analysis allows me to conclude that there is a vivid trend of young females' outdoing males in education at the tertiary level.

Moreover, my primary data collected from university teachers also assert that there are multiple factors of gender reversal change in terms of female outperform male students at the tertiary level. It is worth mention here that my empirical review supports the findings of analysis data and primary data. Contrary to it, theoretical review regarding biological determinism is not aligned with my findings. As biological proponents argue that the gender differentials in academic performance are linked with biological characteristics and brain size of females and males. On the other hand, my study findings are aligned with psychological determinism, sociological approach, and feminist proponents. Thus, I assert here that the success of female students is not based on single or biological differences among female and male students. I conclude here that the performance of female and male students is linked with multiple factors such as familial, educational, motivational, and sociocultural domains.

7.3 Relating the Findings with Previous Studies and Theories

The study finding of my research are not align with the biological deterministic approach. As mention in Chapter 2, biological determinism implies that social behavior is an outcome of biological dissimilarities among boys and girls. This approach argues that female and male differences are based on God gifted intelligence and skills. Several studies have been

highlighted that females and males have different sizes of the brain, intelligence, and reasoning skills based on their biological characteristics (Aluja-Fabregat et al., 2000; Pardeller et al., 2017; Tang et al., 2010). Based on these differences, they argue that males perform better than female students in educational examinations at the tertiary level. My point of assertion here is that gender reverse change is not because of biological characteristics of female and male as my study findings are not in favour of this approach. Academic performance is not based on physiological difference of female and male but linked with other factors such as parental role, study environment, and socialization differences. Hence, I argue that gender reverse change is not a biological phenomenon. My empirical review also supports my argument.

Contrary to biological determinism, my study findings are aligned with psychological determinism. I agree to it, my study findings are linked with the theory of psychodynamic given by Freud (1977). It is argued that the development of gender identity of girls and boys is linked with their early socialization patterns provided in their families by parents. Therefore, based on this aspect of psychodynamic proponents, I link this with an educational performance at the tertiary level. This gender identity provided from familial background creates a difference in academic performance. As the findings of an empirical review of literature are evident that female students achieve better scores in examination results. This trait of securing high positions in examinations in their personality developed in their early interaction with parents make them fit in educational performance. My argument, based on study findings here, is that mother and father both provide a caring environment to daughters and sons to become earning members of the family and perform outdoor activities. Similarly, these traits are developed in their early

ages that result in gender differentials in academic performance. In conclusion, femininity and masculinity are constructed in a cultural environment that results in gender differences for choices in the future. Thus, early personality development traits push girls to perform well and boys to think about familial economic matters. This familial responsibility for boys in securing top position in examinations.

Similarly, my study findings are also aligned with social learning theory that explains the development of gender identity. The main proponents in the social learning approach are Bandura and Walters (1977), L'Abate and Bryson (1994), and Mischel (1973). This theory is also linked with behaviorism and conditioning behaviour given by Kimble (1961), and Burchard and Tyler (1964). This approach elaborates that leaning is based on the concept of reward and punishment similar to the carrot and stick method. As behaviour followed by appreciation and acceptance is likely to be repeated again and again. As a result, the core assumption of this theory is linked with my study findings that female outperformance is based on their acceptance and appreciation by parents and teachers. It is pertinent to mention here that these study findings are also aligned with empirical review in Chapter 2.

Moreover, my study findings are linked with the cognitive development theory by Piaget (1972) and Erikson (1994). The core assumption of these theories assert that girl and boy children learn through interaction, and try to develop their stages of personality. They try to develop their gender identity starting their sensorimotor stage of personality development to the formal operational stage of personality. During these stages of personality development, girls and boys learn differently to play with toys, recognize the objects and symbols, and the ability to analyze the object logically in later stages. This

primary learning in femininity and masculinity develops an opinion about gender differences that may not change over time. Similar to the assumption of these theories, female and male students learn differently in their early educational careers. These differences in learning based on previous educational grades result in gender reverse change at tertiary level.

My study findings are also aligned with the sociologists. As they have studied the process of gender socialization and identified the difference between female and male behaviors (Howard & Hollander, 1997; Lerner, 2005; Räty & Snellman, 1992). The process of socialization starts at birth when the family treats a child according to his or her sex in a potentially different way.

As it is argued that the socialization of gender roles begins in delivery rooms including a blue dress for boys, and a pink dress for girls. Baby enters the world that is updated with language and symbols which shapes its conception of gender stereotypes and gender roles (Gurian, 2010a). The language used in a family mostly centers on physical characteristics and themes for boys like agility and strength while appropriate language for girls used by family might be daintiness, expressivity, and address affection (Grusec, 2011a). These boundaries become the identity standards, and context is used to compare the self to others. The literature on gender role socialization, the mechanisms and procedures differentiate acceptable behavior for females and males, and the evolvement of behavior over time (Francis, 2006; Halberstam, 2019). Therefore, these differences in socialization result in gender differentials in academic performance in education. My study findings are linked with these core assumptions that female favourable socialization at home motivate them to outperform in education. Moreover, my primary data findings also

reveal that family background and parental involvement differentiate between female and male students' learning at tertiary level. As content analysis asserts that female students belong to urban areas and male are from rural backgrounds. Hence, my primary data from university teachers also showed similar nature of results in terms of factors of female outperformance at tertiary level. Moreover, it is pertinent here to mention that girls and boys learn different feminine and masculine identities as per cultural theories based on gendered socialization.

In the early times, boys were preferred by parents and provided more space for education as compared to girls. They performed better than girls based on favourable environment and learning opportunities. However, as this space and opportunity are provided to girls in learning and education, they are performing better than boys not only at school and colleges but also at the university level. Currently, female students are not only in competition but also outnumber and outscore male students in the examination. Consequently, it is pertinent here to mention that the performance in the examination is not linked with biological determinism but with the psychological and socio-cultural domain.

My study findings may also link with the wide range disparities in Pakistan between male and female performance in exams that are more likely associated with the feminine and masculine variations. It is, therefore, found that varying nature of emerging differences between feminine and masculine characters enable feminist to counter the argument of exponents of the brain and innate differences that produce differences in gender equality and, ultimately, affect the achievements of female and male students at tertiary level. In my study, the female and male students' performance is more likely linked with the social construction of the society as performance varies with the students who have differences

in geographic location and socioeconomic backgrounds along with other factors. Henceforth, I reveal that the gender differentials in academic performance is not linked with biological or body characteristic with learning, feminine and masculine identities along with socialization differences. Moreover, the variation in femininity and masculinity provides very important insights to feminists to oppose the notion of a biological deterministic approach to study gender differentials in examination results and academic performance.

Feminism proponents demand equal rights and opportunities to females and males in masculine structure. They demand social equality regardless of sex (Acker, 1987). So, they attracted the attention of the world towards the differences created in femaleness and maleness in society. In compliance with the hegemonic masculine structure of the society, several feminist voices came into existence to support the women's participation in different arrays of life. Similarly, the feminists argued that the male hegemony and masculine structures are major components of the women subjugation generally in society and particularly in education. In the past, the failure of females in every single filed was more likely associated with their biological and sexual variations while the feminine and masculine factors were not considered. Currently, the feminist argued that variation of femininity and masculinity as mainly because of male hegemonic values and culture (Gilbert & Gubar, 1996; Lorber, 2000). As the female and male were dealt in different ways which created a clear rift in gender construction. Further, it prevailed in every filed including education.

My study findings are similar to the findings as reported in the empirical review that previously female and male educational performance was more likely linked with

biological variations but later in a gender-neutral culture females started performing better in examinations. Hence, it is argued that the biological differences less likely affected the performance of female and male students rather shaped by cultural differences. Accordingly, females' deprivation of education was due to the traditional and cultural practices in male hegemonic society. Moreover, feminists' proponents raised voices to provide equal opportunities for females to get an education and perform equal to males.

I argue that girl's lagging behind in the past was based on traditional cultural practices and normative value structures of society. Thus, culture and society both made an inappropriate environment for females to learn and come up with better opportunities. Females were born and treated differently to develop different image of society. At this point, my argument is that no one is born genius rather socialized and prepared in a particular socio-economic environment.

It is concluded from the above discussion that gender is mainly influenced by the masculine culture of the society. Females are mainly disturbed by male perspectives as males dominate in every walk of life. Male design and execute the policies in almost every sphere of life. Owing to this, females are subjugated ad kept at margins in every filed in the past. Simultaneously, males got education and outperforming females while females were excluded in education. It is hence argued that masculine and cultural differences have a pivotal role in socializing the girls for education and competition of males rather than innate differences.

To summarize the discussion as per the theories to study gender and education, females were deprived in the past based on cultural practices and normative value structure of the societies. As the access and cultural practices provided gap to females, they try to

perform not only at school and college level but also at the university level. Therefore, I argue that females were not supported by their families and cultural practice for education. The proponents of feminism struggled for female education, and space was provided. Currently, female students are outshining males in examination results almost at all levels. Therefore, the performance of female male students in education is not linked with biological determinism and inborn characteristics. Based on the above empirical and theoretical review, I argue that the difference in educational performance among female and male students at the tertiary level is not linked with biological characteristics. It has roots with the difference of psycho-social, socio-economic, and cultural factors of socialization among female and male students.

It is important here to mention that I opted for the theory of Bourdieus' Cultural Capital Theory. The main theoretical tools of Bourdieu are habitus, fields, and different forms of capital. I applied to the concept of cultural capital, i.e. economic, cultural, social, and symbolic. The data presented in chapters 4 and 5 are full of the assertion that the behavior of students is not determined by the educational institutions rather by the social structure, rural and urban society, where they were borne, bread, and socialized. Thus, the primary habitus of students induced in childhood is more durable to learn behaviors regarding social structure rather than learn at a later stage.

It is further asserted in the study context that students from rural and urban backgrounds may bring changes in certain behaviours to ensure coexistence and avoid maladjustment in a new setting i.e. educational institutions. After spending some time, students from rural backgrounds adopt the new environment and gradually become part of the new structure and perform better. Thus, the analysis of data presented in Chapter 4

asserts that female perform better than male students and they mostly belong to urban areas. Likewise, males underperform and mostly belong to rural geographical locations.

As mentioned in my empirical review in Chapter 2, scholars across the globe have identified cultural capitals as a source of success and recognition and sorted out the factors which contribute to the achievement of female and male students. There is evidence indicating that cultural capital forms although interrelated to each other but different in terms of possession of every form carry different impacts on the lives of those who possess. However, the different researches in my review examined a small number of variables (parental education, parental expectations, parental reading, book possession) corresponding to types of cultural capital.

My data presented in Chapter 5 is aligned with the social reproduction theory of Bourdieu that presents the interrelationship of education, family, and social status. Education is the main source of social inequalities and subversion. In this process, cultural capital has a pivotal role because the inequalities in the cultural capital refer to an imbalance in the social class. Such inequalities flourish in educational institutions as schools and teachers are also a source when explaining the role in pedagogic activities/roles which give rise to perpetuation of classes by expounding the rich. They encourage the learners by rewarding the haves of such capital and discourage or degrade the have-nots. Therefore, schools serve as the main source of reproduction and omission. Thus female students belong to urban areas with high SES that results in their good performance in examinations as compared to male students at the tertiary level.

Moreover, the cultural capital denotes the coding culture supported by parents which are transmissible as well as the practices capable of a transmissible against. It

contains a body of aesthetic codes, conditionings, and habituations transferred to learners internalized through socializing or the inherent transfer of cultural traits. It shows the status of the class or the actors' location from various walks of life. It expedites the naturalization of structural possession. Family refers to class by its habitus. The cultural resource of only the middle or elite class can become a valuable *capital* in society. In 'highbrow' culture, knowledge and possession are unevenly found in class and education that is declared as legitimate. Distinctions and privileges are awarded to the possessors. Beside other capitals like a human, social and economic, cultural capital invokes the unequal social fabric of society. This highbrow culture is induced in school systems unevenly that results in better performance of female students as compared to males in their later education.

My data presented in Chapter 5 also assert that children of rich people are recognized as high SES, parental education, urban place of residence, and good previous schooling. The teachers recognize this advantage of students and exclude those who lack such cultural capital. Their pedagogic actions cause them to take part in a competitive mechanism. Moreover, their pedagogic actions are considered meritocratic and legitimate. Therefore, elite culture seems to be contrary to be deprived or underprivileged. Due to unusual assessment, the teachers are biased when they grade educational performances of the female and male students as they recognize the competencies of the elite, not their scholastic performances. In this way, the educational institutions serve as a source of a specific intergenerational social mobility and outcomes. Thus, based on the core assumption of this theory and my data presented in Chapters 4 and 5, I assert here that teachers perceive female students outperform at tertiary level examination based on their cultural capital differences with male students.

7.4 Implications of the Study

The findings of this study respond to the study's research questions and help to explain and outline the factors that contribute to female students' outperformance and male students' outperformance in higher education in Punjab (Pakistan). The findings from analysis have very vividly highlighted the gender reverse trend in education performance at the tertiary level in Pakistani context. Thus, the study makes a significant contribution to existing literature on the issue of gender reverse change in education performance in tertiary education. Moreover, the findings provide good food for thought to new readers and researchers in the field of feminist sociology of education. The findings can be utilized for revisiting the phenomena and improving it in the best interest of future requirement of Pakistani society.

7.5 Limitations of the Study and Recommendations

The study findings suggest a number of limitations and recommendations. The details as follows.

7.5.1 Limitations of the Study

The research is limited to ten years of examination results of only master level programmes. Similarly, it also only focuses on primary data from university teachers. Moreover, study's universe was limited to one university-University of the Punjab. Moreover, it is purely based on quantitative approach.

7.5.2 Policy Recommendations

Recommendations based on the study findings are related to the application mechanism of different methods to minimize educational differences among female and male students. The detail is as under.

Counseling Services: The study recommends that counseling services should be provided to students in educational institutions for the students coming from rural areas (mostly males). Moreover, it is important here to mention that the experts in the relevant field should be nominated from the educational institution for the said purpose. This programme will strengthen the performance of male students and also enable them to develop their confidence that results positively in their educational performance. It is noteworthy to mention here that this counseling mechanism should be properly monitored and the confidentiality of both female and male students should be ensured.

Equal Learning Environment: The study recommends that families and educational institutions should provide resources and learning environments equally to female and male students. As my empirical and theoretical review reveals that families provide a different learning environment for females and males in terms of more favourable to females. It is worth mentioning that parents should distribute resources equally among their female and male members which may results in ending gender discrimination at the household level. Similarly, they learn to have equal opportunities, and the performance of male students in the examination will be increased. The study also strongly recommends that equal educational opportunities should be provided in rural and urban geographical region of the country. It will minimize the gender disparity in academic performance at tertiary level examinations.

Attitudes of Parents: The study also recommends that the discriminated attitude of parents towards their female and male children should be eliminated in terms of care and role performance. Moreover, parental pressure on male students affects according to their choice in the future. Thus, this attitude can be changed through higher educational

institutions, Non-governmental organizations, media, and community representatives. Further, parents should also monitor the activities of males as similar to females in terms of their peer group, behaviour, educational performance, outdoor, and usage of social media. A strict monitoring of males from their parents can result in better performance at tertiary level examinations.

The Attitude of Teachers: Furthermore, the study recommends that the attitude of teachers should also be changed through teachers' training programme, and workshops. It is important here to mention that female and male teachers should give equal importance to female and male students in the classroom. Moreover, female and male students have equal worth for teachers. Thus, teacher-students interaction should be improved for the performance of male students through administration and department heads.

Training for Teachers and Parents: The study recommends that there should be proper training of newly selected university teachers and parents as well. University teachers can be trained through getting training from experts in the field of pedagogy and gender studies. Moreover, the study highly recommends that all teachers specifically working at the university level should also be encouraged to complete some course/s or diploma in the field of teaching or education as a pre-requisite for their jobs. Similarly, parents should be guided and trained to have meetings with teachers, attending seminars in educational institutions, parent-teacher day, and all other activities that can enhance the educational performance of male students.

Awareness Campaign Strategies: Last but not the least, the study recommends that an awareness campaign strategy should be launched through media and dissemination of print material to eradicate gender discrimination at the family and educational institutional level.

Parents and teachers along with community members should be awarded for the equal educational rights of children. Moreover, this method can minimize the differences in gender roles and the provision of learning environments at the family and educational institution level.

7.5.3 Recommendation for Future Research

This study suggested the following aspect of future researches for forthcoming students and scholars in the fields of sociology of education and gender studies.

Study design: Future research can be conducted with the help of mixed-method study design. Researchers can use qualitative and quantitative techniques to conduct the similar nature of research in the field of sociology of education and gender studies. This study was conducted in the light of a quantitative approach i.e. quantitative content analysis and survey. Thus, scholars can opt for a case study, focus group discussion, observation, and field research or triangulation techniques to the researches in the future.

Population: The study suggests that future researchers and scholars can use multiple universities from all over Pakistan and with larger sample size. This research was only focused on content analysis of examination results and university teachers' responses. Thus, the future, students, educational administrators, representatives from the Higher Education Commission (HEC), and members from the education ministry can also be engaged in future research.

Variables: The study suggested that future scholars can study gender differentials in academic performance in terms of female outperformance and male underperformance by selecting multiple other variables. They may engage variables such as curriculum, study hours, online classes and coaching, grade inflation, educational hegemony, extracurricular

activities, participation in sports, students' pick and drop, on-campus stay and daily commuters, the role of siblings, food and sleeping habits, communication gap, part-time job i.e. tuition, etc., shadow education, blended education, traditional learning, monitoring and assessment, selection of subjects, the physical environment of the classroom, and use of technology in the classroom.

Statistical analysis: In the end, the study also suggested that research can be done by employing regression analysis and other modern statistical techniques in future to predict gender differentials in terms of female students outperform males at tertiary level education. It is highly believed that the education-modeling setting employing multivariate analysis helps to determine gender differentials in the academic performance of the students. The future models may use other factors such as curricular, classes, e-learning system, curse feedbacks, shadow education, blended education, traditional learning, monitoring and assessment, selection of subjects, the physical environment of the classroom, use of technology in the classroom, and the role of teachers. I strongly believe that gender differentials in the academic performance of the students with an artificial intelligence-based analytic setting can further minimize this gender-gap in academic performance within higher education institutions in Pakistan and other countries as well.

7.6 Concluding Remarks

The overall content analysis enables me to conclude that there is a vivid trend of young female's outdoing males in education at the tertiary level. It is important here to mention that I employed content analysis techniques on the examination results books of the University of Punjab from 2006-2015. Using the content analysis approach, I analyzed female and male students' performance in MA/MSc examinations. Top three positions in

master level examinations have been taken as indicators of outperformance. The analysis of results books of ten years depicts female students' outperformance and male students' underperformance in nine faculties except for the Faculty of Engineering & Technology. The overall crux of the content analysis is that female students have outperformed males in the top three positions of examinations held during the last ten years in all (61 master level programs) faculties. It is also noted that these female students almost belong to urban areas.

The primary data for the study in Chapter 5 come from teachers (n=253) of University of Punjab. The study findings depict a nonparametric test known as the Kruskal Wallis Test that is infecting an extension of the Mann-Whitney U statistical test. In my study, the independent variable consisted of three independent groups of university teachers based on their educational qualifications including MA/MSc, MS/M. Phil and Ph.D. degree holders. The statistical results in the table showed that the role of motivation and commitment of the students was significantly different for three groups of teachers. Similarly, the results also supported that the self-fulfilling prophecy of the students in academic performance was also significantly different for university teachers' educational groups. My point of conclusion here is that the competency is based on teachers' qualifications and training. Similarly, it varies from teacher to teacher and geographical location as well. Thus, the findings of the study reveal that university teachers, based on their educational qualifications, perceive multiple factors of female and male students' academic performance differently in terms of female outshine males at tertiary level education. Moreover, based on study findings in Chapter 5, (see bivariate analysis) Kendall's tau_b statistical test results show that there is a significant positive correlation

among almost all variables. This correlation is varying as low, medium, and high among multiple variables. Hence, the test is applied to check the correlations before moving to employ multivariate analysis. Further, the study findings also show that almost all variables have a significant association with gender differentials in academic performance in terms of female outperformance and male underperformance at tertiary level examinations. It is noteworthy to mention here that the Chi-Square test was employed to check the associations among variables before moving to further analysis.

The overall results of the first model support and extend the findings of previous studies carried out in different socio-cultural contexts. The study's findings enable me to associate teachers' perceptions of females' outperformance and males' underperformance in higher education with socio-economic, cultural, and educational factors as well as female and male students' attitudes towards education. The main findings of the study are consistent with the expectation that the deposition and traits of individuals influence educational attainments. Documenting and presenting the main possible explanations for gender reverse change in education performance, I believe that this gender reverse change is likely to persist in the coming decades.

The overall conclusion that I reach from model 2 using teachers' perception is that there is a trend of female students' outperformance and male students' underperformance in higher education. The review and study findings revealed that the socio-economic background of the students and their cultural factors creating differences in the academic performance of the students. Parental involvement and economic status of the family is more favorable for female students to outperform male students academically. Moreover, female and male students' previous educational background is also widening this gap in

tertiary educational performance. Likewise, the classroom environment and student-teacher interaction are also favorable to female outperformance. In the presence of these factors, the motivation and commitment of female students is higher towards studies as compared with male students. The study findings also supported the argument that gender and geographical location of the university teachers have a different perspective on gender differentials in academic performance in terms of female students' outperformance and male students' underperformance in higher education.

The overall conclusion that I reach from the analysis of my primary data in model 3 show also a vivid trend of female students' outperformance and male students' underperformance in higher education. This gender reverse change in education performance in tertiary education stems from various sociological, economic, and geographical factors. The series of factors noted in the published literature and findings of this study include the socio-economic status and home background of the students. Socio-economic status and home background of the students do create differences in the academic performance of the students. Parental involvement and the economic status of the families is more favourable to female students to outperform male students academically. Moreover, female and male students' previous educational background was noted as one of the key factors that widen this gap in tertiary educational performance. Likewise, the classroom environment and student-teacher interaction are also favourable to female outperformance. In the company of these factors, the educational self of female students is higher towards studies as compared to male students. The study findings also supported the argument that gender and geographical location of the university teachers have different

perspectives on gender differentials in academic performance in terms of female students' outperformance and male students' underperformance in higher education.

In this study, the Artificial Neural Network (ANN) model was also employed for predicting and evaluating teachers' perspectives on factors of females' outperformance and males' underperformance in higher education. To predict and evaluate the performance of ANN, case processing summary, network information, model summary, estimated neural network, classification table, Predicted Pseudo-Probability, ROC, Gain, and Lift chart was developed. Overall, the results of ANN have achieved a good prediction accuracy of 85.3 percent. This performance of ANN makes a useful technique for teachers' perspectives on factors of females' outperformance and males' underperformance in higher education in Punjab, Pakistan. Thus to sum up the study based on content and primary data analysis, it is concluded that female students outperform males at tertiary level examinations. This outperformance is linked with multiple factors rather than a single factor.

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Appendix-A

DATA SHEET FOR TOP THREE POSITION HOLDERS OF MASTER/S PROGRAM *(on campus)* **University of the Punjab**					
Faculty Name					
Name of Institute/ College/ Center/ Department					
Degree Program Title					
Quaid-i-Azam Campus **(1)**		Allama-Iqbal Campus **(2)**			
Sr. No.	**Year/s**	**Top Positions**			**Out Performed** (Gender/Area)
		1st (Gender/Area)	2nd (Gender/Area)	3rd (Gender/Area)	
1	2006				
2	2007				
3	2008				
4	2009				
5	2010				
6	2011				
7	2012				
8	2013				
9	2014				
10	2015				
Total	Females/Area				
	Males/Area				
%	Females/Area				
	Males/Area				
2015 1st Position	Name	Matriculation	Intermediate	Bachelor	Rural/Urban
Date:					

Appendix-B

Informed Consent Form

Dear Faculty Members,

My name is Muhammad Shoaib. I am a student with the Department of Sociology, International Islamic University Islamabad for the Doctor of Philosophy (Ph.D.) Degree. I am conducting research on the approved title, "Sociological Analysis of Teachers' Perspective on Students' Academic Performance in Higher Education in the Punjab".

Muhammad Shoaib

Procedures

The researcher requests for your participation. If you accept to participate, I will converse with you for an hour and with your consent our conversation or discussion will be recorded in writing and an audio recorder will also be used. Total of 288 faculty members will participate in this research. Your participation in this research is completely voluntary so that you can terminate your involvement at any time, notwithstanding the fact that you would have consented to participate. Please feel free to express your experiences honestly. You will remain anonymous and all the information you provide will be held in strict confidence and with utmost privacy. You may decline to answer any question if you feel uncomfortable and you do not have to provide me with a reason for refusing to answer any question. If you decide not to be part of the study, there will be no consequences for you. There is no right or wrong answer to any question. I just want to know your opinions. The study does not anticipate any risks to you.

Privacy and confidentiality

I shall use only the response provided by you on the questionnaire. Your real name will not be used but codes will be used instead. The only place your name will be recorded is on the informed consent form. This form will only be in my possession and will never be used in any research output.

Benefits

There are no direct benefits from this study but your participation will help us find out the determinants of gender differentials in academic performance at tertiary level education. The information obtained from the questionnaire will help me in finding ways of improving the academic performance of university students.

If you have questions about the study, you may ask me at shoaibsoc@gmail.com. If you do not have questions and agree to participate in this study, then please fill the questionnaire. Firstly, I will ask you to sign this form, stating that I, the researcher, have informed you of your rights and that you have agreed to provide information on the subject under hand. This is the only place your name will be entered. If you do not wish to sign your name you may simply mark with an "X".

Respondent

Appendix-C

Sociological Analysis of Teachers' Perspective on Students' Academic Performance in Higher Education in the Punjab

(Questionnaire)

ID ----------

A) Identification of the respondent

i) Name of department _____

ii) Name of faculty _____

B) Socio-economic profile of the respondent

Q.1 Age (Completed years) _____

Q.2 Gender i) Male ii) Female

Q.3 Educational qualification i) 16 Years ii) 18 Years iii) Above 18 years

Q.4 Designation (Please tick the relevant)

i	ii	iii	iv	v
Professor	Associate Professor	Assistant Professor	Lecturer	Lecturer/Research Associate

Q.5 Teaching experience (in completed years) _____ Q.6 Monthly income (PKR) _____

Q.7 Residential background i) Rural ii) Urban

C) Household determinants of female outperformance and male underperformance

Up to what extent you agree or disagree with the following statements as determinants of female outperformance and male underperformance in higher education. Please tick relevant.

Strongly Agree = SA, Agree = A, Slightly Agree = SLA, Slightly Disagree = SLD, Strongly Disagree = SD

S.N.	Statements	SA	A	SLA	SLD	D	SD
C.1 Students' home background (favorable socialization)							
i	Males misbehavior is often tolerated by family	6	5	4	3	2	1
ii	Females are expected to comply with familial authority	6	5	4	3	2	1
iii	Biased gender socialization differences start from home	6	5	4	3	2	1
iv	Females tend to assume favorable gender roles	6	5	4	3	2	1
v	Obedience in family is a desirable for females not males	6	5	4	3	2	1
vi	Small deviances at home are tolerated for males not females	6	5	4	3	2	1
C.2 Socio-economic status of the family							
i	Social status of family matters in students' performance	6	5	4	3	2	1
ii	Females who reach higher education might belong to families with higher income	6	5	4	3	2	1
iii	Females who reach higher education might belong to families with higher wealth	6	5	4	3	2	1

iv	Females who reach higher education might belong to families with higher parental education	6	5	4	3	2	1
v	Females who reach higher education might belong to families with occupational prestige	6	5	4	3	2	1
vi	Males who reach higher education might belong to families with economic pressure	6	5	4	3	2	1
C.3 Parental involvement (favorable to females)							
i	Parents least bother educational performance of males	6	5	4	3	2	1
ii	Parents limit the activities of females outside household	6	5	4	3	2	1
iii	Parents tend to monitor the educational activities of females	6	5	4	3	2	1
iv	Parents construct the higher education of females as a worthy endeavor	6	5	4	3	2	1
v	Parents prefer males to become earning member of family hence end up pressurizing them	6	5	4	3	2	1
vi	Parental control of females end up being an asset for them	6	5	4	3	2	1

D) Role of Social media in female outperformance and male underperformance (biased role expectation)

S.N.	Statement	SA	A	SLA	SLD	D	SD
i	Social media activities of males and females differ significantly	6	5	4	3	2	1
ii	Social media access is more readily provided to males than females	6	5	4	3	2	1
iii	Females tend to subdue the use of social media to their studies (e.g. notes exchange)	6	5	4	3	2	1
iv	Social media engages males in nonproductive wastage of time	6	5	4	3	2	1
v	Females are more likely to join educational groups and pages on social media	6	5	4	3	2	1
vi	Males like to spend more time on entertainment than females	6	5	4	3	2	1

E) Role of peer group in female outperformance and male underperformance

S.N.	Statement	SA	A	SLA	SLD	D	SD
i	Female students prefer to have in small groups in university	6	5	4	3	2	1
ii	Male students prefer to have large group in university	6	5	4	3	2	1

iii	Male students spent more time with peers than females	6	5	4	3	2	1
iv	Male students prefer outdoor activities after evening	6	5	4	3	2	1
v	Female students are bound to live in boundary wall after evening	6	5	4	3	2	1
vi	Female students are more likely to join study groups than males	6	5	4	3	2	1

F) Role of social construction of educational self in female outperformance and male underperformance

S.N.	Statement	SA	A	SLA	SLD	D	SD
i	Female are socially bound to outperform in education	6	5	4	3	2	1
ii	Females are trying to compete with role model females in media industry	6	5	4	3	2	1
iii	Females are taught that they are less intelligent than their counterpart	6	5	4	3	2	1
iv	Feminist discourses tend to promote education as heroic effort of females	6	5	4	3	2	1
v	Females tend to occupy power positions in educational institution and politics	6	5	4	3	2	1
vi	Religious ideology instigates a need of educated mothers	6	5	4	3	2	1

G) Educational determinants of female outperformance and male underperformance

S.N.	Statement	SA	A	SLA	SLD	D	SD
G.1 Educational background of the students							
i	Males have poor education background	6	5	4	3	2	1
ii	Females are more passionate to excel from the very start of educational career	6	5	4	3	2	1
iii	Females are more inclined to do their homework from the very start	6	5	4	3	2	1
iv	Females are more serious about teachers' feedback about their works from the very start of educational career	6	5	4	3	2	1
v	Males are less concerned about their education from the very start of educational career	6	5	4	3	2	1
vi	Males tend to be serious about education at the later stages of educational career	6	5	4	3	2	1
G.2 Student-teacher interaction							
i	Teachers interact differently with female and male students	6	5	4	3	2	1

ii	Males tend to display indifference towards their interaction with their teachers	6	5	4	3	2	1
iii	Males tend to underplay the role of class participation	6	5	4	3	2	1
iv	Demeanors of females reflects more obedient than males	6	5	4	3	2	1
v	Teachers are more suspicious about males' discipline	6	5	4	3	2	1
vi	Females are more active than males in interacting with teachers	6	5	4	3	2	1
G.3 Teachers' competency and gender							
i	Gender of teacher influences students' performance differently	6	5	4	3	2	1
ii	Male teachers consider males a challenge to their authority	6	5	4	3	2	1
iii	Female teachers consider males a challenge to their authority	6	5	4	3	2	1
iv	Teachers of both genders consider females more cooperative	6	5	4	3	2	1
v	Males are the obvious choice of teachers' blame	6	5	4	3	2	1
vi	Frequent questions of males challenge teachers' competence	6	5	4	3	2	1
vii	Frequent questions of females endorsee teachers' competence	6	5	4	3	2	1
G.4 Classroom environment							
i	Classrooms are dominated by female strength	6	5	4	3	2	1
ii	Females are considered more punctual	6	5	4	3	2	1
iii	Females are considered having higher moral standards	6	5	4	3	2	1
iv	Males often play roles of backbenchers	6	5	4	3	2	1
v	Deviance from classroom norms is expected from males	6	5	4	3	2	1
vi	Females are considered more friendly for class environment	6	5	4	3	2	1

H) Role of gender-specific study culture in female outperformance and male underperformance

S.N	Statement	SA	A	SLA	SLD	D	SD
i	Females spent more time on homework	6	5	4	3	2	1
ii	Males spent more time in outdoor activities	6	5	4	3	2	1
iii	Females tend to spend more time on searching study material	6	5	4	3	2	1
iv	Males adopt anti educational masculine identities	6	5	4	3	2	1

v	Females are more inclined to study group collaborations	6	5	4	3	2	1
vi	Females are more concerned about lecture notes	6	5	4	3	2	1

I) Motivation/commitment and self-fulfilling prophecy in female outperformance and male underperformance

S.N.	Statement	SA	A	SLA	SLD	D	SD
I.1 Motivation and commitment							
i	Females are encouraged to perform well as compared with males	6	5	4	3	2	1
ii	Females are more committed to their education than males	6	5	4	3	2	1
iii	Education is considered a liberating force for females	6	5	4	3	2	1
iv	Education is linked with better matrimonial offers for females	6	5	4	3	2	1
v	Males consider education a liability while females an asset	6	5	4	3	2	1
vi	Education has more pragmatic value for females than males	6	5	4	3	2	1
I.2 Self-fulfilling prophecy							
i	Females have gender advantage to complete educational tasks	6	5	4	3	2	1
ii	Females are better communicators than males	6	5	4	3	2	1
iii	Females are better at making relations than males	6	5	4	3	2	1
iv	Females are less prone to detrimental trend at university (e.g. sectarianism, ethnic conflicts, drug usages)	6	5	4	3	2	1
v	Females are less social than males	6	5	4	3	2	1
vi	Males are less serious than females in educational completion	6	5	4	3	2	1

J) Gender differentials in academic performance

S.N.	Statement	SA	A	SLA	SLD	D	SD
i	Females are making big strides in higher education	6	5	4	3	2	1
ii	Females are able to educationally place themselves in a better position due to prior gender differences at family	6	5	4	3	2	1
iii	Females are able to maintain the narrative of female advantage in higher education at HEIs	6	5	4	3	2	1
iv	Females are able to secure better enrollment in HEIs	6	5	4	3	2	1

v	Females are more capable of successfully completing their degrees from HEIs than males	6	5	4	3	2	1
vi	Females are more capable to acquire employable skills from HEIs than males	6	5	4	3	2	1
vii	Females are more able to educationally place themselves in a better position than males	6	5	4	3	2	1
viii	Females are more able to educationally place themselves in a better position in classroom environment than males	6	5	4	3	2	1
ix	Females are able to educationally place themselves in a better position in motivation and identity than males	6	5	4	3	2	1

K) Sociological analysis (sociological factors)

S.N.	Statement	SA	A	SLA	SLD	D	SD
K. 1 Historical factors of female outperformance and male underperformance							
i	Females were trained to believe that they are incapable	6	5	4	3	2	1
ii	Females have been less visible in the texts	6	5	4	3	2	1
iii	Females were represented in subordinate roles in past	6	5	4	3	2	1
iv	Females have less responsibilities than males	6	5	4	3	2	1
v	Feminism has played a significant role in females' education	6	5	4	3	2	1
vi	Women empowerment has decreased the long lasting gender gap in higher education	6	5	4	3	2	1
K.2 Cultural factors of female outperformance and male underperformance							
i	Males are cultured to do as they are pleased	6	5	4	3	2	1
ii	Females remain restricted in their actions	6	5	4	3	2	1
iii	Educated females are preferred for mate selection	6	5	4	3	2	1
iv	Parents prefer the girl child for better education over males	6	5	4	3	2	1
v	Socio-cultural milieu reinforces parents to educate females	6	5	4	3	2	1
vi	Changeling situation in education is welcomed by females	6	5	4	3	2	1
K.3 Structural factors of female outperformance and male underperformance							
i	Religious norms favor the education of females	6	5	4	3	2	1
ii	Economic participation of females incites their educational training	6	5	4	3	2	1
iii	Family is encouraging female education	6	5	4	3	2	1
iv	Political agenda of women empowerment favorably encourages female education	6	5	4	3	2	1

v	Mass media promotes educated females as role models (e.g. Burka Avengers)	6	5	4	3	2	1
vi	Civil society heavily depends on feminist agenda of educated women	6	5	4	3	2	1
K.4 Critical factors of female outperformance and male under performance							
i	Status of females is fixed and based on structural ascriptions from birth	6	5	4	3	2	1
ii	Males' position as compared with females in social structure is more flexible	6	5	4	3	2	1
iii	Males as compared with females acquire better social mobility by factors other than education	6	5	4	3	2	1
iv	males as compared with females acquire more power by factors other than education	6	5	4	3	2	1
v	Males as compared with females acquire more income by factors other than education	6	5	4	3	2	1
vi	Males as compared with females acquire more prestige by factors other than education	6	5	4	3	2	1

Suggestion of the respondents to minimize gender gap in academic performance

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Date ----------

Appendix-D

Sample Size Distribution of Teaching Faculty at University of the Punjab, Lahore

S.N.	Designation	Females (N_1)	Females (n_1)	Males (N_2)	Males (n_2)	Total (N_1+ N_2=N)	Total (n_1+ n_1=n)
01	Faculty of Arts and Humanities						
	Total	44	12	52	15	96	27
02	Faculty of Behavioral and Social Sciences						
	Total	52	15	38	11	90	25
03	Faculty of Commerce						
	Total	17	5	29	8	46	13
04	Faculty of Economics and Management Sciences						
	Total	40	11	32	9	72	20
05	Faculty of Education						
	Total	34	9	31	9	65	18
06	Faculty of Engineering & Technology						
	Total	19	5	58	16	77	21
07	Faculty of Islamic Studies						
	Total	5	1	16	4	21	6
08	Faculty of Law						
	Total	5	1	16	4	21	6
09	Faculty of Life-Sciences						
	Total	109	30	107	30	216	60
10	Faculty of Oriental Learning						
	Total	12	3	47	13	59	16
11	Faculty of Science						
	Total	79	22	162	45	241	67
12	Faculty of Health Sciences						
	Total	4	1	7	2	11	3
13	Faculty of Pharmacy						
	Total	7	2	10	3	17	5
Grand Total		**427**	**119**	**605**	**169**	**1032**	**288**

Available total faculty members at Lahore campuses = 1032 (M=605, F=427)

$n = N/1+N(e)^2$

$n = 1032/1+1032(0.05)^2$

$n = 288.268$ (Say 288)

n = 288-253=35*

*Partially filled = 03/ Left university=11/leaves cases=13 /Not willing to answer = 08

Thus, the actual sample was 253 faculty members

Appendix-E

Permission Letter

INTERNATIONAL ISLAMIC UNIVERSITY ISLAMABAD
Faculty of Social Sciences
Department of Sociology

Director/Chairman/Chairperson/HOD/Coordinator
University of the Punjab

Dated: March 01, 2018

Subject: PhD Dissertation Research in Sociology

It is certified that Mr. Muhammad Shoaib S/o Nazir Ahmad Reg.29-FSS/PHDSOC/F16 is a regular student of PhD Sociology International Islamic University Islamabad. He has completed his coursework and now working on his thesis titled on ***"Sociological Analysis of Teachers' Perspectives on Students' Academic Performance in Higher Education in the Punjab"*** under my supervision. He needs to collect secondary data on students' results and primary data from teachers of University of the Punjab. Your cooperation and support in this regard will be highly appreciated. I assure that he will follow research ethics and will use the data (information) for academic purpose only. He will also keep confidentiality of the institutions as well as individual respondent.

Regards

(DR.HAZIR ULLAH)
Chairman Sociology

051-9019560

DR. HAZIR-ULLAH
Chairman
Department of Sociology
International Islamic University
Islamabad

Dr. Hazir Ullah
Supervisor

Department of Sociology, Faculty of Social Sciences, IIUI Block B, H-10, Islamabad (0333-5531533)

INTERNATIONAL ISLAMIC UNIVERSITY ISLAMABAD
FACULTY OF SOCIAL SCIENCES
(Department of Sociology)

October 26, 2018

TO WHOM IT MAY CONCERN

It is certified that Mr. Muhammad Shoaib S/o Nazir Ahmed Reg. 29-FSS/PHDSOC/F16 is a regular student of PhD Sociology International Islamic University Islamabad. He has completed his coursework and now working on his thesis titled on ***"Sociological analysis of teachers' perspectives on students' academic performance in higher education in the Punjab"*** under my supervision. He needs to collect primary data from teachers of University of the Punjab. Your cooperation and support in this regard will be highly appreciated. I assure that he will follow research ethics and will use the data for academic purpose only. He will also keep confidentiality of the institution as well as individual respondent.

Regards,

DR. HAZIR ULLAH
Dy. Dean
Faculty of Social Sciences
International Islamic University, Islamabad

Dr. Hazir Ullah
Supervisor

DR. HAZIR-ULLAH
Chairman
Department of Sociology
International Islamic University
Islamabad

(DR. HAZIR ULLAH)
Chairman Sociology
051-909560

Appendix-F

Department and Program Title

Morning =M, Afternoon = A, Evening = E

Sr. No.	Faculty	Department	Degree	Program Title	Program Timings		
					M	A	E
Quaid-i-Azam Campus							
1	Faculty of Arts and Humanities	Department of Archaeology	Masters	M.A. Archaeology	√		
		Department of English Language & Literature	Masters	M.A. English	√		
			Masters	M.A. English (Self-Supporting)		√	
		Department of French	Masters	M.A. French	√		
			Masters	M.A. French (Self-Supporting)		√	
		Department of History & Pakistan Studies	Masters	MA Pakistan Studies (Self Supporting)		√	
			Masters	M.A. History	√		
		Department of Philosophy	Masters	M.A. Philosophy	√		
2	Faculty of Behavioral and Social Sciences	Department of Political Science	Masters	MA Political Science	√		
			Masters	MA Diplomacy & Strategic Studies (Afternoon) Self-Supporting		√	
			Masters	MA International Relations (Afternoon Self-Supporting)		√	
		Department of Social Work	Masters	M.Sc Social Work (Self Supporting / Replica)		√	√
			Masters	M.Sc Social Work (Regular)	√		
		Institute of Communication Studies	Masters	M.Sc Communication Studies Replica / Afternoon (Self Supporting Program)		√	
			Masters	M.Sc Communication Studies (Morning / Regular Program)	√		
			Masters	M.Sc Communication Studies Self Supporting (Development Journalism)		√	
			Masters	M.Sc Communication Studies Self Supporting (Film & Television)		√	
		Institute of Social & Cultural Studies	Masters	M.Sc Development Studies (Morning/Self-Supporting)	√	√	
			Masters	M.Sc. Criminology & Security Studies (Self Supporting / Afternoon)		√	√
			Masters	M.Sc. Population Sciences (Afternoon/Self-Supporting)		√	√

		Sub department under Institute of Social & Cultural Studies. Department of Criminology	Masters	M.Sc. Criminology & Security Studies (Self Supporting / Afternoon)		√	√
		Department of Development Studies	Masters	M.Sc Development Studies (Morning/Self-Supporting)	√	√	
		Department of Gender Studies	Masters	M.Sc Gender Studies (Replica/Self-Supporting)		√	
			Masters	M.Sc Gender Studies	√		
		Department of Population Sciences	Masters	M.Sc. Population Sciences (Afternoon/Self-Supporting)		√	√
		Department of Sociology	Masters	M.Sc Sociology	√		
			Masters	M.Sc Sociology (Self Supporting / Afternoon)		√	
3	Faculty of Commerce	Hailey College of Commerce	Masters	M.Com (1 1/2 Years) Self Supporting		√	
			Masters	M.Com (3 1/2 Years) Morning	√		
			Masters	M.Com (3 1/2 Years) Self-Supporting		√	√
			Masters	M.Com (1 1/2 Years)	√		
4	Faculty of Economics and Management Sciences	Department of Economics	Masters	M.Sc Economics Self Supporting/ Replica		√	√
			Masters	M.Sc Economics (Morning)	√		
			Masters	Master of Business Economics (MBEcon) Self-Supporting (Afternoon)		√	
		Department of Information Management	Masters	Master of Information Management (Morning)	√		
			Masters	Master of Information Management (Self Supporting)		√	
		Institute of Administrative Sciences	Masters	Masters of Human Resource Management (Regular Program)	√		
			Masters	Masters of Human Resource Management (Self Supporting / Evening)		√	
			Masters	Masters of Marketing (Evening)			√
			Masters	Master of Public Administration (Morning / Afternoon / Evening)	√	√	√
		Institute of Business & Information Technology	Masters	MBIT (1 1/2 Years) (Regular)	√		√
		Institute of Business Administration (IBA)	Masters	MBA Evening Self Supporting		√	
				MBA (1 1/2 Year)	√		
			Masters	MBA 3.5 Years Self Supporting Program		√	√
5	Faculty of Education	Department of Special Education	Masters	MA Special Education	√		
			Masters	MA Special Education Self Supporting		√	
		Sub department under Institute of Education & Research.					
		Department of Business Education	Masters	Master of Business Education (MBE) Self Supporting		√	
			Masters	Master of Business Education (MBE)	√		

		Department of Educational Research and Evaluation	Masters	M.A. Educational Research and Assessment	√		
			Masters	M.A. Educational Research and Assessment Self Supporting		√	
		Department of Elementary Education	Masters	MA Education Elementary	√		
			Masters	M.Ed Elementary	√		
			Masters	M.Ed Elementary Self Supporting		√	
			Masters	MA Education Elementary Self Supporting		√	
			Masters	M.A. Education Early Childhood	√		
			Masters	M.A. Education Early Childhood Self Supporting		√	
		Department of Islamic Education	Masters	M.A. Education Islamic	√		
			Masters	M.A. Education Islamic Self Supporting		√	
		Department of Science Education	Masters	Master of Science Education (MS Ed)	√		
			Masters	Master of Science Education (MS Ed) Self Supporting		√	
			Masters	M.Ed Science	√		
			Masters	M.Ed Science Self Supporting		√	√
		Department of Secondary Education	Masters	MA Education Secondary	√		
			Masters	M.Ed Secondary Self Supporting		√	
			Masters	M.Ed Secondary	√		
			Masters	MA Education Secondary Self Supporting		√	
		Department of Technology Education	Masters	Master of Technology Education (MTE) (Self-Supporting)	√		
			Masters	Master of Technology Education (MTE)		√	
		Dept. of English Language Teaching & Linguistics	Masters	MA English Language Teaching and Linguistics	√		
			Masters	MA English Language Teaching and Linguistics Self Supporting		√	
6	Faculty of Engineering & Technology	Centre for Coal Technology	Masters	M.Sc. Coal Technology	√		
			Masters	M.Sc (Engg.) Energy & Environmental Engg. (Self-Supporting)		√	
		Department of Textile Engineering & Technology	Masters	M.Sc. (Engg.) Textile Engineering (Self-Supporting Program)		√	√
			Masters	M.Sc. Textile Processing Technology Self Supporting Evening Program			√
		Institute of Chemical Engineering & Technology	Masters	M.Sc (Engg.) Chemical Engineering (Self Supporting)		√	
		Institute of Quality & Technology Management	Masters	M.Sc Quality & performance Management (QPM) (Regular Program)	√		
			Masters	M.Sc Quality & performance Management (QPM) (Self Support / Afternoon Program)		√	√
		Department of Electrical Engineering	Masters	M.Sc. Electrical Engineering	√	√	√

		Department of Metallurgy & Materials Engineering	Masters	M.Sc (Engg.) Metallurgy and Materials Engineering (Self Supporting / Evening Program)			√
7	Faculty of Islamic Studies	Institute of Islamic Studies	Masters	MA Islamic Studies	√		
			Masters	MA Islamic Studies (Self-Supporting)		√	
8	Faculty of Law	Punjab University Law College	Masters	LL.M. (Morning)	√		
9	Faculty of Life-Sciences	Department of Botany	Masters	M.Sc. Botany (Morning) Replica (Self- Supporting)	√	√	
		Department of MicroBiology & Molecular Genetics	Masters	M.Sc. Microbiology & Molecular Genetics	√		
		Department of Sports Sciences & Physical Education	Masters	MSc Physical Education (Evening Self-Supporting)		√	
			Masters	MSc Physical Education (Morning)	√		
		Department of Zoology	Masters	M.Sc. Zoology (Morning)	√		
			Masters	M.Sc. Zoology Replica (Evening)		√	√
		Institute of Agricultural Sciences	Masters	M.Sc. (Hons.) / M.Phil Agriculture (Food Science & Technology) (Morning / Replica)	√	√	√
			Masters	M.Sc. (Hons.) / M.Phil Agriculture (Plant Pathology) (Morning / Replica)	√	√	√
			Masters	M.Sc. (Hons.) / M.Phil Agriculture (Horticulture) (Morning / Replica)	√	√	√
			Masters	M.Sc. (Hons.) Agriculture (Entomology)	√		
		Institute of Applied Psychology	Masters	M.Sc Applied Psychology (Morning)	√		
			Masters	M.Sc Applied Psychology (Replica / Self-Supporting)		√	
		Institute of Biochemistry & Biotechnology	Masters	M.Sc. Biochemistry / Biotechnology	√		
10	Faculty of Oriental Learning	Department of Arabic	Masters	MA Arabic	√		
11	Faculty of Science	Centre for High Energy	Masters	M.Sc Computational Physics Regular	√		
			Masters	M.Sc Computational Physics Self-Supporting		√	
		Centre For Integrated Mountain Research (CIMR)	Masters	MSc in Mountain Conservation & Watershed Management (MCWM)	√	√	
		College of Earth & Environmental Sciences	Masters	M.Sc. Seismology (Self-Supporting)		√	
			Masters	M.Sc. Applied Hydrology	√		
			Masters	M.Sc Tourism & Hospitality Management	√		
			Masters	M.Sc Environmental Sciences (Self Supporting)		√	√
			Masters	M.Sc Tourism & Hospitality Management (Self Supporting)		√	√
			Masters	M.Sc Environmental Sciences	√		

		College of Statistical and Actuarial Sciences	Masters	M.Sc. Statistics (Self Supporting)		√	
			Masters	M.Sc. Statistics (Regular)	√		
			Masters	M.Sc. Biostatistics (Self Supporting)		√	
			Masters	Master of Information & Operational Management (Afternoon / Self Supporting)		√	√
			Masters	Master of Information & Operational Management (Regular)	√		
			Masters	M.Sc. Actuarial Science (Regular)	√		
			Masters	M.Sc. Actuarial Science (Afternoon / Self Supporting / Evening)		√	√
			Masters	M.Sc. Business Statistics and Management (Afternoon / Self Supporting)		√	√
			Masters	M.Sc. Biostatistics (Regular)	√		
			Masters	M.Sc. Business Statistics and Management (Regular)	√		
		Department of Geography	Masters	M.Sc. Geography (Morning)	√		
			Masters	M.Sc Geography Self Supporting		√	
		Department of Mathematics	Masters	M.Sc. Mathematics (Morning)	√		
			Masters	M.Sc. Mathematics (Self Supporting)		√	
		Department of Physics	Masters	M.Sc Physics	√		
		Department of Space Science	Masters	M.Sc. Space Science	√		
		Institute of Chemistry	Masters	M.Sc Chemistry Self Support Evening Program		√	√
			Masters	M.Sc Chemistry Morning	√		
Allama-Iqbal Campus							
1	Faculty of Arts and Humanities	University College of Arts & Design	Masters	MA in Painting	√		
			Masters	MA Fine Arts	√		
			Masters	MA Fine Arts (Replica)	√		
			Masters	MA Music	√		
	Faculty of Commerce	Hailey College of Banking & Finance	Masters	MBA (3.5 Years) (Banking & Finance) Morning	√		
			Masters	MBA (3.5 Years) Insurance & Risk Management (Morning)	√		
				MBA (3.5 Years) Banking & Finance (Evening / Self Supporting)		√	√
			Masters	MBA (3.5 Years) Insurance & Risk Management (Evening / Self Supporting)		√	√
10	Faculty of Oriental Learning	Department of Kashmir Studies	Masters	MA Kashmir Studies (Morning Program)	√		
		Department of Persian	Masters	MA Persian	√		
		Department of Punjabi	Masters	MA Punjabi	√		
		Department of Urdu	Masters	MA Urdu	√		

11	Faculty of Science	Punjab University College of Information Technology	Masters	M.Sc IT (Morning)	√		
			Masters	M.Sc IT Self-Supporting		√	
			Masters	MSc in Computer Science (Morning / Self-Supporting)	√	√	√
		Centre for Geographic Information System [GIS]	Masters	M.Sc GIS Morning	√		
			Masters	M.Sc GIS Self-Supporting		√	