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GENDER EQUALITY IN SECONDARY EDUCATION: A STUDY OF GIRLS’ EDUCATIONAL ACCESS AND PARTICIPATION IN JORDAN BETWEEN 2000 and 2005

By

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Submitted in partial fulfillment of the Requirements for the Degree of Doctor of Education
Seton Hall University
2009
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ABSTRACT


This study investigated the changes of male and female enrollment in urban and rural areas in Jordan and the school-related factors, as well as government policies that contributed to its change. Both qualitative methods and archival research were utilized to collect data in urban and rural areas in Jordan. A selective sample of twelve people consisting of teachers, administrators and policymakers, were interviewed. Data were analyzed through descriptive statistics and narrative descriptions. Results of the study indicated that the percentage enrollment level of girls and boys for grades 11-12 has been rising somewhat in Jordan between 1999/00 and 2004/05. However, in absolute numbers, the enrollment of boys in schools was greater than the enrollment of girls during the period of the study. The ratio of boys to girls was almost the same. The analysis also showed that there have been higher rates of increases in the enrollment of girls in urban areas than in rural areas, while the number of girls enrolled in urban areas increased the number of girls enrolled in rural areas decreased. Although the number of both male and female students in rural areas decreased, the data showed that a few more female students were found than males.

By analyzing the data on institutional-side supplies, the study found that the Jordanian government provided different types of schools, single-gender and coeducational learning environments, inclusive female certified staff in urban and rural
areas, and technology as well as other school material and equipment. In terms of
government policies, the study found that all educational policies in Jordan were generic
and intended generally to increase male and female educational participation.

Although the Jordanian government showed tremendous initiative in the
investment of expanding and improving the educational system, school facility
conditions, educational quality, and teachers' status should be further prioritized for the
future.
ACKNOWLEDGMENTS

It is a pleasure to thank the many people who made this dissertation possible. It is difficult to overstate my gratitude to my mentor, Dr Elaine Walker, who provided encouragement, sound advice, good teaching, good company, and plenty of good ideas. I would have been lost without her. I would also like to thank Dr. Martin Finkelstein and Dr. Joao Sedycias for being part of my committee and for allowing me to share in this research project with them. A special thanks to my adviser, Dr. Charles P. Mitchel, for his kindheartedness, support, encouragement, and assistance throughout the journey of my doctorate study.

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I am indebted to Hussien Betar, from Jordan Ministry of Education (MOE), for his tremendous help and assistance and the extended help beyond what was required. I am also grateful to Dr. Reem from the MOE, teachers, administrators, and educators from Jordan who gave me the opportunity to develop and finish this research.
DEDICATION

This is dedicated first to Almighty Allah who gave me the health and patience to finish this thesis. Then a great thank you to my husband, Yahya Belal, who is a true supporter in our family’s journey. Your support, patience, and encouragement surpassed what I dare dream of myself. Without you, this dream will never become true. A great thanks to my daughters; Dr. Shadin, Dr. Maymonah, Deemah, and Lubaba for their support, kindness, and patience, during the long journey of my dissertation. Your magical words inspired me to continue and accomplish my goal. I am thankful to my niece, Afnan Betar, for her support and assistance during the process of the dissertation. A special thanks to my mom, my sisters, and my nephews for their consistent encouragement.
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<tr>
<td>Male</td>
<td></td>
<td></td>
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CHAPTER I

INTRODUCTION

The empowerment of women has become a global issue, especially since the beginning of the twenty-first century. Women’s participation in politics and public sector economic activities falls below that of their counterparts, often due to a lack of education for girls. Education is a key strategy for gender equality and women’s empowerment, yet millions of women around the world are denied the access to education (Menon-Sen, 2005).

Previous research (Hill & King, 1993; Klasen, 2003; Loncove, 2008) pinpoints the reasons for investing in women’s education and shows how the low level of literacy, not only has a negative impact on women’s lives, but also on the lives of their children and on their country’s economic development (Hill & King, 1993; Klasen, 2003). Research also shows that illiterate women have high levels of fertility and mortality, poor nutritional status, low earning potential, and little autonomy within the household. A woman’s lack of education also has a negative impact on the health and well-being of her children, especially where the primary responsibility for child-rearing and home-making lies with the mother. When mothers are educated, they are more capable of nurturing their children and are less frequently ill than those who are not educated (Floro & Wolf, 1990; Hill & King, 1993; Nussbaum, 2000; Brighouse & Unterhalter, 2002; Klasen, 2003; Chaabouci, 2006). In addition, since education increases the opportunity cost of having a child by creating new opportunities that compete with childbearing and child-care, educated women tend to opt for smaller families. By educating its women,
therefore, a country can reduce poverty, improve productivity, slow the population


Evidence from developing countries bears out these expectations. Women's

education in developing countries has had a greater impact on economic growth than

expenditures on educating males (Hill & King, 1993). According to Hill and King

(1993), countries that have spent more on providing primary education to girls tend to

have higher economic productivity, lower infant and maternal mortality, lower fertility

rates and longer life expectancies for both men and women than other countries. They

have also pointed out that one year of a mother's education has been associated with a

9% decrease in the mortality rate of children under the age of five. Educating women has

a powerful, catalytic effect on every dimension of development, from lowering fertility

rates to raising productivity and improving environmental management.

Despite recognition of the previous facts, female access to education, especially at

higher levels, is still not universally available. The gender gaps between male and female

students continued to persist worldwide (gender gap can be measured by the Gender

Parity Index [GPI] or the absolute gender gap which shows the difference between the

male and female enrollment ratios). According to the United Nations Educational,

Scientific and Cultural Organization (UNESCO) (2008), in the year 2005, worldwide,

118 countries out of 188 with available data had achieved gender parity, the fifth goal of

Education for All (EFA) (UNESCO, 2008) at the primary educational level (see Table 1)

and only 67 countries out of 181 achieved gender parity at the secondary educational

level.
Table 1

*Number of Countries in Each Region that Achieved Gender Parity at the Primary and Secondary Education Levels in 2005*

<table>
<thead>
<tr>
<th>Region</th>
<th>Achieved Primary Level</th>
<th>Total Countries</th>
<th>Achieved Secondary Level</th>
<th>Total Countries</th>
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<tbody>
<tr>
<td>Sub-Saharan African</td>
<td>14</td>
<td>40</td>
<td>2</td>
<td>34</td>
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<tr>
<td>Arab states</td>
<td>11</td>
<td>20</td>
<td>2</td>
<td>20</td>
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<tr>
<td>Central Asia</td>
<td>7</td>
<td>8</td>
<td>5</td>
<td>8</td>
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<tr>
<td>East Asia and Pacific</td>
<td>18</td>
<td>32</td>
<td>10</td>
<td>31</td>
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<tr>
<td>South and West Asia</td>
<td>3</td>
<td>8</td>
<td>2</td>
<td>8</td>
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<td>Latin America and Caribbean</td>
<td>26</td>
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<td>18</td>
<td>39</td>
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<tr>
<td>North America and Western Europe</td>
<td>22</td>
<td>23</td>
<td>14</td>
<td>23</td>
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<tr>
<td>Central and Eastern Europe</td>
<td>17</td>
<td>18</td>
<td>14</td>
<td>18</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>118</strong></td>
<td><strong>188</strong></td>
<td><strong>67</strong></td>
<td><strong>181</strong></td>
</tr>
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Sources: UNESCO, 2008
According to Bank (1997), gender equity in schooling was first introduced as a goal after the emerging feminist movement in the United States in the 1960s, which assumed the necessity to eliminate unequal treatment of boys and girls in school. Bank also pointed out that the scores on national tests, access to and performance in institutions of higher education, and occupational aspirations and achievements that favor boys over girls are the outcomes of the unequal treatment. Accordingly, developed and developing countries established policies and programs to give girls, particularly at higher educational levels, equal educational opportunities. However, while some countries succeeded in achieving gender parity, other countries have failed or have lagged behind. Jordan, as one of the developing countries in the Arab region, was able to reach gender parity in education in 2005 at the primary and secondary levels (UNISCON, 2008).

**Background of the Country**

The Hashemite Kingdom of Jordan is a relatively small country with an area of approximately 89,342 sq. km. (34,495 sq. mi.), making it similar in size to Austria or Portugal. According to World Fact Book (2009), the latest estimate of the population of Jordan is approximately 6,342,943. About 92% of Jordanian people are Muslim, 6% Christian, and 2% are considered other. The country is bordered on the north by Syria, to the east by Iraq and Saudi Arabia and to the west is the occupied territory of Palestine (see Appendix A). About 70% of Jordan's population is urban, while less than 6% is rural. Jordan is classified by the World Bank as a "lower middle income country", with a Gross Domestic Product (GDP) of $4,700 per capita. Education and literacy rates in Jordan as measures of social well-being are relatively high compared to other countries with similar incomes (U.S. Department of Statistics, 2009).
Based on the information provided by the Canadian International Development Agency (CIDA) (2008), hundreds of Palestinians migrated to Jordan after the 1948 and 1967 Arab–Israeli War. These immigrants of Palestinian origin then became a large proportion of the Jordanian population, and later became Jordanian citizens. Toward the end of the 1990s and the early 2000s, more than 300,000 permanent returnees and one million transit Iraqi refugees entered Jordan during and after the Gulf Crisis during the invasion of Iraq by United States. This overwhelming number of refugees highlighted the urgent need for development in order to accommodate the mass movement of the population. Accordingly, several international organizations, such as United Nations High Commission for Refugees (UNHCR), the International Red Cross, the Jordan Red Crescent Society, and the international community, were able to assist Jordan since their system was not equipped for the strain on the country's social, economic, health, educational, and financial institutions (CIDA, 2008).

In 2008, about 31.3% of Jordanian population was 14 or younger, while 64% fell between 15 and 64 years of age. Almost one-third of all Jordanians are enrolled in educational facilities (World Fact book, 2008). General education principles in Jordan are derived from the Arabic Islamic civilization and are contained in the Jordanian Constitution and introduced to everyone in Jordan equally and without any discrimination based on sex, language, ethnicity, and religion (Al-Jabery, 2008). The Ministry of Education (MOE) (2004) indicated that the number of schools in Jordan reached 5526 between the years of 2003 and 2004. Additionally, there were 76,946 teachers, and 1,515,315 students, of which there was almost equal representation of males (51%) and females (49%) (MOE, 2004).
The educational system in Jordan covers from kindergarten to twelfth grade, including basic (primary and middle schools) and secondary schools. The basic school consists of grades 1-10. Basic schooling is free and compulsory for all Jordanian students. Toward the end of the tenth grade, students’ scores for the previous three years (8th, 9th, and 10th) are combined to determine in which secondary stream (track) students will continue. Usually, the students’ preferences are taken into account, but the final decision rests with the Ministry of Education (MOE, 2004).

The secondary cycle (grades 11 and 12) is divided into two main streams: one being an academic stream where it ends with a general secondary education examination called Tawjihi. The other is the applied (vocational) stream which consists of specialized vocational courses and prepares the student for skilled labor through apprenticeship programs run by the Vocational Training Corporation and the Ministry of Education. According to the MOE (2004), 70.5% of Jordanian students go to public school, 19.2% go to private schools, 8.9% go to United Nations Relief and Works Agency (UNRWA) schools, which are operated by the United Nations, and 1.4% go to other government institutions (MOE, 2004).

For the past three decades, Jordan focused on human resource investment as part of an extensive reform initiative. The government spends more than 5% of the Gross Domestic Product (GDP) on education. According to the World Bank (2005), this investment is considered higher than that made by other middle-income countries, and was instrumental in improving the literacy rate from 69.2 to 91% between 1980 and 2002. Jordan also leads the Arab region in terms of female literacy rates (85.9%).
Between 2001 and 2004, Jordan eliminated the gender gap in enrollment that disproportionately disadvantaged females, particularly at higher education levels. Their Gender Parity Index (GPI) at the primary level reached 1.01 and 1.02 at the secondary level (i.e., a GPI equal to 1 indicates parity between females and males, a value less than 1 indicates disparity in favor of boys/men, and a value greater than 1 indicates disparity in favor of girls/women) (UNESCO Global Monitoring Report (GMR), 2008). The primary gross enrollment for both girls and boys increased from around 81% in 1980 to 98% in 2001. Gross Enrollment in secondary education for females increased from 56% in 1980 to 87% in 2001, while male enrollment rose to 85%. Tertiary gross enrollment for females increased from 13% in 1980 to 31% in 2001, slightly higher than the rate for males. In fact, by 1999, unlike other Arab countries and comparable lower-middle-income countries, Jordan’s female gross enrollment at all education levels was equal to, or higher than, male enrollment (World Bank, 2006).

Statement of the Problem

Jordan has made strides in educational attainment over the past several decades. By the 1980s, Jordan had achieved universal basic education, and by 2001, had achieved a youth literacy rate of 99% compared to an average of 88% across Arab states (World Bank, 2002). By 2001, in Jordan, the Gross Enrollment Ratio (GER) for grades one to six had climbed to 104%, while the Net Enrollment Rate (NER) had reached 96% in 1999. The secondary enrollment was close to 70% in 1999, while tertiary enrollment reached 21% in the same year (World Bank, 2002).
Jordan also achieved gender parity at all levels of education. In 2005, the UNESCO Global Monitoring Report (GMR) data on Jordan indicated that for every 100 boys, there were 102 girls enrolled at the secondary education level (UNESCO, 2008). In 2003, female enrollment at the secondary level increased to 49%, which was 2% above the world average (UNESCO, 2008). While some societies in the Arab region, as well as some of the developing countries such as Sub-Saharan Africa and south Asia (UNESCO, 2008) face the problem of low participation of girls, especially at the secondary level in education, Jordan is only one of a few countries that have achieved gender parity at the secondary level.

On the other hand, much has been written in recent years about gender disparities and the barriers that prevent girls from fully participating in the educational system. Some researchers classified these barriers into categories of supply and demand (Hill and King, 1993; Lockheed et al., 1991; McGinn and Borden, 1995; UNICEF, 1992). Teijen (1991) classified supply and demand factors that contribute to girls' lower participation in education into the following categories: (1) macro level factors, and (2) micro level factors.

Macro level determinants include national wealth, degree of industrialization, level of development, degree of urbanization, and religion. Regarding macro level factors, researchers have different views as to which of these characteristics is most influential. For example, Robertson (1984) argues that urbanization outweighs wealth, while Gowman and Anderson (1980) point to the interactive effect of the distinctive Muslim pattern that excludes women from opportunities for schooling due to poverty.
This is strongly denied by other researchers, such as Youssef (1976-1977). However, these macro level characteristics are generally not immediately subject to change or manipulation through policy intervention. Therefore, intervention strategies and policy formulation rest conceptually on the micro-level factors or the supply-side and demand-side factors.

However, in terms of supply-side factors, governments and educators have tended to think that insufficient quantity and quality of educational resources have constrained the educational participation of girls (Teijen, 1991). UNESCO's report (2008) on gender disparities in developing countries provided evidence that the lack of school places, female teachers, and school materials, hindered girls' schooling especially at the secondary level. Such improvements as more places, better classrooms, and greater per pupil budget, were deemed the factors that would increase the participation of girls in school (Hill & King, 1993).

Evidence from research focused on school accessibility, indicate that the further children live from school, the less likely they are to enroll in school; and if they do enroll, the more likely they are to drop out (Anderson, 1988). For example, in Egypt, Morocco, and Tunisia parents are reluctant to send their daughters to distant schools because they fear exposing them to risk and peril (King and Hill, 1993).

Research on the availability of female teachers also indicates that the presence of female teachers enhances girls' enrollment and retention. For example, in many cultures of South Asia and the Middle East, the presence of female teachers often reduces parental concerns about their daughters' morality and security, and therefore increases girls'
participation in schooling (UNICEF, 1992). In Yemen, the Philippines, and Nepal, the presence of female teachers also had a positive effect on girls’ enrollment (Tietjen, 1991). Furthermore, the availability of textbooks and learning materials was shown to have a positive and statistically significant influence on girls’ educational attainment (King & Bellew, 1989).

Although supply-side factors play a role in girls’ educational access and participation, Teijen (1991) argued that the extent to which girls gain access to education may be affected largely by factors related to the demand for educational services. Demand factors encompass a wide range of variables, including family income, direct and indirect costs of schooling, opportunity costs (income or labor that is lost to a household because a child goes to school), distance to school, and concerns about safety. There is also the cultural expectation that girls will marry early and have children, making further education unnecessary.

This researcher believes that supply-side factors (see Figure 1) that include educational policies, school places and proximity, type of schools (religious, single-sex, and coeducational), school attributes (facilities/infrastructure), school quality (material input and curriculum relevancy), and teacher attributes (availability, gender and qualifications) are critical for girls’ educational access and participation, especially at the secondary level.
In this view, researchers who study countries which have attained gender parity at the secondary level can help identify their school-related factors and their educational policies that have contributed to this success. Yet, no research has focused on female education in Jordan, a country which has shown progress in this area. Shedding light on girls' enrollment in urban and rural areas in Jordan, as well as conducting an investigation of school-factors might provide evidence of the role these factors play in gender parity and may be beneficial to other countries seeking a clear policy direction.
Purpose of the Study

In reviewing the literature on female education in developing countries, a paucity of research on gender equality was found in the Arab states in general, and in Jordan in particular. Therefore, the purpose of this study is to understand girls’ access to secondary education and their participation level in schooling. In particular, the objective of the study is to investigate the changes in female to male enrollment at the secondary level in urban and rural areas in Jordan and the governments’ role in terms of policy initiatives associated with the school-related factors, as well as broader educational polices (supply-side) in improving access and participation.

Research Questions

1. What is the status of girls’ enrollment at the secondary level in urban and rural areas in Jordan, how has this changed over time, and what supply factors in terms of school and governmental policies have contributed to female access and participation in secondary schooling?

Subsidiary Questions

1.1 How has gender parity (that is, the ratio between boys and girls) at the secondary level in urban and rural areas in Jordan improved over time?

1.2 How have the national government policies with respect to school-related factors such as availability of female teachers, availability and location of schools, type of school, school infrastructure, and school quality aided in promoting female access to secondary education in urban and in rural areas in Jordan?
1.3 How have the existing government policies in urban and rural areas, if any, improved girls’ access to and participation in secondary education?

**Significance of the Study**

According to research, investing in girls’ education is vital for increasing female participation and productivity in the labor market, especially in nonagricultural wage employment (Hill & King, 1993, Lencove, 2008). Greater productivity means higher economic growth and more effective reduction of poverty. When women have more schooling, the returns flow not only to themselves, but to the next generation.

In addition, evidence from research shows that educating girls and women yields significant social and health benefits. Educated women are more likely to send their daughters to school. Countries with higher levels of female secondary-school enrollment have lower infant mortality rates, lower fertility, lower rates of HIV and AIDS, and better child nutrition (Hill & King, 1993; Klasen, 2003; Lancove, 2008).

The significance of this study is demonstrated on the grounds of policy, practice and knowledge. It will contribute to the body of knowledge regarding gender equality at the secondary level in developing countries. This study will help identify institutional factors and government policies that can improve girls’ education especially in rural areas, and guide decision makers in developing strategies nationally and internationally towards enhancing girls’ schooling. This study’s significance also lies in the fact that it is the only research effort to date that is geared toward the analysis of girls’ schooling in Jordan. Accordingly, it may serve to extend the knowledge on gender equality in education and add to studies completed in other developing countries. Lastly, it is hoped that the results of this study will be used nationally to demonstrate best practices and
advance the educational level of girls and boys at the secondary level in Jordan in order to enable the country to compete with other countries globally.

**Delimitations and Limitations of the Study**

A number of delimitations should be considered when reviewing this study. This study is delimited to one data source: the Jordan Ministry of Education of which is based on Jordanian department of statistics and includes the period between 1999/00-2005/06. The study also is limited to students in grades 11-12, ages 17 and 18. Limitation of the study lies in the availability of data and reliability of its analysis. Missing data and educational policy changes contribute to the questions of reliability.

While the study uses the Ministry of Education data as part of its quantitative sources of information, interviews are used to provide in-depth details on the supply-side factors that may have an influence on girls’ education at the secondary level. Interviews are restricted to a selective number of participants, and these viewpoints are used to represent the spectrum of the discourse on girls’ secondary education in the country. The persons who are selected for interviews from the MOE officials, as well as educators from the education sector, were taken to be adequately qualified in their knowledge and experience to represent the area selected, and could therefore be considered as reliable sources of information.

**Organization of the Study**

The dissertation comprises six chapters. Chapter I introduces the study, describes the nature of the problem, the purpose of the study, significance, delimitation and limitation of the study, as well as the definition and terms of the study.
Chapter II reviews the literature related to girls’ education in developing countries. The chapter is divided into the following parts: (1) The purpose of Education in General and Women’s Education in Particular (2) The Role of International Organizations in Promoting Women’s Education (3) Factors that Effect Girls’ Access to Education. Chapter III describes the research design and research methodology. It also describes the research questions, sampling, instruments, procedure, and data collection. Chapter IV provides a brief history of Jordan and a description of its educational system. Chapter V describes the findings of the study by answering the main and subsidiary research questions of the study. Chapter VI comprises a discussion of the findings of the study, and recommendations as well as suggestions for future research.

**Definitions and Terms**


2. *Arab states*: defines a geographical area, but does not have precisely defined borders. The modern definition of the region includes Algeria, Bahrain, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, the United Arab Emirates (UAE), and Yemen (UNESCO, 2002)

3. *Developing Countries* are the low- and middle-income countries generally referred to as the 'South' in which most people have a standard of living with less access to fewer goods and services than most people in high-income countries. There are currently about 125 developing countries with populations over 1 million; in 1995, their total population was more than 4.7 billion (UNESCO, 1998).
4. **Demand-side factors** refer to households' perception of girls' reproductive roles. According to Tiejen (1991), the private demand for educational services by the student and her parents is a function of household and family structure, societal characteristics, and socio-cultural beliefs as well as of the direct and opportunity costs of participation.

5. **Education for All (EFA)** is a global movement led by UNESCO, aiming to meet learning needs of all children, youth and adults by 2015. The movement was launched in 1990 at the World Conference on Education for All in Jomtien. Education for All Global 2 Monitoring Report (EFA GMR) is an annual publication prepared by an independent team based at UNESCO. It monitors progress towards the six EFA goals adopted in Dakar, Senegal in 2000. These goals are:

   a. Expand and improve early childhood care and education.

   b. Provide free and compulsory universal primary education by 2015.

   c. Provide equitable access to learning and life-skills programs.

   d. Achieve a 50% improvement in adult literacy rates.

   e. Eliminate gender disparities in primary and secondary education by 2005 and at all levels by 2015.

   f. Improve all aspects of the quality of education (UNESCO, 2008)

6. The **Millennium Development Goals (MDGs)** are eight goals to be achieved by 2015 that respond to the world's main development challenges. The MDGs are drawn from the actions and targets contained in the Millennium Declaration that was adopted by 189 nations and signed by 147 heads of state and governments during the UN Millennium
Summit in September of 2000. The eight MDGs break down into 21 quantifiable targets that are measured by 60 indicators.

Goal 1: Eradicate extreme poverty and hunger
Goal 2: Achieve universal primary education
Goal 3: Promote gender equality and empower women
Goal 4: Reduce child mortality
Goal 5: Improve maternal health
Goal 6: Combat HIV/AIDS, malaria and other diseases
Goal 7: Ensure environmental sustainability
Goal 8: Develop a Global Partnership for Development (UNESCO, 2008)

7. Gender Equity/Parity refers to the equal participation of girls and boys in all forms of education based on their proportion in the relevant age groups in the population (UNESCO, 2008).

8. Gender Equality is not the same as achieving gender parity or females being represented in equal numbers as males in education, although the latter offers a “first stage” measure of progress towards gender equality in education. Gender parity reflects “formal” equality, in terms of access to, and participation in, education. “Formal” equality can also be understood as equality that is premised on the notion of “sameness” of men and women, where the male actor is held to be the norm (UNESCO, 2008).

9. Gross Enrollment Rate (GER) is the total enrollment in a specific level of education, regardless of age, expressed as a percentage of the population in the official age group corresponding to this level of education.
10. *Participation in Education*: Participation in education refers to the effective demand for education when the opportunity for education is available. Enrollment in school and subsequent retention in school (attendance, completing school cycle) are two of indicators of participation (Anderson, 1988).

11. *Policy and Policymakers*: official statements of intention to act on certain problems. Policies can take different forms: legislations, official recommendation in reports by governmental agencies or departments, and results appointed by government (Stromquist, 1997).

12. *Primary Education* (ISCED Level 1): Sometimes called elementary education, refers to educational programmers that are normally designed on a unit or project basis to give pupils a sound basic education in reading, writing and mathematics along with an elementary understanding of other subjects such as history, geography, natural science, social science, art and music. In some cases, religious instruction is also featured. These subjects serve to develop pupils’ ability to obtain and use information the children need about their home, community, country, etc. Synonym: primary schooling (UNESCO Institute for Statistics, 2006).

13. *Rural areas*: According to the Ministry of Education (MOE) (2005), a rural area is any incorporated place with fewer than 5000 inhabitants.

14. *Supply-Side Factors*: According to Tiejin (1991) refers to “enough schools, teachers, textbooks, etc.,” whose sufficient quantity is assumed to “produce the desired outcomes for boys and girls alike” (p.7). The use of this concept is relevant to this study in its goal
of examining both school environment and government-level factors that affect secondary girls' educational participation.

15. *Secondary education*: Jordan Ministry of Education refers to grades 11-12 as secondary education. Accordingly, the researcher used Jordanian classification to conduct his/her research.

CHAPTER II

REVIEW OF RESEARCH, THEORY, AND LITERATURE

Introduction

The main objective of this research is to understand the changes in female enrollment at the secondary level in urban and rural areas in Jordan and the government role in terms of supply-side factors, as well as policies in increasing access and participation. Since there is a lack of research and studies on girls' education in the Arab states in general, and in Jordan in particular, I drew upon the literature on access and participation in education in other developing countries, particularly for girls, in an attempt to understand the role and significance of various factors, as well as policies and interventions adopted in various developing countries, in an attempt to increase girls' school participation. The literature review, then, is divided into three sections.

The first section presents the purpose of education in general, and women's education in particular, in developing countries.

The second section explains the role of the international organizations in promoting women's education in developing countries.

The third section explains the factors that affect girls' access to, and participation in, education. This section illustrates the effect of school-related factors and government policies on girls' access to and participation in education. The previous factors that were presented also under the supply and demand side were found to have a major influence on girls' access to and participation in education in developing countries.
The Purpose of Education in General, and Women's Education in Particular

Almost every developing country is waging a battle to provide universal access to and participation in education for all its citizens regardless of gender, age, socioeconomic status, location, religion or ethnicity (UNESCO, 1993; World Bank, 1995; UNICEF, 1999). The educational systems expanded drastically worldwide in 1950s and 1960s. Many countries declared primary education as a fundamental right, with commitments to increase and equalize access for all populations, to improve retention rates and opportunity for promotion within the educational system for all groups, and to provide better and equal chances of employment after school (Chawla, 2002).

Education is considered to be a goal that should provide a quality life for all citizens (Anderson, 1988; World Bank, 1998). The wealthier the society, the more of its citizens it can afford to educate. In addition, education is seen as a means of achieving other goals, such as development, national integration and identity (Lynch, 1989). According to UNICEF (1999) and the World Bank (2000), an educated nation is considered to be economically more productive, and hence politically more stable, and there seems to be a significant positive relationship between education, earnings, productivity, and health status. Recent research studies indicate the importance of education, and especially primary education, for growth and development (Azariadis & Drazen, 1990; World Bank, 1993; Thorneley & Williams, 1997). A diverse body of literature shows that completing primary education helps alleviate poverty and advance economic and social development (Schultz, 1961; Denison, 1962; Raudensush & Willms, 1991; Satyarthi, 2001). There is ample evidence that adults in developing countries who
have higher education have more paid employment, higher individual earnings, greater agricultural earning, lower fertility and better health and nutritional status.

According to McMahon (1984) and Tilak (1989), an educated labor force is a necessary condition for economic development. Peaslee (1969), for example, found that the richest countries during the period of 1950 and 1960 did not achieve significant economic growth before attaining universal primary education. Benabot (1985) also found a strong positive correlation between primary education and economic growth in 110 rich and poor countries during 1930 and 1980. Moreover, Patrinos (1997) found a significant relationship between education and earnings. In short, primary education is a key element in developing the human capital of the poor (World Bank, 1996b).

Education in general and education of women also affect the social well-being of nations in terms of reducing fertility, improving child nutrition and health and improving the life expectancy of both men and women (Floro and Wolf, 1990; Hill & King, 1993; Klasen, 1999; World Bank, 2000). The rapid population growth in many developing countries was found to have a negative impact on standards of living and economic growth (Hill & King, 1993). Reducing fertility rates has become a critical part of the development program in the majority of over-populated nations. Based on Cochrane’s study (1979), the education of women in Africa and Asia was found to have a significant effect on reduction on fertility. Holsinger and Kasarda (1975) also found a negative correlation between schooling and birth rates.

There is also a close relationship between education and child health as well, and evidence appears to suggest that children of educated mothers live healthier and longer lives. Countries that have spent more on providing primary and secondary education for
girls tend to have higher economic productivity and lower infant and maternal mortality, but also lower fertility rates and longer life expectancy for both men and women (Schultz, 1991; Hill & King, 1993; Klasen, 1999). Hill and King (1993), in their study of several developing countries, suggested that educated mothers have a better understanding of nutrition and food, and to that extent are instrumental in reducing child mortality and improving child health. One year of a mother’s education has been associated with a 9% decrease in the mortality rate of children under the age of five, and children with better-educated mothers tend to go to school and to be healthier (Hill & King, 1993). In addition, in many poor countries, women make an important contribution to agricultural production, and since educating farmers has been known to increase their productivity, educating women may make the difference between subsistence and surplus conditions. This is especially true when the men are absent from the household and the primary responsibility for child-rearing and homemaking lies with the mother. Moreover, the children of better-educated mothers tend to be better nourished and less frequently ill than others (Hill & King, 1993). Education also increases the opportunity cost of having a child by creating new opportunities that compete with childbearing and child care; consequently, educated women tend to opt for smaller families (Hill & King, 1993).

The Role of International Organizations in Promoting Women’s Education

After World War II, a major focus on women’s rights emerged (Wilson, 1991). Since the late 1950s, significant international policies have been created to enforce equality of educational opportunity throughout the world. According to Wilson (1991), since World War II, the right to receive an equal education has been a fundamental
component of many human rights documents in terms of access. Following is a list of
United Nations (UN) conferences and resolutions that address human rights, including
women's rights, in various domains throughout the world: the UN Declaration of Human
Rights in 1948, the UN Declaration of the Rights of Child in 1959, the UNESCO
Convention against Discrimination in Education in 1960, the UN Convention on the
Elimination of All Forms of Discrimination against Women in 1979, the UN
International Women's Year in 1975, the UN Decade for Women 1975-1985, the Nairobi
Forward Looking Strategies to the Year 2000 in 1985, and the Beijing Conference in
1995 (Hamza, 2002).

The previous conventions, declarations and resolutions intend to uphold the principle
of human rights, equality, and women's rights to be completely educated and participate
fully in the economic, political, and social life of their societies.

According to UNESCO (1996), gender equality should be based on providing the
same opportunity to women and men, boys and girls, to participate completely in the
development of their societies and to achieve self-fulfillment. UNESCO also indicated
that gender equality is a key to development.

Gender inequality in society is a genuine issue of concern to the international
community. As education is believed to be the key to improving the situation of both
men and women, it is considered also to be the most significant means for achieving
gender equality and women's empowerment. The cooperation between the international
organizations and national governments on the issue of gender equality is increasing in
developing countries, and the focus is to advance and improve women's conditions as
well as their societies.
Factors Affecting Girls' Access to Education

As a result of the cooperation between the national governments and the international organizations around the world, the percentage of children in school has been steadily increasing. In 1990, for example, more than 78% of all children were enrolled in school, though there were regional variations. In Africa in 1990, the enrollment rate was 66%, in Asia it was 74%, and in Latin America 84%. Despite this progress, however, over 130 million primary school-aged children, 60% of them girls, were not enrolled in school (World Bank, 1996; United Nations 1999; UNESCO, 2000).

Since the early UNESCO conferences on education in the 1960s, the numbers of women being educated in developing regions and the amount of education they receive have increased significantly. Yet, women remain underrepresented at all levels of education. According to Sivard (1985), women's enrollment is at least 10% points lower than that of men in 66 of 108 developing countries and is higher in only eight countries. Dehle (1981) also indicated that fewer women enter any educational program, that fewer receive vocational and technical training, and that women account for a very small proportion of enrollment in post-secondary education. In fact, the problem is not only that many children are not enrolled in school, but also that the majority of them are girls.

Before exploring the factors that affect participation of children in general, and girls in particular, in education, it is useful to clarify the meaning and implication of a few key terms, such as access to education, opportunity of education and participation in education. According to Anderson (1988), access to education has two dimensions: opportunity and participation. Opportunity refers to the supply of educational resources, such as schools, teachers, classrooms, educational materials, textbooks. Participation,
however, refers to the demand for education when education is available, and is
determined by such factors as culture, society, family, and the individual. When the goal
is education for all but when there is a mismatch between the number of school-aged
children and available resources for their education (schools, teachers, supplies, etc), the
problem is that of access, since there is a lack of opportunity for education. But when
both the resources and the opportunity for education are available but not utilized, then
the problem is that of lack of participation.

In most countries, developed and developing ones, educational policies are
generally devised to affect the total education system. Hence, evidence indicates that
certain groups in virtually all societies are advantaged for one reason or the other.
Therefore, urban populations, in general, tend to have a better opportunity to attend
school, compared to rural populations in the majority of countries (World Bank, 1996b).
The literature on educational access helps to identify several factors that affect girls’
school participation. These factors were found to have an influence on girls’ education.
However, for the purpose of this study, the following are going to be reviewed: (a)
school-related factors and (b) government policies.

**School-Related Factors**

This study sought to investigate gender parity in education, with the purpose of
analyzing supply-side factors that increase girls’ educational participation. According to
Tiejen (1991), macro level factors include: economic development, industrialization,
urbanization, gross national product (GNP), and religion. At the micro level, supply-
side or school-related factors were found to be barriers to girls’ educational
participation. These school-related factors include: policy environment (universal
primary education-UPE, compulsory education, entrance criteria, pregnancy policy, quotas), school location and proximity, type of school (religious, single-gender, coeducational), school attributes (facilities/infrastructure, organization), school quality (material inputs, curricula relevancy), and teacher attributes (gender, attitudes, behavior, experience). These previous observations, resulting from various studies in developing countries, point to factors that both supply and demand-levels impact girls' participation in education in terms of indicators such as access and achievement. This study, however, focuses on supply-side factors.

Research studies have found that the previous school factors have a negative impact on girls' education (Shah & Eastmond, 1997; Hertz et al., 1991; Coleman, 2004; DeJaeghere, 2004; Rose & Subrahmainian, 2005). The inadequate school buildings, especially the absence of toilet facilities, are significant in countries such as Pakistan (Shah and Eastmond, 1977). In addition, Hertz et al. (1991) indicated that many cultures prevent adolescent girls from attending coeducational schools, so that where the appropriate, separate, facilities are not available girls simply do not attend school.

Female teachers, as well as the availability of textbooks in schools, seem to have a significant impact on enrollment for girls. King and Bellew (1991) found that girls were 1.3 times more likely to attend school when school provided free textbooks. Furthermore, the researchers indicated that parents were more interested in sending their girls to schools that provided textbooks and female teachers. The availability of female teachers was critical in parents' decisions to send their daughters to school in most developing societies. To them, female teachers provide an aura of safety for their
daughters at school (Hertz et al., 1991; Coleman, 2004; DeJaeghere, 2004; Rose & Subrahmainian, 2005).

Based on the literature, schools tend to be clustered in urban areas in developing countries, which places the rural population at a disadvantage (Hill & King, 1993; DeJaeghere, 2004; Rose & Subrahmainian, 2005). Rural areas, in general, lack schools, and even when governments build schools, they are scattered, which is a disadvantage especially for girls who must travel long distances to reach their schools. Research in rural Nepal and Egypt shows that children in these areas travel long distances to reach their schools; therefore, a large number of them do not attend school (Robinson et al., 1986). Another research study on girls’ education in Indonesia also found that distance to school was identified as a critical factor that hinders girls’ and women’s education. (According to statistics 34% of rural women in Indonesia are illiterate as compared to 15% of the male population [U.S. Department of Education, 2003])

Several researchers hold that school-related factors (irrelevant curriculum to girls’ needs and opportunities, distance from secondary school; poor sanitation and unsafe environments within and around the school, lack of a gender-sensitive school environments and curriculum, poor teaching and learning processes, lack of guidance and counseling services) can be important determinants of whether girls enter and remain in school (King & Hill, 1993; Wilson, 2003; DeJaeghere, 2004; Coleman, 2004; Rose & Subrahmainian, 2005). King and Hill (1997) explained that schools of poor quality inhibited the educational attainment of girls and affected the choices they made about what to study. In Kenya and Ghana for example, girls were overrepresented in secondary schools of low quality which provided limited access to science and mathematics. The
increasing of adequate female schools in Malaysia, however, increased female enrollment. In twenty-two rural villages in Thailand, Cochrane and Jamison, the distance to school negatively affected the participation of both boys and girls. However, distance to school may be more important in decisions regarding schooling for girls than for boys according to culture as mentioned earlier.

Glewwe and Kremer (2005) explained that the quality of schooling in developing countries was often very low. Grade repetition and leaving school at an early age were common, teachers were often absent from classrooms, and many children learned much less than the learning objectives set in the official curriculum. The authors added that visitors from developed countries were often shocked at the conditions in many schools. Many schools lacked the most basic equipment and school supplies—textbooks, blackboards, desks, benches, and sometimes even classrooms. The World Bank (1997) pointed out that, in rural areas of Vietnam’s Northern Uplands region for example, in 1998, 39% of primary school classrooms did not have blackboards. In India in 1987, more than 8% of schools did not have a building in which to meet.

Shortages of teachers and school buildings can result in very large class sizes, or in double shifts which shorten the school day for individual pupils. In Vietnam, more than 90% of children in rural areas attended schools with two or more shifts, resulting in an average class time of only 3 hours and 10 minutes per day. The World Bank (1997) reported that, in districts with low literacy rates in the Indian State of Tamil Nadu, the average class size in primary school was 78 students. Teachers often had weak incentives and little supervision, and their absenteeism rate was high.
Government Policies

According to Stromquist (as cited in Hamza, 2002), in order to understand the intentions of policymakers and help them formulate effective policies, researchers have to focus on the analysis of policy instruments. On the other hand, Stromquist suggested a classification based on the level of social transformation planned by the legislation. The policies that she described are: coercive laws (enacted to prevent sexual discrimination from taking place or continuing), supportive laws (created to monitor the implementation of new practices), and constructive laws (which provide procedures in educational institutions concerning programs and course development, teacher training, more scholarship for women, etc). In addition, Stromoquist believes in three kinds of gender policies: general policies against discrimination in general, policies specific to education but addressing women by implication only, and policies specific to women’s education.

Table 2 summarizes generic and gender-specific policies as cited in Hamza, 2002.

Table 2

Comparison of Generic and Gender-Related Policies

<table>
<thead>
<tr>
<th>Type</th>
<th>Desired Effect</th>
<th>Enforcement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandate</td>
<td>Eliminate of discrimination, waste, damage, etc</td>
<td>Punishment to encourage compliance</td>
</tr>
<tr>
<td>System Changing</td>
<td>Devolution of authority, creation of new agencies</td>
<td>State’s goodwill: funds to create new institutions</td>
</tr>
<tr>
<td>Capacity Building</td>
<td>New capacities in individuals and institutions</td>
<td>Money for training and institutional improvements</td>
</tr>
<tr>
<td>Inducements</td>
<td>Provision of new services and administration of new services</td>
<td>Money for provision of services</td>
</tr>
</tbody>
</table>
### Gender-Sensitive Policies

<table>
<thead>
<tr>
<th>Type</th>
<th>Desired Effect</th>
<th>Enforcement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coercive</td>
<td>Eliminate discrimination</td>
<td>Withdrawal of contracts or fines to encourage compliance</td>
</tr>
<tr>
<td>Supportive</td>
<td>Institutions/units to promote gender issues and monitor coercive gender legislation</td>
<td>Funds to create new institutions/units</td>
</tr>
<tr>
<td>Constructive</td>
<td>New behaviors, knowledge and attitudes regarding women and men in society</td>
<td>Funds to enable curriculum changes, teacher training and retraining, and research</td>
</tr>
</tbody>
</table>

Sources: McDonnell and Elmore (as cited in Hamza, 2002)

The following conceptual Model (see Figure 2), based on Stromoquist’s (as cited in Hamza, 2002) classification of educational policies, is used as an instrument for analyzing the Jordanian government policies and practices. Both the supply-side factors (see Figure 1, Chapter 1) and Stromoquist’s classification of the educational policies (see Figure 2) are used in this study to examine their affect on girls’ educational access and participation at the secondary level.

Figure 2. Types of Educational Policies
Policies Found to Affect Girls' Participation

There is a dearth of studies in the literature addressing policies and programs to increase girls' access to education. The limited studies which exist suggest a few common perspectives. These perspectives can be divided into two categories: (1) supply-side, or opportunities, and (2) demand-side, or participation, factors. Since the supply-side factors have an effect on girls’ school participation, as mentioned earlier, many governments took significant steps to increase and improve the condition of schools, recruit and train more female teachers, and improve curriculum. Consequently, significant expansion of educational resources and opportunity took place in most countries in Asia, Africa, and Latin America since 1950s. Kelly (1980) indicated that the expansion of educational resources in developing countries has resulted in an improvement among women.

Countries in developing regions used different strategies and policies to increase girls’ enrollment. For example, the government of Kenya abolished school fees and improved boarding facilities for the children of nomads (Nkinyangi, 1982). The Indian government expanded budgetary outlays for primary education and launched a nationwide primary education program (World Bank, 1996b). The Yemen government provided programs that focused on building and renovating schools, providing basic equipment, training female teachers, and providing literacy classes for women (Saba News & Freedom House Report Yemen, 2007).

The available research on demand-side factors indicates that demand-side financing, for example, has improved educational indicators and outcomes for both boys and girls (Patrinos, 2002). In some cases, these intervention programs led to (a) higher
attendance rates and lower school dropout rates (Patrinos, 2002). Policies targeting the elimination or the reduction of school fees, for example, have substantially increased enrollment, particularly for girls. When free schooling was introduced in Uganda in 1997, for example, primary school enrollment nearly doubled—from 3.4 to 5.7 million children—rising to 6.5 million by 1999. Other developing governments provided conditional cash transfer for education to targeted beneficiaries only when children were kept in schools. Such programs serve as social safety nets, immediately raising the incomes of impoverished families while also increasing the human capital of the poor by educating their children. Such programs increased girls’ enrollment from 63% to 83% among poor countries (Birdsall et al., 2006).

Policies such as creating school feeding programs benefit poor girls as well as boys by creating incentives to enroll in and attend school, and by improving health, attentiveness, and the capacity to learn. By providing meals at schools, children, especially those who are poor and chronically hungry, can attend classes. In Bangladesh, for example, school-based food distribution increased enrollment 20% at a time when enrollment at nonparticipating schools fell 2%. Evidence from countries such as Cameroon, Morocco, Niger, and Pakistan has also documented strong improvements in enrollment and attendance when families receive food incentives in return for good school attendance.

Improving and providing water and sanitation facilities at school are critical, especially for girls. Privacy issues relating to sanitation are a major factor forcing girls out of school. A study conducted by the Department of Public Health Engineering in Bangladesh in 1994 to 1998 showed that the provision of water and sanitation facilities in
schools increased girls’ attendance in schools by 15% (Patrinos, 2002). Decreasing the distance to school raises girls’ enrollment and attendance by assuaging their concerns about safety and reputation. In Egypt, for example, following a campaign to construct rural primary schools, girls’ enrollment grew by 23%, while the enrollment of boys rose by 18%.

Other government policies focused on creating programs that assist girls with their heavy burden of household chores: the establishment of day care centers and preschools for younger siblings or students’ children, improving the supply of accessible water and fuel, the creation of flexible school schedules to allow girls to pursue an education while assuming household responsibilities, take-home food rations for the families of girls in school to offset the loss to the household of the girls’ labor. Countries such as Bangladesh, China, India, Morocco, and Pakistan provided girls with flexible schedules, double sessions, and evening school hours to improve and increase the enrollment of females (Patrinos, 2002).

**Summary**

The literature review was divided into three sections: 1. the purpose of education in general, and women’s education in particular; 2. the role of international organizations in promoting the education of women; and 3. the factors affecting girls’ access to education. Research studies found that education in general, and educating women in particular, had improved the economic and social development of nations (Hill and King, 1993; Klasen, 2003; Lincove, 2008). According to UNICEF (1999) and the World Bank (2000), an educated nation is considered to be economically more productive and hence politically more stable, and there seems to be a significant positive
relationship between education, earnings, productivity, and health status. Recent research studies also indicated the importance of education, and especially primary education, for growth and development (Azariadis & Drazen, 1990; World Bank, 1993; Thorneley & Williams, 1997). Moreover, a diverse body of literature shows that completed primary education helps alleviate poverty and advance economic and social development (Schultz, 1961; Denison, 1962; Raudensush & Willms, 1991; Satyarthi, 2001). Significantly, it has been found that educating women does not only advance countries’ economic development, but also affects the social well-being of nations in terms of reducing fertility, improving child nutrition and health and improving the life expectancy of both men and women (Floro & Wolf, 1990; Hill & King, 1993; Klasen, 1999; World Bank, 2000).

Accordingly, the United Nations, with the cooperation of other national governments around the world, conducted conventions and issued declarations and resolutions in order to uphold the principle of human rights, equality, and women’s rights to be completely educated and participate fully in the economic, political, and social life of their societies.

On the other hand, there is a dearth of studies in the literature addressing policies and programs to increase girls' access to education. The limited studies which exist suggest a few common perspectives. These perspectives can be divided into two categories: (1) supply-side, or opportunities; and (2) demand-side, or participation, factors. The supply-side factors were found to have an effect on girls’ participation in schooling. Consequently, many governments took significant steps to increase and improve the condition of schools, recruit and train more female teachers, and improve
curricula. Furthermore, significant expansion of educational resources and opportunities took place in most countries in Asia, Africa, and Latin America since 1950s. This expansion of educational resources in developing countries has resulted in an improvement in the education of women.
CHAPTER III

RESEARCH DESIGN AND METHODOLOGY

Introduction

Social science researchers used different methods when conducting their research. These methods can be divided into three groups: theoretical, experimental or quantitative, and qualitative (Bender, 1985). Theoretical research is intended to provide scientific analysis, while quantitative methods are directed toward collecting data to test theories and hypotheses. Qualitative case studies research on the other hand is aimed at understanding a given phenomena from the subjects' point of view, allowing the researcher to understand how and what kind of meaning is attributed to events affecting their lives (Taylor & Bogdan, 1984). For the purposes of this study, the researcher depended on the qualitative case study method of research. A qualitative study, according to Creswell (2009), “is a research in which the researcher relies on the views of participants; asks broad, general questions; collects data consisting largely of word from participants; describes and analyzes these words for themes, and conducts the inquiry in a subjective, biased manner” (p 6).

This investigation took the form of a case study. A case study format was used to allow for an intense study of one of the Arab countries, Jordan. A case study, as Yin (1989) defines it, is “an empirical inquiry that investigates a contemporary phenomenon within its real life context, when the boundaries between phenomenon and context are not clearly evident, and in which multiple sources of evidence are used”. The current
phenomenon in this study was the success of girls' access and participation in Jordan at the secondary level. The focus of this study was to understand the government’s role in terms of school supplies, as well as policies that contributed to girls' access and participation. The boundaries between the phenomenon and its context were in fact blurred; hence, the focus of this study. On the other hand, Stake (1988), indicated that the case study facilitated the study of a system so that it could be understood in “its own habitat”. The focus, therefore, was on understanding the particularities of the ‘case’ under study, and not the ‘whole population of cases’ (Stake, 1988). Hence, in this study, an exploratory analysis was conducted of one unit in Jordan’s society with the variables evaluated and the implications discussed.

**Research Design**

In order to understand how females at the secondary level in Jordan achieved gender parity and full access to education, various factors were explored, with the primary goal of identifying those factors that appeared to increase secondary school girls’ access and participation. A mixed methodology design was used for this purpose. Descriptive research, as described by researcher such as Gay (1996), allowed reporting existing situations, circumstances, and perceptions. Archival research and semi-structured interview questions were selected in order to presents a description of various categories of participants’ views regarding factors that affect secondary girls’ educational participation in Jordan. These factors, described as supply-side factors, included government-level, and school level. Using archival research data on gender equality in access and participation, deriving from government documents were reported over six school years (1999/00, 2000/01, 2001/02, 2002/03, 2003/04, and 2004/05) in urban and
rural areas. To understand how supply-side factors, as well as government policies, contribute to girls' access and participation. In addition to archival documents, semi-structured interviews questions were administered to key stakeholders and personnel involved in the education sector of Jordan.

Interviewing educators (i.e., teachers and administrators) and educational officials took place in Amman, the capital of Jordan. Two policy makers from Jordan Ministry of Education were interviewed to identify the type of government policies implemented to facilitate females' access to secondary education in urban and rural areas. The qualitative interviews and archival documents provided detailed data on school-related factors, as well as government policies that affect girls' schooling. Table 3 summarized the design of this study.
**Research Design**

<table>
<thead>
<tr>
<th>Research Main Question</th>
<th>Subsidiary Question</th>
<th>Method</th>
<th>Data Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What is the status of girls' enrollment at the secondary level in urban and rural areas in Jordan, how has this changed over time, and what supply factors in terms of school and governmental policies have contributed to female access and participation in secondary schooling?</td>
<td>1.1 How has gender parity (that is, the ratio between boys and girls) at the secondary level in urban and rural areas in Jordan improved over time?</td>
<td>Archival research</td>
<td>-Ministry of Education documents on girls' participation and enrollment</td>
</tr>
<tr>
<td></td>
<td>1.2 How have the national government policies with respect to school-side factors such as availability of female teachers, availability and location of schools, type of school, school infrastructure, and school quality aided in promoting female access to secondary education in urban and in rural areas in Jordan?</td>
<td>Archival research -Semi-structured interviews</td>
<td>-Ministry of Education documents on school supplies (i.e., number of teachers and schools, Student-Teacher Ratios, distance to schools, school infrastructure, and school materials and equipments). -Interviews with principals and teachers from urban/rural areas -Interviews with educational officials from the Ministry of Education -reports, articles, and studies</td>
</tr>
<tr>
<td></td>
<td>1.3 How have the existing government policies in urban and rural areas, if any, improved girls' access to, and participation in, secondary education?</td>
<td>Archival research -Semi-structured interviews</td>
<td>-Board of education records and documents -interviews with education officials from the Ministry of Education -articles and reports</td>
</tr>
</tbody>
</table>
Methodology

The issue of women's education, and strategies to address it in developing countries, has been widely examined by international educators, researchers, and policy makers through various methods. This research used archival and qualitative case study research methods to collect data. Both qualitative and quantitative frameworks are used to analyze the data.

On the other hand, archival research methodology allowed the researcher to report existing gender parity in educational outcomes from archival documents. The descriptive statistics are used in data analysis, thus allowing comparison of quantitative data over five years nationwide in urban and rural areas. On the other hand, the qualitative method, utilizing semi-structured interviews, allowed examination of various policy-makers' perceptions of policies that shaped gender parity in education outcomes in Jordan. Consequently, this study provided narrative description of both educators and policy makers on school-supply factors which they believed increased girls' access and participation.

Several studies in developing countries have shown that school-related factors, as well as government policies, have an effect on girls' participation in education (Hill & King, 1993, Hamza, 2002; Tiejen, 1991). Based on the consistency of such findings, and in order to understand how the factors hypothesized affect girls' schooling in Jordan, data are collected and are reported through archival research, as well as through semi-structured interviews with educators and policy makers.
Research Questions

This study is designed to examine gender parity in education. Hence, the focus of this study was to understand the government's role in terms of the school-related factors, as well as policies that appeared to increase girls' access and participation at the secondary level in urban and rural areas in Jordan. There is one general research question and three subsidiary questions.

Main Research Question

1. What is the status of girls' enrollment at the secondary level in urban and rural areas in Jordan, how has this changed over time, and what supply-side factors in terms of school and governmental policies have contributed to female access and participation in secondary schooling?

Subsidiary Questions

1.1 How has gender parity (that is, the ratio between boys and girls) at the secondary level in urban and rural areas in Jordan improved over time?

1.2 How have the national government policies with respect to school-supply factors such as availability of female teachers, availability and location of schools, type of school, school infrastructure, and school quality aided in promoting female access to secondary education in urban and in rural areas in Jordan?

1.3 How have the existing government policies in urban and rural areas, if any, improved girls' access to and participation in secondary education?
Interview Procedure

The purpose of this research is to understand the changes in female-to-male enrollment in urban and rural areas and the role of the national government in terms of school-related factors and policies that improved girls’ educational access and participation. The focus is to identify the supply-related factors, as well as government policies, that improved girls’ enrollment. For the purposes of this study, the researcher selected education government officials, as well as educators, including teachers and administrators, in order to receive in-depth views on school-supply factors and educational policies that appear to contribute to the success of girls’ access and participation. The interviews with MOE officials took place in Amman, the capital of Jordan. Amman was selected because it is the researcher’s home region and home city, and her ability to speak the native language (Arabic) to facilitate her entry to the sector and communication with the participants. Participants were chosen to allow a comprehensive perspective and understanding of the effect of supply factors on girls’ educational access and participation.

A content analysis of documents, reports, and studies was used to support the interviews. According to Patton (1990), using a variety of sources is important in strengthening the different types of data collection while minimizing the weakness of any single approach. Therefore, this study selected a spectrum of individuals, including educational officials and educators. The term “educators” in this study refers to the selected sample of teachers and administrators. Ten faculty members—four teachers from urban areas and four from rural areas and two administrators/include one female
principal from an urban area and one headmaster of a science department from a rural area were selected for this study. All teachers hold a minimum of a Bachelor's degree. They also had many years of experience in the teaching profession. Also, all participants were Muslims and married. The two education officials were selected from the Human Resources and the Planning Departments—one male and one female. This strategy of selecting interviewees guaranteed a wide variety of perspectives. Table 4 shows the number and description of the selected interviewees in this study.

Table 4

<table>
<thead>
<tr>
<th>Descriptions</th>
<th>Number of participants</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational officials</td>
<td>2</td>
<td>M/F</td>
</tr>
<tr>
<td>Teachers</td>
<td>8</td>
<td>F</td>
</tr>
<tr>
<td>Administrators</td>
<td>2</td>
<td>F</td>
</tr>
</tbody>
</table>

The following steps were taken to conduct this research:

1. Officials from the Ministry of Education were contacted by phone to introduce the researcher and make arrangements for lodging;
2. Permission to access relevant archival documents was obtained from the officials involved;
3. Once the interviewees in the study were identified, the education officials involved, as well as the educators from the education sector, were contacted by phone or visited in person and their cooperation was solicited for gaining access to the sample;

4. Letters of introduction were shown to the subjects and sent to the officials from the researcher’s institution in order to receive permission to conduct the research.

Instrument

The researcher, who was the head interviewer with the ability to speak both languages (Arabic and English), acted as the main instrument for this research. A tape recorder was used to record the interview responses. All interviews were conducted in Arabic and translated by the researcher into the English language. Responses were summarized to indicate if patterns in the responses emerged. A complete summary of responses to the questions is presented in the Results section, providing an overall picture of the participants’ responses. An effort was made to ensure consistency in data collection through the use of a list of questions (see Appendix B) to guide the interviews.

Description of the Interview Questions

Interviews were conducted in July and August of 2009 with teachers, administrators, and education officials. During the interviews, the interviewer took notes and recorded the conversation. Interviews lasted approximately two hours. Analysis was based exclusively on the information from the interviews. Some interview questions were presented to all interviewees and some were presented only to the education officials. Appendix B shows each set of questions and for whom they are structured. The questions posed, and the rationales for their construction, follow.
Interview questions 1, 2, 3, and 4 were: “What are the procedures for female staff recruitment?”, “How many female teachers are assigned to a school at the secondary level?”, “Are there any shortages of the number of female teachers in general and/or in particular subject areas?”, and “What are the guidelines for teachers’ salaries and benefits?” The purpose of these questions was to understand the availability of female teachers at the secondary level in Jordan for all subject areas and the recruitment policies. Research indicated that the presence of female teachers is very critical for girls’ educational access and participation, especially in Muslim countries (Hill & King, 1993). UNESCO’s reports (2008) also indicate that countries with high gender disparities, especially those schools at a higher educational level, lacked female teachers. Furthermore, the low salaries and low rates of training for female teachers in developing countries contribute to the shortage of female teachers.

Interview questions 5 and 6 were: “What are the qualifications for high school teachers?”, and “Are teachers provided with trainings and workshops to enhance their teaching skills, and if so, how often?” Trained teachers are found to affect educational quality (UNESCO, 2008). Countries that lack trained and qualified teachers have high gender disparities. The goal of this question was to understand if secondary-level Jordanian female teachers are trained and provided with workshops in order to improve the rate of female students’ participation in school.

Interview question 7 was: “Do salaries and benefits motivate and attract female teachers?” According to UNESCO (2008), female teachers are a critical component of increasing girls’ access and participation at all education levels. In order to attract female teachers, governments need to improve their conditions by increasing teacher salaries and
improving benefits. The purpose of this question was to understand from the participants’ point of view what motivates and attracts Jordanian female teachers to the teaching profession.

Interview question 8 was: “Is there a teacher-student ratio that has to be met?” This question was asked of the teachers and the education officials involved in the survey. According to UNESCO (2008), the student-teacher ratio measures the number of students per teacher. It also reflects teacher workload and the availability of teachers’ services to their students. Research shows that the lower the student-teacher ratio, the higher the availability of teachers’ services to students. Moreover, the student-teacher ratio has implications, not only for the cost of education, but also for the quality of education (Finn & Achilles, 1999). This question sought an understanding of the teachers’ and the educational officials’ points of view on the educational quality of Jordanian schools.

Interview question 9 was: “What types of schools (coeducation, single-gender, religious, or private) are available for girls at the secondary level in urban and rural areas?” It was observed in some developing countries, particularly in North and Sub-Saharan Africa and the Arab states, that the interaction between males and females is restricted, especially when they reach the age of puberty. Accordingly, establishing single-gender schools is considered critical for girls’ educational persistence. The purpose of this question was to understand the type of schools the Jordanian government offers female students. This is particularly important, as Jordan is considered part of the Arab states where mixed-gender programs are prohibited.
Interview question 10 was: “Is there a direct cost for schooling at the secondary level and if so, can families at different socioeconomic levels afford it?” Schools’ direct fees and costs hinder girls’ access to schooling in developing counties (Hill & King, 1993), and countries that have abolished schools fees tend to have higher girls’ enrollment (Teijen, 1991). This question was intended to clarify whether or not school fees were required for female students, and if so, how families from different economic backgrounds afford those expenses.

Interview question 11 was: “What is the condition of the school facilities and do they accommodate females’ needs at this age?” According to research, inadequate school buildings, especially the absence of lavatory facilities, are significant in girls’ access to schooling and participation (Shah and Eastmond, 1977). This question intended to provide an overall picture of the condition of the school buildings and if these structures were suitable in serving females’ needs.

Interview question 12 was: “Do public schools equip students with materials as well as access to technology (computers, TV, VCR, etc.)? If yes, are these provided annually or as needed?” The availability of materials, such as textbooks and computers, are vital for educational quality. King and Bellew (1991) found that girls were 1.3 times more likely to attend school when the school provided free textbooks. Furthermore, the researchers indicated that parents were more interested in sending their girls to schools that provided textbooks and teachers. This question intended to explore whether or not the Jordanian government was able to provide their female students with materials and technology equipment.
Interview question 13 was: “What is the government policy on compulsory education, and are there penalties for not enrolling or attending school?” Compulsory education can only be effective if it is supported by legislative enforcement, congruent and concomitant programs, financing and facilities (Teijen, 1991). This question was intended to gain an insight into the state and nature of compulsory education in Jordan and to examine any legislation that enforces it.

Interview question 14 was: “What is the government policy for setting up a school in rural areas?” Research found that the lack of schools, especially in rural areas, depressed girls’ enrollment at all educational levels (Hill & King, 1993). The main focus of this question was to clarify the Jordanian government policies on the establishment of schools in urban and rural areas.

Interview question 15 was: “Are there any policies for married females 15 years and older who decide to return to school?” Research found that, for girls who live in countries where marriage at an early age is common, girls failed to continue their education in regular schools. In addition, girls in some developing countries were treated harshly and prevented from readmission to schools due to their pregnancies (Teijen, 1991). This question was intended to investigate whether the Jordanian government established any policies related to female marriage or pregnancy with regard to their school attendance.

Interview question 16 was: “What are the government policies for increasing participation of girls in school? Are there specific gender policies targeting girls at grades 11 and 12?” According to Stromquist (as cited in Hamza, 2002), government policies are either generic or gender sensitive. Governments with high gender disparities might
establish gender-sensitive policies to increase girls’ access and participation. Policies establishing single-gender schools, for example, tend to increase female educational participation, especially in Muslim countries such as Yemen (USAID, 1984). The focus of this question was to determine whether the Jordanian government had established any gender-sensitive policies, or if their educational policies were generic. In addition, the question intended to examine any unique policies that might enhance girls’ education that could be applied in other countries with high gender disparities.

**Description of Variables**

The following is a description of the variables for this study:

1. **Gross Enrollment Ratio (GER)** refers to the total enrollment in a specific level of education, regardless of age, expressed as a percentage of the eligible official school-age population corresponding to the same level of education in a given school year. A high GER generally indicates a high degree of participation, whether the pupils belong to the official age group or not. A GER value approaching or exceeding 100% also indicates that a country is, in principle, able to accommodate all of its school-age population, but it does not indicate the proportion already enrolled. Furthermore, GER at each level of education should be based on total enrolment in all types of schools and educational institutions, including public, private and all other institutions that provide organized educational services (UNESCO/UIS, 2008).

2. **Gender Parity Index (GPI)** refers to male values of a given indicator. The GPI measures progress toward gender parity in education participation and learning.
opportunities available for women in relation to those available to men. It also reflects the level of women’s empowerment in society. A GPI equal to 1 indicates parity between females and males. In general, a value less than 1 indicates disparity in favor of boys or men and a value greater than 1 disparity in favor of girls or women (UNESCO/UIS, 2008).

3. A trained teacher is a teacher who has received the minimum organized teacher training (pre-service or in service) normally required for teaching at the relevant level (UNESCO/UIS, 2008).

4. Student-teacher ratio (STR) is the average number of pupils per teacher at a specific level of education in a given school year. The higher the student teacher ratio, the lower the relative access of pupils to teachers. It is generally assumed that a low student-teacher ratio signifies smaller classes, which enables teachers to pay more attention to individual students, and may in the long run result in better performance of students (UNESCO/UIS, 2008).

5. Types of schools refer to religion, single-sex, and coeducational schools.

6. Students’ achievement refers to students’ examination results or test performance. In this study, the Tawjehi exam, which is the final assessment provided by the MOE of Jordan to all male and female students towards the end of grade 12, is used for this study (MOE, 2005; UNESCO/UIS, 2008).

7. Educational expenditure refers to the total public expenditure on education (current and capital) expressed as a percentage of total government expenditure in a given financial year. A higher percentage of government expenditure on education shows a high government policy priority for education, relative to the
perceived value of other public investments, including defense and security, health care, social security for unemployment and elderly, and other social or economic sectors (UNESCO/UIS, 2008).

8. Compulsory education refers to the number of years that children are legally obligated to attend school (UNESCO/UIS, 2008).

Data Collection

The data collection was done in three parts:

1. Archival documents constituted the sources for numerical data. The MOE statistics and documents included the board of education records on female-to-male enrollment, female teachers, Student-Teacher Ratio (STR), number of schools, government educational expenditure, male-to-female achievement rates, teachers’ qualifications, as well as a review of all the MOE report and documents on secondary education. Appropriate permission for reviewing these documents was obtained from the persons in charged of these documents.

2. Interviews: Interviews were conducted with the officials from the MOE, as well as teachers and administrators. All interviews were semi-structured with open-ended questions. According to Kerlinger (as cited in Hamza, 2002), open-ended items provide a frame of reference for respondent answers; however, they minimize the restraint on the answers and their expression. This method also has the advantage of allowing the interviewer to play a role in controlling the interview and keeping the conversation focused on the intended topic at hand. It is also flexible in allowing the interviewer freedom to make modifications in the sequence and wording of the questions, even though the content of the interview were organized in advance.
3. Documents and printed materials, including national and international reports and articles, provided perspective on the educational system in Jordan.

**Data Analysis**

This study used both quantitative and qualitative methods for data collection and analysis. Through archival research, quantitative data on gender parity in access and participation over a six-year period (1999/00, 2000/01, 2001/02, 2002/03, 2003/04, and 2004/05) and school supplies were collected. First, a compilation of tables and figures were made to present a statistical profile of secondary girls’ educational participation in Jordan, as well as school-side supplies. Through descriptive statistics, common measures of relative frequencies, such as percentages, were used to determine girls’ participation rates nationally and between urban and rural areas, as well as between boys and girls. In addition, a comparison of school supplies (i.e., the number of female teachers, number and type of schools, female to male achievement rates, STR, and state expenditure) was conducted to determine the government’s effort on increasing and supplying female students at the secondary level. Thus, first, a comparison of the number of girls to boys in grades 11-12 in urban and rural areas in Jordan was completed. Secondly, a comparison between school-related supplies in urban and rural areas was established. The analysis of both data on female enrollment and school-related supplies were used to assess answering the research questions in this study. These measures also will determine the extent to which urban and rural differences, as well as school-related supplies improve girls’ schooling.

On the other hand, data collected from responses to semi-structured interviews, as well as from reports and article were analyzed and coded into themes (Patton, 1990). The
data allowed the researcher to interpret ways in which school and government positively affect girls' educational participation. The school-related factors model (see Figure 1, Chapter 1), as well as the classification of the educational policies model (see Figure 2, Chapter 2), informed the analysis of this research. The archival documents, reports and articles, as well as the interviews with the key personal in this study provided a thorough picture on gender parity at the secondary level in Jordan.

Summary

This study was intended to investigate the changes in female enrollment at the secondary level in urban and rural areas in Jordan and explore the national government role in terms of school supply-side factors, as well as policies that promote female access and participation. A qualitative case study method was used to conduct the study. A multi-methods approach—interviews, reports and articles, and archival documents—was used for this purpose. This chapter outlined the research design, methodology, research questions, and description of variables, interview protocol, instruments, data collection, and data analysis.
CHAPTER IV
BACKGROUND OF JORDAN AND ITS EDUCATION SYSTEM

Introduction

This study explored the changes in girls’ enrollment at the secondary level in urban and rural areas in Jordan. This study also analyzed the national government’s role in terms of school-related supplies and policies that hypothesized to facilitate and increase girls’ access and participation in secondary education.

This research will assist other developing countries, generally those with high gender disparities at the secondary level, particularly certain Arab states, to create policies designed to facilitate and increase girls’ participation in secondary education. As mentioned earlier, educating females is essential for the social and economic development of a country. Research-based evidence already documents that educating women decreases fertility, increases and improves women’s participation in workforce, improves children’s health, increases their participation in education, and improves national economic growth (Hill & King, 1993). This chapter of the study provides a brief history of the country and a description of its educational system.

A Brief History of Jordan

After the collapse of the Ottoman Empire toward the end of World War I, the League of Nations formed the French Mandate of Syria and the British Mandate of Palestine (Metz, 1991). About 90% of the British Mandate of Palestine was east of River
Jordan and was known as Transjordan. In 1921, the British gave semi-autonomous control of Transjordan to the future King Abdullah I of Jordan, of the Hashemite family. King Abdullah I continued to rule until he was assassinated in 1951 (Metz, 1991). In 1946, under the treaty of London, Transjordan became a kingdom. In 1948, Britain transferred its control of Palestine to the Jews, where they established their state of Israel, leading to the first Arab-Israeli War. As a result, about 450,000 Palestinian refugees settled in East Bank of Jordan (Abu Odeh, 1999). In 1949, Transjordan was renamed the "Hashemite Kingdom of Jordan" (Bataeineh, 2008). King Talal became the king of Jordan, but his son Hussein assumed power in 1952 due to Talal’s ill health. In 1999, King Hussein died after ruling Jordan for 48 years (Bataeineh, 2008).

Jordan has very limited resources, and its economy depends on its few natural resources, including phosphates, potash, and fertilizers, supplemented with income from tourism and foreign aid (El-Skka, 2004). Water sources in Jordan are scarce; rainfall, ground water, and surface water are the main sources that are estimated to make up the 900 million cubic meters of Jordanian water. This information/statistic indicates that Jordan endures an impoverished water supply. The world water supply average is around 7,000 cubic meters per capita, whereas in Jordan this average does not exceed 180 cubic meters per capita (MOE, 2001).

The demographics of Jordanian age distribution classifies as a youthful nation: 31.3% are between 0 and 14 years old (males, 1,014,183; females, 973,538), 64.5% are between 15 and 64 years old (males, 2,183,638; females, 1,904,420), and 4.2% are between 65 years and over (males, 128,759; females, 138,410) (CIA World fact book, 2009). The population of Jordan is approximately 6,342,948 (CIA world fact book,
The population has doubled since 1980, and in the year 2000; the population growth rate amounted to 3.4%, and then decreased to 2.3% in 2006 (MOE, 2001; MOE, 2008).

Compared with the third world countries in general, and the Arab states in particular, Jordan occupies an advanced rank in terms of human resources development standards by virtue of its natural resources and the Gross National Product (GNP). The infant mortality rate decreased from 29% per 1000 in 1999 to 24% in 2006. Life expectancy rates increased for males and females from 69% in 1999 to 71.7% in 2006, where the fertility rate declined almost imperceptively overall from 3.8% in 1999 to 3.7% in 2006 for those between the ages of 15 to 49. However, the decline of rural fertility rates outpaced urban rates—to 4.2% (MOE, 2008).

According to the MOE (2008), the Jordanian Constitution and laws guarantee equal rights for Jordanians in job and educational opportunities, and the state secures them for all citizens within its available recourses. Basic education is compulsory and free in public schools, and the country protects and sets legislations for organized labor and safeguards laborers’ rights. Jordanians are treated equally by law, and there is no discrimination among them in rights and duties regardless of their race, religion and language. The country does its utmost to help Jordanians live in peace and it guarantees personal freedom.

The MOE (2008) indicated that Jordan endorsed acts related to human rights and eliminated all kinds of discrimination between males and females in 1992. In its plans and programs, Jordan gives much care to integrate people with special needs with other
groups in the society. The MOE (2008) also pointed out that the Ministry of Social Development, as well as the Ministry of Education and other stakeholders, cooperate in opening schools and centers to integrate people with special needs in the local community through implementing special programs for this group. A national strategy for the handicapped, which includes various programs and activities, was adopted in 2007 to upgrade services provided for them.

The MOE (2001) indicated that Jordan’s educational system is concerned with directing education towards preparing the Jordanian citizens for future challenges and aspirations. Accordingly, the Jordanian state provided a free compulsory education for grades 1 to 10. The most significant indicators of educational development in Jordan in the year 2000 show the following: (a) students’ enrollment rate amounted to 101%, (b) enrolled students from grade 1 to 12 was 29.3%, 51% males and 49% females, and (c) illiteracy rate has dropped to 11.6% (MOE, 2001).

A Description of the Educational System in Jordan

According to Al-Tall (1989), when Jordan was under the rule of Ottoman Empire, its education system was run by the Director of Education in Syria and received little attention. Prior to the declaration of Transjordan as a state, only 19 schools were established for boys and girls (about 980 male students and 59 females) including twenty-seven male and female teachers.

Norman (1989) indicated that the education system witnessed a rapid expansion of school attendance in Transjordan during the 1920s. After the establishment of the Emirate of Transjordan in 1921, there were nearly 25 religious schools, which provided
Qur’anic and basic Arab language studies (Robins, 2004). According to the MOE (1955), education beyond elementary level was only available for a limited number of boys from the privileged population.

When the Ministry of Education took over the responsibility of all aspects of education in 1948, it expanded the number of schools and opened more colleges and universities. Presently, there are over 3,500 government schools, 1,700 private schools, 48 community colleges, and 26 universities (Ministry of Higher Education, 2006). The Jordanian government provides schools in all urban, rural and isolated areas, making access to education available to all citizens, whether poor or rich.

One-third of all Jordanians are enrolled in educational facilities. The Jordanian government provides education to all citizens. Education for grades 1 to 10 is also free and compulsory for all children ages 6 through 15. The number of students attending elementary and secondary school in the 1997-1998 school year was 1,346,178, with 951,831 of them attending schools run by the Ministry of Education, whereas 229,487 attended private schools. The number attending schools monitored by the UNRWA was 143,893, while 20,967 attended other government-run schools. Between 2003 and 2004, the number of schools in the country reached 5,526; the number of teachers was 76,946; and the number of students rose to 151,315, of which about half were females (Abu-Samak, 2006). In 2006, the student population reached 1.4 million. Jordan’s educational system is structured into the following three stages:

1. Preschool: A non-compulsory stage run by the private sector only. Children from the age of 3 and up can be admitted to kindergarten, based on the parents’ decision since it is
not a mandatory stage in the education system. The Ministry of Education has established a number of kindergartens, particularly in remote and needy areas, which aim at providing well-balanced educational growth for children.

2. Basic Education: A compulsory stage of ten years, from the first grade to the tenth grade. All schools are unified across the country and students are assessed yearly. Based on students’ academic achievements, students in 8th through 10th grades are assigned to one of the various streams in the next stage.

3. Secondary Education: A two-year stage that ends with sitting for the general examination called “Tawjihi”. Based on the students’ grade on the Tawjihi exam, the student may qualify for different colleges and universities. The Ministry of Education then issues transcripts and certificates to the students who pass the exam in order to move them to one of two main streams:

- Academic sub-stream, which includes scientific and literacy specialties
- Vocational sub-stream, which includes industrial, commercial, agricultural, nursing, hotel, and home economic specialization

This cycle provides specialized cultural, scientific, and vocational experiences, which meet the existing and anticipation needs of the Jordanian society. It is also intended to develop an individual who can serve and perform his or her skills well in society. Toward the end of the two-year cycle, a national examination is held and successful students are provided a general secondary education certificate. Students who wish to continue their education are allowed to enter a college or a university to pursue their undergraduate studies.
Toward the end of 1990s, the Ministry of Education recognized the importance of meeting the needs of all students. Several schools and centers were established in the Kingdom, such as the Pioneer Centers, to serve distinguished students and enhance their basic academic skills. The Ministry of Education also provides several non-formal education programs such as a literacy program, continuing education classes for dropouts, and adult education programs. The previous programs are mostly provided to students in the evening to allow them to continue their education, as well as to give them an opportunity to obtain their college degrees.

The Ministry of Education, through its subordinate agencies, supervises different types of schools. Following is a list of those agencies and the types of schools they supervise:

a. The Ministry of Social Affairs provides services to students with special needs.

b. The Directorate of Education and Culture at the Armed Forces administers nineteen schools, with an enrollment of 10,217 students scattered in different areas around the country.

c. UNRWA runs 199 schools, enrolled 14,135 Palestinian refugee students between 1999 and 2000.

d. Noor Al-Hussein Foundation cares for the gifted students by the Jubilee School, is a coeducational secondary school where gifted students in the 9th through 12th grades are provided special programs. The number of students who enrolled in this institution for the year 2000-2001 reached 393.
e. The Jordanian Hashemite Fund runs several kindergartens and care centers for handicapped individuals.

Higher education in Jordan was first established in 1951. Al-Hussein College in Amman was originally established for the purpose of training teachers. The duration of study was for two years after the award of the General Secondary Certificate. In 1965, the college was renamed the “Teacher Institutes,” and in 1981 it developed into community colleges. Higher education in Jordan continued to expand after the establishment in 1962 of Jordan University, the first university in the country. Additional universities were established; such as, Yermouk University, Mu'tah University, Jordanian Science and Technology University, Al-Elbait University, Al-Hashemiyah University, Al-Balqa’ Applied University, Amman University College for Technical Engineering, College of Al-Da’wah and Religion Principles, and Al-Hussein Ben Talal University. In 1989, the Private Universities Law was passed, permitting the establishment of private universities. The first private university was established in 1990, and then several private universities, ultimately twelve, were founded. These private universities include: Amman Private University, Philadelphia University, Al-Isra’ University, University of Applied Science, Petra University, Al-Zaytoonah University, Irbid Private University, Jerash University, AlZarqa Private University, Princess Sumayya College, The Academy of Music, and the College of Educational Sciences (Ministry of Education, 1996).

In the year 2000, King Abdullah II called for reestablishment of a system for monitoring public and private higher education institutions, in order to insure a high standard of education in order to support development goals and meet global changes and challenges.
The education system in Jordan is centralized and is run by the Ministry of Education. The Ministry of Education has control over the educational policies in terms of financing the system, curriculum, books, general examinations, recruiting, promotion, and other educational issues (Hamouri, 1992).

The philosophy of education in Jordan is based on the Qur'an and the word of the Prophet Muhammad (Bataeineh, 2008). According to Prophet Muhammad, every Muslim was, and is, encouraged to seek knowledge throughout their lifetime (Saddique, 2000). Badwi (1995) indicated that education was not only a right, but also a responsibility, for all Muslims, both males and females. Prophet Muhammad said, "Seeking knowledge is mandatory for every Muslim" ("Muslim" is used here in the generic sense, which includes both male and female) (p. 5).

As advanced by the Ministry of Education (1955), the philosophy of education stems from the Constitution, the Islamic Arabic civilization, the principles of the Great Arab Revolt (1914), and the Jordanian nation's experiences (Bataeineh, 2008). According to Metz (1991), the Jordanian Constitution stated that education is a basic right for all citizens. Based on the Constitution, Jordan’s Education Act, established in 1987, specifies the philosophy, goals, and objectives of education as follows:

- The Hashemite Kingdom of Jordan is a hereditary constitutional monarchy and adheres to the principles of the Great Arab Revolt to achieve the unity of the Arab Nation as a basic necessity for its national being and future.

- Faith in God, belief in Arab national values, adherence to Islamic Arabic culture, and respect for thought, science, and morals are integrated to shape an effective citizen and to create national consciousness and unity.

- The goal is to provide education for all citizens, irrespective of race, sex, or religion. An additional goal is to enhance the country’s economic and social development and the
individual’s needs and wishes. These are basic necessities for the survival of the society and its individuals.

The general goals and objectives of education focus on preparation of the citizens who believe in God; adhere to the spirit of love for the homeland and nation; and have strong commitment to the love of truth, values, social responsibilities, and respect for law and order. The goals also emphasize harmonious growth of personality (physically, intellectually, socially, emotionally, and spiritually) and development of the potentialities to cope with the contemporary changes and to contribute positively to the human civilization and its momentum (Ministry of Education, 1988, p.9).

The Ministry of Education acknowledges the importance of secular curricula; however, it tries to connect it with the elements of traditional Islamic education. Separate public school systems for boys and girls are sustained in accordance with traditional segregation of the sexes outside the home.

According to the Ministry of Higher Education (1989), the main purpose of education is to provide students with full understanding of Islamic faith and ideas, belief in Arabic national values, and respect of thought, science, morals and skills. Furthermore, students are expected to acquire a variety of skills and knowledge in order to be equipped to function productively; to develop the society economically, socially, and culturally; and to prepare to become successful members in the building of their community.

The country’s educational institutions are expected to prepare students spiritually, by emphasizing moral and religious beliefs while providing the society with faithful teachers, lawyers, doctors, engineers, business people, technicians and scientists, which are necessary for the development of the country’s human and natural resources (Al-Tall, 2000). According to Jordanian officials’ philosophy, expanding and emphasizing education is the way to regain the glorious past of their Muslim ancestors and compete globally with the most advanced modern countries (Al-shami, 1977). The educational
policies of Jordan are, therefore, both religious and secular. They are considered religious since they prepare individuals for life after death, and they are secular since they aim to prepare students to become active members in their society (Ministry of Education, 1988).

The Ministry of Education in Jordan provides educational opportunities for all students, both males and females, from kindergarten to 12th grade, and encourages them to continue on to undergraduate studies, contingent upon high academic achievement at the secondary level. Graduate programs also are available to the majority of college graduates (Bataineh (2008).

The Educational Policy of Jordan

The educational policy of Jordan is based on Islamic beliefs and Arabic values and culture.

- The purpose of education in Jordan is to have the student understand Islamic faith in a correct comprehensive manner, belief in Arabic National values, and respect of thought, Science, morals and skills. To furnish the student with values, teachings, and ideas of Islam and Arabic values, to equip him or her with the various skills and knowledge, to develop his conduct in constructive directions, to develop the society economically, socially, culturally, and to prepare the Jordanian individual to become useful member in the building of his or her community (Ministry of Education, 1988, p.9)

The main purpose and objectives of education for the entire country at all educational levels are stated as follows in the Educational Policy of Jordan:

- Item A: Orienting the educational system to have better suitability to both the individual and societal needs and establishing a balance between them.
- Item B: Providing opportunities to meet the principles of continuous education and investing parallel education types through coordination with the specialized parties.
- Item C: Emphasizing the importance of political education in the education system and enhancing the principle of participation, justice, and democracy and their practices.

- Item D: Steering the educational process to develop the citizen’s personality; capable of analyzing, criticizing, taking initiatives, innovating, and carrying out positive dialogue and enhancing values of Arab, Islamic, and human civilizations.

- Item E: Enhancing scientific methodology in planning, conducting, and evaluation of the educational system and developing research assessment and follow-up systems.

- Item F: Expanding educational types in educational institutions to have them evolve programs for special education and others for gifted learners and for those with special needs.

- Item G: Emphasizing the comprehensive experience concepts, including vocational and technological experiences.

- Item H: Emphasizing the fact that teaching is a message and career that has its own ethical and occupational basics.

- Item I: Orienting the educational system to insure centralization in general planning and follow-up and decentralization in administration.

- Item J: Enhancing pride in the scientific and social status of the teacher for his distinguished role in building up the individual and society.

- Item K: Emphasizing the importance of education and environmental knowledge (Ministry of Education, 2000a, p. 3-4)

In 2000 and 2002, the Ministry of education instituted large educational reform that focused on the following:

1. Fundamental devolution towards the human personality, critical thinking, and creative flexibility.

2. A concentration on accuracy, excellence, and creativity.

3. Rationalizing education decision-making to enhance national security and consolidate national security, national unity, and scientific methodology (Alazzi, 2005).
From 1950 through 1977, the Jordanian government spent between 5 and 10% of its budget on education. About 7% of this budget was allocated to constructing new schools and expanding the existing educational institutions. In school year 2004-2005, the educational system reached nearly 10% of the country's total budget of $942 million (700,000 Jordanian diners equal to 1 million U.S. dollars). According to Alazzi (2005), education in Jordan is financed by the government of Jordan, the UNRWA, the Hashmite Jordanian Fund, Noor Al Hussein Foundation, and other public and voluntary institutions. However, major educational financing sources are the Ministry of Education's budget, revenues and loans, and an education tax called “Ma'aref”.

Summary

Chapter IV provided a brief history of Jordan and a description of its educational system. Jordanian society is a young society, as its citizens classify as a youthful nation. Jordan occupied an advanced rank in human resources development in terms of its natural resources and its Gross National Product (GNP), compared with developing countries and Arab states.

Basic education in Jordan is free and compulsory for grades 1 to 10. The education system is structured into three stages: (1) pre-school, (2) basic education, and (3) secondary education. Meanwhile, secondary education is divided into two streams; academic and vocational. The educational system in Jordan is centralized and is run by the MOE.
CHAPTER V
PRESENTATION AND ANALYSIS OF DATA

Introduction

The objective of this study was to determine the changes in the enrollment of females in secondary schools in urban and rural areas in Jordan. The study also set out to examine the role of the national government in terms of this body's impact on school-related factors, including its role in establishing policies that facilitate girls’ access to, and participation in, secondary education. In order to determine the status of secondary enrollment among females in urban and rural areas, the study used archival documents from Jordan’s Ministry of Education’s database. To determine the role of the national government in terms of school-related factors (type of schools, school attributes, school quality, and teacher attributes), and to explore government policies on improving female access and participation at the secondary level, the study used Ministry of Education (MOE) documents, records, reports and articles. Input was also obtained from educational and government officials, including teachers and administrators.

The researcher interviewed key personnel from the Human Resources and Planning Departments of the MOE, as well as teachers and administrators from rural and urban school districts. Statistical data were collected from the MOE in order to construct a picture of female enrollment at the secondary level (grades 11-12), as well as the school-related factors. Further, reports and articles were perused in an effort to gain insight into the phenomena behind the country’s success in terms of the levels of access, and participation of girls in secondary education.
The major research question of the study was: 1. What is the status of girls' enrollment at the secondary level in urban and rural areas in Jordan, how has this changed over time, and what supply factors in terms of school and governmental policies have contributed to female access and participation in secondary schooling? The subsidiary questions were: 1.1 How has gender parity (that is, the ratio between boys and girls) at the secondary level in urban and rural areas in Jordan improved over time?; 1.2 How have the national government policies with respect to school-side factors such as availability of female teachers, availability and location of schools, type of school, school infrastructure, and school quality aided in promoting female access to secondary education in urban and in rural areas in Jordan?; and 1.3 How have the existing government policies in urban and rural areas, if any, improved girls' access to, and participation in, secondary education?

In seeking answers to the main research question and the subsidiary questions, a number of themes and issues emerged. The results of the study are broken into subsections which correspond to the research questions and their subcomponents. The findings follow.

The Main Research Question was- What is the status of girls' enrollment at the secondary level in urban and rural areas in Jordan, how has this changed over time, and what supply factors in terms of school and governmental policies have contributed to female access and participation in secondary schooling?

Subsidiary Question 1.1 How has gender parity (that is, the ratio between boys and girls) at the secondary level in urban and rural areas in Jordan improved over time?
The study was designed to examine the access and participation level of girls in secondary education in the Hashemite Kingdom of Jordan, and to determine whether or not access and participation have increased over time. In order to answer this question, school enrollment data covering a period of six years (1999/00 to 2004/05) were collected from Jordan MOE for grades 11-12. (Data for 2005/06 were not available when this research was conducted). Since UNESCO assessed countries’ Education for All (EFA) goals, including gender equality at the secondary level in 2005, attempts were made to compare the participation levels of girls and boys before and after UNESCO’s midway assessment. This would illustrate the extent to which girls’ access and participation level has increased over time. The MOE statistics were used as the primary source of data for this study.

Tables and figures are presented on girls’ enrollment for grades 11-12 in urban and rural areas over the five year reference period (1999/2000 to 2004/2005). These tables highlight gender gaps as the central issue in access and participation in terms of the number of male students compared to the number of female students.

Table 5 displays the percentage, as well as the total number of male and female students enrolled in grades 11-12 in urban and rural areas. The data show that the total number of male and female students in urban and rural areas increased by 6.6% between 1999/00 and 2004/05. The percentage increase in the enrollment of female students was 5.5%, compared to an increase of 7.7% in the enrollment of male students between 1999/00 and 2004/05. In terms of gender parity, the data show that the enrollment of male students and female students was almost equal (49.5-50.5%) between 1999/00 and 2004/05. Figure 3 illustrates the changes in the total number of male and female
students enrolled in grades 11-12 in urban and rural areas between the period of 1999/00 and 2004/05.

Table 5

*Total Number and Percentage of Male to Female Students (grades 11-12)*

*By Year in Urban (U) and Rural (R) Areas in Jordan*

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>Total M &amp; F</th>
<th>Total M</th>
<th>Total F</th>
<th>% M</th>
<th>% F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>U &amp; R</td>
<td>U &amp; R</td>
<td>U &amp; R</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jordan</td>
<td>1999/00</td>
<td>165,586</td>
<td>82,034</td>
<td>83,552</td>
<td>49.5</td>
<td>50.5</td>
</tr>
<tr>
<td></td>
<td>2000/01</td>
<td>167,551</td>
<td>81,591</td>
<td>85,496</td>
<td>48.7</td>
<td>51.1</td>
</tr>
<tr>
<td></td>
<td>2001/02</td>
<td>171,432</td>
<td>85,697</td>
<td>85,735</td>
<td>50.0</td>
<td>50.0</td>
</tr>
<tr>
<td></td>
<td>2002/03</td>
<td>177,887</td>
<td>89,441</td>
<td>88,446</td>
<td>50.3</td>
<td>49.7</td>
</tr>
<tr>
<td></td>
<td>2003/04</td>
<td>173,795</td>
<td>87,047</td>
<td>86,748</td>
<td>50.1</td>
<td>49.9</td>
</tr>
<tr>
<td></td>
<td>2004/05</td>
<td>176,456</td>
<td>88,318</td>
<td>88,138</td>
<td>50.1</td>
<td>49.9</td>
</tr>
<tr>
<td></td>
<td>Percent Change</td>
<td>6.6%</td>
<td>7.7%</td>
<td>5.5%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources: MOE, 1999/00 to 2004/05
Figure 3. Changes in the Total Number of Male and Female Enrolled in Grades 11-12, in Rural and Urban Areas, 1999/00 to 2004/05

The data presented in table 6 show that the total number of male and female students (grades 11-12) in urban areas increased by 10.2% between 1999/00 and 2004/05. The percentage level increase of female students however was found to be smaller (8.5%), which means that more male students (11.8%) enrolled than females for the same reference years. In the meantime, an almost equal number (49% to 50%) of male and female students were enrolled in schools in urban areas between 1999/00 and 2004/05. Figure 4 depicts the changes in the percentage of male to female student enrollment in urban areas.
Table 6

*Total Number and Percentage of Male to Female Students (grades 11-12) in Urban Areas in Jordan*

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>Total M &amp; F</th>
<th>Total M Urban</th>
<th>Total F Urban</th>
<th>% M</th>
<th>% F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jordan</td>
<td>1999/00</td>
<td>112,949</td>
<td>56,570</td>
<td>56,379</td>
<td>50.1</td>
<td>49.9</td>
</tr>
<tr>
<td></td>
<td>2000/01</td>
<td>114,228</td>
<td>56,160</td>
<td>58,068</td>
<td>49.2</td>
<td>50.8</td>
</tr>
<tr>
<td></td>
<td>2001/02</td>
<td>116,692</td>
<td>58,452</td>
<td>58,240</td>
<td>50.1</td>
<td>49.9</td>
</tr>
<tr>
<td></td>
<td>2002/03</td>
<td>127,428</td>
<td>65,694</td>
<td>61,734</td>
<td>51.6</td>
<td>48.4</td>
</tr>
<tr>
<td></td>
<td>2003/04</td>
<td>122,011</td>
<td>62,139</td>
<td>59,872</td>
<td>50.9</td>
<td>49.1</td>
</tr>
<tr>
<td></td>
<td>2004/05</td>
<td>124,435</td>
<td>63,256</td>
<td>61,179</td>
<td>50.8</td>
<td>49.2</td>
</tr>
<tr>
<td>Percent Change</td>
<td></td>
<td>10.2%</td>
<td>11.8%</td>
<td>8.5%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources: MOE, 1999/00 to 2004/05
Two statistical phenomena distinguish the educational situation in rural areas from their urban counterparts. First, whereas urban areas experienced a robust increase in overall enrollment (10.2% as reflected in Table 6), as shown in Table 7, in rural areas there was a decrease of 1.7% in overall enrollment. Secondly, as Table 6 demonstrates, the preponderance of the overall urban increase was due to an escalation in enrollment by males, while, as Table 7 shows, the rural decrease, conversely, was disproportionately attributable to a decline in male enrollment. As vividly reflected in Figure 4, a statistical consequence was that female enrollment ratios in rural areas were greater than the male enrollment ratios in urban areas throughout the reference period. Among developing countries, including Arab states, Jordan is—in all probability—singularly reflective of this statistical phenomenon. Figure 5 shows the changes in female to male enrollments in rural areas in Jordan, between 1999/00 and 2004/05.
Table 7

*Total Number and Percentage of Male to Female Students (grades 11-12) in Rural Areas*

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>Total M &amp; F</th>
<th>Total M Rural</th>
<th>Total F Rural</th>
<th>% M Rural</th>
<th>% F Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jordan</td>
<td>1999/00</td>
<td>52,637</td>
<td>25,464</td>
<td>27,173</td>
<td>48.4</td>
<td>51.6</td>
</tr>
<tr>
<td></td>
<td>2000/01</td>
<td>52,859</td>
<td>25,431</td>
<td>27,428</td>
<td>48.1</td>
<td>51.9</td>
</tr>
<tr>
<td></td>
<td>2001/02</td>
<td>54,740</td>
<td>27,245</td>
<td>27,495</td>
<td>49.8</td>
<td>50.2</td>
</tr>
<tr>
<td></td>
<td>2002/03</td>
<td>50,459</td>
<td>23,747</td>
<td>26,712</td>
<td>47.1</td>
<td>52.9</td>
</tr>
<tr>
<td></td>
<td>2003/04</td>
<td>51,784</td>
<td>24809</td>
<td>26,876</td>
<td>47.9</td>
<td>51.9</td>
</tr>
<tr>
<td></td>
<td>2004/05</td>
<td>52,021</td>
<td>25,062</td>
<td>26,959</td>
<td>48.2</td>
<td>51.8</td>
</tr>
<tr>
<td></td>
<td>Percent Change</td>
<td>-1.17%</td>
<td>-1.56%</td>
<td>-0.78%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources MOE, 1999/00 to 2004/05
**Subsidiary Question 1.2** How have the national government policies with respect to school-related factors such as availability of female teachers, availability and location of schools, type of school, school infrastructure, and school quality aided in promoting female access to secondary education in urban and in rural areas in Jordan?

Literature on educational access identified several school factors that were found to have an influence on girls' educational participation in developing countries: availability of female teachers, availability of schools, types of school, school infrastructure, and school quality (Tijen, 1991). This researcher sought to understand the role of the Jordanian government in relation to these school-related factors, and to explore to what extent these factors contributed to promoting girls' access to, and participation in, secondary education. Tables 8 to 14 present data on school-related factors (i.e., number of female teachers in urban/rural areas, numbers and types of
schools, student-teacher ratio, educational expenditure, and male-to-female achievement rate).

**Female Teachers**

Research (Hertz et al., 1991; King and Bellew, 1991; Coleman, 2004; DeJaeghere, 2004; Rose & Subrahmainian, 2005) found that the availability of female teachers has a significant impact on girls’ enrollment. Research, furthermore, indicates that the presence of female teachers, especially at higher grade levels, encourages parents in some developing countries to send their daughters to school. In Muslim countries, for example, gender mixing is prohibited, and families do not support having male teachers educating their daughters.

As a Muslim country, Jordan employed female teachers for girls in urban and rural areas. The total number of male and female teachers in urban and rural areas increased by 49% between 1999/00 and 2005/06 (see Table 8). The percentage increase in the number of female teachers in urban (54%) and rural areas (84%) is greater than the increase in male teachers in urban (24%) and rural areas (63%) between 1999/00 and 2005/06. This observable increase in the number of female teachers in urban and rural areas is an effective indicator of the importance that the Jordanian government attaches to female secondary education. Figure 6 depicts the changes in the number of female and male teachers in urban and rural areas for grades 11-12.
Table 8

*Total Number of Male to Female Teachers in Urban and Rural Areas in Jordan, grades 11-12*

<table>
<thead>
<tr>
<th>Year</th>
<th>MTU</th>
<th>MTR</th>
<th>FTU</th>
<th>FTR</th>
<th>T/M &amp; FT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999/00</td>
<td>3,772</td>
<td>1,459</td>
<td>3,342</td>
<td>1,592</td>
<td>10,165</td>
</tr>
<tr>
<td>2000/01</td>
<td>3,964</td>
<td>1,523</td>
<td>3,543</td>
<td>1,751</td>
<td>10,781</td>
</tr>
<tr>
<td>2001/02</td>
<td>4,323</td>
<td>1,786</td>
<td>4,156</td>
<td>2,035</td>
<td>12,300</td>
</tr>
<tr>
<td>2002/03</td>
<td>4,688</td>
<td>1,625</td>
<td>4,236</td>
<td>1,910</td>
<td>12,459</td>
</tr>
<tr>
<td>2003/04</td>
<td>4,755</td>
<td>1,768</td>
<td>4308</td>
<td>1965</td>
<td>12,796</td>
</tr>
<tr>
<td>2004/05</td>
<td>4,621</td>
<td>1,892</td>
<td>4,166</td>
<td>2,167</td>
<td>12,846</td>
</tr>
<tr>
<td>2005/06</td>
<td>4,694</td>
<td>2,382</td>
<td>5,149</td>
<td>2,928</td>
<td>15,153</td>
</tr>
<tr>
<td>Percent Change</td>
<td>24%</td>
<td>63%</td>
<td>54%</td>
<td>84%</td>
<td>49%</td>
</tr>
</tbody>
</table>

Sources: MOE, 1999/00 to 2004/06

Note: MTU= male teacher/urban, MTR= male teacher/rural, FTU= female teacher/urban, FTR= female teacher/rural, T/M&FT= total male and female teachers
Figure 6. Changes in the Number of Female and Male Teachers in Urban and Rural Areas for Grades 11-12, 1999/00 to 2005/06

Student-Teacher Ratio (STR)

According to research (Achilles, et al., 1994), reducing the number of students per teacher is shown to have a positive effect on students' achievement and helps teachers focus on each student's needs. In some developing countries, however, overcrowded schools and a large student-teacher ratio has led to high rates of teacher absenteeism. Consequently, many female students drop out from schools especially at the secondary level (World Bank (1997; UNESCO, 2008).

The data indicated that the STR in urban and rural areas for grades 11-12 in Jordan decreased between 1999/00 and 2005/06 (see Table 9). In urban areas for example, the STR was 16.3 in 1999-2000 and decreased to 13.4 in 2005/06. In rural areas, the STR decreased from 17.3 to 9.4 in 2005/06. The reduction of the STR ratios in Jordan, as previous research (Achilles, et al., 1994) illustrated, should have a positive
influence on students, especially females attendance as well as educational achievement.

Figure 7 depicts the changes STR in urban and rural areas for grades 11-12.

Table 9

<table>
<thead>
<tr>
<th>Year</th>
<th>STR Urban</th>
<th>STR Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999/00</td>
<td>16.3</td>
<td>17.3</td>
</tr>
<tr>
<td>2000/01</td>
<td>15.5</td>
<td>16.1</td>
</tr>
<tr>
<td>2001/02</td>
<td>14.0</td>
<td>14.3</td>
</tr>
<tr>
<td>2002/03</td>
<td>14.3</td>
<td>14.3</td>
</tr>
<tr>
<td>2003/04</td>
<td>13.5</td>
<td>13.8</td>
</tr>
<tr>
<td>2004/05</td>
<td>14.2</td>
<td>12.8</td>
</tr>
<tr>
<td>2005/06</td>
<td>13.4</td>
<td>9.4</td>
</tr>
</tbody>
</table>

Sources: MOE, 1999/00-2005/06

Figure 7. Changes in STR in Urban and Rural Areas in Grades 11-12, 1999/00 to 2005/06

Number and Type of Schools
According to research, the availability of schools in urban and rural areas is critical for girls' participation in secondary education (Teijen, 1991). Moreover, the type of schools that are provided by governments, such as single-gender and religious schools, are also found to be vital for girls' access and persistence (as cited in Teijen, 1991). The governments in Muslim countries, including Arab states, established single-gender schools, as well as religious schools in order to increase female students' participation, especially in rural areas (as cited in Teijen, 1991).

In reviewing the documents on the type of secondary schools established in urban and rural areas in Jordan, the researcher found three types: public schools, private schools, and other governmental (other governmental schools run by the Ministry of Awkaf, the Higher Ministry of Education, and the army) schools. About 70% of these schools are run by the MOE.

According to the Jordanian culture and Islamic belief, coeducation—especially for girls and boys reaching the age of puberty—is prohibited and is considered immoral (Jordanian Ministry of Education, 1988). Therefore, the Jordanian government as well as some private sector organizations established single gender schools, typically with grades 4-12. Coeducational programs are provided by some private institutions, located primarily in the capital, Amman, and a few other government schools. The types and numbers of girls' schools in urban and rural areas between 1999/00 and 2005/06 are shown in Table 10. The data indicate that the number of female public schools in urban and rural areas increased since 1999/00. However, more public schools were found in urban areas (44%), compared to rural areas (8.6%) between 1999/00 and 2005/06. On the other hand, private schools in urban areas decreased slightly from 14 to 12 between
1999/00 and 2005/06. This decrease might be related to the high tuitions that some of private schools require, which some parents cannot afford. In rural areas however, no private schools were found. The number of government (non-public schools) schools decreased from 6 in 1999/00 to 5 in 2005/06, while only one school was established in a rural area in 2005/06 (MOE, 2006).

Table 10

*Type and Number of Schools Available for Female Students, Grades 11-12, in Urban and Rural Areas*

<table>
<thead>
<tr>
<th>Year</th>
<th>MOE/Public Schools</th>
<th>Governmental Schools</th>
<th>Private Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>U</td>
<td>R</td>
<td>U</td>
</tr>
<tr>
<td>1999/00</td>
<td>180</td>
<td>313</td>
<td>6</td>
</tr>
<tr>
<td>2000/01</td>
<td>195</td>
<td>339</td>
<td>5</td>
</tr>
<tr>
<td>2001/02</td>
<td>201</td>
<td>355</td>
<td>5</td>
</tr>
<tr>
<td>2002/03</td>
<td>221</td>
<td>351</td>
<td>5</td>
</tr>
<tr>
<td>2003/04</td>
<td>212</td>
<td>364</td>
<td>5</td>
</tr>
<tr>
<td>2004/05</td>
<td>216</td>
<td>371</td>
<td>4</td>
</tr>
<tr>
<td>2005/06</td>
<td>260</td>
<td>340</td>
<td>5</td>
</tr>
</tbody>
</table>

Sources: MOE, 1999/00 to 2005/06
Note: U = Urban, R = Rural

Coeducational schools, as mentioned earlier, are limited to some private institutions and other governmental schools. These coeducational schools are located mainly in urban areas. Some coeducational schools, however, were located in rural areas due to the Islamic culture and traditions that prohibit mixed gender schools. Table 11
presents the number of coeducational schools that include grades 11-12 in urban and rural areas between 1999/00 and 2005/06. The table showed that the number of co-educational private schools increased by 37% in urban areas between 1999-2000 and 2005-2006. In rural areas however, co-educational private schools doubled in number (from 3 to 6), but represented an exceedingly small number. The other coeducational government schools in urban areas increased from 1 to 5 schools and decreased from 2 to 1 school in rural areas during the period of the study.

Table 11

*Type and Number of Coeducational Schools in Urban and Rural Areas, Grades 11-12*

<table>
<thead>
<tr>
<th>Year</th>
<th>O Governmental Schools</th>
<th>Private Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>U  R</td>
<td>U   R</td>
</tr>
<tr>
<td>1999/00</td>
<td>1  2</td>
<td>73  3</td>
</tr>
<tr>
<td>2000/01</td>
<td>2  2</td>
<td>84  4</td>
</tr>
<tr>
<td>2001/02</td>
<td>2  1</td>
<td>86  4</td>
</tr>
<tr>
<td>2002/03</td>
<td>3  2</td>
<td>87  4</td>
</tr>
<tr>
<td>2003/04</td>
<td>3  2</td>
<td>90  5</td>
</tr>
<tr>
<td>2004/05</td>
<td>5  2</td>
<td>93  6</td>
</tr>
<tr>
<td>2005/06</td>
<td>5  1</td>
<td>100 6</td>
</tr>
</tbody>
</table>

Sources: MOE, 1999/00 to 2005/06
Educational Expenditure

According to UNESCO (2003-2004), increasing the educational quality requires significant government expenditures. In addition, educational expenditure is a useful proxy indicator for educational quality. In reviewing the documents on the Jordanian government educational expenditure, the data showed the MOE budget in Jordanian Dinar (JD) (US $100.00 = 70 JD) for the past six years increased by 37.7% between 1999 and 2004 (see Table 12). The largest increase was observed between the years of 2002 and 2003. While the level of expenditure for education consistently increased, a correspondingly greater percentage of the state budget was dedicated to education each year during the reference period. The data showed that Jordan spent between 10-11% of the country’s budget on education. Figure 8 depicts the changes in the MOE educational expenditure between 1999 and 2004.

Table 12

Comparative Statistics of MOE Budget and its Percentage to Budget in Jordanian Dinar

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>State Budget</th>
<th>MOE Budget</th>
<th>% to State Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>2,160,000,000</td>
<td>220,735,000</td>
<td>10.22</td>
</tr>
<tr>
<td>2000</td>
<td>2,210,000,000</td>
<td>230,500,000</td>
<td>10.43</td>
</tr>
<tr>
<td>2001</td>
<td>2,300,000,000</td>
<td>244,595,000</td>
<td>10.63</td>
</tr>
<tr>
<td>2002</td>
<td>2,413,000,000</td>
<td>258,450,000</td>
<td>10.71</td>
</tr>
<tr>
<td>2003</td>
<td>2,511,000,000</td>
<td>285,550,000</td>
<td>11.37</td>
</tr>
<tr>
<td>2004</td>
<td>2,670,000,000</td>
<td>304,120,000</td>
<td>11.39</td>
</tr>
</tbody>
</table>

Sources: MOE, 1999-2004
In regard to the government’s educational spending on basic and secondary education, table 13 shows a slight increase between 1999/00 and 2002/03. Between 2002/03 and 2004/05, the government expenditure on basic education and secondary education decreased slightly by 2.1%. 
**Table 13**

*The Percentage of Government Expenditure on Basic and Secondary Education*

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>% of Educational Expenditure on Basic And Secondary Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999/00</td>
<td>86.41</td>
</tr>
<tr>
<td>2000/01</td>
<td>87.84</td>
</tr>
<tr>
<td>2001/02</td>
<td>88.86</td>
</tr>
<tr>
<td>2002/03</td>
<td>88.96</td>
</tr>
<tr>
<td>2003/04</td>
<td>86.85</td>
</tr>
<tr>
<td>2004/05</td>
<td>86.90</td>
</tr>
</tbody>
</table>

Sources: MOE, 1999/00 to 2004/05

**Female-to-Male Achievement**

In order to measure students’ achievement at the secondary level in Jordan, a national exam, Tawjehi, is provided to all students in all schools toward the end of grade 12. This exam assesses students’ knowledge in math, languages (Arabic and English), sciences, history, and Islamic Studies. Based on the students’ grade on the Tawjihi exam, the student may qualify for different colleges and universities. The Ministry of Education then issues transcripts and certificates to the students who are successful. Students who score the highest in the Tawjihi exam (the top ten scores) in the country usually have the opportunity to attend a ceremony conducted by the king or the queen of Jordan. Additionally, the ten students with the highest Grade Point Average (GPA) usually receive scholarships provided from the MOE to any university of the students’ choice.
In reviewing the MOE archival documents on the Tawjehi exam between 1999/00 and 2004/05, the data (see Table 14) show that the number of male and female students who participated in the exam increased significantly (112.5%) since 1999/00. The number of female students who took the exam, for example, increased by 105% between 1999/00 and 2004/05, compared to 120% for males. These figures indicate that the percentage of male students who completed 12 grades is slightly higher than females.

On the other hand, while the number of female and male participants increased between 1999/00 and 2004/05, the achievement rates decreased. For example, the percentage of female students who passed the Tawjehi exam decreased by 25% compared to a 19% decrease for males between 1999/00 and 2004/05 (MOE, 2005).

Overall, however, the percentage of female students who passed the exam surpassed the males significantly during the period of the study. In 1999/00, 57.30% of female students who took the exam passed, compared to 43.10% of males, representing a difference of 14.2 percentage points. Although female attainment rates exceeded males, the achievement gaps decreased to 8.1 percentage points in 2004/05, compared with 14.2 percentage points in 1999/00. Figure 9 illustrates the changes in the male to female percentage achievement rate for the Tawjehi exam at grade 12 between 1999/00 and 2004/05.
Table 14

**Total and Percentage of Male to Female Students (grades 11-12) Who Passed the Tawjehi Exam in Jordan**

<table>
<thead>
<tr>
<th>Year</th>
<th>TS</th>
<th>TM</th>
<th>M Passed (%)</th>
<th>TF</th>
<th>F Passed (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999/00</td>
<td>104,773</td>
<td>52,030</td>
<td>43.1</td>
<td>52,743</td>
<td>57.3</td>
</tr>
<tr>
<td>2000/01</td>
<td>103,495</td>
<td>52,015</td>
<td>35.3</td>
<td>51,480</td>
<td>52.1</td>
</tr>
<tr>
<td>2001/02</td>
<td>117,371</td>
<td>59,669</td>
<td>31.67</td>
<td>57702</td>
<td>47.17</td>
</tr>
<tr>
<td>2002/03</td>
<td>134,758</td>
<td>69,949</td>
<td>30.68</td>
<td>64,809</td>
<td>45.76</td>
</tr>
<tr>
<td>2003/04</td>
<td>160,897</td>
<td>81,725</td>
<td>29.86</td>
<td>79,172</td>
<td>40.81</td>
</tr>
<tr>
<td>2004/05</td>
<td>222,685</td>
<td>114,545</td>
<td>24.19</td>
<td>108,140</td>
<td>32.2</td>
</tr>
</tbody>
</table>

Percent Change 112.5% 120% 105%

Sources: MOE, 1999/00 to 2004/05
Note: TS= Total Students, TM= Total Male, M= Male, TF=Total Female, F=Female
Summary

The data show that the enrollment level percentage of girls and boys for grades 11-12 has been rising somewhat in Jordan between 1999/00 and 2004/05. However, in absolute numbers, the enrollment of boys in schools was greater than the enrollment of girls during the period of the study. The ratio of boys to girls was almost the same. The analysis also showed that there have been higher rates of increases in the enrollment of girls in urban areas than in rural areas; while the number of girls enrolled in urban areas increased the number of girls enrolled in rural areas decreased. Although the number of both male and female students in rural areas decreased, the data showed that a few more female students were found than males.

On the other hand, the data on the school-related factors in Jordan revealed that the number of male and female teachers in urban and rural areas increased between 1999/00 and 2004/05. Yet, more female teachers were found in urban and rural areas than males. In addition, the number of female teachers in rural areas almost doubled between
1999/00 and 2005/06. At the same time, a decrease in the student-teacher ratios was observed in urban and rural areas for the same reference years. This decrease in the number of students to each teacher might have a positive effect on students’ attendance and achievement.

Additionally, the Jordanian government provided three types of schools for male and female students in grades 11-12: public schools, other governmental schools, and private schools. All public schools that were provided by the MOE and include grades 4-12 are single-gender schools. Coeducational education, however, is provided only in the private sector and a few other governmental schools. The data indicate that the number of public schools increased in urban as well as in rural areas between 1999/00 and 2005/06. In contrast, the number of female private schools decreased slightly in urban areas, while none were established in rural areas. Coeducational private schools were found mostly in urban areas, while only a few were established in rural areas. These coeducational schools, with respect to their small numbers, increased over time in both urban and rural areas.

In terms of the government’s educational expenditure, the data revealed that the Jordanian government increased its educational spending between 1999 and 2004. In addition, government spending on basic and secondary education increased slightly for the same reference years.

Lastly, the analysis showed that more students, especially boys, are participating in the 12th grade final exam. Yet, girls’ performance level is significantly higher than boys’. Although the number of male and female students participating in the exam is increasing, the passing rate percentage, on the other hand, is drastically decreasing.
Interviews, Reports, and Analysis of Articles

In order to provide in-depth answers to the research question, the researcher analyzed reports, articles, and conducted interviews. Ten female staff members, eight teachers and two administrators, were interviewed for this study. In addition, one education official from the Human Resources Department was interviewed. The interview questions were developed to seek answers to the research question regarding the role of the Jordanian government with regard to school-supply factors (i.e., availability of female teachers, availability and location of schools, type of school, school infrastructure, and school quality) in urban and rural areas and how it promoted female access and participation at the secondary level. Through the interviews with teachers, administrators, and policy makers as well as the analysis of articles and documents, this researcher will determine and draw a conclusion as to whether or not the supply-side factors aided in promoting female educational access and participation at the secondary level.

Supply-Side Factors/Teacher Attributes

In Muslim countries, including Jordan, where culture and religious practices prohibit mixed genders in schools, female teachers were found to be vital for girls' educational access and participation, especially at the secondary level. Countries that are found to lack female teachers especially at higher educational levels are also found to have high gender disparities (UNESCO, 2003-2004).

To investigate the availability of female teachers at the secondary level in urban and rural areas in Jordan and the government procedure of recruiting teachers, the educational official from the Human Resource Department of the MOE indicated that:
The school principals for grades 11-12 usually request teachers based on the schools' needs. Then their request is sent to the Planning Department in the MOE giving the number of teachers needed. After that, the head of the Human Resource Department reviews the list of teachers needed and recommends the teachers based on the applications provided from applicants. Afterward, the chosen teachers are notified through the newspaper. No interviews or tests are required in order to be hired as a teacher. The number of teachers assigned to each school, according to the educational officials, depends on the staffing needs at the beginning of each year or during a school year. A certain number of teachers for grades 11-12 are hired based on the size of the schools and the number of students. Some large schools with a large number of students require more teachers than smaller schools and have fewer students.

In addition, the official pointed out that substitute teachers are provided to each school in order to cover any emergencies all year long. The education official pointed out that Jordan does not have any shortages in the number of female teachers in general and/or in particular subject areas in urban or rural areas for grades 1-12, "There are a significant number of female teachers (100%), especially for grades 1-10 in urban and rural areas. Jordan has enough female teachers for all subject areas, but the shortage that the country is having at the present time is in male math and science teachers."

**Teachers' Qualifications**

Since teachers' qualifications impact female students' attendance and attainment, as mentioned earlier, a question was asked of the educational officials about the effect of Jordanian law on teachers' qualifications, and the availability of trained female teachers for grades 11-12. According to the official, all female teachers who teach students in grades 11-12 hold a minimum of a Bachelor's degree (B.A.), "All teachers who are hired to teach grades 7-12 should have at least a Bachelors degree. Teachers also should teach students based on their degree background. For example, math teachers should teach math, science teachers should teach science, and so on and so forth."
In addition, Jordan Educational Law, Part 15 (2007 p. 40-44), establishes that the MOE hires teachers based on two ranks: A. Teaching position, and B. Supporting Specialist. Teaching positions are divided into three levels: Level 1, Teacher 2; Level 2 Teacher 1; and Level 3, Expert Teacher. Also, according to the law, any teacher who is hired for Level 1 should possess a Bachelor's degree and a minimum of five years of teaching experience. He or she should also obtain an International Computer Driving License (ICDL) or its equivalent, and a minimum of good evaluation. For teaching position Level 2, a candidate should possess one year of education beyond the Bachelor's degree and ten years of teaching experience. In addition, the teacher should complete an educational training program that is related to his/her educational area, as required by the MOE. The educational training should be equivalent to 160 hours and the candidate should pass it successfully. In addition, he or she should hold an ICDL and maintain a minimum of a satisfactory evaluation. For teaching position Level 3, the candidate should have 15 years of teaching experience and have a minimum of a Master's degree. He or she also should maintain a satisfactory evaluation and develop at least two pieces of research work or write two books that are related to the educational field.

Rank B, the Supporting Specialist category, is divided into three levels: 1. Assistant Educator, 2. Educational Administrator, and 3. Expert Educational Administrator. For the second educational rank, candidates who are applying for position Level 1 should have a minimum of two years of college and five years of teaching experience. He or she should also possess an ICDL, or any other equivalent program that the MOE approves. For position Level 2, the candidate should have a minimum of 10 years of teaching experience and should possess one year of education beyond the
Bachelor's degree. He/she should also complete a minimum of 160 hours of educational administration training and should pass a test that is required after the completion of the program (Jordan Educational Law, 2007 p. 40-44).

**Teachers' Salaries and Benefits**

Since female teachers are a significant component of girls' educational access and participation, school districts and boards of education should promote the recruitment of female teachers through reasonable salaries and benefits. In response to the question regarding female teachers' salaries and benefits in Jordan, the official indicated:

The newly hired teachers' salaries start from 314.70 JD a month, which is equivalent to US$450. If a teacher, male or female, is married, then their salary is based on the size of their families. For example, 15 JD are added to each married teacher’s monthly salary who is without children, and 20 JD is added for each teacher with children (15 JD = $20.00 and 20 JD = $25.00). At the same time, teachers are offered full benefits, such as a pension and medical insurance for the whole family including teachers' parents. Yet, the MOE deducts premiums of 5.5% for pension and 3% health insurance from employees’ salaries. Female married teachers are also provided with 90 days' maternity leave before or after delivery, with a continuation of their benefits. As part of their yearly benefits, teachers are also permitted 14 days of leave time—7 sick days and 7 personal days. In addition, teachers are provided with twenty-one days of vacation to do their religious pilgrim to Makka (holy place in Saudi Arabia) without affecting their salaries or benefits. Moreover, the MOE provides teachers with opportunities to continue their education in or outside the country but without salaries or benefits. A yearly salary increase is also provided to teachers. Additionally, the King of Jordan, Abdullah II, provides teachers, especially the ones who teach in rural areas, with living units as an accommodation to provide support to allow them to continue teaching in these areas.

However, the female teachers, as well as the administrators, argued that the salaries and benefits were not sufficient for teachers' survival. One of the teachers said, "The salaries are not encouraging and the only reason that we prefer to stay in the teaching position is our passion for education." Another teacher stated, "Private schools pay more money than public schools. However, most private schools are located in the
capital Amman, and it is hard for some of us from other cities or villages to travel long
distances to work for them.” They all argued that, in order to attract more people to the
teaching profession, the MOE should improve the salaries of teachers, both male and
female.

**Teachers’ Training and Workshops**

As mentioned previously, providing workshops and training for teachers are
critical to enhancing their teaching skills, which will also reflect on students’
achievements. The MOE, according to one official, provides teachers with workshops
and training once or twice a year. These workshops are given by special educational
directors from the Board of Education in each city or district. Yet, the teachers argued
that not all workshops are useful and beneficial. One teacher indicated, “Some
workshops are useful and some are not, and their effectiveness is based on the knowledge
and the ability of the presenters. These workshops’ effectiveness also depends on the
topic and to what extent they are related to students’ issues.” The teachers, as well as the
administrators, agreed that very few workshops are provided for administrators. One of
the teachers said, “Administrators are scarcely provided with training and workshops and
they need supports in order to assist students and their teaching staff too.”

**Educational Quality/Student-Teacher Ratio (STR)**

As mentioned earlier, reducing the number of students per teacher was found to
have a positive effect on students’ achievement (Achilles, et al., 1994). It also helps the
teacher to focus on each student’s needs. In response to the question on the existing
policies in regard to student teacher ratios in Jordan, the educational official indicated
that Jordan does have policies on the number of students to each teacher, “There is a
student-teacher ratio that should be met in Jordanian schools. However, some schools in some cities might exceed the requirement ratio because of the large number of students.” One teacher from an urban school setting, however, stated, “Some schools might surpass 40 students for a teacher, especially in cities such as Amman and Zarqa.” (Amman, Zarqa, and Irbid are the largest and the most populated cities in Jordan.)

The previous data on the STR in urban areas, however, show a slight increase (0.3%) between 2001/02 and 2002/03. This slight increase in the STR might be related to the large number of Iraqi children who entered Jordan with their families due to 2002-2003 war. According to Weiss (2007), approximately 800,000 families migrated from Iraq to Jordan following the armed conflict in Iraq in 2003. Most of these immigrant families reside in the capital Amman. About 50,000 of the children of migrant families are enrolled in public schools. In order to assist the Jordanian government in providing accommodations to the large number of Iraqi refugees, several United Nations agencies (i.e., UNICEF, WFP, and UNFPA) established institutions to serve Iraq’s families. In addition, Jordan received about $80 million in assistance from international organizations in order to help the MOE in providing education to the Iraqi children. The money was used to construct schools, renovate classrooms, and hire more teachers.

**Availability of School Materials and Technology**

Research has found that female teachers, as well as the availability of textbooks in schools, seem to have a significant impact on enrollment for girls (King and Bellew, 1991). Furthermore, the researchers indicate that parents are more interested in sending their girls to schools that provide textbooks and female teachers.
According to the educational official, "All students in grades 1-10 in urban and rural areas are provided with books free of charge. Students in grades 11-12 must purchase their own books, and the prices of which are considered reasonable by most Jordanian families." The teachers and the administrators, on the other hand, argued that the price of the books for grades 11-12 were costly. One of the administrators said, "The price of books and school fees for grades 11-12 are very high to some poor families. We give money or share our copies with some disadvantaged girls."

Meantime, other materials, such as science equipment, are provided to all public schools. The head of the science department said, "The school district provides us with science equipment, and we as teachers and administrators have to maintain this equipment. If any damage occurred to any of the equipment, it would be hard to replace." On the other hand, computers are provided to all schools in urban, as well as rural areas, with a connection to internet services. The official stated, "When schools were supplied with computers, all teachers were sent to training so they would be able to use the technology in their classrooms." Furthermore, the emphasis on education and technology made Jordan a target for investment by international companies. For example, in July 2003, the Jordanian Government launched the Education Reform for the Knowledge Economy (ERFKE) initiative that was supported by USAID. This five-year, $380 million program, was one of the most ambitious education reform programs in the Middle Eastern and North African region to date. The main goal of this educational project was to reorient education policy, restructure education programs and practices, improve physical learning environments, and promote learning readiness through improved and more accessible early childhood education. This project also was
supported by eight other donor nations and multilateral organizations and expanded to ERFKE I and II.

The ERFKE I and ERFKE II projects assisted the government’s early child care initiative by creating 100 public kindergartens, fostering the development of field-test curricula, and an accreditation system in the next year. In addition, USAID worked with the Ministry of Education on school-to-work programs and developed an Informational Technology (IT) curriculum stream for high school students (USAID, 2006).

To meet the goals of ERFKE I and II’s IT curriculum stream at the secondary level, all the teachers and the administrators agreed that more computer training is needed for urban and rural personal. One of the administrators stated, “We still have some teachers who struggle with the technology. I really would like to see more computer training in the future.” One of the rural teachers stated that the focus on using technology such as computers took teachers’ time from providing instruction: “We do not have time to teach as we used to long time ago. I think the computer is taking us away from the teaching.”

### School Attributes/Condition of School Facilities

The condition of school facilities and the lack of school amenities such as lavatories were found to be critical for girls’ educational participation, particularly at the secondary level, in developing countries (Shah and Eastmond, 1977). According to the official, “Recently, the new school buildings have to follow certain criteria which have to meet female and male needs. The old school buildings are always under renovation to improve their condition.” The education official also added, “All school buildings, especially for grades 7-12, are provided with special facilities such as health rooms to
accommodate girls' and boys' needs. A yearly budget is provided to maintain and renovate school buildings, as well as for expanding them. Old school buildings do not have heating or cooling systems and teachers or administrators usually provide students with portable devices during winter and/or summer seasons."

The teachers from urban areas indicated that the condition of some school facilities such as lavatories were not adequate. One teacher stated, "All school buildings are provided with lavatories but lack sanitary conditions." The teacher also added, "These female lavatories do not have sufficient staff to maintain them, and they lack water most of the time." "Moreover," the teacher added, "the condition of some school buildings’ facilities, especially the restrooms, is very poor and most female students do not feel comfortable using them. Lavatories in some school buildings also are lacking proper sanitary conditions." Another teacher stated, "My school building, for example, does not have enough staff to clean the facilities, which makes it hard for female students to use." Furthermore, the teachers and administrators agreed that the number of lavatories in some school buildings are not sufficient, compared to the number of the female students. One administrator stated, "Some school buildings might have 200 students, while the number toilets might be only 5 which is not sufficient to serve that number of students." Another teacher stated, "Because of the bad condition of the toilets, most female students do not use them during the day except if it is an urgent situation."

The condition of some school buildings in rural areas is also not adequate to meet female students' needs. As one of the rural areas teacher stated, "Some school buildings lack heating and cooling systems, adequate lavatories, and areas for extra curricula such as gym".
Type of School

When the education official was asked about the availability of single-gender schools and coeducational schools, he stated that the government provided four types of schools for male and female students in grades 1-12: (1) the MOE public schools, (2) other government schools (religious that are part of the Ministry of Awkaf, army schools, and the High Ministry of Education schools), (3) United Nations Relief and Works Agency (UNERWA), and (4) and private schools. All public schools grades 4-12 in Jordan, in both urban and rural areas, are single-gender. According to the official, “Parents, especially the ones who live in rural areas, prefer to send their children, particularly daughters, to single gender schools. The Jordanians’ culture and religion prohibit mixed-gender schools; it is considered immoral for both boys and girls.”

The official also indicated that the public schools are the dominant ones in urban and rural areas for grade 1-10 and 11-12, followed by the UNRWA schools. The UNRWA schools, as the official explained, are found in urban but not in rural areas and they serve students ages 6 to 15 years old. The UNRWA schools also are supported by the United Nations, and primarily serve the Palestinian refugees who were forced to leave their land in 1948 and settle in Jordan. Furthermore, a few nongovernmental schools, as the official indicated, are managed by the Ministry of Awkaf, the Army, and the Higher Ministry of Education and are scattered in different cities and villages.

Cost of Schooling

According to Tiejen (1991), the direct school cost was found as one of the major barriers to girls’ access to schooling in some developing countries. This direct school
cost includes school tuition and textbook fees. When these countries removed school fees, for example, the girls’ educational enrollment increased (Birdsall et al., 2006).

The educational official, as well as the teachers and administrators, were asked about their input on the direct school cost and if Jordanian families can afford it. The official first indicated that basic education from grades 1-10 is compulsory and free:

Students who are enrolled in grades 1-10 are provided with school books once a year without cost, but parents have to pay a small amount of money for the entire year, which is 3.25 JD for grades 1-6, 6 JD for grades 7-10, and 26 JD for 11-12. Parents, on the other hand, are responsible for school supplies and school uniforms. A school uniform price varies based on the sizes, costing from 5 JD and up. Students in grades 11-12 are required to pay a yearly school fee, which is about 20 JD and 20 JD additional fees for the yearly exam, Tawjihi. In addition, students in grades 11-12 must purchase and pay for their own school books.

According to the teachers, the school fees are considered expensive for many families, especially if they have more than one child in school (i.e., students grades 11-12 have to pay approximately $50.00 a year for school tuition, books and exam fees). One teacher said, “The school fee for grade 12 is considered out of reach of some deprived families in urban or rural areas. Some of them have difficulty paying the school fees as well as the school uniforms and books.” One of the administrators also indicated that teachers sometimes share their own copies with the students, due to the fact that some students cannot purchase school books because of their high price. According to the educational official, the school building principals are allowed to waive the school fees. He also added, “Occasionally, King Abdullah II assists Jordanian families, especially in rural areas and waives the school fees as well as provides students with cloths and school uniforms.”

**Subsidiary Question 1.3** How have the existing government policies in urban and rural areas, if any, improved girls’ access to and participation in secondary education?
Interviews, Reports, and Analysis of Studies

This research question seeks to explore the type of educational policies that impact female students at the secondary level in urban and rural areas in Jordan. In order to answer this question, an interview was conducted with the head of the planning department of the MOE in Jordan. As the head of the planning department, the interviewee was able to answer all interview questions regarding government educational policies for female students at the secondary level. The meeting with the head of the Planning Department took place in the MOE and lasted about an hour. The conceptual model on the type of educational policies (see Figure 2, Chapter 2) is used for the analysis of this research question. According to the generic model, policies are classified into two categories: generic policies, and gender-sensitive policies. Generic policies are government policies that are established in general to increase girls and boys educational participation such as compulsory education. Gender-sensitive policies, such as readmission for pregnant and marriage girls, are policies that are established specifically for female students in order to increase their educational access and participation.

Compulsory Education

The educational policies in Jordan are created to meet the needs of both male and female students. Compulsory education, for example, is a fundamental policy for male and female students. To enforce it, the Jordanian government established an enforcement act to assure people's compliance. Batanieh (2008) indicated that the first law on compulsory education in Jordan became effective in 1952, and considered the first six years of school, grades 1-6, as obligatory. In 1964, the MOE extended compulsory
education to encompass nine years, grades 1-9. In 1987, the law governing compulsory education was further extended to ten years, grades 1-10, and was free for all students.

The educational official stated, “The Hashemite Kingdom of Jordan, according to the Constitution, guarantees education for all Jordanians. Accordingly, the government created the policies and regulations that assure free education for all Jordanians from kindergarten to grade twelve.” In terms of penalties for not attending schools for students’ grades 1-10, the official stated, “Parents who have children, boys or girls, in grades 1-10, are obligated to send them to school. The punishment for not complying with the law is 500 JD, which is equivalent to about $800.00 and three months of prison time.”

Setting up a School in Rural Areas

Compulsory education cannot be effective unless agencies such as schools are established. These schools also need government funding in order to function and perform their roles. Since the establishment of the Hashemite Kingdom of Jordan, and even with its limited natural resources, the Jordanian government focused tremendously on education and devoted a large portion of its budget to the educational system. Different types of schools (public, private, and others) were established in urban and rural areas to meet students’ needs (Batanieh, 2008).

Moreover, the government policies focused on remote and rural areas to ensure that both girls and boys have access to, and participate in, secondary education. Policies such as setting up schools in rural areas are established and based on the number of students who reside in these areas. According to the educational official, “The MOE must build schools in rural areas even when the number of students ranges from five to
ten.” In terms of the safety of male and female students, policies were also developed to ensure that schools are built close to students’ residencies, and far from any areas which would endanger the safety or welfare of students. Accordingly, the government required selected criteria when establishing schools in rural areas:

Any school that the MOE established in rural or urban areas should follow certain criteria. The safety of all students, boys and girls, is top priority for the MOE when establishing schools. For example, a school should be distant from flooding areas and a safe distance from street. Schools which are established in rural areas are placed far from tribes who have conflicts or problems of cooperation. Furthermore, for every eight students in rural areas, the MOE is obligated to open school for these students. In terms of the distance from the students’ residency to the schools, in flat areas, 1 kilometer is required for grades 1-10 and for high or mountain areas, a distance of 500 meters. For grades 11-12, a distance of 2000 meters is required in flat areas and 1000 meters in high or mountain areas.

### Readmission Policies for Married and Pregnant Girls

Educational policies that prohibit girls from attending schools due to their marriage and or pregnancy in some developing countries were found to hinder girls’ education (Hamza, 2002). In some rural areas such as Yemen, where culture and tradition enforce early marriages, girls are prevented from readmission to school after they get married or become pregnant. In other countries in Sub-Saharan Africa, also, girls are not allowed back to school if they are found to be pregnant (Hamza, 2002). In order to understand Jordanian policies in regard female students’ readmission after marriage or pregnancy, the official indicated that there is no specific policy on this issue. However, the law in Jordan does not prevent female students from being readmitted to school after marriage or pregnancy, if the return is within three years:

In general, students, boys or girls, are readmitted to school if absences do not exceed three years. Accordingly, female students who leave school for the sake of marriage are allowed to return as long as their return is within three years. In addition, the MOE created informal education alternatives such as home schooling and evening programs, to meet the needs of male and female students.
who drop out of school. If female married students, for example, do not feel comfortable attending regular schools they have other options. Students are also allowed to attend the final exam at the regular schools near their homes (MOE official).

Educational polices such as the establishment of the informal schooling programs were found to help both male and female students, especially the ones who drop out of school at the secondary level. This type of inducement policy provides boys and girls with the opportunity to continue their education, and prepares them for the market place if they wish to work before attending college. The informal programs include: (1) Literacy programs (2) The follow-up program which is a continuation of the literacy program of study (3) Evening Classes Centers Programs (4) Household Studies Program, and (5) Summer Studies Centers Program. All these programs are supported financially from the MOE and are staffed by qualified male and female teachers. The informal education programs provide girls and boys with learning opportunities and a comprehensive unified teaching environment, especially for students who dropout and are unable to finish their schooling. These programs, therefore, play a key role in achieving EFA goals and implementing inclusive development plans (Integration between the Formal and Non-Formal Education in Jordan, 2004).

Besides informal education, other inducement mechanisms comprise the establishment of special education and inclusion programs. Toward the end of the 1990s, the Jordanian government recognized the importance of meeting the needs of students with learning disabilities. Accordingly, special programs were implemented and teachers’ training was provided to serve these students. The integration of all students with learning, behavior, and physical disabilities in regular classrooms also sought to
create a suitable learning environment and equal educational opportunity for students assigned to special education classes (Al-Jabery & Marshall, 2008).

To support the provisions for special education and inclusion as established by law, the government provided funds for all teachers to attend workshops, training programs, and college courses in order to assist students with all types of disabilities. The educational official commented, “We implemented inclusion programs in all schools, in order to serve all students with disabilities.”

In relation to current policies, the Jordanian government did not design any gender-sensitive policies. When the education official was asked about the need for any gender policies to increase female participation, she responded:

The MOE policies are all established for both male and female students. Jordan reached gender equity in basic and secondary education and accordingly, they did not necessarily have to create specific policies targeting female students. All educational policies such as compulsory free education, informal schooling, uniforms and school cost, etc., are all created for both genders.

**Summary**

The interviews with the teachers, administrators, and the educational officials revealed that no shortage was found in regard to the number of female teachers for grades 11-12. Instead, the shortage applies only to the number of male math and science teachers. The data on the number of teachers, however, show a significant increase in the number of female teachers in urban and rural areas, which coincides with the information gleaned from the interviews.

On the other hand, the archival documentation on teachers’ qualifications shows that teachers must possess a minimum of a Bachelor’s degree in their subject areas in order to teach grades 11-12. Thus, all female teachers who teach grades 11-12 in Jordan are
found to be highly qualified. Although teachers are highly qualified, a scarcity of training programs and workshops was found, according to the interview with teachers and activities administrators. Furthermore, teachers' salaries and benefits do not encourage individuals to continue in the teaching profession, according to the teachers and administrators.

In terms of school attributes, the analysis of the interviews reveals that the Jordanian government provides female students with three types of schools: public schools, private schools, and other governmental schools. In addition, single-gender as well as coeducational programs were found to be available for all female students. Yet, the condition of some school buildings in urban and rural areas is very poor. For example, the lack of sanitary facilities in some school buildings prevents girls from using them during the school day. This condition might be due to the shortage of maintenance staff and/or to the lack of yearly renovation of these buildings. In addition, an absence of heating and cooling systems, as well as limited areas for extra curricular educational activities, were found to be some of the major debilitating conditions in some of these school buildings. Furthermore, some schools in urban areas were found to have a high STR, which might negatively impact the attendance and achievements of male and female students.

In reviewing the availability of school materials such as textbooks for grades 11-12, female and male students are required to purchase these supplies. The high prices of these textbooks placed them out of reach of some female students. In addition, the school's direct cost or tuition, and the purchase of the yearly school uniforms, were also found high for some female students. To offset these costs, King Abdullah II, the head of
the Jordanian government, provided assistance to all students, males and females, in urban and rural areas. The aid included a distribution of school uniforms, free winter clothes, and the waiver of school fees or tuitions for all students' grades 11-12.

In terms of technology, Jordanian schools in urban and rural areas were found to be advanced in the use of computers, compared to some Arab countries and some developing countries, especially after the implementation of ERFKE I and ERFKE II in 2003. These projects that were supported by the USAID were intended to improve the whole educational system and develop an Informational Technology (IT) curriculum stream for all high school students.

Lastly, Jordanian educational policies are formed to meet the needs of all male and female students. Policies such as compulsory education, the establishment of schools and their location from students' homes, the teachers' qualifications, the establishment of non-formal education, the technology integration to all schools, the inclusion policy of students' with disabilities, the school tuition, and the increase of the government and the MOE spending on education were all intended to increase educational opportunity and output, not just female, but also male students.

Chapter VI will discuss these findings, draw some implications, and make some recommendations for future research, policy and practice.
CHAPTER VI
SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

"Gender inequality holds back the growth of individuals, the development of countries and the evolution of societies, to the disadvantage of both men and women" (State of World Population Report, 2000). This dissertation consists of six chapters. Chapter I introduced the study, describes the nature of the problem, the purpose of the study, significance, delimitation and limitation of the study as well as the definition and terms of the study. Chapter II reviewed some literature related to girls' education in developing countries. Chapter III described the research design and research methodology. Chapter IV provided a brief history of Jordan and a description of its educational system. Chapter VI highlighted the results of the analysis of the study by answering the main and subsidiary research questions of the study. Chapter VI presents the findings, conclusions, discussion, recommendations for practice, policy, and future research. First, the researcher discusses the research findings of each research question. Secondly, this researcher examines the implications resulting from the study. Finally, the researcher presents a conclusion and recommendations based on the researcher's personal reflections.

Purpose of the Study

The overarching focus of this study was an examination of the status of girls' enrollment at the secondary level in urban and rural areas in Jordan, and the role played
by the Jordanian government in terms of school supplies and the establishment of governmental policies that promoted female access to and participation in secondary schooling. Based on previously conducted research on females' schooling in developing countries (Teijen, 1991; Hill & King, 1993; Klasen, 2003; Hanza, 2002; Lancove, 2008), an interview protocol was conducted that examined the school-related factors and government policies which contributed to girls' educational participation in Jordan. The supply-side factors model (see Figure 1, Chapter I), as well as the type of educational policies model (see Figure 2, Chapter II), were used for the purpose of the analysis of this study.

**Description of the Research Design**

In order to understand the changes in female enrollment in urban and rural areas at the secondary school level in Jordan, and the role played by the government in terms of school supplies and policies in promoting access and participation, the researcher reviewed government educational documents. These educational documents include enrollment records of girls and boys, as well as various school-related factors such as the number of male and female teachers, the number and types of schools, student-teacher ratio (STR), students' achievement rates, and government educational expenditure. A qualitative case study was conducted for this purpose. In addition, multiple data collection methods were used, such as semi-structured interviews, analysis of articles and reports, and archival reviews of available documents related to girls' schooling at the secondary level in Jordan. The data on girls' access and participation were derived from governmental documents which covered the period 1999/00 to 2004/05. This time span...
permitted the researcher to observe the trends and the changes in girls’ participation at the secondary level over a six-year period.

Content analysis of articles, including archival documents, was conducted to understand the nature of gender equality in Jordan’s schools. Interviews with key personnel from the Ministry of Education (MOE), as well as teachers and administrators, were conducted for the purpose of this study. The interviews with participants were conducted in homes and offices. Descriptive statistics were used to analyze gender equalities in educational outcomes as reported in the national of educational statistics for the six year period. Narrative descriptions of participants’ perceptions of factors that improved secondary school females’ educational participation were provided.

Summarized Findings and Discussion

In this section, the researcher will present the summary of the findings from the study’s main research question and three subsidiary research questions. The discussion of the findings will draw from excerpts from the literature, participants’ narratives from the interviews, and the researcher’s processing of study-derived data.

The main research question of the study was: What is the status of girls’ enrollment at the secondary level in urban and rural areas in Jordan, how has this changed over time, and what supply factors in terms of school and governmental policies have contributed to female access and participation in secondary schooling?

Subsidiary question 1.1 How has gender parity (that is, the ratio between boys and girls) at the secondary level in urban and rural areas in Jordan improved over time?

Through content analysis of the MOE documents, the study established the existence of gender equity in participation in secondary schooling in Jordan. Descriptive
statistics were utilized to examine gender equity in access to education over a six-year period using proportions and percentages to determine gender comparisons. The researcher found that the number of girls and boys in grades 11-12 increased slightly in urban areas between 1999/00 and 2004/05. The analysis of the results also found that the number of male students enrolled in urban areas was slightly higher than females for the same reference years. However, gender parity, measured as an equal number of boys and girls, continued to exist for the same reference years. In addition, the results showed that, while the number of girls and boys increased slightly in urban areas, it decreased somewhat in the rural areas for the same reference years. This decrease in the number of male and female students in rural areas should be further investigated. Policymakers, as well as educators, should create intervention programs and strategies in rural areas for both male and female students at the secondary level to improve and to increase enrollment.

Although the number of female students decreased over the years of 1999/00 and 2004/05 in rural areas, their participation level was found to be slightly (1-2%) higher than males. This phenomenon is unusual, compared to many developing countries—including some Arab states—where boys usually outnumber girls in rural areas. In Yemen for example, only 21% of female students enrolled in rural areas at the secondary in 2005 compared to 66.6% of boys (Alim et al, 2007). In some rural areas in Sub-Saharan Africa such as Niger, male students are found to exceed the number of females (Hamza, 2002).

**Subsidiary question 1.2** How have the national government policies with respect to school-related factors such as availability of female teachers, availability and location of
schools, type of school, school infrastructure, and school quality aided in promoting female access to secondary education in urban and in rural areas in Jordan?

This study used the supply-side factor model (see Figure 1, Chapter I) to find out what the government had done in terms of school-related factors in urban and rural areas to increase female access to secondary education. School-related factors in this study included: the number of male and female teachers, the number and types of schools, Student-Teacher Ratio (STR), students' achievement rates, and government educational expenditure.

According to research (Shah & Eastmond, 1997; Herz et al., 1991; King & Hill, 1997; Coleman, 2004; DeJaeghere, 2004; Rose & Subrahmainian, 2005), the lack of trained female teachers, adequate schools, female lavatories, school materials, free education, and single-gender schools were all identified as barriers to female schooling in developing countries. Inadequate school buildings for example, especially the absence of toilet facilities, were found to significantly impact female enrollment at the secondary level in some developing countries (Shah & Eastmond, 1977).

Furthermore, many cultures in developing societies prevent adolescent girls from attending coeducational schools; accordingly, girls do not attend school as long as single-gender facilities are not available (Hertz et al., 1991). The availability of female teachers was thus found to be a critical facilitation factor in encouraging parents to send their daughters to schools in many developing societies. Female teachers, to the parents, offer a climate of safety for their daughters at school (Herz et al., 1991; Coleman, 2004; DeJaeghere, 2004; Rose & Subrahmainian, 2005). Moreover, the availability of
textbooks in schools was found to have a significant impact on girls' enrollment (King and Bellew, 1991).

Additionally, the shortages of teachers and school buildings can result in very large class sizes and high student-teacher ratios (World Bank, 1997). This shortage of teachers also leads to schools' implementing double shifts, which shortened the school day for individual pupils. According to the World Bank (1997), in some school districts with low literacy rates in certain developing countries such as Indian State of Tamil Nadu, the average class size in primary school reached 78 students. Collateral consequences of extraordinarily large-sized classes include teacher inactivity, infrequent and ineffective supervision, and high rates of teacher absenteeism.

In terms of female teachers' availability in urban and rural areas, this study found that Jordan has a sufficient number of female teachers for all subject areas for girls' grades 11-12 in urban as well as rural areas. The analysis of the data showed that the number of female teachers for grades 11-12 increased significantly in urban (54%) as well as rural areas (84%) between 1999/00 and 2005/06. In addition, the results showed that female teachers in urban and rural areas who are hired to teach grades 11-12 are all certified and hold at minimum a BA. Therefore, the interviews with the teachers and the administrators showed that a lack of teachers' training and workshops is a concern. Furthermore, the teachers and administrators in the study were found to be dissatisfied with their earnings, as well as the teacher benefits.

In terms of school types and availability, this study found that the Jordanian government provides female students with schools in urban as well as rural areas. These schools are categorized into public schools, other governmental schools, and private
schools. The public schools, however, accounted for almost 70% of all school types. Public schools that serve female students in grades 11-12 are all single-gender schools and the analysis showed that the number of these schools increased in urban (37%) as well as rural (8.4%) areas between 1999/00 and 2004/05. On the other hand, the private schools in Jordan are divided into single-gender and coeducational. The private single-gender schools, with respect to their small number, increased in urban areas while none was established in rural areas. Meanwhile, the other governmental single-gender schools that operate through other governmental sectors such as the army, the Awkaf, and the highest ministry of education, were few in number and were mostly found in urban areas.

Coeducational schools, as mentioned earlier, are only provided through some private and other governmental sectors. The private coeducational schools, according to the data, increased in urban as well as rural areas through the years of 1999/00 and 2005/06. The other governmental schools, on the other hand, accounted for a small number and increased in urban areas, whereas they decreased in rural areas. The availability of private, single-gender, or coeducational schools in Jordan depends on students’ enrollment. Since the tuition of these schools is generally high, few parents, especially in urban areas, can afford to send their girls or boys to these schools.

In terms of the adequacy of female schools, through interviews with public school teachers, administrators, and educational officials, the results showed that the condition of some public school buildings is unsatisfactory. It was also found that, while separate lavatories were provided for female students, these facilities often lacked sanitation, and janitorial support was typically insufficient. Moreover, the number of women’s
lavatories was insufficient to accommodate the large number of female students in some public schools.

In terms of supplies such as school textbooks, Jordan was found to provide all students in grades 11-12 with textbooks. These textbooks, however, are not free and some Jordanian families, according to the interviews with teachers, were either unable to purchase them or had to forgo purchasing other essential goods. Hence, the aid that is provided by the government to the Jordanian families should be consistent and the cost of the textbooks might be reduced in order for some students, male or female, to afford them. In addition, the analysis of the research showed that computers and internet services are installed in all public schools urban and rural areas. However, the teachers and administrators indicated that more computer training is needed to improve the computer skills of instructional staff.

According to UNESCO (2003-2004), it is assumed that lower student-teacher ratios, higher teacher qualifications and higher levels of public spending are likely to be good indicators of educational quality. This study found that Jordan’s STR decreased between 1999/00 and 2005/06 for grades 11-12 in urban and rural areas. Meanwhile, Jordan’s STR (23, 21) was found to be lower than world average (25, 25) and developing countries (27, 28) between 1999 and 2006 (UNESCO, 2009). Surprisingly, however, the teachers interviewed in the study argued that some schools, especially in urban areas, have high STRs. The analysis of documents also indicated that these high STRs might be related to the large number of Iraqi student refugees who entered the cities of Jordan after the invasion of Iraq by the US. An investigation should be conducted of these schools with high STRs, and strategies and interventions should be developed to reduce the ratio
of students to teachers. Reducing STRs might have a positive effect on student performance, especially in view of the fact that the achievement rates for both male and female students, has decreased significantly since 1999/00.

In terms of educational expenditure, the study found a significant increase (37.7%) in spending on education in general, but only a slight increase in spending on basic and secondary education. This insignificant increase (0.02%) in basic and secondary education spending between 1999 and 2004 is insufficient to meet the challenges confronting the educational system in Jordan.

Subsidiary question 1.3 How have the existing government policies in urban and rural areas, if any, improved girls’ access to, and participation in, secondary education?

For this question, the researcher used the category-referenced type of educational policies model (see Figure 2, Chapter II). According to the model, educational policies are divided into generic and gender-sensitive policies. Generic policies are policies that are created in general to meet the needs of both male and female students, such as compulsory education. Gender-sensitive policies are strategies that are focused on female students in order to improve their enrollment, attendance, or performance and they are usually developed in countries with high gender disparities. For example, policies such as decreasing the distance to school are established in some developing countries in order to raise girls’ enrollment and attendance by assuaging their concerns about safety and reputation (Patrinos, 2002).

When reviewing the educational polices in Jordan, the researcher found that the national policies are overwhelmingly generic in nature, which suggested equal opportunity for all of Jordan’s children ages 6-18, regardless of their gender. One
example of a generic policy is the free and compulsory education afforded to all students in Jordan. According to the interview with the MOE official, “The Hashemite Kingdom of Jordan according to the Constitution, guarantees free education for all Jordanians, males and females, and it created the policies and regulation that assure free education for all Jordanians from kindergarten to twelfth grades.” To enforce the compulsory education law, the Jordanian government created regulation policies such as a fine or imprisonment for parents who do not comply with the law.

Furthermore, the educational policies of the Jordanian government focused on establishing schools in urban as well as rural areas that are convenient in distance for both male and female students. For example, schools in rural areas were established based on students’ residency where certain distances were required in flat areas as well as high mountainous areas.

In terms of school-supply policies, the Jordanian government provided all educational institutions with trained and qualified teachers to meet male and female students’ needs at the secondary level. Furthermore, the government provided schools with technology (i.e., computers and internet services) in urban and rural areas. In addition, more educational services were established; such as, special education, inclusion, and the informal education. These services were funded and supported by the Jordanian government to assist all students in urban as well as rural areas.

In conclusion, this study found that the Jordanian government policies were all developed, in general, to meet the needs of both male and female students. When the Hashemite Kingdom of Jordan was established in 1921, the government worked extensively to improve the educational system. Because of Jordan’s limited resources,
the government invested in its human capital to prepare students academically, as well as professionally, to compete globally with the world market. The government provided the necessities for school operation for all students in urban and rural areas. These school necessities included certified teachers, school infrastructure, and school materials such as textbooks and technology. The Jordanian government also cooperated with international organizations, such as UNESCO, the World Bank, and USAID in order to increase and improve its educational system. Furthermore, the stable political environment helped the Jordanian government to continue improving their educational system in order to elevate its status beyond that of a developing country.

**Recommendations for Educational Practice, Policy, and Research**

Findings from this investigation have various implications. The results of the study suggest that Jordan’s cooperation with world organizations such as UNESCO on the Education For All (EFA) initiative resulted in gender equality for grades 11-12. While some developing countries, including some Arab states, struggle to meet the goal of gender equity at the secondary level, Jordan successfully reached that goal. The government’s propensity to provide schools with certified female teachers, school buildings, single-gender and private education, school materials, and appropriate educational policies, facilitated male and female students’ educational access and participation. Yet, the study found that the educational system in Jordan needs improvement.

**Recommendations for Practice**

1. Provide and increase the frequency and quality of professional development of opportunities for all teachers and administrators in urban/rural areas in Jordan.
2. Apply best practices and theories to improve male and female students’ academic skills in order to increase the achievement rates on the 12th grade exam.

3. Apply best practices and theories to improve males’ academic skills in order to close the gender gap at grade twelve.

Recommendations for Policy

1. In order to keep female teachers and attract additional male teachers, the MOE needs to increase the wages and improve the current teachers’ benefits provided for both male and female staff.

2. The MOE needs to improve the condition of school buildings in terms of the number of lavatories, maintenance staff, heating, and cooling systems. The government needs to focus specifically on the old school buildings by providing ongoing physical improvements and renovation to assure male and female students’ well-being and safety.

3. Investigate the decrease in the number of male and female students in rural areas, and develop policies and interventions to improve overall enrollment.

4. Investigate the drastic decrease in the rate of achievement of both male and female students on the Tawjehi exam, and develop policies and interventions to improve students’ academic skills.

5. Investigate the high STRs in some school districts in urban areas and develop appropriate educational policies to improve these schools’ STRs. Policies such as
expanding the school building or hiring more staff might be beneficial to decrease the STR.

6. Abolish school fees for grades 11-12, especially for disadvantaged families in order to enhance the level of participation in secondary education. Free textbooks should also be provided for all students who cannot afford them.

Recommendations for Future Research

1. Replicate and expand the study in five years.

2. Expand the study to include demand-side factors to determine their effect on girls’ access and participation at the secondary level.

3. Do a comparative study of Jordan and another country that demonstrates gender disparity at the secondary level by using the supply-side factors only and other constructs determined for this study.

Conclusions

Research found that educating girls decreases their pregnancy rates, reduces poverty, improves productivity, and decreases children’s and women’s mortality rates (Hill & King, 1993, World Bank, 1995). This study focused on girls’ education at the secondary level in urban and rural areas in Jordan. This research also provided a profile on the role of the Jordanian government in regards to school-related factors and policies that contributed to female secondary education in urban and rural areas. The study found that the number of female students increased overall in Jordan and gender parity continued to exist in urban as well as rural areas. In addition, the study found that the Jordanian government played a positive role in providing school buildings, female
teachers, and school materials and technology to female students. Furthermore, the research found that all Jordanian educational policies are generically established to meet the needs of girls and boys. Yet, an improvement in school facilities, teachers' wages and teacher training quality is needed.

Reaching the goal of gender equality in education, especially at the secondary level, needs commitment from governments in terms of expanding and increasing schools in urban and rural areas, providing certified teachers, and increasing people's awareness of the importance of women's education. This study focused on an important issue—that women's education is critical in every society around the world. If our goal is to develop educated, healthy, and productive citizens, we need to work collectively. Hence, national and international organizations need to provide an adequate education to all girls globally since they are a critical component in every society.
References


UNESCO (2008). *Education for all by 2015 will we make it?* UNESCO. Paris


World Bank (1996b). *India primary education achievement and challenges*. Washington, D.C.


APPENDIX A

Map of Jordan
APPENDIX B

Interview Guides

Interview questions

1. What are the procedures of female staff recruitment? [education officials, Human Resources Department (HRD)]

2. How many female teachers are assigned to a school at the secondary level? 
(education officials, HRD)

3. Are there any shortages of the number of female teachers in particular subject areas? 
(MOE officials, HRD)

4. What are the qualifications for high school teachers? (MOE officials, HRD)

5. What are the guidelines for teachers’ salaries and benefits? (MOE officials, HRD)

6. Does that motivate and attract female teachers? (principals and teachers)

7. Are teachers provided with training and workshops to enhance their teaching skills? 
(MOE officials, HRD, principals and teachers)

8. How often are workshops held and who provides them? (MOE officials, HRD, principals and teachers)

9. Is there a teacher-student ratio at grades 11 and 12 that has to be met? (MOE officials, HRD, principals and teachers)

10. What is the condition of the school facilities and do they accommodate females’ needs at this age? (MOE officials, HRD, principals and teachers)

11. What types of schools (coeducation, single-gender school religious, private) are available for girls at the secondary level in urban and rural areas? (MOE officials, HRD)
12. Is there a direct cost for schooling at the secondary level? If so, can families at different socio-economic levels afford it? (MOE officials, HRD, principals and teachers)

13. Do public schools equip students with materials as well as access to technology (Computers, TV, VCR, etc.)? (MOE officials, HRD, principals and teachers)

14. Are these provided annually or as needed? (MOE officials, HRD, principals and teachers)

15. What is the government policy on compulsory education and are there penalties for not enrolling or attending school? (Education officials, Head of the Planning Department)

16. What is the government policy for setting up a school in rural areas? (Education Officials, Head of the Planning Department)

17. Are there any policies for married females 15 years old and up who decide to return to school? (Education officials, Head of the Planning Department)

18. What are the government policies for increasing participation of girls in school? Are their specific gender policies targeting girls at grades 11 and 12? (Education officials, Head of the Planning Department)