CHAPTER 1

NATURE, PURPOSE, AND OVERVIEW OF
THE RESEARCH AND ITS IMPORTANCE

1.1 Introduction

Education reform has become a global phenomenon as a strategy based on belief in the power of education to improve social conditions as well as to meet economic needs for the next millennium (Corrales, 1999; Dinham, 2000). As a result, there has been a continuing and pressing demand to reform education. This has resulted in the increased politicisation of education as a tool for redressing global recession, restructuring national economies to facilitate greater international competitiveness and solving the social problems of unemployment, family break-up, crime and poverty. In fact, it has been argued, with justification, that schools have in many respects become the last resort of society because they are expected to solve the problems that other societal institutions seem unwilling or unable to treat (Hargreaves, 1994; Dinham & Scott, 1996). Because of this phenomenon, Beare (1989) noted in some detail how structural change has become a common, international feature of education systems during the 1980s and attributed this to a number of factors, including the entering of the “post industrial era” and “interlocking international order” (pp. 254-255).

The pressure for change and the pace of education change have increased considerably over the last decade, in part due to what some have called a world wide education reform movement (Hargreaves, 1996). As a result, education systems have experienced radical new directions in the areas of teaching practice, curricula, teacher education and the involvement of stakeholders. This has been accompanied by
attempts to streamline education bureaucracies with a greater emphasis upon accountability, rationality and self-management.

The education system in Jordan, in parallel with those in the rest of the world, has undergone considerable change over the last 20 years, with respect to restructuring of the years of schooling, modifying teaching practice, improving curricula and textbooks, and increasing the involvement of stakeholders in the education process. In the 1980s, Jordan strove to implement an education system that would address serious structural problems in the labour force in a country confronting a recession and high rates of employment among educated people, particularly in the professions of medicine, engineering, and teaching. At the same time, there was a need for skilled technical labour (Ministry of Education, 1988) that was in short supply because of the cultural tradition of attaching greater prestige to academic qualifications than to vocational training. These labour requirements by the economy made the need for education reform particularly urgent in Jordan (Alatal, 1978).

In response to the need for education reform, the Government of Jordan called for the reform of education to meet the needs of the country and its people (Ministry of Education, 2000). In 1987, the late King Hussein launched the National Conference for Education Reform (NCER), an ambitious, 20 year long, comprehensive education reform program. The ultimate goal of Jordan’s Education Reform Program (hereafter JERF) was to improve the quality of the outcomes produced by the education system. This was deemed a necessary precondition for building the technologically skilled labour power base needed to increase national economic productivity and provide Jordan with a strategic means to retain its competitive position in the regional labour market (Haddad, 1994; Berryman, 1997).

For the purpose of implementation, the reform plan was divided into six national programs to be implemented in three phases. The six national programs were:

1. curriculum and textbooks development;
2. teacher and supervisory staff training;
3. education technology and learning resource centres;
4. education facilities improvement and school construction;

5. vocational and technical education and training; and


Within Jordan, teachers were seen as being central to the change process both as facilitators of change and the group that would be most affected by change. Thus, any change was likely to have a significant impact on the role teachers had historically played in Jordan.

The role of the teacher in change has been the subject of extensive study in many countries. Hargreaves (1997), for example, discussed the effect of changes in the work and role of teachers in contemporary society:

Schools can no longer pretend that their walls will keep the outside at bay...increased poverty creates hungry children who cannot learn and tired ones who cannot concentrate. Fractured, blended, and one parent families fill classrooms with children who are often troubled and present teachers with labyrinthine complexity in the face of mounting social problems. (p. 4).

Similarly, the JERP stressed the centrality of teachers and the importance of their role in making change happen. The JERP then required teachers to change their practice and placed new demands and expectations upon them.

1.2 Rationale for This Study

Teachers' work has been the subject of change over the past decades in Jordan. Recently education reform has placed new professional demands on teachers and this change has had implications for teachers' work and various roles in schools. As indicated in the literature, teachers are fundamental tools for education change (Zumwalt, 1986; Alnahar, Battah & Freijat, 1992; Hanushek, 1994; Alkhateeb, 1996; Mu'taman, 1997). Thus, influencing and shaping the performance of teachers can be viewed as an important component in facilitating change. In this way, teachers become
an elite group (Conley, Bacharach, & Bauer, 1989) who play a leadership role in education and the future of Jordanian society.

Although a few studies have dealt with the issues associated with education change in Jordan (Kharees, 1992; Abu-Zeanah & Abu-Lebedeh, 1995; Alkhateeb & Alnabhan, 1996; Alkhateeb, 1997), to date, the JERP has not been studied in great depth. Nor are there readily available or detailed accounts of the education changes that have been taken place in Jordan. Few attempts have been made to try to understand the political and social factors that affect the implementation of these changes, or to assess the impact of the various changes on the work of teachers and what is happening in classrooms. Nor have teachers had the chance to express their views about the changes to Jordanian education.

The study reported here will fill a significant gap in the literature related to education change in Jordan, and contribute to knowledge by providing the baseline data needed for effective policy development and implementation.

1.3 Statement of the Research Problem

There is agreement amongst a range of experts in education change that the teacher is pivotal to education change and school improvement (Gurry, 1963; Fullan, 1982; Claxton, 1989; Ben Talal, 1998). Against this background, the current study addresses an overarching research question in relation to education change in Jordan:

What processes enable teachers to become proactive agents of education reform in Jordan?

1.4 Aims of the Study

The over-arching aim of this study was to explore how education reform has affected teachers’ work and to elicit teachers’ explanations of their responses to education change. Specifically, this study attempted to achieve the following objectives.
1. To produce statistically reliable and valid data on primary school teachers’ views of the education reform in Jordan.

2. To analyse the relationship between teachers’ views and values and the extent to which these are reflected in official education aims, policies and curriculum requirements.

3. To relate systematic information about the need for education reform in a way that will assist the education reform process by clarifying the current state of teachers’ thinking and values.

4. To make recommendations about how the purposes and policies of Jordan’s education reform program can be most effectively communicated to teachers, and how curriculum development and teacher training can enhance education reform, given the current level of understanding, values and education levels of primary school teachers in Jordan.

5. To apply the analyses of the research data analyses, where appropriate, to make suggestions about improving the conceptualisation of education policy and decision-making in Jordan.

6. To make a research contribution to improving the quality of the education experience of teachers and students in Jordanian primary schools.

7. To make a research contribution enhancing the quality of social and cultural life in Jordan by improving students’ knowledge and understanding of issues such as health, employment and social responsibility, insofar as these are covered in the primary school curriculum.

8. To provide soundly based research that will assist policy decision makers in the Ministry of Education (MOE) in the planning of education change in Jordan.
1.5 Research Questions

The focus of this study was directed by a number of factors that included positioning the research within the education policy reform agenda of Jordan to provide a critical and constructive analysis of key aspects of education change in a unique social, cultural and economic context. To achieve this overarching aim and the objectives outlined above, the study was directed by the following research questions which were drawn from the review of education reform conference documents for the years 1987, 1994 and 1998 and related literature.

1. What processes, methods and strategies have been used in Jordan to introduce and implement education change as part of Jordan’s Education Reform Program?

2. What roles have been stated for primary school teachers in Jordan’s Education Reform Program?

3. How do teachers perceive their performance in schools in terms of translating their knowledge and beliefs into actions?

4. Are there any differences in the education roles of primary teachers due to: gender, number of in-service training courses attended, years of teaching experience, academic qualifications, teaching specialisation, and school location?

5. How do two significant groups of stakeholders, specifically academics and administrators, describe the nature of the changes and role of teachers in the education change process in Jordan?

6. What has been the impact of these changes on teachers and what do teachers think about the nature of the education reforms and the expectations for their role?

7. What factors and/or variables have contributed to teachers’ views about Jordan’s Education Reform Program and the process of implementation of the reforms?
8. From all the evidence in this research study, how effective has the education reform agenda in Jordan been, and what factors have hindered it?

9. What are the implications of findings related to the above questions for future policy and practice concerning education in Jordan?

1.6 Methods

To answer the above research questions, two methods of data collection were employed comprising a survey questionnaire for primary school teachers, and in-depth interviews with three groups of key stakeholders, namely, teachers, academics and administrators.

The survey group was chosen as a representative sample of primary school teachers working in the 13 education districts in Mafraq and Irbid provinces in Jordan. This was a representative, random sample consisting of teachers working in a broad range of geographical areas comprising desert (badia), mountains and plains, and who were representative of the Jordanian teaching profession in terms of gender, education qualifications and years of experience.

The data were collected in March 2001. The researcher personally administered the printed questionnaire in Jordan. Because of this direct contact with schools, a high response rate resulted (see discussion in Chapter 4). The items in the questionnaire were derived from a relevant literature review and an analysis of the papers and documents compiled as a result of the National Conferences for Education Reform held in Jordan in 1987, 1994 and 1998.

The questionnaire was written and administered to the teachers in Arabic, but translated into English for University of Western Sydney (UWS) Human Research Ethics Committee approval. The questionnaire consisted of 58 items covering seven domains as follows:

1. The teacher’s role as developer of students’ cognitive growth;

2. The teacher’s role as implementer of curriculum and teaching methods;
3. The teacher’s role as education evaluator;

4. The teacher’s role as health educator;

5. The teacher’s role as technologist;

6. The teacher’s role in professional and personal growth; and

7. The teacher’s role as a social change agent in society.

Expert advice about the appropriateness, relevance and conceptual coherence of the items was sought from nine different Education Faculty staff members in three different Jordanian universities, who had local expertise in education reform and change in Jordan. To check the validity and statistical reliability of the instrument, a pilot study was conducted, and is described fully in Chapter 4. The results of the survey were analysed using the Statistical Program for Social Sciences (SPSS).

Qualitative research data were also gathered through interviews with samples of teachers, administrators and academics. These three groups were considered to be the stakeholders who were most closely involved in the planning and implementation of education change. The purpose of the interviews was to gather information about the opinions of the three groups regarding their hopes for education change and their views of the education change process. It was deemed important to tap the three groups’ perceptions of the factors that encouraged and hindered education change in Jordan, and to discover the ways in which education reform plans were communicated to them and whether they had any voice in the planning process.

Content analysis techniques were used in analysing the interviews. Unlike the questionnaires described above, the interviews focussed on the change process itself rather than teachers’ reports on the extent to which they had implemented the roles prescribed by the MOE. Content analysis was used to obtain rich qualitative data considered valuable in understanding education change phenomena in Jordan.
1.7 Ethics and MOE Approval

The conduct of the study received ethics approval from the University of Western Sydney Human Research Ethics Committee (see Appendix A). The study commenced after this approval was given. It was also necessary to gain the consent of the Education Directorates of the MOE to allow the study to be carried out in the selected Jordanian schools. In both Irbid and Mafraq provinces, the managers of the education region districts gave the researcher permission to approach the schools directly, and provided a letter to the principals requesting assistance be given to the research.

1.8 Definitions of Terms

This section is included specifically for Jordanian readers, as some of the terms commonly used in education research in English language countries may be unfamiliar. Also, several terms used in Jordan such as “primary school” have somewhat different meanings in western countries. These are explained below.

Bachelor Conversion

According to JERP, all teachers with two years of community degree training will have free access to further training to upgrade their qualifications over two years of part time study, leading to the award of a Bachelors degree.

Badia

Badia is the Arabic term used as the name for an arid, desert area. Such locations occupy four-fifths of Jordan’s area.

Education change

The term education change refers to the group of changes that are introduced to improve the education outcomes of an education system effectively, and specifically in developing countries like Jordan, to ensure that the education system is responsive to and meets the needs of society in the future. Education change in Jordan refers
specifically to the group of changes introduced after the first National Conference for Education Reform in 1987. Throughout this research, the term “education change” was used interchangeably with “education reform”.

**Field teacher**

A field teacher is one who is assigned to teach one or more subjects within a certain scientific field. For example, within the field of social science, the subjects might be history, geography, and demographic studies.

**Primary school**

Unlike many western countries, primary schooling in Jordan extends from Grade 1 (C1) (initial entry at 6 years of age) to Grade 10 (C10) (with students approximately 16 years of age). These are the compulsory years of schooling. Teachers of Grades 1-4 (C1-C4) teach all subjects. For Grades 5-10, there are specialist subject teachers. There is a unified scheme of study for all primary school students, but at the end of Grade 10, students are streamed according to their academic performance in school assessment and examinations in Grades 8, 9 and 10, into either comprehensive (general academic) or applied (vocational) secondary education (Ministry of Education, 1994).

**Professional development**

Professional development is any activity that teachers undertake to improve their knowledge, understanding, and performance related to their current or future professional roles (Logan, 1994, p. 5).

**Subject teacher**

A teacher who is assigned to teach specific subjects, such as English, Arabic, or mathematics is designated a subject teacher.
Supervisor

A supervisor is a person appointed by the MOE and held responsible for fellow teachers’ practice.

Tawjehi

At the end of the two years of comprehensive secondary education, students sit for the General Secondary Education Certificate Examination, commonly called Tawjehi, meaning guidance in Arabic. This examination is administered by the MOE.

Teacher resistance

Teacher resistance is the term used to describe “the inability or unwillingness of teachers to bring about change to their practice. This process might be conscious or unconscious” (Page, Thomas & Marshall, 1977, p.290).

Teacher role

The word “role” is a complex term and there are many concepts where this term could apply. Biddle (1987, 1995) distinguished between three concepts: role as behaviour, role as social position and role as expectation. Havighurst and Neugarten (cited in Hoyle, 1972) defined the word role as a “coherent pattern of behaviour, values, goals, common to all persons who fill the same position or place in society and pattern of behaviour expected by other members of society.” Teachers have many roles. Teachers can be father, mother, judge, salesperson, technician, librarian, and more (Wright, 1987; Lickona, 1991). These aspects are discussed more fully in the literature review. In this thesis, the term teacher’s role refers to a pattern of behaviour common to and expected from members of the teaching profession.

Teacher specialisation

Teachers are classified according to their professional qualifications into two categories: Natural Science (science, and mathematics); and Human Science (fine arts, and social science).
1.9 Outline of the Thesis

The thesis is divided into seven chapters, as described below.

Chapter 1 details the background and scope of the study, lists the research questions and provides an overview of the research methods and analysis.

Chapter 2 provides a general background about Jordan and the history and initiatives involved in the Education Reform Program.

Chapter 3 presents a review of relevant literature. In particular, literature related to the following areas is addressed: the nature of education change and forces behind it; the historical background of education change; reasons for failure in attempts to change education; approaches to education change; change in teacher roles; education change in Jordan; and the seven roles required for teachers in education change in Jordan.

Chapter 4 describes the methods employed in the study and outlines the research design of the study. It also provides details about the questionnaire and interview samples, the methods of data collection and the types of data analysis conducted.

Chapter 5 presents the results of the analysis of questionnaire responses concerning teacher role performance and background factors associated with that performance.

Chapter 6 reports the results of content analysis of the interviews of academics, administrators and teachers.

Chapter 7 contains a recapitulation of the content of earlier chapters and provides a statement of the conclusions reached. It also presents a discussion of implications arising from the study as well as recommendations and suggestions for further research.
CHAPTER 2

GENERAL BACKGROUND INFORMATION ABOUT JORDAN

2.1 Introduction

This chapter presents information related to the first question of the nine adopted to guide this research. That question was:

Question 1: What processes, methods and strategies are used in Jordan to introduce and implement education change as part of Jordan’s Education Reform Program?

Education is not isolated from social, geographical, or other issues so it is useful to outline these issues. Therefore, this chapter begins with an overview of the country’s social and political conditions and mode of schooling as a background to understanding education change in Jordan.
2.2 Geography and Climate

Figure 2.1 shows a map of Jordan and defines its location in the heart of the Middle East.

The Hashemite Kingdom of Jordan, (H.K.J) is located in South-West Asia, the heart of the Middle East, between 34 and 39 degrees East longitude and 29 and 33 degrees North latitude. The Middle Eastern Kingdom of Jordan is a small country that covers an area of 91,880 square kilometres, surrounded by oil-rich neighbours Iraq and Saudi Arabia in the East and South; Palestine and Israel in the West; and Syria in the South. Aqaba is the only seaport (Bunker & Francis 1975; Ministry of Education, 1996b).

Figure 2.1 Map of Jordan

Ancient TransJordan, the area to the East of the River Jordan, was part of the Egyptian, Babylonian, Hittite, Greek, Roman, Byzantine, and Islamic empires. These dynasties were followed by 450 years of Ottoman rule. In 1916 Jordan came under British influence. The area remained under British control and was supported by British financial aid until 1946 (Mansfield, 1990; Hoffman, 1992; Belt, 1998).

Jordan is a developing country that emerged as a modern state in 1921 when the Emirate of TransJordan was established under the leadership of Prince Abdullah who was proclaimed the first King of the Hashemite Kingdom of Jordan. During World
War II, Jordan fought with the Allies. After the war, the country gained its independence from Britain in 1946.

The country has extraordinary climates from the hothouse conditions of the Jordan Valley through to the pleasantly cool and breezy "up-land" (highlands), to the harsh conditions of the South and East Desert. The semi-desert areas predominate in the Eastern and Southern parts of the country and comprise more than 80 per cent of the country's total area. Less than five per cent of the total land area is arable, and is confined largely to the Northern part of the country and the Jordan Valley (Hurst, 1983).

2.3 Political Organisation

The Jordanian political system is a constitutional hereditary monarchy based on the constitution promulgated on January 8, 1952, in which the King is vested with wide powers (Masri & Bermamet, 1995). As Head of State, the King signs and executes all laws. His veto power may be overridden by a two-thirds vote of both houses of the National Assembly. He appoints and dismisses all judges by decree, approves amendments to the constitution, declares war, and commands the armed forces. Court judgements, Cabinet decisions and the national currency are issued in his name. The King may dismiss other cabinet members at the Prime Minister's request. The King appoints the Prime Minister, who exercises executive authority in the King's name after selecting the Ministers' cabinet, which is responsible to the Umah Council, that is, the bicameral National Assembly, comprising 80 speakers from the Speakers Council (Lower House) and 40 Senators from the Al-A 'yan Council (Krien, 1992).

Jordanians went to an election in November 1988, the first time for 22 years. A ban on political parties had been implemented in 1957. In July 1992, parliament formally legalized political parties and for the first time in history, the entire spectrum of Jordanian society participated in the legislative branch of government (Krien, 1992). The King, according to the Jordanian constitution, used his constitutional rights to revitalize the
legislative authorities and enable the reformation of the political parties and the opening of freedom and democracy (Mansfield, 1990). Since 1989, there has been a significant increase in the number of political parties in Jordan. Citizens and political parties have started practising their constitutional rights by exercising their rights as voters and by fielding candidates to the Umah house respectively. These rights are ensured by the constitution and the King has directed his ministerial cabinet to maintain transparency and fairness of the speakers’ house election process. International referees have judged this process positively on all three occasions (1989, 1993 & 1997) when Jordanian elections have been monitored by international agencies.

2.4 Economy

For more than the last 30 years, the national economy has achieved a remarkable growth rate. This is in spite of the obstacles and challenges the State has faced. The industrial infrastructure of the Jordanian economy is still developing, and the economy has confronted many challenges. These include limited natural resources, restricted arable land, scarcity of water compounded by a recent three-year drought, and economic recessions.

The service sector is the largest economic sector in Jordan. The trade balance rate suffers from a deficit in relation to other international trade markets. The economy of Jordan is highly vulnerable to various internal and external determinants, such as the extent of foreign aid, fluctuations in the price of phosphate and potash (considered the main exported natural minerals), and the impact of unpredictable rainfall on agricultural production (Masri & Bermamet, 1995). Moreover, the whole structure of the labour force suffers from an imbalance in supply. Although the country is currently suffering from a high unemployment rate (14.2 per cent, as cited by the Ministry of Labour (2001), Jordan still imports expatriates from neighbouring countries, to work as labourers, particularly in agriculture. In addition, the participation of women in the labour force is low.
From the mid-1980s, the Jordanian economy, like those in most Arab states, has faced a great deal of difficulty including a strong economic recession (Welch, 2000). Moreover, after the Gulf War in 1990, a large number of Jordanian expatriates and Palestinians working in the Gulf States have returned to Jordan, leading to an increase in the unemployment rate (SBS World Guide, 1998).

2.5 Population, Health and Religion

According to the 1995 national census, the total population of Jordan was 4,100,709 individuals. Of this number, 68 per cent live in urban areas where the population density is 43 people per square kilometre. Other salient characteristics of the population are the rapid rate of rural to urban immigration, the high proportion of teenagers under 15 years of age, and a high population growth rate (3.6 per cent). Ethnic groups are relatively small in numbers. These groups were settled in the country by the Turks about 100 years ago and largely comprise Circassian, Chechens, Armenians and Kurds (Baker & Jones, 1998).

The majority of Jordanians speak a dialect of Arabic as a mother tongue. However, an increasing number have started to use in general conversation the Modern Standard Arabic. English is the second language of the country. Although it is not fluently spoken, it is the medium of instruction in science in the scientific institutions.

The health care system in Jordan is divided into two sectors: general and private. The former provides primary health care including vaccination, maternal health and child-care, as well as secondary and tertiary health and medical care for the majority of the citizens. The latter provides health care to private sector employees, who are not included in the governmental health insurance system. A steady expansion of the health facilities and number of medical staff has been achieved in the majority of urban and rural areas. Life expectancy has increased, for females to 74 years and 2 months and for males to 70 years and 4 months, with an overall average of 72 years and 3 months (United Nations Development Program (UNDP), 2002).
Over 80 per cent of the population are Sunni Muslims. There is a small Shiite Muslim minority. Christians comprise five per cent of the population and are mainly Roman Catholic, Anglican, Coptic and Greek Orthodox (UNDP, 2002).

### 2.6 Education

#### 2.6.1 Historical Background

Traditional education in basic skills was provided in the *Alkutta*b where basic learning skills and religious studies dominated the traditional school established by the Ottoman Empire (1516-1916). Formal education and schools that are similar to those in the West were established during the expansion and modernisation under the Emirate of Transjordan in 1921 (Massialas & Mawgood, 1988).

However, after 1940, public schools became the responsibility of the newly established Ministry of Education, and modern curricula were developed. In 1962, the University of Jordan was established as the first university. During the 1950s and 1960s, education expanded very rapidly despite the modest nature of the economy and the education budget increased by 341 per cent between 1975 and 1978, constituting 8.7 per cent of the total government expenditure (Altal, 1978).

During the last 20 years, the education system has dramatically expanded in terms of high student enrolment in primary school education. After the 1990 Gulf War, thousands of families returned to Jordan along with a significantly high number of primary school students. However, Jordan has achieved a high enrolment rate in school education (98 per cent for children up to the age of 12, and 80 per cent for the 12-18 age group) and maintained a student/teacher ratio of 20:1 compared to 30:1 in the developing countries and 18:1 in the developed countries (MOE, 1996b).

Compared with other Arab countries and other developing countries, a higher proportion of students, both boys and girls, are attending Jordanian secondary schools and pursuing higher education in Jordanian scientific institutions and abroad (Ahlawat & Billeh, 1996).
Students attend school for five days per week from eight o'clock at morning until two o'clock in the afternoon. The school year includes 180 days and runs from September through May. There are two semesters in the school year. School attendance is compulsory until age 16 (Grade 10). In Jordan, Grades 1-10 are called basic education. Grades 11-12 are called secondary education (MOE, 2000a).

The expansion of education has led to significant social changes. Free primary and secondary schooling, together with different forms of assistance and scholarships for higher education, enable students from low socio-economic status families to pursue their higher education. The education of girls illustrates the social changes that Jordanian culture has experienced. Girls are now studying in co-education classrooms for the first four years of primary education. Moreover, women have already participated in many fields of work, although predominantly in health, social work, and education (Salameh, 1980).

2.6.2 Education Authorities

The education system is run by three authorities that have different tasks, as set out below.

Ministry of Education

The Ministry of Education (MOE) is the decision maker in all aspects of education and it is responsible for recruiting new teachers. It prepares, organises and supervises the state high school examination, Tawjehi. Moreover, it determines the content and structure of curriculum throughout the country. Beside textbooks, it provides all education aids such as television programs, computers and laboratory instruments.

Although the central MOE is the main decision maker when it comes to the country’s general education policy, it gives the 27 Regional Education Directorates covering the whole country authority to implement locally the Ministry’s general policy. Moreover, local education directorates, applying a decentralised administrative approach, are authorised to follow up the daily activities of their schools, students and teachers,
including professional development and continuing training and education (Salameh, 1986; Touqan, 2002).

Also under the umbrella of the MOE is the Ministry Central Office comprising 25 directorates. Each of these directorates is responsible for one centrally organised aspect of education in Jordan, including such diverse responsibilities as textbook development, staff appointments, and teachers' promotions.

The Board of Education

The Board of Education was established in 1969 to ensure stability and continuity of general education policy and the smooth running of the education system. The Board of Education is chaired by the Minister of Education and is composed of 18 members representing ministries and agencies concerned with education, as well as other individuals. The Board is also responsible for the final approval of the curriculum and approving any suggested modifications and changes to it, prescribing the specifications required in the writing of textbooks, and approving any changes in the textbooks. Textbooks that are not officially prescribed by the MOE cannot be used in Jordanian schools (MOE, 1988).

Central Education Committee

The Central Education Committee (CEC) offers recommendations concerning the implementation of general education policy in the country, studies the annual budgets of the Ministry of Education and presents its recommendations, and offers its expert advice. One of its most important functions is in laying down basic general principles that have to be followed in the planning and development of curricula and textbooks. The members of the CEC are the Minister of Education as Chair, the Under-Secretary, and all heads of the Education Directorates. The CEC supervises the Ministry's projects, approves general policy to be followed by each directorate, plans the administrative organisation of the Ministry and the directorates, prepares draft laws, regulations and directives, supervises public examinations, and authorises all educational publications.
2.6.3 Finance and Fees

Public education is financed mainly by the general budget of the Government according to education objectives and priorities, whereby part of the budget is allocated yearly for the Education Reform Plan. Governmental expenditure on education for the financial year 2001 was 12 per cent of the total general budget of the Government and more than 4.5 per cent of its Gross Domestic Product (GDP). Education in Jordan is free for all years (C1-C12) and compulsory during basic education for the first 10 grades (C1-C10). Textbooks are distributed to students free of charge for the compulsory years and provided at a nominal price for secondary education (C11-C12) (MOE, 1995b).

2.6.4 Agencies of Education

In Jordan, both public and private sectors provide education. Schools at the basic and secondary levels run by the MOE accommodate 78 per cent of the school enrolment. Religious bodies run most of the foreign private schools while secular and religious bodies run national private schools. Over the last 10 years, many private schools have been established on a commercial basis.

The United Nations for Relief and Working Association (UNRWA) schools provide the first 10 years of schooling for children of Palestinian refugees who live in Jordan. The refugee children who qualify for secondary education are able to attend MOE schools free of charge (National Office of Overseas Recognition Skills, 1997).
2.6.5 Years of Schooling

Education in Jordan is organised under three levels.

Pre-School education

Pre-school education is provided in kindergartens by private organisations, both national and foreign, but under the control of the MOE. Children at the age of at least 3 years and 8 months are eligible to enter kindergarten. Kindergarten is a non-compulsory part of education in Jordan. Some kindergartens are located in separate buildings but others are attached to the schools. Under the reform plan, the MOE is committed to establish kindergartens in rural and badia areas.

Basic education

At the age of at least 5 years and 8 months, all children have to begin basic compulsory (C1-C10) education. In 1991, the enrolment percentage of all eligible students in basic education had reached 97.17. The delivery of basic education is unified for all students, and includes an annual evaluation carried out at the end of the cycle. The MOE also evaluates students' achievements in the 8th and 9th grades (C9 and C10), aiming to classify them for various fields, including both academic and vocational (Tawalbeh, 2001).

Students from C1 to C5 progress automatically from one grade to the next. However, students from C6 to C9 may repeat a grade up to twice after which they are automatically promoted (MOE, 1994).

The curriculum includes Arabic, English, Mathematics, History, Religion, Science, Physical Education, Music, Geography, and Civics Education. Recently, the MOE started teaching English from the first grade as a second language, although most private schools have been doing so for a long time.
Secondary Education

All students, at the end of the 10th grade, are classified into one of two major streams: the comprehensive secondary (academic and vocational) education stream and the applied secondary education stream. Students in the two-year comprehensive secondary education program end up sitting for the General Secondary School Education Certificate examination in the following specialisations: the academic sub-stream, which includes a scientific and literary specialisation, or the vocational sub-stream, which includes industrial, commercial, and agricultural studies, nursing, hotel management, and home economics education. The two-year applied secondary program provides vocational education and training for skilled labour to meet the needs of society (MOE, 1996b).

2.7 International Education Reform Movement

In the last quarter of the Twentieth Century, change became one of the main facts in Jordanian social life (Smith, 1980). Education change has become a global phenomenon. The international education movement has believed that human beings are the best resource for achieving comprehensive economic and social development. Until now, political leaders have considered education as a panacea for their social and economic problems (Cookson, Sadovanik & Semel, 1993; Dinham, 1992).

Meanwhile, the impact of changing economic realities and increasing global interdependence has influenced national education systems. In addition, different factors have had an impact in both developing and industrialised countries, including falling student achievement levels (associated with higher retention rates) and the increasing cost of basic education (Ahlawat & Billeh, 1997).

The most important features of this movement have been: (1) changing the policy in education administration from centralisation to decentralisation or vice versa; (2) commitment to education for all with recognition of the growing importance of lifelong learning; and (3) extending the period of initial schooling, with more emphasis on general education for children and young people to prepare students for life, rather than vocational skills for specific jobs.
Hence the curricula have become broader and more inclusive, and technology has come to play an integral role in nearly every aspect of the education process (Otlowski, 1998). At the same time, contemporary thinking about pedagogy has been characterised by increasing emphasis on teamwork, co-operation and student-centred approaches, rather than didactic methods. In addition, a major characteristic of new education trends has been a strengthening of the relationship between the school and society, to make the schools more accessible and integral to the community. In both developed and developing countries, education provides a medium for the introduction of social change (Hoyle, 1995; Alwakeel, 2002).

At the same time, a great deal of social and cultural change has occurred in parallel with this movement, including growing social, economic and political inequities, and deepening social differences and break-downs in social cohesion. Rapid growth has had inevitably adverse effects on the economic situation in Jordan and abroad. These social developments often lead to failure at school, and contribute to school drop-out, high youth unemployment that undermines the ability of young people to enter the world of work, and a world that increasingly appears to emphasise competition and material values (Coombs, 1985).

2.8 The Education Reform Plan in Jordan

2.8.1 Overview

This section attempts to answer the first of the research questions that were adopted for the guidance of this study. That question is:

**Question 1: What processes, methods and strategies are used in Jordan to introduce and implement education change as part of Jordan’s Education Reform Program?**

Education reform in Jordan is a part of the so-called “world wide education reform movement”. As a country with limited natural resources, Jordan has a long-standing
policy of human resource investment to develop Jordanian society, through the
provision of education and appropriate training:

Our investment in education is recognised as an investment in human
resources development. This country [Jordan] abounds in human
resources, with a vast potential for development. Human capital is
highly valued and its focus is upon the wholesome development of
values, knowledge, skills, attitudes and beliefs, in a society which in a
few short decades has moved from early beginnings to sharing in global
education (Ben Talal, 1998, p.11).

The investment in education to develop human resources had served Jordan well, even
before JERP was initiated, and as a result, student enrolments in basic, secondary and
higher education are among the highest in the world (MOE, 1990). According to the
JERP, the impact of the planned change will touch every aspect in the education
system.

This change will happen in many ways with the ultimate results of improved students’
learning, upgraded teachers’ qualifications, and more attention to the physical
education environment. It is also expected that teachers will be encouraged to alter
their practices in the classroom toward more involvement for their students through
teachers listening to them and asking them to state their views.

However, the impact of economic recession and the increasing requirement for the use
of technology in all aspects of life has contributed to a need for comprehensive reform
of education and training. Jordan decided to review the whole of its education
programs, because education is perceived as the cornerstone of the country’s
comprehensive development policy since it is recognised that education should
produce graduates with a high quality general education geared towards problem
solving, critical thinking, analytical skills, and an ability to apply information in
creative and productive ways (Hoerner, Abele & Alshannag, 2000).

Jordan was dissatisfied with its education system and there was a strong motivation
for change. Hence change is perceived as vital to the country. With a narrow economic
production base, an educated labour force was an important factor for Jordan to
sustain a competitive edge in the Gulf States (GS) labour market (National Centre for
Following the report of the National Education Policy Commission, a Central Task Force (CTF) was formed for further study of the key issues in an attempt to address Jordan's education needs. The late King Hussein opened the National Assembly in 1985 and called for a national program of education reform, and his political leadership ensured that there would be a comprehensive assessment of Jordan's education program. The Royal Prince Al-Hassan Ben Talal supervised and coordinated the planning and conduct of a comprehensive, national review of education to make the system more relevant to national needs (MOE, 1996a).

In response to the Royal announcement, the Government initiated a comprehensive evaluation of education in Jordan. An Education Policy Commission (EPC) was formed by the Prime Minister, consisting of eight education experts drawn from the public and private sectors, the Ministry of Education, the Higher Education Council (HEC) and government universities. After one year of studying and analysing the education system, the Commission submitted a comprehensive report to the Government that included an in-depth analysis of the whole education system and its performance, as well as identification of the country's current and future economic, social, political, and cultural needs. Finally, it included an outline of general strategies of education change and policy directions (MOE, 1988).

The Education Policy Commission showed that the rapid expansion of education in Jordan was due to several factors, including compulsory mass immigration from Palestine and the Gulf States. This had eroded the quality of education in Jordan and contributed to an overloaded education system characterised by double shifts in school, a shortage of teachers and school buildings, and aggravated by economic difficulties in the 1980s.

As a result, education in Jordan was losing its momentum in the rapidly changing world and the time and conditions were ripe to implement education reform. The principal objective of the reform was to improve students' achievement by enhancing education quality and by making education outcomes relevant to the current and future needs and challenges facing Jordan in the region and globally. Consequently, the Government committed itself to reconstructing and modernising the entire
education and training system and to realising the vision of education reform (National Centre for Education Research Development, 1999).

To translate these commitments into action, the Government sponsored The National Conference of Education Reform (NCER) in September 1987 (MOE, 1988) under the patronage of late King Hussein Ben Talal, who proclaimed four major principles for education reform policy, as follows:

1. Faith in God, belief in spiritual values, recognition of the role of science, and respect for work.
2. Balance between national identity and conscious openness to world cultures.
3. Maintenance of a balance between national resources and population growth.
4. Adaptation to changing requirements of the present and future, and development of education national capacity to meet these requirements (Faraj, 1988).

2.8.2 Phases of the National Reform Plan

The JERP was divided into three phases. The first phase consisted of a five year plan (1989-1995), for which the major objectives were to reform human resources focused on the following areas:

a. Improving general examinations, including school tests and the high school general examination, by up-grading the testing program so as to make it reflect new technologies and to draw more on higher order thinking skills;

b. Maintenance of old school buildings and building new schools as well, including supplying education aids such as laboratories, libraries, playgrounds, and computer laboratories;

c. Extending the basic education period from nine to 10 years to help students to acquire more knowledge and skills required of life long learners; and

d. Providing opportunities for students to enjoy vocational schools after completing the basic level, rather than necessarily going to academic schools, yet still being able to access higher education and intermediate college. The new education
reform plan was to focus on vocationalisation in order to reduce a mismatch between the demand and supply of human resources. The proponents of vocationalisation perceived it both as a solution to the unemployment problem among educated youths and as a strategy for cooling down high social demand for higher education (MOE, 1998).

The second phase of the JERP was from 1996 to 2000. The main aim of this phase was to strengthen the impact of the first education reform plan (1989-1995). A primary focus was to upgrade the qualifications of primary school teachers, as most of this group had only a two year college degree, owing to a labour shortage 20 years earlier. Of the 67 per cent of primary school teachers who had a two-year post-secondary qualification, many did not have education training in their pre-service preparation. For teachers with two years training, the aim of the second phase of the JERP was to upgrade their qualifications to a four year university degree. Thus, the MOE developed a plan to enrol qualified teachers in universities for an additional two years, to enable them to graduate with a Bachelors degree in Education.

In addition, several areas were designated as priority areas by the MOE. These areas included:

a. professional development of staff, in particular supporting school principals by offering scholarships to upgrade their qualifications by acquiring Master of Education (MEd) in Education Leadership and enabling School Supervisors to obtain MEds in School Supervision;

b. changing the content of all schools’ examinations to assess critical thinking skills rather than merely subject content and knowledge;

c. increasing students’ enrolment in Technical and Vocational Education and Training (TVET) to support Jordan’s labour power needs by providing students with financial support, with guaranteed post-study employment and recognition of TVET qualifications for entry to higher education; and

d. introduction of Government pre-schools in remote areas, and raising the standard requirement for the registration of both private and government operated pre-schools.
The third phase of JERP is from 2000-2005 (MOE, 1988). Designated priority areas for this phase include:

a. development of curricula and professional training for teachers so that students would improve and apply their skills in critical thinking and research in all subject areas;

b. introduction of English as a compulsory language in grades from C1 to C12;

c. development of informal education initiatives by opening free evening schools in all areas to meet the needs of illiterate women and elderly people; and

d. introduction of a new program to help schools and local communities to work together, for instance, by sharing school facilities and community resources.

A significant social issue in Jordan is the high rate of unemployment amongst highly educated people because of the lack of correlation between the labour market and education outcomes. Hence another priority in the third phase of the JERP is to facilitate access to vocational training and higher education so that student enrolments can be directed to meet the country’s economic needs. A continuing problem for Jordan is its reliance on foreign aid to finance education. Therefore, a particular aim of the third phase of the plan is to find a solution to this funding dilemma (Touqan, 2001).

2.8.3 Major Reform Initiatives

To achieve the fundamental reform goals, as outlined above, the Ministry of Education has identified targeted areas for policy and reform initiatives throughout the life of the JERP (1989-2005). In addition, initiatives in these areas will radically restructure and invigorate education in Jordan for the new millennium.

Restructuring the school system

The restructuring under JERP was to comprise:
a. providing students with more solid ground in basic knowledge and skills, enabling them to master a high order of critical thinking;

b. extending basic (compulsory) education from 9 to 10 years secondary with a unified core curriculum;

c. encouraging further education aspirations, through a restructured two-year comprehensive education;

d. addressing the diverse abilities and interests of individual students;

e. providing opportunities for specialisation in line with students’ career options and life long learning;

f. promoting new emphases on technology and technicians through integrating computers into teachers’ daily practice;

g. establishing specialised applied technology secondary schools;

h. implementing a promotion and examination system that conforms to the new phase;

i. restructuring students’ promotion into secondary school based on previous grades achieved (grade point average) at the end of the basic education period and the new examination system at the end of the secondary cycle;

j. providing a full review of new, substantially revised curricula that are explicitly designed to support the curriculum objectives, and ensuring that the textbooks and teaching aids are used effectively (Jaradat, Mu’tamen & Abu Samaha, 1990).

Curricula and Textbooks

The curriculum development plan focussed on improving the content, aiming at developing higher skills like creative thinking and promotion of academic, vocational, and applied education tracks, whereby coordination is guaranteed. The plan pays attention to developing skills for analysing and processing information, modernising curriculum content to reflect both up-to-date pedagogy and contemporary issues, making curriculum more flexible and responsive to individual learning abilities and interests, and establishing integration between basic and secondary curricula (Jaradat,
Mu’tamen & Abu Samaha, 1990). During the last 10 years, MOE has designed, developed, and published about 500 new curriculum documents and textbooks for basic and secondary education (MOE, 2000b).

**Institutional development**

Learning resource centres house necessary teaching aides that are made available either in the education directorate where the learning centres are located, or if ambulatory, sent to schools upon request. Moreover, the MOE has assumed responsibility for editing, publishing and distributing new versions of textbooks in sufficient quantities for schools. Other institutional developments include the establishment of an Education Management Information System (EMIS), a National Assessment Program (NAP) and a National Centre for Education Research and Development. According to the reform plan, to help in maintaining the momentum of the reform agenda, longitudinal research will be conducted to provide rich data to be available to key decision-makers.

To improve facilities for activities ranging from teaching and learning through to accommodating more students:

a. schools were expanded by rehabilitating and furnishing old schools to meet a new school standard, besides building new ones;

b. the number of rented buildings was reduced to eight per cent;

c. there was a discontinuance of schools working a double shift; and

d. improvements were made to the quality of school facilities by providing libraries, laboratories and audio-visual equipment (MOE, 1988).

**Preparing, qualifying and training teachers**

In response to changing needs, teachers must acquire new knowledge, skills and attitudes to improve the quality of their teaching. They should also work hard to create a suitable learning climate enabling their students to reflect personal experience and discuss openly issues in the classroom (Ben Talal, 1998). The reform plan thus gave emphasis to upgrading teachers' qualifications and academic knowledge through a
certification program, offered by three public universities. The Education Act No. 3, passed in 1994 (MOE, 1994), required the upgrading of teachers’ qualifications as follows:

a. basic education teachers, who had a two-year community college qualification, were required to have a university first degree;

b. secondary education teachers, who had a first university degree, were required have a graduate diploma in education; and

c. education leaders and supervisors were to be encouraged through enabling them to enrol in Master of Education degrees.

Moreover, few primary school teachers would have had the opportunity to undertake a four year training qualification before the introduction of the change plan. Most of them had access to only two years of community college with poor preparation for teaching, although two years of pre-service training has now ceased in most Jordanian colleges. Four year training has become very common and Jordanian universities offer programs to bridge the old college degree holders to the equivalent of four years training, with cooperation from the MOE. Most experienced teachers tend to be trained initially for two years while recently appointed teachers are more likely to be four year trained. However, most teachers before the reform plan was implemented were unqualified graduates, with more than 67 per cent of them holding just community college degrees without any efficient in-service training during their years of work. As a result, the reform plan’s aim is to raise their professional and academic levels to equal Bachelor degree status. As stated above, the Government has passed a law increasing the certification requirement of basic education teachers to a BA/BS degree or its equivalent, and of secondary teachers to Bachelor of Arts or Bachelor of Science degrees plus one year postgraduate teacher training (Ahlawat & Billeh, 1996).

Jordanian universities hold the responsibilities for planning and implementing pre-service teacher training programs, particularly for class, field, and subject teachers (see Chapter 1 for definitions). To modernise programs in the education faculties and to meet the reform project’s needs, the two-year community college teacher training program has been replaced by a four-year university degree in teacher education. This program has been in operation since 1992 (Ahlawat & Billeh, 1996).
In contrast, MOE is responsible for planning and conducting in-service training programs in cooperation with education experts, as well as with international and regional organisations, for the purpose of providing teachers with effective teaching skills. These skills include: cooperative teaching; brain-storming skills and critical questioning; skills for applying knowledge to practical life; content knowledge of new textbooks; methods of teaching; and subject-matter knowledge related to specialisations. Furthermore, as part of the reform agenda, school principals are being provided with skills in planning, design and development of initiatives for schools; team working skills; creative leadership skills; skills to lead the change process in schools; action research skills; and efficient communication tools (MOE, 1996a).

In terms of teachers’ status, the MOE designed strategies to improve teachers’ status through such incentives as special allowances, housing funds, teachers’ clubs, good furniture for teachers’ lounge rooms, medals, and the celebration of a Teacher Day. In addition, five percent of the university places will be kept yearly for teachers’ sons and daughters (Obedat, 1995).

According to the education reform plan, MOE will work for democratisation of education, promoting democratic practices stemming from decentralisation, delegation of authority, participation in decision–making and students’ councils and committees. However, teachers in Government schools are considered civil servants and, as such, are subject to the Civil Service Law concerning matters related to promotion, classification, and retirement (MOE, 1994).

Examined, Promotion and Certification

There are no national or general examinations conducted in Jordanian schools except the one which is held at the end of year 12 (C12). It is called the General Secondary School Education Certificate Examination (GSSCE) (Tawjehi) and is organised by the MOE to enable students to gain access to higher education. A school certificate is also
issued at the end of secondary education (National Office of Overseas Skills Recognition, 1997).

Although regulations are passed by the MOE defining general outlines for examinations, the promotion and evaluation of students is the ultimate responsibility of the teachers. Repetition of school grade is allowed to a limited degree. One of the challenges faced by the reform plan has been identified as the need for change of the examination and evaluation system in order to be able to measure more than just cognitive learning (Ahlawat & Billeh, 1996; Massad, 2001).

2.9 Conclusion

In 1987 Jordan started a long term education reform plan assuming that the impact of this plan would touch every aspect of the education system. The plan included many strategies for change, including the upgrading of teachers' qualifications, paying greater attention to the physical education environment, and changing the curricula content, as well as encouraging teachers to alter their practices in the classroom toward more involvement for their students, listening to them and asking the students to state their views. Moreover, the MOE was committed to push teachers to get rid of their old orientation to teaching and to adopt a new one. All these factors were seen to offer a helping environment to achieve the plan's ultimate goal, which was the improvement of students' learning abilities. The ultimate goal of the reform plan was to develop human resources for the social and economic benefits of the country.
CHAPTER 3

LITERATURE REVIEW

3.1 Introduction

The main aim of this research was to examine the role played by primary school teachers in education change in Jordan, and to identify and clarify the views of three groups of stakeholders (teachers, administrators and academics) in this change. This chapter focusses on literature and research related to education change, and on approaches followed to achieve the proposed change.

Moreover, it examines the role of teachers, mandated by a series of education change conferences and workshops held in Amman since 1987 (National Conference for Education Reform). These conferences focussed on the belief that education change will enable the country to overcome problems of economic recession. Enabling full understanding of the research problem under investigation necessitated a review of research and literature in areas related to the research.

One more of the nine questions guiding this research is addressed in this chapter. It is Question 2, and is as follows:

**Question 2: What roles have been stated for primary school teachers in Jordan’s Education Reform Program?**

First, however, it is necessary to examine the international literature on education change. Most of the research and literature reviewed in this chapter was written in English and was designed for countries in the English-speaking world. However, some relevant Arabic research and literature is also included here, as available. The review
of the literature begins by exploring the nature and the historical background of education change and approaches that were followed to bring about the change. These include the seven roles of Jordanian teachers espoused in the Jordanian Education Reform Program (JERP).

3.2 The Nature of Education Reform

It has been claimed that change is the biggest fact of our social life (Smith, 1980). Teaching takes place in a world dominated by rapid change, uncertainty and increasing complexity. McCulloch (1997) pointed out that education holds unique power to engineer our future in the changing world of the new millennium when schools must equip students for life rather than prepare them only to work (Lowe, 2000). Education change is a public demand by people who want teachers to be changed (Hargreaves, 1994). The present author’s observation has been that when the agenda of political parties throughout the world is reviewed, it is noticeable that education reform is one of the top priorities.

There is also a strong argument that change is needed because many teachers are frustrated and bored (Fullan, 1982; Coombs, 1985). The argument continues that change will foster sustained professional development and, through that, lead to student benefits. Indeed, change might be one of the few sources of revitalisation and satisfaction left for teachers. However, it could be extremely difficult to establish the appropriate conditions that allow teachers to engage in a prerequisite for sound change, that is, to re-evaluate their own roles (Hargreaves, 1997).

3.3 The Forces Behind Education Reform

Dimmock and O’Donoghue (1997) claimed that there were at least five arguments for the importance of education reform. These arguments were based on: satisfaction theory; economic and political considerations; the structure and organisation of education systems; school effectiveness; and teachers’ empowerment.
The first argument based on satisfaction theory arose during the 1980s when it was argued that the public and governments were dissatisfied with perceived school outcomes and achievements. Therefore, in many countries, governments introduced education change as a response to the challenge of a rapidly changing world. For example, the report entitled "A Nation at Risk", produced by USA National Commission on Excellence in Education (1983), showed dissatisfaction with what most American students knew and could do.

The second explanation, the one concerned with political and economic factors, was based on values such as equality, efficiency, liberty, and choice. By this argument, cuts by governments in central budgeting were seen to impair the achievement of equality and efficiency and, by implication, choice (e.g., Lingard, Knight & Porter, 1993). As one attempt at a solution, school site management style was introduced with a lump-sum budget, and consequent high community involvement in school decision-making (Conley & Bacharach, 1991). This change fostered diversity among schools and gave parents the opportunities to select among different types of schools to ensure choice (Marburger, 1990).

The third explanation was based on organisation theory. It proposed that a suitable approach to centralisation or decentralisation be determined according to the nature of the techniques and technology required to accomplish the job. Thus, it was argued that the more schools were seen as organisations fostering the satisfaction of student needs, requiring more specialised teaching and learning, the more political decentralisation was likely to be appropriate. Thus, the most popular feature in education reform phenomena became decentralisation, with more accountability (Cranston, 1999; Helsby, 1999).

The fourth force driving education change was based on school effectiveness literature. Purkey and Smith (1985) pointed out that in effective schools teachers were given a considerable amount of autonomy and authority to deal with school problems. Teachers also had a say in curricula and instructional decisions and the allocation of building resources. These issues became a new mission for teachers in the schools.
The fifth explanation focussed on teachers’ empowerment and professionalism. It was argued that, where teachers were given power in almost every aspect of education, schools became better places for teaching and learning. This, it was argued, was because teachers could practise more professional autonomy and leadership under such conditions (Romanish, 1991).

To sum up, five arguments were advanced for introducing education change. Most of these arguments had their roots in politics and economics. Throughout the world, many governments have introduced education changes to counter the impact of economic recessions in their countries.

Waugh and Punch (1987, cited in Smylie, 1991) suggested that change might happen at different levels in schools, and that it would be more acceptable if change agents tried to alter the surface level value, performance norms and the manner of teacher behaviours than if they sought to change more deeply held beliefs that are embedded in school culture. These authors argued that change resulting from efforts directed to a deeper level would be short-lived. This observation might explain why many change programs fail when they come to the implementation stage and why they are abandoned when outsider support is withdrawn.

Westly (cited in Morrish, 1976) argued that change tends to occur in various ways, for instance, through some quite small projects, such as the introduction of a new textbook, or through quite large interventions, such as a general improvement in teacher professional training.

Dimmock and O’Donoghue (1997) divided education change into two levels. The first level was macro reforms that involved moving central authorities to allow schools to be self-governing. They argued that change at a whole school level was effective when it dealt with school management rather than teacher practice. The second level was the micro level, which paid attention to schools restructuring to alter classroom practices. This type of policy was said to be more flexible, and to target pedagogical practice and the learning process. This second approach is similar to what Cuban (1988) named “first-order”, where change improves the effectiveness of what is already in existence without disturbing the basic organisational feature and without altering the way that
children and adults perform their work in school. For Cuban, “second-order” change aims at altering the fundamental relationships in a school, creating new goals, reorganising structure, and creating a new culture. In this connection, Fullan & Stiegelbauer (1991) argued that:

The challenge of the 1990s will be to deal with more second-order changes — changes that affect the culture and restructure of schools, restructuring roles and reorganising responsibilities, including those of students and parents. In the past we have worked on the notion that if we just “fix it” and if all perform their roles better we will have improved education (Fullan & Stiegelbauer, 1991, p. 29).

3.4 Historical Background of Education Reform

It is important here to review the history of education change, as many initiatives and theories have been developed in the last century, especially since Sputnik was launched in 1957 by the USSR. In the Jordanian context, a few attempts, “bit by bit”, to bring about change were started by the 1960s. Therefore, this time has been chosen as starting point to describe three phases in the history of education change (Haddad, 1994) and the emergence of a current fourth phase.

The first phase lasted from the 1960s to the early 1970s. This period, characterised by the so-called “Curriculum Reform Movement” (Goodson, 1989), was intended to have a major impact on student achievement through the production and distribution of exemplary curriculum materials, well designed by teams of academics and psychologists (for example, Physical Science Study Committee (PSSC) Project and the Biological Sciences Curriculum Study (BSCS) (Kliebard, 1991).

However, this phase did not influence teachers’ practice (Silberman, 1970) to a marked degree because they were excluded from the development of curriculum and in-service education training (INSET). Some argued that the new curricula did not meet the basic needs of classroom reality (Bartlett, 1992; Hopkins, Ainscow & West, 1994). Teachers’ response to this reform was to take what they thought was suitable material and integrate it into their established teaching approaches (Skilbeck, 1990; Fullan, 1992; McKinlay, 1993).
The second phase covered the period from the mid of 1970s to late 1980s. As a result of the failure of the "Curriculum Reform Movement" to affect teachers' daily practices, the top-down approach to curriculum change was seen as unsuccessful (Sarason, 1971). This second phase featured the view that education change does not occur spontaneously as a result of legislative change (Romanish, 1991; Yilman, 1997). Instead, it was recognised that implementation of education change is an extremely complex and lengthy process (Gross, Giacquinta & Bernstein, 1971; Morrish, 1976; Hohn, 1998; Gray, Hopkins, Reynolds, Wilcox, Farrell & Jesson, 1999; Scott, 1999) requiring a sensitive amalgamation of strategic planning, individual learning and commitment of all stakeholders to succeed (Hopkins, Ainscow & West, 1994).

After the characteristics of the effective school were widely recognised, strategies for school improvement were implemented. During this third phase, many studies about school effectiveness, including major large-scale and longitudinal research studies, were conducted. These early studies became springboards for what were later to be called the effective schools and school improvement research movement that spawned major studies (for example, the International School Improvement Project (Bentley, 2000). This period achieved considerable success. Consequently, much was learnt about the dynamics of the change process during this period. Many factors influencing effective teaching were identified (Hopkins, Ainscow & West, 1994).

A fourth phase began in the 1990s and was recognised as the hardest phase, with the world dominated by rapid change. This phase acknowledged the importance of research and knowledge in education. The importance of involving parents and giving them more responsibility in the education of their children was also recognised (Lawton 1988; Waterhouse, 1995).

This phase endeavoured to establish a systematic relationship between the findings of school improvement research and school reality. This trend was mainly inspired by economic rationalist thinking (Bentley, 2000) and the need for more accountability and quality assurance focussing on school outcomes (Helsby, 1999). Moreover, it was marked by seeking greater involvement of school staff in bringing about change. The early application of this movement occurred in New Zealand (Bentley, 2000). It is too early to judge whether this phase of change has achieved its desired outcomes.
In summary, currently it is recognised that the Curriculum Reform Movement failed to alter teacher practice in the classroom, and that education change failed to occur as a result of legislation. Education change during the second phase was recognised as a complex process and not a one-shot event. However, the third phase achieved considerable success, after the characteristics of school effectiveness were identified. These phases ended with the emergence of a fourth phase, which was recognised as the hardest phase, aiming to achieve a solid connection between the findings of education research and school realities.

3.5 Failure in Education Change

Many education change programs throughout the world have failed. Therefore, it is worthwhile to trace the reasons lying behind that failure. It is ironic that while change in education is “ubiquitous” (Fullan, 1993, p.vii), the achievement of intended significant change is difficult and slow (Smith, 1980; Fullan, 1982; Cookson, Sadovnik & Semel, 1992; Ball, 1994; Louden & Wallace, 1996; Boston, 1997; Groundwater-Smith, Cusworth & Dobbins, 1998; Buchanan & Khamis, 1999; World Bank, 2000). When any attempt to bring about change is initiated, there are many problems associated with it, as the Australian Schools Council (1990, p.12) noted:

One of the most general effects on the teaching force has been the production of uncertainty about its role and responsibilities. But it should be noted that this has been generated at least as much by the profession itself as outside it. Whatever its sources, the variety of influential and conflicting opinion provided in a relatively short space of time was difficult for practising teachers to digest and assimilate.

Beeby (1966) in his classic book titled “The Quality of Education in Developing Countries” pointed out five difficulties likely to face any reform program:

1. Lack of clear goals: ultimate education goals are less clear than in other professions as education lies close to the conflicting faiths and desires of the community.

2. Understanding and acceptance: any reform initiative will be without any value until the teachers understand it, and are willing to accept it.
3. Teachers are the product of the system: teachers spend most of their lives in the classroom, so they are prone to reflect the virtues and defects of the system.

4. Isolation of the teachers: teachers work in an isolated environment in their classrooms.
Teachers’ range of ability: there are individual differences in the abilities of teachers and these occur in every occupational group.

Moreover, many authors have pointed out that change is mostly met with a high degree of resistance by teachers (Zaltman, Florio & Skorski, 1977; Marsh, 1988; Buchanan & Khamis, 1999). However, Morrish (1976) mentioned some sound reasons why teachers resist change, including the following:

1. teachers do not have enough knowledge about change;
2. they ignore new technologies, preferring to keep to traditional teaching methods because they work very well;
3. they have interpersonal disagreements with people who initiated the change; and
4. they have had bad experiences with change in the past, as it did not bring desired results.

Similarly, Brady (1987) identified a number of factors connected to the failure of education change, such as lack of teacher understanding of change and of the role demanded by the change, lack of expertise in fulfilling the new role, lack of resources needed to implement the change, lack of communication of what is most important, and finally, school organisation which is incompatible with the new change.

In this connection, policy makers sometimes accuse teachers of being resistant to change, while teachers complain that they have to do many things in a short time, that administrators do not know what teachers need, or understand classroom reality. Furthermore, administrators are sometimes accused of introducing change for their
own self-aggrandisement and not as a response to teachers' needs (Fullan & Stiegelbauer 1991; Levine, 1992).

On the other hand, Smylie (1991) argued that teachers are not interested in change if they believe it creates a risk to the maintenance of order in their classrooms. He added that there is growing evidence revealing a strong connection between teachers' beliefs and their receptiveness to implement change. This finding suggests that teachers' beliefs about their professional efficacy are highly related to their participation in, and implementation of, change (Smylie, 1991).

According to Eisner (1992), even experienced teachers dealing with change are highly doubtful and resistant. They get rid of new policies for two reasons: first, education change policy comes and goes; second, teachers work behind closed classroom doors so no one knows what is going on. However, Stallings (1989, cited in Day, 1999) found that teachers are likely to accept change when they:

1. become aware of the need to change through analysing their own work profile;
2. write statements to try out novel ideas in their classrooms on the next working day;
3. modify ideas to work in their classes;
4. observe each others' classrooms, analysing and reporting on their success or failure;
5. discuss problems and suggest solutions;
6. utilise a wide range of strategies of observation, simulation, presenting at professional meetings; and
7. learn by their own experience to set goals for professional development.

Education has often been labelled as the most resistant profession in terms of its ability to take on change and look forward to the future (Richardson, 1989; Kagan, 1992; Groundwater-Smith, Cusworth & Dobbins, 1998). Furthermore, education change is harder than any other human aspect, because there are many stakeholders involved in this change, for example, teachers, parents, and politicians. Each group holds its own beliefs, attitudes and experiences related to change (Fullan, 2001).
In this connection, policy makers throughout the world have failed to convince their communities about the benefits of change. To examine this, one only need look at education reform efforts in England, Canada, Australia and the United States among other countries. These efforts confirm the distrust politicians and technocrats have for educators in general, and teachers in particular. Politicians tend to hold teachers responsible for the failure of education (Stoll & Fink, 1996).

Education change suffered from a “mix in concept”, according to Fullan (2001). Many change programs have failed because there is no distinction made between theories of change (what causes change), and theories of changing (how to influence those causes). Furthermore, Fullan has said that change contains ambivalence and dilemmas because “when we set off on the journey to achieve significant change, we don’t know in advance all the details of how to get there, or even what it is going to be like when we arrive” (Fullan, 1991, p. 34).

Another reason for hardships in bringing about education change is that policymakers are keen to acknowledge change as an event that it will occur in a certain time (Marsh, 1988; Hopkins, Ainscow & West, 1994). However, change is an ongoing process. This assumption was introduced for the first time by Hall and Hord in 1972 when education change was recognised as a process (Hall & Hord, 1987). Figure 3.1 illustrates that change is a process rather than an event and that many factors are playing important roles in bringing about change.
According to Beeby (1979), when a new education reform program fails to be implemented successfully, it is likely to be for one of the following reasons:

1. teachers have no desire to know about the change program;
2. lack of material and equipment necessary to perform the change;
3. students do not respond to this newly initiated method;
4. the change demands knowledge, understanding, or other qualities in which the majority of teachers in the area are not interested; and
5. the change is met by the resistance of teachers and administrators.

To conclude, it is useful to review the factors related to teachers that should be addressed if schools are to undergo successful change. Bremer (1974) identified a number of these factors: quality of entrants to education courses and quality of teacher education programs; more academic discipline and grade-level specialisation;
simplifying the role of the teacher; and creation of an elite organisational environment in which the above generalisations are accepted.

Lilyquist, (1998) indicated factors that affect teachers’ attitudes toward any education reform: modification of a teacher’s rank in the social structure; restriction that blocks teachers from gaining status or places them in a position of losing status; and concepts that contradict the teacher’s vision of good professional practice.

Fullan (1991, p. 113) showed that teachers use three main criteria when they are dealing with change:

1. Does the change potentially address a need? Will students be interested? Will they learn?
2. How clear is the change in terms of what the teachers will have to do?
3. How will the change affect the teachers personally in terms of time, energy, and new skill, sense of excitement and competence, and interference with existing priorities?

3.6 Approaches to Education Reform

There is a great deal of dissimilarity among education systems. Consequently, it is impossible to locate one theory of implementing change that would suit all education systems (Centre for Educational Research, 1969). Therefore, education change might be initiated by various approaches, for example, top-down, bottom-up or a combination of the two approaches (Glasgow, 1997).

1. Top-Down Change

Top-down change occurs through initiatives taken by policy decision makers at central government authorities when they decide to adopt ideas that require regulations and instructions to bring the change into effect. Bottery and Wright (1998) pointed out that many countries in the period between 1980 and 1999, regardless of their type of
economy, such as Australia, the United States of America, England, and New Zealand, followed centralised models to bring about change.

Claxton (1989) noted that attempts by governments to bring about education change through legislation and increased prescription will generally be recognised as attacks on teacher autonomy and another indication of distrust in teachers' judgement and their ability to do a good job. These signals are taken to indicate lack of respect for teachers' experience in the classroom. They combine to produce an atmosphere of personal stress, where teachers feel that change brings more problems and not possible solutions.

Governments have attempted to force the pace and scope of change to some degree. The implementation of change in schools has been compromised due to difficulties, such as gaining understanding, acceptance and commitment to change that is seen as politically driven. Thus, the whole topic of change management needs to be addressed by government and education authorities. In some countries, it has been argued, increased politicisation of education has not helped the process of rational, well-managed change (Dinham, 2000). Furthermore, Goodson (1995) pointed out that a crisis of reform happens when many reforms prescribed by politicians are brought to the school.

Goodlad (1993) noted that top-down, politically driven education change is addressed primarily to restructuring. These changes often have little relevance to matters of perceived, genuine, educational importance and are a political rush to bring about reform. Teachers' voices have been largely neglected, their opinions overridden, and their concerns dismissed (Berman & McLaughlin, 1978; Ball, 1994; Aubusson, 1996; Dinham, 2000).

The failure to implement top-down change may be attributed to the fact that it looks at teachers as "a bothersome intervening variable" (Richardson, 1989, p.379) as "stone age obstructions" (Doyle & Ponder, 1979, p.2). When change fails, teachers are perceived as being responsible for low education standards, because they are "either unskilled, unknowledgeable, unprincipled or a combination of all three" (Hargreaves, 1994, p.11). Teachers are cast as villains, not as victims of naïve bureaucratic attempts
to change teaching practice (Goodson, 1994). However, by the late 1970s a significant shift started to appear regarding this image. Attention began to be directed to the factors that hinder teachers’ change. “Teachers were transformed from villains to victims, and, in some cases, dupes of the system within which they were required to operate” (Ball & Goodson, 1985, p.7).

With top-down change “teachers remain on the receiving end of policy and have little hand in its formation” (Eisner, 1992, p.616). Teachers seem a relatively unimportant element in many change programs except as objects of comment or complaint (Cooper, 1991). Hargreaves (1994) argued that teachers have been cast as respondents to this change, which is initiated external. Teachers did not perform a major role in the top-down change process. However, there is inconsistency between how change was sought by organisations, and what motivates teachers to change.

Drawing on numerous studies, Sikes (1992) claimed that attempts by decision makers to impose change upon teachers were often unsuccessful. Furthermore, Sarason (1990) and Eisner (1992) argued that billions of dollars have been spent on top-down change with little result. Istance and Lowe (1991) added that organisational and structural reforms have not guaranteed improvement in the quality and effectiveness of schooling.

3.6.2 Bottom-Up Education Reform

In bottom-up change, teachers are regarded not as recipients of policy change initiated outside of schools, but as initiators of change that will increase teachers’ commitment to, and involvement in, change and reduce their resistance (Eisner, 1992; Brady; 1996; Day, 1999). A most successful application of bottom-up change in a rural school reform project was “Escuela Nueva” in Columbia. This project was started with the collaboration of one university professor and local teachers and spread to thousands of schools in the next 10 years without any central support (Schiefelbein, 1992; Dalin, 1998). Marsh (1988) pointed out that there are many reasons why education change should be initiated at a school level where teachers know their situation better than outsiders and they are directly involved in implementing any change.
Similarly, Hargreaves (1994) added that teachers’ ownership of change is a crucial factor in its success. Teachers need to be seen as the stewards of their school and since reform must be an ongoing process, reform must be in the hands of the stewards. Rather than viewing change as a path to a kind of school, it should more closely reflect a process embedded in the routine that appreciates and values teachers’ current knowledge and experience (Hargreaves, 1989).

However, Reyland and Cuttance (1992) noted that in Wales, where efforts were made to implement bottom-up change, in which schoolteachers owned the process, the results were disappointing. Furthermore, it seems that grassroots change is slow and uncertain in producing the desired change (Chapman, Boyd, Lander & Reynolds, 1996).

On the other hand, Rogers and Shoemaker (1971, cited in Marsh, 1988) identified characteristics of teachers who initiated change. These people were generally young people enjoying high social status, having influence on their colleagues’ opinions, creating ideas beyond the school fence, and likely to be regarded by their peers as abnormal people.

3.6.3 The Combined Approach to Education Reform

It has become clear that neither of these two change approaches (i.e., top-down and bottom-up) are fully effective in bringing about proposed change. Fullan summarised the results of the two kinds of changes as follows:

We have known for decades that top-down change doesn’t work...decentralised solutions like site-based management also fail because groups get preoccupied with governance and frequently flounder when left on their own... Even when they are successful for short periods of time, they cannot stay successful unless they pay attention to the centre and vice-versa... What is required is a different two-way relationship of pressure, support and continuous negotiation. It amounts to simultaneous, top-down, bottom-up influence (Fullan, 1993, pp. 37-38).

In conclusion, many research studies have shown that neither centralisation nor decentralisation approaches have worked, and that other approaches should be
introduced (Fullan & Miles, 1992). The question that arises is which alternative should be followed in order to make change happen? Change is likely to be successful when it combines the two ways with top-down stimulating and supporting, setting directions, and guiding the change process (Hall & Hord, 1987; Pajak & Glickman, 1989). Furthermore, Marsh (1988) called the combined top-down and bottom-up strategies the “typical situation” where the government provides support for school change and does not intervene or mandate how teachers will carry out this change. He added that the government could play an important role in this kind of the change, for example, distributing clear statements on the goals of the change program, supplying promotion for the change effort and providing technical and consultative support for schools seeking help, in addition to offering financial support on a per capita basis.

3.7 Reform in Teachers’ Roles

It has been claimed that the role of the teachers is increasing complex under the mounting pressure to bring about change in education around the world. In many countries a tension has risen in the teachers’ roles resulting from the co-existence of an education system that has changed slowly and a social context that has changed fast (Goodlad, 1984; Tyack & Cuban, 1995).

There can be little doubt that change occurring in the structure of education is affecting the teacher’s role. This change has become a continuing feature in teachers’ work (Organisation for Economic Cooperation and Development (OECD), 1974). According to an Australian Schools Council (1989) report, teachers’ work is becoming more complex and new challenges have faced teachers in recent years. Their work extends behind their classroom door, increasing demand for accountability and more involvement in decision-making (Hargreaves, 1994).

The mission of teachers takes on more importance than ever before. Parents and children are increasingly in a position to challenge the value of schooling. The pressures on teachers have increased, with more students coming to the schools from broken families, and increasing social problems. Religious, racial, and regional
minority groups are asserting their rights to preserve their own ways of life in the face of the dominant national culture (Hargreaves, 1997). Hence, teacher roles can never be static. Social and education changes have already provided a platform to alter significantly the nature of teaching and add more complexity to teacher roles (Turney, Eltis, Towler & Wright, 1986; Scott, 1987). Moreover, many different and complex factors influence the roles that teachers adopt in classrooms. Teachers play many roles, such as technician, mother, father, and librarian (Wright, 1987).

The 45th session of an International Conference on Education (United Nations for Educational, Scientific and Cultural Organization (UNESCO), 1996) held in Geneva in 1996 found that the difficulties that teachers face are not negative; they are simply facing new challenges that will motivate them in new directions. Moreover, they should not enclose themselves in circles of negativity and be pessimistic towards the meaning of change in their work, especially if they themselves have a large say in the selection of roles and the emphasis which might be placed on them (UNESCO, 1996). Turney, Eltis, Towler and Wright (1986) argued that the roles teachers carry out are not solely a product of direct external pressure. However, teachers themselves have a large say in the selection of roles and the emphasis which might be placed on them.

Education change depends on what teachers do and think. The quality of the working conditions of teachers is fundamentally connected to the chances of success of change strategies. If education change is to happen, it will require that teachers understand themselves and be understood by others (Fullan, 1982). Moreover, change is a personal experience so that each and every one of the teachers who will be affected by change must have the opportunity to work through this experience in a way in which the rewards at least equal the cost (Fullan, 1991).

Hargreaves and Evans (1997), in their discussion of the Education Reform Act of 1988 in England and Wales, pointed out that, “No one is more aware of the turbulence of these reforms than the teachers who had to implement them” (p.1). Teachers are key players in the education change process. They are able to hamper any attempt to bring about change. Teachers can make change work for their students as well (Thiessen, 1992; UNESCO, 1996; Scott, 2000). Classroom teachers are the core of any improvement effort - the final curriculum decision-makers; the primary facilitators
of learning; and the key agent of implementation (Thiessen, 1992). Claxton (1989, p.2) pointed out that successful change, whether in teaching methods, curriculum, or school organisation relies on "teachers being ‘in-play’, willing to participate in the search for more powerful and enabling forms of schooling”.

Coombs (1985, p.117) argued that the quality of education and the learning achievement of students depend heavily on the competence, personality and dedication of the teacher. Thus teachers are held responsible for meeting the spiritual, cultural, moral, mental, and physical needs of students and preparing them for the next opportunities, responsibilities and experiences of adult life (Day, 1997). The teacher is the human point of contact with the student. All other influences on the quality of education are mediated by who the teacher is and what the teacher does. Teachers have potential for enhancing the quality of education by bringing life to the curriculum, and inspiring students to curiosity and self-directed learning. Clark (1995) indicated three roles for the teachers that most directly influence the quality of education: teacher as person, teacher as curriculum planner, and teacher as instructor. Primary attention in the change activity has focussed on enhancing the quality and effectiveness of teachers because teachers are central to the function of the school and education occurs in the classroom under teacher control (Cooper, 1991; Smylie, 1991).

Historically, teachers have to perform a variety of roles, for example, nurse, counsellor, disciplinarian, technician, librarian, mediator, surrogate parent, and so forth. According to Hoyle (1972), the role of the teacher can range from being highly specific to highly diffuse. It is diffused when teachers act as friend, counsellor, confidante and object of identification. It is specific when the teacher emphasises specialised instructional and selective roles.

Moreover, Wright (1987) stated that teachers can perform a variety of tasks, such as: instructor, in which the teacher transmits a body of knowledge and skills appropriate to needs and abilities of students; evaluator, in which the teacher acts in different ways, including recommending promotions, demotions and counselling children and their parents; and socialiser, in which the teacher prepares the student to take part in the way of life style of his or her society. Teachers with their traditional roles working in a conservative environment of content focussed curricula do not fit students’
broader needs. Teachers must now have the knowledge, confidence, and resources to ensure that schools become learning communities.

The role of teachers for the last 30 years has had the effect of de-emphasising their classroom and teaching role and focussing on their social roles as counsellors, organisers, administrators, cultural change agents, et cetera (Lickona, 1991). It might well be that their new roles and expectations have contributed greatly to the stress suffered by many teachers. However, they have also provided teachers with ample opportunities to make decisions, which will lead to significant professional growth (Glatthorn, 1995).

According to Husen (1994), the role of the teacher is to construct knowledge, diagnose students’ wants and expand instruction accordingly, while trying to make learning significant for students. Mayer (1992, cited in Maguire, 2000) claimed that the change in moving from belief that knowledge may be acquired to the view that learning will occur when activity constructs knowledge is the most important change in the teacher’s role.

As noted above, Clark (1995) indicated three roles for the teacher that most directly influence the quality of education: the teacher’s role as person; the teacher’s role as curriculum planner; and teacher’s role as instructor. However, teachers have weakened these new roles because they have not been provided with sufficient challenges or opportunities to work against the traditional roles of classroom teachers. These new demands on teachers to manage a productive learning environment might be resisted by many teachers who find themselves more familiar and comfortable with their traditional roles (Bluer, 1991).

Travers and Cooper (1996) added that the process of adoption of new roles for teachers has not been an easy one. New models of learning are radically redefining the teachers’ roles. Development of the learning society requires collaborative learning and involves focussing on knowledge-building. These changes arise from a shift in educational goals, with increasing diversity of populations and new conceptions in learning and knowledge. Lifelong learning, where a school acts as a learning organisation, and the integration of the school into a broader community that promotes
learning, will be required for human development in the information age (Dalin & Rust, 1996; Keating, 1998).

3.8 Education Change in Jordan

In Jordan a few patchy attempts at education change were made during the 1960s and 1970s. However, the first comprehensive program was initiated with the guidance of his majesty the late King Al Hussein Ben Talal and, with the close supervision and keen interest of Prince Al Hassan Ben Talal, Jordan began to review its education system comprehensively in the mid 1980s.

The first National Conference for Education Reform was held in September 1987 (MOE, 1988). As a result, the government launched a long-term education change package, costing approximately US $1 billion. The plan was claimed to be comprehensive and aimed to improve the quality of education outcomes by developing curricula enabling students to master higher level thinking skills and to apply academic knowledge to real life practice. This change was to take place through paying more attention to upgrading teachers’ qualifications and associated in-service training programs.

Teachers, according to this plan, would perform a new and restructured set of roles. School administrators in schools would have new targets to reach the goals for this program as well. Computers would come to play an integrated part in the learning-teaching process; and students with special needs would be mainstreamed in ordinary classrooms. More detail on these issues was included in Chapter 2.

The top-down model of education change was followed in Jordan, where this research was conducted. Political and social factors, among others, determined that top-down change was the most appropriate manner to bring about education change in Jordan. As explained in Chapter 2, the Jordanian political system is built on a monarchy. The King’s Government is the executive body, which is responsible for policy, and decision-making. Education is part of the system where the Government is responsible for setting the whole education policy agenda. Moreover, the Government has claimed
that teachers are not willing to spend the time and effort to bring about change and there is no agreement among them on what should be changed nor why they should change. For their part, teachers were not then able to organise themselves in a recognised body where their voice would be persuade the Government to consider them as a participants in making education policy. As a consequence, from their point of view, they were excluded from taking part in deciding directions for change, although they were the most experienced people who worked in the schools. In contrast, they were seen as Government employees doing what the Government mandated.

For teachers to have their a recognised union, they needed the support and approval of the Government, which claimed that establishing a teachers' union would politicise teachers in ways not acceptable in the Jordanian political system. Historically, governments have always experienced tension with the already established unions. Furthermore, it was feared that a union of teachers would form the biggest number among all other government servants and organising them in one body would exert a tremendous pressure upon the government. Thus, to put an end to this potential dispute, the Government sought refuge in the Constitution. The matter was taken to a court with the power to interpret the Constitution and it found that it was unconstitutional for teachers to have a union unless a new constitutional act was launched by the Jordanian parliament.

Socially, people have grown up in a system ruled by a hierarchy. They believe implicitly that the country's leadership will do what is in the people's best interests. Moreover, as mentioned earlier, people began participating in the country's political life only in the late 1980s. Therefore, they need time to learn about their critical role in sharing with Government the shaping of education policy. On the other hand, the Government has claimed, with some validity, that top-down change will help bring more social justice, equity and democracy when the change plan is implemented in all 11 of the country's provinces. The assumption is that change will offer equal learning opportunities for all students, regardless of their social background, and that it will also help to build a consistent Jordanian national character.
3.9 The Seven Roles Required for Teachers in the Education Reform in Jordan

It is in this section that the answer is provided for Question 2 of those which guided this research:

**Question 2: What roles have been stated for primary school teachers in Jordan’s Education Reform Program?**

According to JERP and made explicit in JEPP Conference Reports since 1987, primary school teachers will play different roles in bringing about change. Some of these roles might be new, while others will be reconstructed. According to Jordanian education decision makers, these new roles are having a deep impact on education in Jordan today and promise to exert increasing influence in the reform plan. These roles are: the teacher’s role in students’ cognitive growth; the teacher’s role in implementing teaching methods and curriculum; the teacher’s role as evaluator; the teacher’s role as health educator; the teacher’s role as technologist; the teacher’s role in professional and personal development, and the teacher’s role as a social change agent.

3.9.1 The Teacher’s Role in Developing Students’ Cognitive Growth

In a modern society the teacher is only one of a wide range of information sources (Allen & Christensen, 1974). Many people and things can be serving as informants. A teacher is no longer a small spot representing educated people, in a sea of illiteracy (Smith, 1991). Even though the primary mission of teachers will be unchanged, they will continue to be educators (Bennett, 2000).
The role of teachers has shifted from that of a provider of content knowledge to that of facilitator of students' own information and organisation skills. Teacher education has moved away from emphasising direct delivery of information toward greater stress on shaping students' mastery of information and encouraging critical thinking skills, such as problem solving, asking questions, and investigation.

Darling-Hammond (1996, cited in Germinario & Cram 1998) pointed out that to help diverse learners master more challenging content, teachers must go far beyond dispensing information, giving a test and giving a grade. They must know their subject areas deeply, and they must understand how students think if they are to create experiences that actually works to produce learning.

When the MOE literature on the education reform plan is analysed, it seems that there is a paradox in this view of a teacher's role. Planners perceived the teacher's role as developing students' cognitive growth, yet they still reinforced a role of teachers as information givers as being the "core business of a teacher". In addition, they set the education reform plan on the basis that teachers will play a dual role, that is, information supplier but also organiser of the learning environment. It can be inferred that the Jordanian MOE policy maker is fully aware of recent developments in defining teachers' roles. However, some confusion in setting the education reform agenda arises when teachers are asked to play contradictory roles at the same time. How can a teacher be asked to be a teaching organiser and at the same time a "sage on the stage"?

It seems that policy decision makers are trying to capitalise on the two ways at the same time when they encourage the development of teachers' skills as transmitters of knowledge and also try to prepare them to perform a new role. The MOE is claiming that teachers lack pedagogical knowledge, and hold views which are inconsistent with the modern views of teachers' roles, so the change will require them to master their subject matter and upgrade their pedagogical knowledge as well as to prepare for new roles. Peterson (1989) noted major differences among teachers related to their views about their roles, and the role of their students. Teachers who continued to see their roles primarily as transmitters of knowledge to students, rather than listening to
students or organising their learning environment, still performed the old roles, and resisted any change.

Shulman (1987) identified seven knowledge bases from which teachers draw during their teaching:

1. Content knowledge: teachers have broad knowledge of their subjects; understand deeply the structure of their subject and the syntactical structure of this subject;

2. General pedagogical knowledge: this encompasses the broad principles on which the conduct of teaching is based;

3. Curriculum knowledge: teachers have knowledge of official curriculum and the material that is related to the curriculum, such as textbooks;

4. Pedagogical-content knowledge: knowledge of ways in which to teach particular types of content;

5. Knowledge of the characterises of learners: it important to recognise the individual differences among students;

6. Knowledge of education contexts: this includes knowledge about different backgrounds of classes and knowledge of the school as an institution and an extension of this knowledge to include the community where schools are located and where students come from; and

7. Knowledge of education goals and values and the philosophical and historical background for these goals and values.

3.9.2 The Role of the Teacher in Implementing Curriculum and Teaching Methods

Skilbeck (1990) pointed out the importance of curriculum when he said, "the curriculum and its attendant pedagogy are the principal means whereby the school pursues its education purpose and stresses issues and structures learning" (p.15). The education reform program recognised that Jordanian textbooks and curriculum were overcrowded with information that provokes teachers to rely on rote memorisation in
preparing their students for examinations. In addition, it did not encourage students to
discover facts and think for themselves and to stress issues and problems or to find

In response to those shortcomings, the MOE has recently finished a plan for
developing the curriculum and textbooks for all school grades (Massad, 2001). It
urged teachers to focus on developing students’ thinking skills, changing from a
traditional approach to a critical one and encouraging students to discover facts and
think for themselves and to stress issues, problems, and to find solutions in a divergent
manner. In a general sense, curriculum reform prompted Jordanian teachers to develop
higher order thinking skills for their students and to reorient classroom teaching
methods to emphasise principles like self-learning. In addition, combined with this
change in curriculum, teacher guides were provided for each subject to help teachers
to bring more flexibility and creativity in applying the curriculum.

The new curriculum expected students not only to master factual knowledge but to
learn to apply that knowledge in real life situations (Massad, 2001). But according to
Lawton (1988), the introduction of the new curriculum will not bring about required
change if teachers do not change themselves. There is no curriculum development
without teacher development.

However, teachers did not participate effectively in the newly developed curricula.
They were involved just in formalities. Moreover, there were no plans to upgrade
teachers’ teaching skills to cope with the new trend of the curricula in terms of
developing students’ skills. Thus, teachers continue to maintain their traditional way
of teaching, which is much easier for them and they are not motivated to take part in
the development of new teaching methods. Textbooks are still the main, if not the
only, resource for students’ learning. The new curriculum did not take into
consideration the fact that the education reform plan is focussing on using the
textbook as only one of the resources that should be used. Textbooks should be
accompanied by other activities that students might perform, for example, gardening,
library work, and sporting activities. The most significant way to improve schools is
by changing teachers’ practices. Improving instruction is the bottom line (Hall &
Hord, 1987). Hence, one of the objectives of the newly developed teaching methods is
to encourage teachers to work as friends in a teamwork environment. However, teachers are used to working in an isolated environment.

Moreover, there were no programs to help and train teachers to work in a team rather than as isolated individuals. In terms of teaching methods, teachers would be encouraged to apply new teaching techniques, such as group teaching, collaboration with colleagues, and utilisation of the local environment as a resource in teaching as a means of relating the curriculum to students' experience. However, as William (1972) noted, most of the change in classroom practice is still at the level of talking. As a result, classroom practice remains largely unchanged. Teachers like their old role and are happy to stick with it.

3.9.3 The Role of the Teacher as Evaluator

Evaluation is a pivotal component of the teaching-learning processes and it must actively engage teachers and students (Lembo, 1971). The two most significant goals of evaluation are to decide what and how students are learning, and to measure the value of that learning (Macbeath, 1996). Teachers are natural evaluators. The nature and complexity of teaching means that teachers are involved, on a day to day basis, evaluating activities, reviewing their students' work and modifying their practice according to the evaluation results. Teachers need to know how to evaluate student learning. They must decide what students have or have not learned as a result of teaching. Without accurate evaluation of what students know and are able to do after instruction, a teacher will not have a clear track for the next instructional step. In the broadest sense, student evaluation has been used to ensure school accountability, improve instruction, and to help students learn (Haney, 1991).

In JERP, the emphasis was on making teachers use evaluation as a feedback system, enabling the students to evaluate and correct their own work rather than rely only on teachers, and from merely rating students' output. Teachers were to measure higher order thinking skills of their students (Massad, 2001). The Examination Reform and Assessment Project (ERAP) was performed in cooperation with the British Department for International Development (DFID) to train MOE staff in evaluation methods for certain subjects (Hussani, 1999). The examination reform project
demonstrated that there was a positive impact of the reform on students' learning achievement.

Moreover, recently MOE has conducted a national test for all teaching subjects to judge to what extent the students achieved the objectives of the national curriculum, and to provide feedback on what typical students knew and could do. The results showed that students still had weaknesses in many higher order skills, such as investigating and analysing (MOE, 2002).

3.9.4 The Role of the Teacher as Health Educator

Health education can play an important role in all disease and injury prevention and health promotion. According to the World Health Organisation (WHO) (1947, cited in Butler, 1994, p.56), "health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". The teacher as a health educator has knowledge and skill to assist his or her students in the development of attainable objectives and to organise activities around those objectives. Health education covering every aspect of keeping healthy and suited to the needs of each country should be as important a subject within the school curriculum as sciences or mathematics (Rayne, 1987).

People's levels of nutritional knowledge and awareness will largely dictate the health of the population. This state of health is heavily influenced by various social, cultural and ecological factors. The nutritional state of the population in developing countries is bad (Mango, 2002). Many are threatened by malnutrition because of deficiencies in quantity of food, calories and other nutrients (Baydoun, Hernandez, Schaefer, Styrz & Wille, 1987). Nutritional deficiencies may be classified in terms of specific nutrient categories or specific disease syndromes related to a particular deficiency. For instance, one can alternatively refer to iron deficiency as anemia (Elder, 2001). Teachers can pay attention to this issue by directing their students to have a balanced diet of food and to develop healthy food habits.
The basic object of health education is the transmission of knowledge that helps students behave in ways that are more beneficial to their health. Health promotion is directly linked to primary disease prevention. It begins with people who are fundamentally healthy and applies creative measures to enhance the probability that they will remain in good health. Moreover, school health instruction is a basic part of the overall mission of education because most students spend their young lives in schools, which can provide them with high quality health instruction (Butler, 1994).

According to Butler (1994), the main aim of health education is involved in either changing human behaviour or establishing a preferred one. The aim of primary health education in Jordan is to assist people in establishing a lifestyle that discourages the disease and enhances health. It is also to develop physical health ability and maintain and improve students’ physical health.

Health habits, be they hygiene, proper nutrition, adequate exercise or adequate rest, can be taught by parents in the first instance, and then by school teachers who received training during their pre-service education to apply their knowledge during their teaching (Nayar, 1987). In some developing countries like Jordan, the prevention of disease is the major concern and that was reflected in the curricula. Teachers frequently have to illustrate to their students that illness can be prevented by boiling drinking water if it does not come from a safe pipe supply (Butler, 1994).

Furthermore, teachers during their daily contact with their students have the opportunity to observe early changes in their health and vitality. Jordanian schools perform an important role in bringing this concept to action, according to William (1995). Many national and international health reports repeatedly indicate that the school is the cornerstone in health education. Historically one of the primary interests for health education has been the nature of illness and how to treat it. This interest led to the related issue, which is to prevent disease. However that was shifted towards a new trend that pays great attention to “wellness” rather than “illness” (Thier, 1987).

Health education is not taught as a separate subject in Jordan. This fact requires coordination among all teachers. It is integrated with other curriculum subject areas. All teachers work as health educators as a legitimate part of their subject teaching.
Jordanian teachers are most likely to practise health education when they utilise available health resources in school or when they are teaching in a school environment which is itself supposed to be healthy. When they try to make a connection between health knowledge and a real-life situation they are encouraging their students to develop good food habits and understand the relationship between food and growth.

William (1995) pointed out that some difficulties in treating contemporary disease come from some wrong values that are related to these diseases which are deeply rooted in social and cultural life of society itself. Teachers will come to play an important role in changing these wrong values by a stress on “cause and effect” when classroom discussions involve diagnosis of a disease.

3.9.5 The Role of the Teacher as Technologist

In the post-industrial era, the development of computer-based technology is bringing about greater change in an individual lifetime than has occurred in all the past thousands of years (Smith, 1991; Webster, 1995). These authors point out that we now live in an information society where computer and information technology are changing the way we live, work and learn.

The computer is playing an integral role in almost every aspect of education today from administration to testing to teacher practice (Bruce & Levin, 1997). The first time the computer was introduced in Jordanian schools was in 1984 in a limited number of schools in big cities. This was done for a number of reasons. Firstly, computers could help students be less dependent on teachers as experts, reduce the need for memorisation of facts, and provide more information handling and problem solving. Secondly, they can encourage students to work collaboratively rather than competing. Thirdly, computers work as a catalyst to promote change in education (Hawkridge, Jaworski & McMahon, 1990).

Since the introduction of computers into some schools in Jordan, a few teachers have been trained to use them but the vast majority of teachers are computer illiterates. However, since 1998, with strong support from King Abdullah II, the MOE set plans
to enable every Jordanian school to have access to computers, regardless of their geographic location, and to establish a training program to equip teachers with enough skills and knowledge to deal with the computers.

Hativa (1995) revealed that increased experience with students’ individualised computer practice led to significant changes in teachers’ behaviour and in teaching instruction, so that teachers moved from teacher-led instruction to individualised or achievement based grouping of students. Sheingold and Hadley (1990) argued that computers make a real difference in their teaching and in their expectation of student performance. Teachers act now as coaches and facilitators rather than as information transmitters.

According to Day (1999), as a result of the telecommunications revolution, the role of the teacher as “an expert knowledge holder” will be eroded. Instead teachers will become “knowledge brokers”, or “stewards of the learning process”. Two issues should be addressed here and both of them suggest that the teacher’s role should be redefined. Firstly, the learning process will not require much using of social skills, for teachers will act as mediators rather than content experts. Secondly, the school will not be the only place where students can have their learning. The home, media, parents and teachers will share the responsibilities for educating children. Nevertheless, the teacher’s role will continue to be to preserve the human component because human interaction is the key to the successful application of communication technologies, and the delivery of lifelong learning.

It appears that teachers can use computers to complement their teaching, but there is a need to integrate computers into the teaching process, so that students spend part of the school day interacting with the computer to expand their knowledge. Computers can do much in the classroom to facilitate a problem solving approach.

Leinwand (1992) pointed out that technology does not replace a teacher who is able to make decisions about when and how to intervene in assisting students to develop understanding and to value the world they live in. But, computers assist them to be more effective and the main duty for the teacher is to help students to “adjust” to their environment. This adjustment, it is argued, is more important than teaching subject
matter. The European Round Table of Industrialists (1997) (cited in Day, 1999, p. 200) argued that "Nothing will ever replace the centrally important role of the teacher in the learning process". Teachers are the agents of implementation of any education change (Taylor & Werner, 1989). The personal relationship between the teacher and the learner will remain at the centre of the pedagogical mission for a wakening, initiating, guiding, motivating and transmitting wisdom and tacit knowledge, such as moral values, personal and interpersonal development. However, the role of the teacher will fundamentally be moving from a teaching to a learning model.

Technology will provide students with increasing opportunity to learn through the use of CD-ROMs (Day, 1999). Teachers desire to see their students extract the maximum benefit from the new information and communication technologies (ICTs). This fact was cited as the urgent reason for expanding professional development. When teachers integrate technologies into their practice, their role will shift to be coaches where they provide their students with access to a wide range of learning experiences. Furthermore, teachers will play an active role in designing these learning activities (Oliver, 2001).

3.9.6 The Role of the Teacher in Professional and Personal Development

Teachers, like their students, will need to be prepared to work in a fast changing era where students can obtain information from many different resources. As a result, teachers must turn to a new professional style to invent their craft (Cranston, 1999). Teachers should seek lifelong professional development. According to Day (1999), professional development

... consists of all natural learning experiences and those conscious activities, which are intended to be of direct or indirect benefit to the individual, group or school and which contribute, through these, to the quality of education in the classroom. It is the process by which, alone and with others, teachers review, renew and extend their commitment as change agent to the moral purpose of teaching; and by which they acquire and develop critically the knowledge, skills and emotional intelligence essential to good professional thinking, planning and practice with children, young people and colleagues through each phase of their teaching lives. (p. 145)
Teachers are confronted by a set of changes which lead to contradictory demands on them from society. Brooker and O'Donoghue (1992) expressed their concern about improving teachers' education so that "teachers must be prepared to become more aware of their subjective beliefs about teaching and its context". There is a need to develop teachers' ability to reflect on their action (Schon, 1983, 1987). They need to move from perceiving everyday existing reality as a clearly defined and given thing into accepting that there is always a room for more important.

Hence, teacher professional development has been recognised as a crucial issue in education (Sparks, 1993; Bobis, 2000). Lowe (2000) clearly showed the importance of reshaping pre-service teacher education programs to bring about change. It is argued that to implement education change successfully, there is a need to offer increased help to teachers in determining their needs. Teaching has become a more complex job and teachers need to have enhanced intellectual and interpersonal skills to be successful (Lawton, 1998).

In the literature, teacher development is shaped by some critical, theoretical methods adopted, using concepts such as "teachers as intellectuals" (Aronowitz & Giroux, 1985; Giroux, 1988). The "teachers as researchers" concept (Stenhouse, 1975; Elliott, 1989, 1991; Bell, 1993; Hollingsworth, 1995) was one in which teachers are conceptualised as professionals who think critically about themselves as practitioners, and about the contexts within which they work.

Hargreaves (1996) supported the contribution of teachers in both change and research processes. He argued for the continuance of teachers' "voices" being put with those of other stakeholders, claiming their voices deserved a "prominent and assertive but not a privileged and presumptuous place in a wider dialogue about educational transformation." (Hargreaves, 1996, p.16).

In many models of professional development, teachers received support from experts external to the school. These experts were often university academics or directorate consultants (Tobin & Fraser, 1987; Boomer, 1988; Fullan, 1992; Begg, 1993; Bell, 1993; and Baird & Mitchell, 1986). Such models are described as collaborative programs and these often involve an action research component in which teachers
explore innovations within their own classrooms, and reflect on personal teaching practice and personal views with other teachers sharing their experience (see, for example, Baird, 1992).

The professional development process should be a collaborative effort that provides a setting where teachers from schools and universities work together. Teachers during this process have to acquire essential subject area knowledge, reflective analytic problem solving skills, and social skills. To ensure the education needs of society in the twenty-first century are met, the resultant structure of such consortiums of schools and universities must grow professionally (Stallings & Kowalski, 1990).

According to Fullan and Hargreaves (1992), in teacher professional development programs, the teacher as a person has been neglected. For instance, they either deal with all teachers as if they are the same without any differences between them or they stereotype and categorise teachers as innovators, resisters, and so on. Increasingly research has found that age, stage of career, life experiences, and gender are factors that affect people’s interest in, and response to, change and their motivation to seek improvement. Three decades ago, Beeby (1979) demonstrated that teachers’ abilities to give up routine methods to meaningfully rely on their sense of inner security, required them to have both confidence in mastering their subject matter and proper training for new methods of teaching. His finding remains salient for current programs of professional development. Professional development is an opportunity where teachers become more conscious of their concept of change as the factor that helps them to be “unfrozen” (Lange & Burroughs-Lange, 1994a, 1994b).

Rosenholtz (1989) clearly showed that teachers who regarded teaching as an easy job that they mastered in their early career days, and then knew how to do for the rest of their professional life, will get poorer results than teachers who see teaching as intrinsically difficult, with the need to be lifelong learners.

McLaughlin (1997) argued that the prominent feature in reconstructing teacher professionalism is success in accomplishing the seriously difficult task of learning the skills and perspectives that are assumed by the policy makers. Furthermore,
McLaughlin (1997) indicated five key principles fostering teacher learning and ongoing professional development. These are:

1. increasing opportunities for professional dialogue and connecting these opportunities with the meaningful content of the change effort;
2. reducing teacher professional isolation;
3. offering very good opportunities for teachers to learn and discuss;
4. creating safety and trust in the professional environment; and
5. cooperating with school restructuring in time, space and scale.

According to Firestone and Bader (1992), this approach has been studied with a view to refining professional development kits to make teacher better responders to bureaucratic initiatives. Collins (1991) argued that teacher professional development is an important issue because roles of schools are changing very rapidly. Teachers should be prepared to tackle change, in relation to either themselves, their students or the wider community. The teacher development process is a continuous rather an isolated event (Bantick, 2000). This process needs systematic planning to give consideration to the different phases in teachers' work (Conners, 1991).

In general, teacher development programs have a universal aim that is to make change happen. Three common results of effective teacher development are: change in teachers' beliefs and attitudes; change in teacher content knowledge; and change in teaching practice. The central underlying principle in supporting teacher change is that it should lead to more effective teaching and consequently improved student learning (Conners, 1991).

One of the newer concepts that has received much attention in JERP is collaborative teaching. There is growing evidence that the school culture is a significant feature in education change (Smylie, 1991). In a collaborative culture, teachers develop more beneficial relationships by talking frankly about themselves and offering mutual support to each other (Hargreaves, 1994). Fullan and Hargreaves (1991) argued that, because education change brings anxiety and is unsettling, so a collaborative culture is needed. They state that collaborative cultures allow teachers to develop the collective
confidence to respond to change quickly, select and adapt those elements that will aid improvement in their own work context, and reject those that will not aid improvement (Fullan & Hargreaves, 1991).

Rosenholtz (1989) found that there is increasing evidence that improving the quality of teaching and learning in the classroom is shaped by the quality of the relationship between teachers and their colleagues. The importance and the benefits of teacher collaboration are well documented (Stenhouse, 1975; Nias, 1988; Little, 1988; Hargreaves, 1994; Hopkins, 1994).

Little (1981, cited in Fullan, 2001) claimed that change is likely to happen when teachers engage frequently in concentrated talk about teaching practice. Furthermore, when teachers and administrators observe each other teaching and provide feedback, and when they prepare, research and design teaching materials together, teachers will be encouraged to bring about change in their classroom practice. Moore-Johnson (1990) pointed out that colleagues are important in meeting teachers' needs for contact with adult people and they serve as a primary source of pedagogical advice and academic advice. Teachers in most of their working day are isolated from their colleagues or other adult people.

Teachers in most of their working day are isolated from their colleagues or other adult people. They normally spend little time exchanging their experience and ideas with their peers (Zaltman, Florio & Skorski, 1977; Eisner, 1992). This isolated environment is deep-rooted in schools, which have been organised like egg crates since the mid nineteenth century (Hargreaves & Evans, 1997). It illustrates why teachers avoid collaboration with their colleagues, and why they are prone to work individually (Hargreaves, 1994). Eisner (1992) added that even when teachers have an opportunity to see each other in the staff room, the context of teaching is still rarely a discussion issue. Fullan (1993) stated that teachers need training and practice in working cooperatively with their peers, the community and their students.
3.9.7 The Role of the Teacher as a Social Change Agent

Many developing countries have mobilised the education system as a powerful instrument for social change (Thompson, 1981; Smith, 1985; World Bank, 1990). Zaltman et al. (1977) argued that, regardless of whether education change is initiated within or outside schools, schools are powerful tools of social change. Teachers are the most significant human factors in the operation of school organisations. However, the importance of their role is belied by the low status of teaching as profession.

The education reform plan in Jordan is seen as part of a comprehensive development plan, which will affect all aspects of Jordanian life. Education is seen as promoting social consistency and unity and as serving the needs of the economy (Middleton, 1989). In Jordan, education during the last 40 years has played an important role in social mobility. It has brought harmony to the social fabric of the society.

It was clearly recognised that many of the education problems have social roots. Thus, it is vital to address these issues. Attitudes held by students and their families in Jordanian society value white-collar jobs. People look down on blue-collar jobs. A university degree forms the most respectable career path and is a symbol of social prestige in the community. As a result, the civil service market is at full capacity while the unskilled, semi-skilled and technical workforces experience labour shortages. This situation has created many problems for Jordanian labour, where thousands of educated people are waiting to have a job in one of the government agencies. Simultaneously, there is severe shortage in the vocational market. According to Abu Ragheb, the Jordanian Prime Minister (2002), there are 600,000 foreign workers working in the Jordanian labour force, while there are 200,000 unemployed Jordanians. According to the education reform plan, teachers will play a critical role in correcting this situation by helping students transform their negative attitudes toward vocational careers and learning to value them.

Skilbeck (1991) argued that teachers and schools are located in the front position of social change. He believed that schools have for too long simply reproduced the attitudes, values, and character needed to maintain leading and privileged social groups. Travers and Cooper (1996) found that vast social changes have been deeply
affected by the part played by teachers. The demands facing teachers have changed quite dramatically in the last 15 to 20 years, leading to greater responsibilities being imposed upon teachers. At the same time, families in general have been accepting less responsibility for education of their children.

Globle and Porter (1977) emphasised the role of the school as the agent of social change. This role implies localised decision making. Teacher initiatives place a significant new demand on teacher education and engage teachers in this process. Such change requires the development of teachers' attitudes, skills, knowledge, and awareness of social development issues and problems.

However, Goodlad (1990) pointed out that in-service teacher training programs are failing to realise the importance of the social role for teachers as the driving force in achieving change. He also found that there is a real need to look deeply at professional competence and development in teaching.

In conclusion, Jordanian teachers for nearly 40 years have played a pivotal role in social change. According to the new plan, they are again called upon to help the country to overcome many problems that have social roots.

3.10 Conclusion

This review demonstrates that most attempts to bring about change in education throughout the world have failed to achieve the proposed change because they followed either a top-down change plan or a bottom-up change plan. It demonstrated the need for an alternative method, namely, a combined approach, offering the potential to overcome the problem associated with the more traditional approaches.

Teachers have various dispositions, motivations and commitments when dealing with change. These interests have led to changes in recent years, presenting an increasing attempt to bring a closer connection between the model of change and teachers' desire for change. This attempt includes teachers having more say in the change process, and helping them to feel they own the change concerned, thus increasing opportunities for
leadership and professional learning and encouraging a culture of collaboration and continuous improvement (Hargreaves, 1994). In this connection, Macbeath (1996) argued that government decision-making improves when policy makers listen to teachers and are ready to learn from them.

In 1987 Jordan launched a plan for education change that is seen as critical to better equip young people for the future. It is assumed to be a comprehensive plan in which teachers will come to play various sets of restructured and new roles. These roles envisage teachers as developers of student content knowledge, teachers as curriculum and teaching methods implementers, teachers as evaluators, teachers as health educators, teachers as people who take responsibility for their own professional and personal development, and teachers as social change agents.

Social change is a far-reaching process influencing patterns of beliefs and values which in the past served the Jordanian community well. Currently, a new generation has different needs and so social change is required. Teachers, therefore, have come to be seen as potentially powerful agents in desired social change.

The balance between conserving the tradition and stimulating desirable change is extraordinarily difficult to strike and so it is to be expected that attempting to deal with conflicts between the two would be stressful for many teachers. The seven teacher roles identified above became central in the investigation reported in subsequent chapters. In them, evidence concerning the extent to which Jordanian teachers enacted those roles and the experiences they encountered on the way are reported and discussed.
CHAPTER 4

RESEARCH DESIGN AND METHODS

4.1 Introduction

The focus of this study was determined by a number of factors that included positioning the research within the education policy reform agenda of Jordan to provide a critical and constructive analysis of key aspects of educational change in a unique social, cultural and economic context. To achieve this overarching aim and the objectives outlined above, the study was directed by nine research questions drawn from a review of education reform conference documents in Jordan for the years 1987, 1994 and 1998 and related literature. These nine questions were listed in Chapter 1 (see p. 6) but are repeated here for the sake of completeness.

1. What processes, methods and strategies are used in Jordan to introduce and implement educational change as part of Jordan’s Education Reform Program?

2. What are the roles of primary school teachers in Jordan’s Education Reform Program?

3. How do teachers perceive their performance in schools in terms of translating their knowledge and beliefs into actions?

4. Are there any differences in the educational roles of primary teachers due to: gender, number of in-service training courses attended, years of teaching experience, academic qualifications, teaching specialisation, and school location?

5. How do significant stakeholders, specifically academics and administrators, describe the nature of the changes and roles of teachers in the education change process?
6. What has been the impact of these changes on teachers and what do teachers think about the expectations for their role?

7. What factors and/or variables contributed to teachers’ views about Jordan’s Educational Reform Program and the process of implementation of the reforms?

8. From the all evidence in this research study, how effective has the education reform agenda in Jordan been and what factors have hindered it?

9. What are the implications of findings related to the above questions for future policy and practice in Jordan?

This chapter explains, with details, the research design for the study and the research methods that were employed and why these methods were considered the most appropriate to answer the research questions. Furthermore, this chapter includes descriptions of the population and study sample and justifies their choice. In addition, this chapter describes the data-gathering instruments used. The outcomes of pilot studies of the interview schedules and the questionnaire are described, and the data collection process for each method is reported here together with an outline of the methods used in data analysis.

### 4.2 The Research Design

The research reported here sought to describe Jordan’s Education Reform Program (JERP) and the process of implementation of the reforms. In particular, it endeavoured to identify and account for the roles, experiences, attitudes and beliefs of teachers who were involved in this program. Building on the literature review, the study acknowledged that teachers are the crucial focal point in the successful implementation of any educational change, and that, consequently, it was important to seek information from teachers themselves.

It was also accepted that other significant stakeholders in the education program are academics and administrators and that, therefore, they should also be consulted. Consequently, the study also sought information from these groups about their
experience of education change in Jordan, and especially, to sample their views on the role of teachers in that change, thus providing for triangulation – that process described by Pitman and Maxwell (1992) as the “layering of data across time, informants, events, documents, and so on ... [as] an essential validation technique for conclusions and recommendations” (p. 763).

Two approaches were used to gather data. Firstly, quantitative methods were employed in the form of a questionnaire, which was designed to collect information about teachers’ work across a range of variables drawn from the general international education literature, Ministry of Education documents, and papers included in education change conferences held in 1987, 1994, and 1998 in Amman. In addition, recourse was made to the pertinent United Nations Educational, Scientific and Cultural Organisation (UNESCO) documents.

Secondly, qualitative methods were utilised through interviews with the three groups of significant stakeholders: academics, teachers and administrators. These interviews provided rich data and points of view about change that allowed comparisons to be made among the perceptions of the three groups and a comprehensive understanding of the JERP processes and outcomes to be obtained.
4.3 Quantitative Research Methods

Quantitative research methods were employed in an attempt to establish broad-spectrum, nomothetic rules and principles. As described by Bryman & Cramer, (1994), research using quantitative methods, in general, follows the sequence of phases shown in Figure 4.1.

![Diagram showing the main phases of the quantitative research process]

**Figure 4.1:** The logical structure of the quantitative research process (Source: Bryman & Cramer, 1994, p.3)
4.3.1. The Questionnaire

Chapter 3 focussed on teachers as key players in any proposed educational change. The present study sought to find out the extent to which Jordanian teachers are playing a strategic role in the country's 1987 plan for education reform and to draw implications for policy and practice. As noted in 4.1, the study used both qualitative and quantitative methods to collect data. To ensure that valid data were collected during the survey, it was necessary to devise scales and their questions to reflect key components in the reform agenda. In this way, the study sought to ensure content validity for the survey instrument. Therefore, the questionnaire instrument was developed by identifying the scales and basing the questions on the revision of education reform as discussed at conferences held at Amman in 1987, 1994, and 1998. These scales represent the main desirable changes in Jordanian teachers' practice, based on literature available in this field (see Chapter 3), and as discussed during the reform conferences.

The final survey questionnaire comprised 52 items written to reflect seven major tasks undertaken by teachers and emphasised as part of the reform agenda for educational delivery in Jordan. The seven groups of items corresponding to seven "scales" were as follows:

1. the teacher's role in students' cognitive growth;
2. the teacher's role in implementing curriculum and teaching methods;
3. the teacher's role as an educational evaluator;
4. the teacher's role as health educator;
5. the teacher's role as technologist;
6. the teacher's role in professional and personal development; and
7. the teacher as a social change agent.

For each of the seven dimensions, several conceptually related items were written (see Appendix A) to correspond to teachers' typical classroom behaviour. The items used a six-point response format ranging from 1 ("I never do that") to 6 ("I always do that").
The purpose of forming scales was to operationalise several self-reported behavioural measurements as study variables. Each scale measured one aspect under investigation and the complete set of seven scales, corresponding to the list above, provided a multivariate profile for each teacher. Initially, the item pool comprised 75 items. The original version of the questionnaire was written in Arabic language because the data were collected in Jordan where the first language is Arabic. For the purposes of obtaining ethics approval and reporting results in this thesis, the questionnaire was translated into English and checked by a person who is fluent in both English and Arabic.

Firstly, it was necessary to ensure that the draft items reflected the behaviours intended for each scale, that is, that the scales had content validity. To this end, 11 education experts in Jordanian universities were asked to check the content validity and to provide critical feedback on the items. Specifically, they were asked to:

1. confirm that the wording of an item corresponded to its scale label;
2. suggest any items that should be omitted (e.g., ambiguous) and any that could be added; and
3. suggest changes in wording to improve items.

Written feedback was provided by seven of the eleven experts and, as a result, the pool of 75 items was reduced to 60 and some items were revised. The final version of the survey instrument for teachers began with an introductory letter from the researcher. Then teachers were asked to report their typical behaviour for each item by selecting the most appropriate point on the six-point Likert scale.

4.3.2 Pilot of the Questionnaire

The main purpose of the pilot study was to identify potential problems before they became costly mistakes. The pilot also provided information on how long data collection could be expected to take and gave a preview of how difficult items would be completed. A pilot is typically used if an instrument or methods of data collection are being used for the first time, or for the first time with a particular group, or to
sample several alternative approaches before committing more resources. For all of these reasons, a pilot study was included in the present research.

Ninety (90) primary school teachers participated during workshops in Mafraq, in Irbid Education Province. The purpose of the survey was made clear and anonymity of respondents was assured. Teachers were then invited to complete the questionnaire and drop it in the box provided on the lecture desk. The researcher advised that he was ready to answer any questions about the questionnaire. Every questionnaire had attached to it a blank page and teachers were invited to write any comments on it.

A number of teachers said that some of the questions in the “the teacher’s role as a technologist” scale and “the teacher’s role as a social change agent” scale were difficult to answer. A few teachers said that the questionnaire was too long. Others said they enjoyed completing the instrument as it clarified their ideas and helped them to think more about their work and about educational reform in Jordan. As a consequence of the pilot study, it was decided to delete some items of the questionnaire, thus making it shorter. Other items were modified based on feedback received. Since the final instrument was different from the one used in the pilot, the evidence of reliability (internal consistency) is based on an analysis of data collected during the main survey.

4.3.3 Reliability of the Survey Instrument

A major advantage of using several response alternatives instead of an agree/disagree format was to increase variability and hence reliability (internal consistency) of the scales. As noted in 4.3.2, as a result of the pilot study, a number of questions were omitted, others were revised, and a few new items were added. These changes were judged to improve further the content validity of the instrument. It was then necessary to check the reliability of the revised instrument and, for reasons of economy and time, internal consistency for the scales was checked using the actual survey data (N = 663).
What is reported in this section is an item analysis for the seven scales and decisions made about the post hoc omission of some items that did not fit empirically with other items in the scale.

4.3.3.1 The Teacher’s Role in Students’ Cognitive Growth

This scale comprised nine items about teachers’ behaviours in encouraging cognitive development and understanding in their students. As a result of the item analysis as shown in Table 4.1, all nine items were retained. Although item 1 had a relatively low correlation with total score because of its low standard deviation (a consequence of its very high mean), its inclusion is justified because of its conceptual relevance. The scale overall had an acceptable Cronbach alpha value of 0.78.

Table 4.1 Item Analysis for the Scale on the Teacher’s Role in Students’ Cognitive Growth

<table>
<thead>
<tr>
<th>Item no.</th>
<th>Item statement</th>
<th>Corrected item v. total score correlation</th>
<th>Cronbach alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Explaining new concepts and terminology to students.</td>
<td>0.19</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Offering opportunity for students to practise scientific technical skill.</td>
<td>0.40</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Directing students towards more reading to enrich their knowledge.</td>
<td>0.67</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Assisting students in practising scientific experiments.</td>
<td>0.27</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Developing students’ abilities in research and investigation</td>
<td>0.62</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Providing students with the latest information in my subject matter.</td>
<td>0.29</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Developing students’ abilities in constructing self-criticism.</td>
<td>0.69</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Drawing students’ attention to their errors and assisting them to correct error.</td>
<td>0.54</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Developing students’ abilities in problem solving.</td>
<td>0.56</td>
<td></td>
</tr>
</tbody>
</table>
4.3.3.2 The Teacher’s Role in Curriculum Implementation and Teaching Methods

The scale on curriculum and teaching methods originally comprised seven items covering teacher behaviours regarding curriculum implementation and teaching methods. Item 10, with a correlation with total score of only 0.18 was omitted as a result of the item analysis. Item 10 read, “Using textbooks to develop practical skills” and it can be argued that, even on conceptual grounds, this item does not fit well with the remaining items. As shown in Table 4.2, all other item v. total score correlations were acceptable and the overall Cronbach alpha value for the 6-item scale was 0.71.

Table 4.2 Item Analysis for the Scale on the Teacher’s Role in Implementing Curriculum and Teaching Methods

<table>
<thead>
<tr>
<th>Item no.</th>
<th>Item statement</th>
<th>Corrected item v. total score correlation</th>
<th>Cronbach alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Relating the content of the textbooks to the individual and country needs</td>
<td>0.21</td>
<td>0.71</td>
</tr>
<tr>
<td>12</td>
<td>Preparing teaching aids to accompany the textbooks.</td>
<td>0.51</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Using modern teaching methods in my teaching.</td>
<td>0.71</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Considering individual difference abilities among students</td>
<td>0.30</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Using group-teaching methods in my teaching.</td>
<td>0.51</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Utilising local environment in producing teaching aids</td>
<td>0.52</td>
<td></td>
</tr>
</tbody>
</table>
4.3.3.3 The Teacher’s Role as Educational Evaluator

This scale consisted of eight items and sought to measure the role of the teacher as evaluator of his/her students’ performance. Based on the item analysis results shown in Table 4.3, all items were retained. All item v. total score correlations were acceptable and the scale gave a Cronbach alpha reliability coefficient of a high 0.85.

Table 4.3 Item Analysis for the Scale on the Teacher’s Role as Educational Evaluator

<table>
<thead>
<tr>
<th>Item no.</th>
<th>Item statement</th>
<th>Corrected item v. total score correlation</th>
<th>Cronbach alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>Evaluating students’ performance in accordance with educational goals</td>
<td>0.38</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Maintaining a “question bank” for use in tests</td>
<td>0.68</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Taking individual differences into consideration while preparing tests</td>
<td>0.56</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Using model answer for school tests</td>
<td>0.70</td>
<td>0.85</td>
</tr>
<tr>
<td>21</td>
<td>Analysing questions to rank students’ achievement through scientific statistical approaches</td>
<td>0.57</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Conducting regular evaluation of students’ progress</td>
<td>0.52</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Using regular observation</td>
<td>0.56</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Using a scientific statistical approach to analyse points of strength and weakness in the students’ learning</td>
<td>0.77</td>
<td></td>
</tr>
</tbody>
</table>
4.3.3.4 The Teacher’s Role as Health Educator

This scale covered the teacher’s role as a health educator. It consisted of eight items after one item was excluded. The excluded item was number 30 with a correlation with total score of only 0.09. “Encouraging students to have a balanced diet”, despite being conceptually related, did not fit with the remaining items in this scale. A possible explanation is that teachers did not practise this behaviour because most of their students came from low socio-economic backgrounds where their parents were working very hard to meet their most basic needs. Hence teachers might believe that it would be offensive to ask their students to have certain foods, knowing these limitations. On the other hand, item 26 (“Advising students to buy healthy food”) did not present a problem. The Cronbach alpha reliability index for this scale was a high 0.88, as shown in Table 4.4.

Table 4.4 Item Analysis for the Scale on the Teacher’s Role as Health Educator

<table>
<thead>
<tr>
<th>Item no.</th>
<th>Item statement</th>
<th>Corrected item v. total score correlation</th>
<th>Cronbach alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>Encouraging and assisting students to keep their bodies and clothes clean</td>
<td>0.51</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>Advising students to buy healthy food</td>
<td>0.64</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Guiding students to put rubbish in containers</td>
<td>0.73</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>Guiding students to desist from unhealthy habits like nail biting and finger sucking</td>
<td>0.78</td>
<td>0.87</td>
</tr>
<tr>
<td>29</td>
<td>Encouraging students to play sports</td>
<td>0.73</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>Keeping classrooms clean and exposed to fresh air</td>
<td>0.63</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>Making students aware of risks of using charlatan’s cures</td>
<td>0.55</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>Helping students to understand that ’prevention is better than cure’</td>
<td>0.68</td>
<td></td>
</tr>
</tbody>
</table>
4.3.3.5 The Teacher’s Role as a Technologist

This scale originally consisted of six items designed to map the teacher’s role as technologist. This role is a newly recognised one in the Jordanian educational reform plan. Teachers vary in their willingness to use new technology in their daily practice. However, it was found that item 39, “Producing software programs in my subject matter”, had a correlation of only 0.12 with total score and this item was omitted. It can be argued that teachers did not practise this behaviour because, as stated above, technology is new in Jordan and most of the teachers would not have the needed skills to produce software programs in their fields.

The Cronbach alpha reliability coefficient obtained for this scale was a very high 0.95, indicating high internal consistency for this scale of only five items. Results of the item analysis are shown in Table 4.5.

Table 4.5 Item Analysis for the Scale on the Teacher’s Role as Technologist

<table>
<thead>
<tr>
<th>Item no.</th>
<th>Item statement</th>
<th>Corrected item v. total score correlation</th>
<th>Cronbach alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>34</td>
<td>Using the internet in teaching</td>
<td>0.84</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>Using software programs in my teaching</td>
<td>0.89</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>Using the computer to develop self-learning skills</td>
<td>0.91</td>
<td>0.95</td>
</tr>
<tr>
<td>37</td>
<td>Using the computer to develop technical teaching skills</td>
<td>0.78</td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>Using the computer as a teaching aid</td>
<td>0.92</td>
<td></td>
</tr>
</tbody>
</table>
4.3.3.6 The Teacher's Role in Professional and Personal Development

This scale was constructed in an attempt to measure the teachers' participation in activities related to professional and personal growth, which is considered an important component in the education reform plan. The scale comprised 10 items but two items were omitted after item analysis. Item 47, "Performing my job with complete satisfaction", had a correlation with total score of only 0.19. A possible reason lying behind this low correlation is that teachers may be expressing their lack of satisfaction with their work condition, but this may not necessarily influence their commitment to their own professional growth. Item 49 “Utilizing the teachers’ guide in preparing for classes and teaching”, also had a very low correlation of 0.04 with total score. It can also be argued that this item was not well matched conceptually with the trait defined as professional and personal growth. With items 47 and 49 omitted, the scale of eight items had a Cronbach alpha coefficient of 0.88 as Table 4.6 shows.

Table 4.6 Item Analysis for the Scale on the Teacher’s Role in Professional and Personal Development

<table>
<thead>
<tr>
<th>Item no.</th>
<th>Item statement</th>
<th>Corrected item v. total score correlation</th>
<th>Cronbach alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>Reading books and periodicals in my subject matter</td>
<td>0.67</td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>Keeping up to date with the current philosophy of education in Jordan</td>
<td>0.80</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>Evaluating continuously my teaching performance</td>
<td>0.74</td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>Having a positive view of my role as teacher</td>
<td>0.76</td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>Sharing my teaching experience with my colleagues</td>
<td>0.80</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>Undertaking research and educational studies</td>
<td>0.52</td>
<td></td>
</tr>
<tr>
<td>46</td>
<td>Enrolling in academic educational programs in Jordanian universities</td>
<td>0.57</td>
<td></td>
</tr>
<tr>
<td>48</td>
<td>Participating in evaluating the effectiveness of professional developments run by the Ministry of Education</td>
<td>0.48</td>
<td></td>
</tr>
</tbody>
</table>

85
4.3.3.7 The Teacher’s Role as Social Change Agent

The final scale in the questionnaire sought information about a teacher’s role as a social change agent. According to the reform plan, teachers, through their daily practice, should bring about change by introducing new ideas, linking education to the world of work, encouraging students to be lifelong learners, and so on. This scale consisted of eight items after one item (Item 56: “Utilizing scientific concepts in solving problems facing students”) was omitted because of a low correlation with total score of only 0.17. Empirically, this item was not strongly associated with other items in this scale. The modified scale of eight items had a Cronbach alpha value of 0.83 as shown in Table 4.7.

Table 4.7 Item Analyses for the Scale on the Teacher’s Role as a Social Change Agent

<table>
<thead>
<tr>
<th>Item no.</th>
<th>Item statement</th>
<th>Corrected item v. total score correlation</th>
<th>Cronbach alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>Utilising the results of education research and studies as a basis for educational development</td>
<td>0.31</td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>Participating in educational programs for students with special needs, such as the gifted, disabled, or slow learners</td>
<td>0.72</td>
<td></td>
</tr>
<tr>
<td>52</td>
<td>Utilising modern information and data relevant to educational change</td>
<td>0.72</td>
<td></td>
</tr>
<tr>
<td>53</td>
<td>Correlating the content of textbooks with the needs of national development</td>
<td>0.61</td>
<td>0.83</td>
</tr>
<tr>
<td>54</td>
<td>Presenting students with the principle of integrated education including the academic and the professional streams</td>
<td>0.39</td>
<td></td>
</tr>
<tr>
<td>55</td>
<td>Developing students’ potentials for vocational learning</td>
<td>0.49</td>
<td></td>
</tr>
<tr>
<td>57</td>
<td>Developing the skill of life long learning</td>
<td>0.73</td>
<td></td>
</tr>
<tr>
<td>58</td>
<td>Encouraging students to participate in democracy and human rights activities</td>
<td>0.51</td>
<td></td>
</tr>
</tbody>
</table>
4.3.3.8 A Summary of the Reliabilities of the Seven Scales

Table 4.8 summarises the internal consistency estimates for all seven scales. Cronbach alpha values ranged from 0.71 to 0.95 indicating a most satisfactory level of internal consistency. Over all the scales, six items were omitted following initial item analysis. The table then shows the number of items remaining in each scale as it was used for analysis of the results of the research.

Table 4.8. Internal Consistency for Seven Scales Using Cronbach Alpha

<table>
<thead>
<tr>
<th>No</th>
<th>Scale</th>
<th>No. of items initially</th>
<th>No. of items after omission</th>
<th>Cronbach alpha values</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>The Teacher’s Role in Students’ Cognitive Growth</td>
<td>9</td>
<td>9</td>
<td>0.78</td>
</tr>
<tr>
<td>2</td>
<td>The Teacher’s Role in Implementing Curriculum and Teaching Methods</td>
<td>7</td>
<td>6</td>
<td>0.70</td>
</tr>
<tr>
<td>3</td>
<td>The Teacher’s Role as Educational Evaluator</td>
<td>8</td>
<td>8</td>
<td>0.85</td>
</tr>
<tr>
<td>4</td>
<td>The Teacher’s Role as Health Educator</td>
<td>9</td>
<td>8</td>
<td>0.83</td>
</tr>
<tr>
<td>5</td>
<td>The Teacher’s Role as a Technologist</td>
<td>6</td>
<td>5</td>
<td>0.92</td>
</tr>
<tr>
<td>6</td>
<td>The Teacher’s Role in Professional and Personal Development</td>
<td>10</td>
<td>8</td>
<td>0.83</td>
</tr>
<tr>
<td>7</td>
<td>The Teacher’s Role as Social Change Agent</td>
<td>9</td>
<td>8</td>
<td>0.79</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>58</td>
<td>52</td>
<td></td>
</tr>
</tbody>
</table>
4.3.4 Population and Sample of the Study

Ten education districts were selected as representative of all the educational districts in Jordan for the purpose of obtaining samples to include in the questionnaire survey and in face to face interviews. The target population for the study was defined as all basic teachers who worked in Amman III, Alkoura, Tafeela, North Ghour, Tafeela, Maddaba, Maa’n, Ramtha, Irbid I and Mafraq I education districts for the scholastic year 2000-2001, as shown in Table 4.9.

Table 4.9. Distribution of the Target Population by Education Districts and Gender for the Questionnaire

<table>
<thead>
<tr>
<th>No</th>
<th>Education District</th>
<th>Females</th>
<th>Males</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Irbid I</td>
<td>2,487</td>
<td>1,660</td>
<td>4,147</td>
</tr>
<tr>
<td>2</td>
<td>Amman III</td>
<td>1,000</td>
<td>642</td>
<td>1,642</td>
</tr>
<tr>
<td>3</td>
<td>Alkoura</td>
<td>564</td>
<td>408</td>
<td>972</td>
</tr>
<tr>
<td>4</td>
<td>Tafeela</td>
<td>548</td>
<td>428</td>
<td>976</td>
</tr>
<tr>
<td>5</td>
<td>North Ghour</td>
<td>460</td>
<td>429</td>
<td>889</td>
</tr>
<tr>
<td>6</td>
<td>Ramtha</td>
<td>573</td>
<td>416</td>
<td>989</td>
</tr>
<tr>
<td>7</td>
<td>Maddaba</td>
<td>976</td>
<td>806</td>
<td>1,782</td>
</tr>
<tr>
<td>8</td>
<td>Maa’n</td>
<td>921</td>
<td>540</td>
<td>1,461</td>
</tr>
<tr>
<td>9</td>
<td>Mafraq I</td>
<td>1,218</td>
<td>935</td>
<td>2,153</td>
</tr>
<tr>
<td>10</td>
<td>North Badia</td>
<td>230</td>
<td>344</td>
<td>574</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>8,977</td>
<td>6,608</td>
<td>15,585</td>
</tr>
</tbody>
</table>

Source: Ministry of Education, 1999
From the population shown in Table 4.9, a five per cent sample was randomly selected, providing 779 subjects who were invited to participate in the questionnaire survey. Of those 779, 663 (85.5 per cent) agreed to participate and completed the questionnaire. The relatively high response rate, considerably higher than is typically achieved in educational surveys, combined with the method of random selection of the target sample, assured the representativeness of the respondent group. Table 4.10 presents the breakdown of this sample by the background variables selected for study.
Table 4.10 Description of the Sample of Teachers Who Responded to the Questionnaire

<table>
<thead>
<tr>
<th>Variables</th>
<th>Defined Variables</th>
<th>Frequencies</th>
<th>Per Cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>274</td>
<td>41.3</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>389</td>
<td>58.7</td>
<td></td>
</tr>
<tr>
<td>Highest qualification</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diploma</td>
<td>70</td>
<td>10.6</td>
<td></td>
</tr>
<tr>
<td>Bachelors Degree</td>
<td>284</td>
<td>42.8</td>
<td></td>
</tr>
<tr>
<td>Bachelors Degree Conversion</td>
<td>176</td>
<td>26.5</td>
<td></td>
</tr>
<tr>
<td>Graduate Diploma</td>
<td>91</td>
<td>13.7</td>
<td></td>
</tr>
<tr>
<td>Masters Degree</td>
<td>42</td>
<td>6.3</td>
<td></td>
</tr>
<tr>
<td>Years of experience</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-5 years</td>
<td>162</td>
<td>24.4</td>
<td></td>
</tr>
<tr>
<td>6-10</td>
<td>175</td>
<td>26.4</td>
<td></td>
</tr>
<tr>
<td>11-15</td>
<td>155</td>
<td>26.4</td>
<td></td>
</tr>
<tr>
<td>16+ years</td>
<td>185</td>
<td>22.8</td>
<td></td>
</tr>
<tr>
<td>Number of in-service training</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>courses completed</td>
<td>None</td>
<td>42</td>
<td>6.3</td>
</tr>
<tr>
<td>One</td>
<td>203</td>
<td>30.6</td>
<td></td>
</tr>
<tr>
<td>Two</td>
<td>233</td>
<td>35.1</td>
<td></td>
</tr>
<tr>
<td>Three</td>
<td>185</td>
<td>27.9</td>
<td></td>
</tr>
<tr>
<td>School location</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>City</td>
<td>204</td>
<td>30.0</td>
<td></td>
</tr>
<tr>
<td>Village</td>
<td>225</td>
<td>33.9</td>
<td></td>
</tr>
<tr>
<td>Badia</td>
<td>234</td>
<td>35.3</td>
<td></td>
</tr>
</tbody>
</table>
4.3.5 Methods of Analysing the Questionnaire Data

After collating and coding the questionnaire data, statistical analyses were conducted using the Statistical Package for the Social Sciences (SPSS). As reported above, the Cronbach Alpha coefficient was selected as a measure of internal consistency (reliability) of the scales developed to measure teachers' reported performance of the teacher roles selected for study.

The seven scales were regarded as interval data so descriptive information on them was reported as means and standard deviations (although frequency distributions were also reported). When results showed a spread of reported behaviours on the seven scales, an attempt was made to "explain" differences by relating scale scores to background characteristics of teachers. For categorical background variables, tests of significance of differences were carried out using Student's t test (for two categories, such as gender) or Analysis of Variance (ANOVA) (for more than two categories, such as location). For continuous background variables (for example, number of in-service courses), Spearman Rank Order correlation was computed. The .05 level of probability was adopted as the criterion of statistical significance.

4.4 Qualitative Research Methods

4.4.1 Overview

Strauss and Corbin (1990, defined qualitative research as follows:

Any kind of research that produces findings not arrived at by means of statistical procedures or other means of quantification. It can refer to research about persons' lives, stories, behaviour, but also about organisational functioning, social movements, or international relationships. Some data may be quantified as with census data but the analysis itself is a qualitative one (p.17).

Marshall and Rossman (1989) added, "Qualitative research assumes that systematic inquiry must occur in a natural setting rather than an artificially constrained one such as an experiment" (p. 10).
These principles were followed in this phase of the study. In the context of the study, it was acknowledged that many factors could have had an influence in shaping the participants’ points of view, so it was important to take these factors into account while conducting the interviews. Smith (1987) took up the issue of context in qualitative research, as follows:

Qualitative research is based on the notion of context sensitivity. What sets qualitative research apart most clearly from other forms of research is the belief that the particular physical, historical, material, and social environment in which people find themselves has a great bearing on what they think and how they act. Acts must be interpreted by drawing on those larger contexts. Qualitative researchers reject the notion of universal, context-free generalization. ... Objectivity in the conventional sense is an illusion ... A further implication of the belief in context sensitivity is a de-emphasis of standardised or general research methods. The social scene is thought to be so complex that one cannot anticipate it sufficiently to select a prior a single or even a few meanings for a construct ... and adopt a uniform way of measuring it (p.173-84).

In reporting the analysis and interpretation of the qualitative data in this study, although the context is explained, the interpretation is inevitably subjective. Hence teachers’ comments and views are considered against the background of the quantitative survey findings in an effort to strengthen the conclusions through triangulation. In other instances, individual comments by teachers are used to illustrate findings and hence to enhance insights.

4.4.2 Interviews

The purpose of the individual interviews was to identify the attitudes, views, beliefs and experiences of three different groups of stakeholders in the education change process in Jordan, specifically, teachers, academics and administrators.

These three groups were selected from the provinces of Mafraq and Irbid and 35 interviews were conducted in total. The teachers were selected from basic schools in those provinces. Invitation letters to take part in the interview were sent along with the
questionnaire. Of teacher respondents who indicated a willingness to be interviewed, 15 were selected within provinces (that is, Irbid and Mafraq) in such a way that the sample group included a spread of genders, qualifications, years of experience, school locations, specialisations and numbers of training courses attended (see 4.4.3).

The second group consisted of 10 academics. Seven were teaching in education faculties in Jordanian universities and three were employed by the Jordanian National Centre for Human Resources, which is considered to be a ‘think tank’ for reform (see 4.4.4). Academics were screened according to their academic field of interest. Those who expressed an interest in education reform were invited in writing to participate in the interview and appointments were negotiated.

Academics as a group are well known for their interest in education change. Moreover, they had participated in the National Conferences for change and they had almost daily contact with teachers through their work at universities and the centre. Such academics have also acted as external monitors of the progress made by schools and the MOE in the implementation of the education reform plan.

Finally, the third group consisted of administrators who worked in the MOE in Jordan’s capital, Amman. Interviews were held with 10 administrators in all. The administrators were directly involved in the progress of the change program. They held power in the decision-making processes that shaped the education change policy in Jordan. They were contacted in writing with an invitation to participate in the interview. Although the numbers were small, an attempt was made to interview administrators with different background characteristics (see 4.4.5). However, all administrators interviewed were male, a reflection of a lack of gender equity in the MOE hierarchy.

Given the different positions occupied by members of these three groups, it was considered likely that the range of views held by them would be diverse and that, therefore, the research would uncover a comprehensive range of perceptions and attitudes concerning the education reforms. Furthermore, as both academics, because of their part in teacher education, and administrators, because of their authority within the education system, occupied positions of power over teachers, knowledge of their
perceptions and attitudes could assist in reaching a deeper understanding of teachers’ views.

The draft of the interview schedule was developed as a result of the review of the literature on the Jordanian education context and documents of National Reform Conferences mentioned above. To test the suitability of the structured interview schedule, seven interviews were conducted in a pilot study of three teachers, two academics, and two administrators. As a result of the pilot interviews, it was concluded that the interview schedule was suitable for the task of providing desired information about the attitudes, beliefs, and experiences of the three key groups of stakeholders (See Appendix C).

Interviewees were informed that the interviews would be recorded on audio tape. They were also informed that the recorded information would be regarded as confidential and would be heard and reproduced by the researcher only. In order to make interviewees feel secure and free to interact with the interviewer, it was explained to them that their responses would be stored anonymously and that no personal details would be available to anyone else. In keeping with established ethical procedures in conducting research with human subjects, respondents were informed they had the right to withdraw from the interview at any time without giving any reason for such a decision.

Printed copies of the interview schedule were used, with handwritten notes being taken during the interviews. Audio-recordings were also made so that the accuracy of the handwritten notes could be checked after the interviews. One academic and one teacher were later given a copy of the interview transcripts of their particular interviews and both were satisfied that the interviewer had rightly interpreted the responses. They also added some comments on the interview schedule. On that basis, the interview schedule was revised by adding two more questions directed specifically to the sample of teachers.

Questioning started with an “ice breaker question”, such as, “How are you today?” Moreover, during the interviews, encouraging single words or short phrases were uttered by the interviewer to motivate the interviewees to continue, for example, “Go
on!" "Can you tell me more?" and "Yes." A final question asking for any additional comment gave the opportunity for some very useful comments to be made, which had not arisen in the earlier interview questions.

Interviewing time ranged between 40 and 70 minutes with an average of about 50 minutes.

4.4.3 Interview Sample Description

Characteristics of the sample of interviewees from the three groups - teachers, academics and administrators – are shown in Table 4.11.

Table 4.11. Descriptions of Sample Groups Interviewed

<table>
<thead>
<tr>
<th>No</th>
<th>Groups</th>
<th>Gender</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Total</td>
</tr>
<tr>
<td>1</td>
<td>Teachers</td>
<td>6</td>
<td>9</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Academics</td>
<td>7</td>
<td>3</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Administrators</td>
<td>10</td>
<td>0</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>23</td>
<td>12</td>
<td>35</td>
<td></td>
</tr>
</tbody>
</table>

This part of the study included as respondents 15 primary school teachers in seven different education districts (Mafraq I, Maa'n, Tafeela, Amman III, Maddaba, North Badia and Irbid I) in Mafraq and Irbid Provinces; 10 academics in Education Faculties in three Jordanian universities (Yarmouk, Al Albayt, and the University of Jordan in Irbid, Mafraq and Amman); and 10 administrators, seven of them working in the Ministry of Education central office in Amman and three as heads of education districts (Mafraq I, Irbid I, and Tafeela).
### 4.4.4 Teachers’ Profile

As shown in Table 4.12, of the 15 teachers, nine were females and six male. Most teachers who were teaching in basic Jordanian schools were female in line with the MOE policy to prefer women teachers in the first four classes (C1 to C4), in which schools are co-educational.

Length of teaching experience varied from one year up to 27 years. Four teachers had up five years experience while three teachers had between 5 and 11 years experience, five had between 11 and 15 years experience, while the remaining three above 15 years experience. This variation in length of experience allowed any influence of that variable upon teachers’ views to be reflected in the interview data. Huberman (1988) found that the most experienced teachers tended to resist change and were more inclined to distrust those who introduced change.

Five teachers held Community degree qualifications, three had completed Bachelors Degree Conversion courses and three held Bachelors degrees. Another two teachers held Graduate Diplomas in Education and two held Masters degrees and had applied for promotion to supervisor status in the next scholastic year. The MOE had planned to update all teachers’ qualifications to first university degree status but it was unrealistic to expect that the huge number of less qualified teachers and untrained teachers in Jordan could be taught through the limited number of existing teacher education institutions by the time of this study.

Teachers’ subject specialisations were divided into two categories, human science and natural science. It was found that 10 teachers were human science specialists and five were natural science specialists. All teachers had completed at least one in-service training course with five attending just one, four attending two courses and the remaining six attending three. It was clear that the number of such courses attended was closely correlated with the number of years of experience the teachers had.

Finally, concerning school location, five teachers were teaching in schools located in the Badia (desert areas), another five worked in villages, while five worked in city schools. Novice teachers received their first appointment in Mafraq, Maa’n, Aqaba, Karak and Tafeela districts, which are unattractive areas. Most of teachers who teach
at these districts are originally from the northern district of Irbid so they were travelling for up to five hours daily to their school location or else they lived temporarily near their schools. According to MOE regulations, teachers have a compulsory term of three years initial service in schools to which they are appointed before they can apply for transfer.

Table 4.12  Profile of Teacher Interviewees

<table>
<thead>
<tr>
<th>No</th>
<th>Pseudonym</th>
<th>Gender</th>
<th>Qualifications</th>
<th>No. of years experience</th>
<th>Specialisation</th>
<th>School location</th>
<th>No. of Training Courses Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Salem</td>
<td>Male</td>
<td>Community Collage</td>
<td>20</td>
<td>H. Science</td>
<td>Village</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>Safwan</td>
<td>Male</td>
<td>Bachelor Conversion</td>
<td>14</td>
<td>H Science</td>
<td>City</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Jamal</td>
<td>Male</td>
<td>Community Collage</td>
<td>13</td>
<td>N. Science</td>
<td>Badia</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>Hayder</td>
<td>Male</td>
<td>G. Diploma</td>
<td>9</td>
<td>H Science</td>
<td>City</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>Ahmad</td>
<td>Male</td>
<td>Master Degree</td>
<td>2</td>
<td>N. Science</td>
<td>Badia</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>Jawad</td>
<td>Male</td>
<td>Bachelor</td>
<td>6</td>
<td>H Science</td>
<td>Badia</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Yasmine</td>
<td>Female</td>
<td>Master Degree</td>
<td>10</td>
<td>H Science</td>
<td>Badia</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>Lila</td>
<td>Female</td>
<td>Bachelor</td>
<td>4</td>
<td>H. Science</td>
<td>City</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>Amani</td>
<td>Female</td>
<td>Bachelor Conversion</td>
<td>27</td>
<td>N. Science</td>
<td>Village</td>
<td>2</td>
</tr>
<tr>
<td>10</td>
<td>Aida</td>
<td>Female</td>
<td>G. Diploma</td>
<td>4</td>
<td>H. Science</td>
<td>Badia</td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td>Fadwa</td>
<td>Female</td>
<td>Community Collage</td>
<td>13</td>
<td>N. Science</td>
<td>City</td>
<td>2</td>
</tr>
<tr>
<td>12</td>
<td>Nadia</td>
<td>Female</td>
<td>Bachelor</td>
<td>3</td>
<td>H. Science</td>
<td>Village</td>
<td>1</td>
</tr>
<tr>
<td>13</td>
<td>Zahra</td>
<td>Female</td>
<td>Community Collage</td>
<td>15</td>
<td>H. Science</td>
<td>City</td>
<td>3</td>
</tr>
<tr>
<td>14</td>
<td>Fatima</td>
<td>Female</td>
<td>Community Collage</td>
<td>15</td>
<td>H. Science</td>
<td>Village</td>
<td>3</td>
</tr>
<tr>
<td>15</td>
<td>Hanna</td>
<td>Female</td>
<td>Bachelor Conversion</td>
<td>23</td>
<td>N. Science</td>
<td>Village</td>
<td>3</td>
</tr>
</tbody>
</table>
4.4.5 Academics’ Profile

As shown in Table 4.13, three of the academics were females and seven were males. All of them held PhD degrees, six of which were from United States or United Kingdom universities, while four were from Egyptian, Iraqi, or Sudanese universities. Seven of the academics worked in education faculties in Jordanian universities, while three of male academics worked in the National Centre for Human Resource Development under the umbrella of the Higher Council for Science and Technology in Amman. This centre, headed by a former Education Minister, had cooperative programs with a number of foreign agencies but it did not have any authority to implement its research findings and worked as an independent body. The primary mission of the National Centre for Human Resources was conducting studies about the education system in Jordan and it was deeply interested in the education change program with the academics in this centre regarding themselves as close observers of JERP.

The primary research interests of the academics were education leadership, teacher education, curriculum, instruction and technology. Three academics who worked in the National Centre for Human Resource Development had extensive experience. All of them had teaching experience in Jordanian universities, but since they had been working in the Centre, all their time had been devoted to research. Four of the academics currently teaching in Jordanian universities had worked as teachers in Government schools for varying periods. It had been assumed by JERP that academics with their high qualifications would be able to guide the education reforms (MOE, 1988).
Table 4.13 Profile of Academic Participants

<table>
<thead>
<tr>
<th>No.</th>
<th>Pseudonym</th>
<th>Gender</th>
<th>Qualification</th>
<th>Place of work</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Nabeela</td>
<td>Female</td>
<td>PhD</td>
<td>University</td>
</tr>
<tr>
<td>2</td>
<td>Basma</td>
<td>Female</td>
<td>PhD</td>
<td>University</td>
</tr>
<tr>
<td>3</td>
<td>Khadejah</td>
<td>Female</td>
<td>PhD</td>
<td>University</td>
</tr>
<tr>
<td>4</td>
<td>Abraheem</td>
<td>Male</td>
<td>PhD</td>
<td>University</td>
</tr>
<tr>
<td>5</td>
<td>Muhammad</td>
<td>Male</td>
<td>PhD</td>
<td>N.H.R.C</td>
</tr>
<tr>
<td>6</td>
<td>Zakria</td>
<td>Male</td>
<td>PhD</td>
<td>N.H.R.C</td>
</tr>
<tr>
<td>7</td>
<td>Khalid</td>
<td>Male</td>
<td>PhD</td>
<td>University</td>
</tr>
<tr>
<td>8</td>
<td>Hussein</td>
<td>Male</td>
<td>PhD</td>
<td>N.H.R.C</td>
</tr>
<tr>
<td>9</td>
<td>Fadi</td>
<td>Male</td>
<td>PhD</td>
<td>University</td>
</tr>
<tr>
<td>10</td>
<td>Sultan</td>
<td>Male</td>
<td>PhD</td>
<td>University</td>
</tr>
</tbody>
</table>

4.4.6 Administrators' Profile

As shown in Table 4.14, seven of the administrators were working as assistants to the Minister of Education in the day-to-day running of the Ministry, as consultants in reform issues. Hence, they had authority to significantly influence, and participate in, decision-making in the MOE central office. The other three administrators worked as heads of district education departments and were responsible for implementing the education change plan. They were selected to represent three geographical areas (city, village, and Badia).

Four of the administrators held PhD degrees from Sudanese and Iraqi universities by correspondence. Such degrees are not as highly respected in Jordan as degrees from English speaking countries. Four had Masters degrees in educational administration from Jordanian universities and two held Bachelors degrees.

All the administrators who were interviewed had at least 20 years experience in education and all of them would have worked as teachers in their early days. As noted
above, no females held any senior administrator positions in the MOE. Only a few women had ever held such positions despite the fact that more than 50 percent of employees of the MOE were females. The heads of education districts were chosen from among the most highly qualified and most experienced supervisors who showed evidence of efficiency. They were appointed by the Education Minister on the recommendation of the General Secretary. During the administrators' interviews, it was important to emphasise that their personal points of view were sought and not just the official one, that they and their education district would remain anonymous, and that they had been chosen to represent the three geographic areas - city, village and Badia - so as to capture the varied education landscape of Jordan.

Table 4.14   Profile of Administrator Participants

<table>
<thead>
<tr>
<th>No.</th>
<th>Pseudonym</th>
<th>Gender</th>
<th>Qualification</th>
<th>Place of work</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Waleed</td>
<td>Male</td>
<td>PhD</td>
<td>MOE</td>
</tr>
<tr>
<td>2</td>
<td>Ali</td>
<td>Male</td>
<td>PhD</td>
<td>MOE</td>
</tr>
<tr>
<td>3</td>
<td>Shareef</td>
<td>Male</td>
<td>Bachelor</td>
<td>MOE</td>
</tr>
<tr>
<td>4</td>
<td>Suliaman</td>
<td>Male</td>
<td>Master</td>
<td>DEO</td>
</tr>
<tr>
<td>5</td>
<td>Kamal</td>
<td>Male</td>
<td>PhD</td>
<td>DEO</td>
</tr>
<tr>
<td>6</td>
<td>Fawzi</td>
<td>Male</td>
<td>Master</td>
<td>MOE</td>
</tr>
<tr>
<td>7</td>
<td>Mahmoud</td>
<td>Male</td>
<td>Master</td>
<td>MOE</td>
</tr>
<tr>
<td>8</td>
<td>Faleh</td>
<td>Male</td>
<td>Bachelor</td>
<td>MOE</td>
</tr>
<tr>
<td>9</td>
<td>Mousa</td>
<td>Male</td>
<td>Master</td>
<td>MOE</td>
</tr>
<tr>
<td>10</td>
<td>Nezar</td>
<td>Male</td>
<td>PhD</td>
<td>DEO</td>
</tr>
</tbody>
</table>
4.4.7 Summary of Background Information about Interview Participants

Given the backgrounds of the participants in the interviews, it could confidently be expected that all three groups clearly had the potential to make important contributions as members of major stakeholder groups expressing their views and experiences. All three groups were in positions to influence the implementation of the education reform process and to pass judgment on the degree of success or failure of that program. Table 4.11 (see 4.4.2 above) provided an overall summary of interview participants.

4.4.8 Interview Procedures

Semi-structured interviews were chosen to let participants feel free to give their views without being bound by restrictions of tightly structured questions, while at the same time, ensuring that responses were sufficiently focussed on matters relevant to the purposes of the research.

Two types of questions were used in the interviews. The first type was applied to all three groups of respondents, while the second type consisted of questions specific for each sub-group of respondents (Appendix C).

Some questions were asked as follow-up probes into what the subject had said and in attempts to build dialogue and confirmatory responses or statements of interest. The interviews were transcribed verbatim prior to analysis.

For the teacher group, the interviews were conducted in the school libraries when the library was closed for lunch break. Teachers were free at this time and most teachers agreed to give the researcher the whole hour to conduct the interviews, while some other teachers asked for fifteen minutes for a quick lunch. The principal of every school made the library keys available to the researcher so that he could lock the door, preventing any interruption during the interviews. Other groups of interviewees were interviewed in their offices at mutually convenient times.
4.4.9 Analysing the Interviews

After careful consideration of alternative approaches to the analysis of qualitative data such as that obtained in the interviews in this study, it was decided that the many years of professional involvement of the researcher and the participants in the schools of Jordan had supplied him and the interviewees with a common set of concepts that might appropriately be termed "the language of education". The interview schedule had been developed on the basis of careful reviews of the literature of educational change in Jordan and elsewhere, giving rise to a set of substantive issues that were important to explore in the Jordanian context. On the basis of these substantive issues, a set of interview questions had been determined as the most direct way of accessing the reactions of the three groups of stakeholders interviewed.

In the structured context of schools, it was safe to assume that the participants shared sets of common terms and meanings that could appropriately be used to analyse their interview responses. It was this common language with its well known meanings that was used to provide the qualitative data for this study. Furthermore, in the reporting the results in Chapter 6, frequent use is made of quotations of the participants' actual words so that the reader may judge the appropriateness of the interpretations and conclusions reached by the researcher directly, through familiarity with the actual data itself.

4.5 Reporting the Results

The findings of the study are reported in Chapters 5 and 6. Chapter 5 presents the results of the questionnaire survey while Chapter 6 presents the results of the analysis of the interviews.
CHAPTER 5

RESULTS OF THE ANALYSIS OF QUESTIONNAIRE RESPONSES

5.1 Introduction

The purpose of the present chapter is to report on the analysis of data gathered via the printed questionnaire. The results reported here are pertinent to several of the questions guiding this research as listed at the beginning of Chapter 4, but especially to Questions 3 and 4 which are repeated here:

Question 3: How do teachers perceive their performance in schools in terms of translating their knowledge and beliefs into actions?

Question 4: Are there any differences in the educational roles of primary teachers due to: gender, number of in-service training courses attended, years of teaching experience, academic qualifications, teaching specialisation, and school location?

As described in Chapter 4, the questionnaire comprised seven scales, each representing a desired role that teachers are called upon to play in the Jordanian Education Reform Program (JERP). Each scale was formed by combining scores from several, conceptually-related items. The content validity of the scales therefore depended on the wording of the items to reflect the particular role for teachers. During a review by experts, some items that were criticised for not belonging conceptually, or for being ambiguous or poorly worded, were dropped from the questionnaire scales. The reliabilities (internal consistencies) of the seven scales were then checked and six items, spread over the seven scales, with low item v. total score correlations were deleted.

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The interview schedules applied to the 15 teachers, 10 academics and 10 administrators were not specifically designed to gather information about the seven teachers' roles that were the concern of the questionnaire. However, in the course of responding to the more general questions used in the interviews, the three groups who participated in the interviews made comments that were directly relevant to one or more of those roles. These "volunteered" comments and were thus elicited in an "uncued" or much less structured way than the questionnaire responses. It seemed, therefore, that the interview responses promised to contain valuable complementary insights into matters involving teachers' performance of the roles. For that reason and where possible, interview data were sought that might "flesh out" the questionnaire data or contain enriched insights into matters pertaining to the seven roles. These are included in the results reported below. How did teachers respond to the seven scales describing their roles in the JERP? Section 5.2 provides a descriptive account of their responses.

5.2 Teachers' Reported Behaviours on the Seven Roles

The analyses reported in this section are relevant to Question 3 and the findings obtained here are considered to be valuable evidence in answering that question. Table 5.1 lists the seven scales used in the research and reports the means, medians and standard deviations for the teachers' responses to the scales. The response mode ranged from 1 ("I never do that") to 6 ("I always do that") for each item, but scale scores were divided by the number of items so that all could be shown on a similar 6-point range. Although the questionnaire did not include "descriptive words" for the intermediate points (2, 3, 4, and 5), the mean values can be interpreted in terms of the labels on the extremes (1 and 6). Thus a mean of above 4 could be interpreted as teachers, on average, engaging in this behaviour fairly often. Conversely, a mean below 3 indicates that this behaviour is, on average, fairly infrequent among teachers.
Table 5.1 Means, Medians and Standard Deviations for the Seven Scales in the Questionnaire

<table>
<thead>
<tr>
<th>Scale</th>
<th>Mean</th>
<th>Median</th>
<th>Std Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher's role in developing students' cognitive growth</td>
<td>4.6</td>
<td>4.4</td>
<td>0.50</td>
</tr>
<tr>
<td>Teacher's role in implementing curriculum and teaching methods</td>
<td>3.5</td>
<td>3.3</td>
<td>0.69</td>
</tr>
<tr>
<td>Teacher's role as an educational evaluator</td>
<td>3.8</td>
<td>3.9</td>
<td>0.79</td>
</tr>
<tr>
<td>Teacher's role as a health educator</td>
<td>4.9</td>
<td>5.1</td>
<td>0.68</td>
</tr>
<tr>
<td>Teacher's role as a technologist</td>
<td>2.6</td>
<td>2.8</td>
<td>1.10</td>
</tr>
<tr>
<td>Teacher's role in professional and personal growth</td>
<td>3.7</td>
<td>3.5</td>
<td>0.92</td>
</tr>
<tr>
<td>Teacher's role as a social change agent</td>
<td>2.7</td>
<td>2.6</td>
<td>0.71</td>
</tr>
</tbody>
</table>

As shown in Table 5.1, the means ranged from 2.6 to 4.9 indicating that respondents varied considerably in their perceptions of their behaviours on different roles. The scale showing the teacher as a health educator had the highest mean score (4.9) while that showing the teacher’s role as a technologist had the lowest mean (2.6).

The high mean for the teacher’s role as a health educator is accompanied by a low standard deviation 0.68. That is, there was relatively strong agreement among the teachers on the high frequency of the behaviours in this scale. Teachers practise this role frequently despite the fact that there is no separate set textbook for health education, and only curriculum guidelines are provided to teachers. However, teachers are frequently encouraged to perform this role during their pre-service and in-service training courses, regardless of their principal teaching subjects.

Similarly, the teacher’s role in developing students’ cognitive growth was consistently rated highly by respondents, with a mean of 4.6 and a standard deviation of only 0.50. This result is to be expected since this role is widely practised by most primary
teachers in Jordanian schools. Historically, it is considered the most traditional role performed by teachers over hundreds of years. Although recent literature questions the way teachers should encourage student learning, the MOE asserts that teachers still play a vital role in providing knowledge and being a source of information, especially at the primary school level.

On the other hand, why do teachers perceive low frequency of behaviour in their role as a technologists? It should be noted that the low mean for this scale (2.6) was accompanied by a high standard deviation (1.1). That is, teachers’ opinions differed considerably on the items in this scale, although the overall average was low. One reason that this role is not widely practised by teachers is that the role is a very new one, mandated by the Ministry of Education. Other research shows that most teachers are not adequately prepared to practise this role and schools are not well equipped with the necessary computers and related hardware to enable teachers to perform this role. Further insights into teachers’ performance of this role were obtained from interviews held with teachers, as reported below.

Teachers also rated their role as social change agents as low (mean = 2.7), with a fair degree of consensus (s.d. = 0.71). The remaining roles – in curriculum and teaching methods, student evaluation, and the teacher’s own professional and personal growth – received intermediate ratings.

A somewhat more detailed picture of the ratings of behaviours given by teachers can be obtained from a graphical presentation, in the form of a “box and whisker” plot. Figure 5.1 shows the distribution of teachers’ responses for the seven scales in “box and whisker” format. The shaded portion (the “box”) shows the range for cases between the 25th and 75th percentiles. The black line shows the median. The “whiskers” show the full range of scores, except where there were outlying scores where these cases are shown separately and labelled.
Figure 5.1 Box and whisker plot showing the location and variation for seven scales

As shown in Figure 5.1, the “teacher’s role in students’ cognitive growth” produced the most compacted distribution. That is, respondents were in close agreement that these were behaviours they frequently practised (median = 4.5). In contrast, the figure shows a noticeable degree of variation in teachers’ ratings for the scale “teacher’s role as a technologist”. In this case, there are many teachers who gave very low ratings but some who reported carrying out the behaviours in this role very often. As already noted above, teachers gave high ratings to their role as health educators, and quite low ratings to those behaviours associated with being agents of social change.

In Figure 5.1, the median (black line) is often located away from the middle of the “box” indicating that the distribution of scores is skewed either positively (the tail of the distribution towards higher scores, or the median towards the bottom of the box) or negatively (the tail of the distribution towards lower scores, or the median towards the top of the box). The “shape” of the distributions can be seen more accurately in a series of histograms, as shown in Figures 5.2 to 5.8.
Figure 5.2 Histogram showing the distribution of scores for the scale “teacher’s role in developing students’ cognitive growth”

Figure 5.2 indicates that most teachers practise this role frequently (mean = 4.6 and median = 4.4) indicating they are very familiar with the role and are prone to use behaviours associated with it in their daily teaching. According to the items in this scale, teachers act as a source of knowledge and they expect to teach the students everything they need to know. But they also endeavour to give students more responsibility to gain this knowledge and will enable students to participate effectively in the learning process. According to the 1993 Education Reform Act, number 4, all students should be capable of developing their own skills through guidance and supervision from their teachers.

Although developing students’ cognitive growth has been practised by Jordanian teachers for a long time, many adjustments were made to this role following the JERP. Students are expected to learn the content from their textbooks and thus to gain subject knowledge. The mission for teachers is to provide them with effective ways of gaining knowledge and understanding.

Interestingly enough, almost no mention was made of this role by teachers during the interviews. One teacher claimed that

Literacy is a basic requirement needed for many education outcomes to be judged a success. Many of our students do not master basic skills such as writing, reading and mathematics, therefore the change program has not yielded the desired goals (Salem, March 20, 2001).
However, this single testimony could hardly be given enough weight to overthrow the above finding obtained from the analysis of the questionnaire responses. A few of the academics interviewed gave rise to some scepticism about the extent to which teachers promoted development of higher order cognitive development. Thus one said “Memorisation is still the cognitive skill stressed most by teachers” (Basma, April 1, 2001). Another elaborated as follows:

We have failed to help teachers to realise the importance of education change. Students, in a changing world, need to be able to face challenges and problems with critical thinking. Mastering these skills will help students to be very effective members of society. However, transmission approaches to teaching encourage students to develop memory, not critical thinking skills. Most students do not possess the higher order skills that we expect them to have (Sultan, April 5, 2001).

A third academic expressed a similar view of teaching methods:

Schools don’t equip students with the skills needed for higher order thinking skills, such as problem solving and investigation. They just cram their minds with information that is forgotten shortly after students have sat for exams (Abraheem, April 3, 2001).

![Histogram showing the distribution of scores for the scale “teacher’s role in implementing curriculum and teaching methods”](image)

Figure 5.3 shows a more “normal” distribution for the role of teachers in implementing curriculum and teaching methods (mean = 3.5; median = 3.3). Under JERP, teachers have been expected to adjust their teaching habits to suit the demands of the new curriculum.
Teachers play their role effectively in implementing the new curriculum and teaching methods when they emphasise a student-centred approach and move away from the older teacher-centred approach. According to Figure 5.3, not all teachers agree that they are practising the methods suggested in the revised curriculum and are employing novel teaching methods in their daily practice. This result might reflect the fact that Jordanian teachers were not involved in curriculum development and hence some might find it hard to change their teaching behaviours. That was certainly the explanation given by some teachers during the interviews. For example, one said:

How can I meet the individual needs of 37 students in my classroom? Change is suspect when it is imposed upon teachers who have played no part in promoting it. This makes it very hard to put into practice. They are talking too much about theoretical approaches. In practice the results are negligible (Fadwa, March 18, 2001).

However, the impression given by teachers’ interview responses such as the following is that there were several reasons for teachers being unsuccessful in making the desired changes. The first blamed the absence of relevant in-service training courses:

I have tried my best to modify my teaching practice to make my teaching more effective. I now know that my students are different and have different needs, I am eager to learn about team teaching, but training courses don’t offer that (Yasmine, March 27, 2001).

Another blamed lack of opportunities to collaborate with colleagues:

Teachers need opportunities to work together and exchange their views and experiences. They can do this during regular meetings. Teachers work behind closed classroom doors; collaboration is completely absent in our work. They keep telling us to work together, but never show us in practical ways how to do this (Aida, March 21, 2001).

Others blamed lack of confidence in the effectiveness of the new methods, for example: “I am striving to offer unique learning experiences to individual students, but I don’t know that what I am teaching will make a difference to my students.” (Jamal March 19, 2001) and:

I am afraid that if I use group teaching methods in my classroom that it would be a mess up and I would lose control. I can keep control of the
Finally, some teachers showed sheer rejection of the reforms on cultural grounds:

I do not accept the change; it is not good for my students; they have just imported this reform like everything else. They try hard to implement change that does not fit our culture or our needs. When I close my classroom door, I teach the way that I want to. I am convinced that this meets the needs of my students, and I am happy with it (Amani, March 22, 2001).

Our change strategies are derived from Western countries and are unlikely to serve the needs of all our students. We work hard to implement models that do not fit our country’s needs or culture (Zahra, March 25, 2001).

Figure 5.4 Histogram showing the distribution of scores for the scale “teacher’s role as an educational evaluator”

An important finding emerging from Figure 5.4 is that there has been a noticeable change in teachers’ roles as evaluators (mean = 3.8; median = 3.9). In the past, teachers have been criticised for using questions that stress memory and the direct recall of information (e.g., factual recall of dates and terminology) in their evaluation of students’ performance. Such evaluation provides little information about students’ abilities and needs, and does not diagnose their strengths and weaknesses. The distribution in Figure 5.4 suggests there are some teachers (those with low scores) who still view evaluation as a test of what they cram into their students’ memories. If the students learn what the teachers deliver, then the students can rightly expect to succeed. However, according to JERP, teachers are expected to change their
evaluation practice toward focussing on higher thinking skills and to use evaluation as feedback and not just to judge students’ learning. The negatively skewed distribution of scores on this scale with items about the new approaches provides evidence of adoption of the JERP-recommended approaches to evaluation by a majority of teachers.

The interviews with teachers and administrators yielded little or nothing about their performance of the role of evaluator. There was some mention of taking individual differences into account during instruction but none in the context of evaluation. This apparent absence of concern with the evaluator role may have indicated that, in spite of JERP, and the questionnaire responses, reforms in this role were of relatively little salience to the teachers and administrators. However, this was certainly not the case for the academics who were interviewed. They made several comments on the types of evaluation practices employed by teachers, as follows:

Our teachers still use examinations to measure student knowledge. For example, factual recall, dates and terminology play a central role in their evaluation of student performance. However, this provides little information about students’ abilities or needs; nor does it diagnose their strengths or weaknesses (Khalid, April 10, 2001).

In teachers’ evaluation of students, most questions prepared by teachers call for rote repetition and do not measure higher order thinking. Teachers often view evaluation as a test for which they try to cram information into their students’ memory (Zakria, April 2, 2001).

![Histogram showing the distribution of scores for the scale “teacher role as a health educator”](image)

Figure 5.5 Histogram showing the distribution of scores for the scale “teacher role as a health educator”
Figure 5.5 shows respondents reflecting strong positive behaviours toward frequent practice of this role as a health educator. The figure shows a distribution with highly negative skew (mean = 4.9; median = 5.1). The responses accord with a long-held view of teachers' culture that addresses health as an important issue and regards teachers as being in the "front line" to assist their students to adopt positive attitudes towards healthy food and healthy living. However, there are factors that lie beyond the teachers' control or even responsibility such as what kind of food parents offer to their children. The Government also has a responsibility for implementing "primary health care" for the students where, in every education district, there is a health department that has the responsibility to guarantee that students have access to primary health care and learn in a healthy physical environment.

As important as the teacher's role as a health educator may be, the interviews with academics, teachers and administrators in this study did not give rise to a single comment concerning teachers' performance of, or attitudes to, this role.

Figure 5.6 Histogram showing the distribution of scores for the scale "teacher's role as technologist"

Figure 5.6 indicates that the new role for teachers as a technologists is infrequently practised by Jordanian teachers in their day-to-day working (mean = 2.6; median = 2.8). Here the distribution is positively skewed with few teachers reporting frequent use of the associated behaviours. Although a number of short term training courses have been provided, in general teachers' still lack familiarity with technology and most responded with low ratings for items on this scale. Despite the fact that the
Government is spending massive amounts of money putting computers into schools, it seems there is a danger that students will not benefit from this investment because the average classroom teacher lacks formal training in how best to make use of computers as tools in classroom learning. Most teachers indicated that they did not use computers in their daily practice. It is also possible that this new technology will face strong resistance by traditional teachers who may perceive it as threatening their authority. However, the last point is speculative as the research study collected information on what teachers did in classrooms, but did not collect data on their attitudes. The teachers' responses during the interview phase of the study were especially helpful in explaining the low mean obtained for this role in the questionnaire phase. During the interviews teachers complained that they had not been adequately trained to use computers and consequently had few skills in their use. Thus, they felt highly pressured and overloaded, as indicated in the following comments:

I feel pressured; I have to do a lot of things. I have to learn how to integrate the computer into my teaching and choose software. This is out of the blue. Suddenly we find ourselves having to use computers in our teaching. It's work we are unprepared for; we don't have the training. They [the MOE] have placed additional stress upon us (Nadia, March 29, 2001).

Computers impose extra burdens upon my work time. I have to find suitable software and learn many skills that I don't currently have in order to be able to deal with computers. I don't have much of an idea about using the computer (Jawad, March 19, 2001).

I need training in the use of computers and producing teaching resources. But what is happening is they are bringing computers to schools and no one knows how to use them. They are putting the cart before the horse (Hayder, March 25, 2001).

I find it extremely hard to deal with computers. I have no idea how to even turn on the computer (Fatima, March 28, 2001).

Not all of the comments by teachers were negative, however. One said:

I am willing to integrate technology into my teaching but I want to see how it can help me with my daily work. This issue should be addressed in both pre-service and in-service training programs, and I want to keep abreast of developments in my field. That is very important to me (Lila, March 18, 2001).
Another teacher was even more positive and said:

I want to learn how this machine [computer] works. I love to learn new things. I want to learn about computers. I would like to be able to move forward with new ideas, tools and attitudes (Ahmad, March 19, 2001).

Figure 5.7 Histogram showing the distribution of scores for “teacher’s role in professional and personal growth”

Figure 5.7 shows that teachers do not often engage in professional development activities. The distribution in this case is fairly “normal” with most teachers giving ratings towards the middle of the scale (mean = 3.7; median = 3.5). The new challenge that faces teachers appears to be a most complex one as they are required to perform new roles that place a considerable burden on their shoulders. To be effective in introducing these roles, Jordanian teachers should be engaged in a number of different types of development activities.

It can be argued that professional development will be essential to help teachers to manage their new missions. According to the reforms of JERP, teachers should be lifelong learners, seeking to change their behaviours and attitudes, and gaining new knowledge and skills to meet diverse needs of their students. As Figure 5.7 indicates, teachers are not doing enough to involve themselves in different types of professional and personal development activities that would enable them to perform the suggested roles. The evidence here suggests that teachers are not seeking to take their own personal initiatives to self-design or self-select appropriate professional development, despite the fact that teaching has recently been recognised as a profession, thus demanding certain levels of qualification and training. Whether or not teachers were doing enough for themselves concerning this role, it certainly was true that they were
highly critical of the opportunities their work contexts provided for them, as shown in the following comments:

There are too many expectations which I don’t have time to meet; my I don’t have sufficient free time to make the effort to change. I am very busy with my schedule; there is no time for any type of professional development and no time to meet students or parents. I have 24 periods per week; how can I sit down to read articles in my field. I just rush into the corridor carrying my stuff, heading for another class (Hayder, March 25, 2001).

working day is a very busy one. It is too hard to find the time for any professional journals or to evaluate my work. I just keep carrying my stuff and running from one classroom to another. I don’t have time to know my students as individuals. I have 40 students in my class (Yasmine, March 27, 2001).

The interviews revealed that some of the teachers had very negative views of their roles as teachers in contrast to the positive view called for. One said:

For me teaching is a job until something better comes along. I am not happy; for a while I was thinking about quitting but unfortunately I could not find another job, so I do it because I have to survive, nothing more (Zahra, March 25, 2001).

Then there was another, who said: “I wish I could take a break from the teaching challenges which are thrown at me; teaching is ‘just a job’ and I am just a time filler” (Hanna, March 18, 2001). A third said: “I have lost interest in teaching; I do not respond to my students in the ways I am supposed to. This change has not led us in the right direction” (Amani, March 22, 2001).

It would be surprising if teachers such as these spent much time and effort in professional growth and development activities.
Figure 5.8 Histogram showing the distribution of scores for the scale “teacher’s role as a social change agent”

Finally, Figure 5.8 shows the distribution of scores for the scale on the teacher as a social change agent. The distribution is positively skewed and most teachers, in their reported behaviours, seem to reject this role (mean = 2.7; median = 2.6). The educational reform movement assumes that much social change goes on in Jordan, and that teachers will need to play a major role in sparking this change, in cooperation with other institutions in the society.

The vision of the reform movement is that Jordanian schools will provide greater opportunities for economically disadvantaged groups. There is a hope that teaching faculties will move from being very conservative to being open and to keep trying new things. The teachers’ responses as shown to the items in this scale show that teachers still act to preserve and transmit the traditions of society, and that their methods amount to maintaining the status quo as they work in a conservative environment. Perhaps teachers find it easier to consider themselves as custodians of society’s values than as agents of social change. Social change is a hard mission for teachers to adopt as it demands that they take risks and make themselves more vulnerable.

Figure 5.8 indicates that teachers may not be ready to take risks to produce a new generation who have learned to value work. Social change is a hard task and it needs time to determine the proper way that Jordanian schools can participate in reshaping Jordanian society. The fact that there was only one mention of this role in the interviews with the teachers lends strength to this argument, especially as the comment was very negative, as follows: “People in the MOE expect teachers to be
superman, doing many miracles, easily overcoming obstacles and solving the country's economic problems" (Jamal, March 19, 2001).

5.3 Differences Within the Seven Scales

To obtain a clearer picture of teachers' responses for each scale, the items within the scales were explored. This enabled an analysis of whether teachers responded similarly to all items, or whether some reported behaviours were far more common than others. The fact that these analyses focussed upon each individual item of the questionnaire made it difficult to obtain relevant comments from the interview data, as the teacher respondents almost never talked about such specific matters.

5.3.1 Teacher's Role in Developing Students' Cognitive Growth

Table 5.2 shows the means and standard deviations for the nine items concerned with ways in which teachers foster cognitive growth in their students.
Table 5.2. Means and Standard Deviations for Items in the Scale on Teacher’s Role in Developing Students’ Cognitive Growth

<table>
<thead>
<tr>
<th>Item no</th>
<th>Item statement</th>
<th>Item mean</th>
<th>Std Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Explaining new concepts and terminology to students</td>
<td>5.5</td>
<td>0.55</td>
</tr>
<tr>
<td>2</td>
<td>Offering opportunities for students to practise scientific technical skills</td>
<td>4.5</td>
<td>0.90</td>
</tr>
<tr>
<td>3</td>
<td>Directing students towards more reading to enrich their knowledge</td>
<td>4.1</td>
<td>0.94</td>
</tr>
<tr>
<td>4</td>
<td>Assisting students in practising experiments</td>
<td>5.4</td>
<td>0.76</td>
</tr>
<tr>
<td>5</td>
<td>Developing students’ abilities in research and investigation</td>
<td>4.0</td>
<td>0.95</td>
</tr>
<tr>
<td>6</td>
<td>Providing students with the latest information in subject matter</td>
<td>3.9</td>
<td>0.94</td>
</tr>
<tr>
<td>7</td>
<td>Developing students’ abilities in constructing self–criticism</td>
<td>4.3</td>
<td>0.73</td>
</tr>
<tr>
<td>8</td>
<td>Drawing students’ attention to their errors and assisting them to correct these errors</td>
<td>5.0</td>
<td>0.81</td>
</tr>
<tr>
<td>9</td>
<td>Developing students’ abilities in problem solving</td>
<td>4.0</td>
<td>0.85</td>
</tr>
</tbody>
</table>

Table 5.2 shows that teachers reported performing most frequently the three items “explaining new concepts and terminology to students” (mean = 5.5), “assisting students in practising experiments” (mean = 5.4), and “drawing students’ attention to their errors and assisting them to correct these errors” (mean = 5.0). The pattern of response reflects a traditional view of teaching with the role of the primary school teacher as the main source of knowledge, provider of assistance to students to ensure they follow correct procedures, and evaluator giving feedback to correct errors and to ensure effective learning.

Hence, teachers emphasise growth in knowledge and follow behaviours that ensure that students learn something. This traditional role has been reinforced by Ministry expectations. For example, to assist and supervise students while practising their laboratory experiments is compulsory as per MOE rules and regulations, to ensure
students' physical safety. It is worthwhile to mention that, when 20 students were rushed to hospital suffering from chemical inhalation leading to breathing difficulties, it was claimed that the accident resulted from teacher error (Abu Reden, 2002). New rules have now been issued concerning laboratory safety.

As shown in Table 5.2, other items in this scale received moderate ratings (means from 3.9 to 4.5). Compared with the three items discussed above, these remaining items reflected a more student-centred approach to teaching with emphases on enrichment, student investigation, new sources of knowledge, self-criticism and problem solving. Although teachers reported using such behaviours to some extent, they received lower ratings than the traditional roles discussed above.

5.3.2 Teacher's Role in Implementing Curriculum and Teaching Methods

Table 5.3 shows the means and standard deviations for teachers' reported behaviours on curriculum and teaching methods. None of the means are very high, with "Using modern teaching methods in my teaching" being the highest (mean = 4.3).

Table 5.3. Means and Standard Deviations for Items in the Scale on Teacher's Role in Implementing Curriculum and Teaching Methods

<table>
<thead>
<tr>
<th>Item no.</th>
<th>Item statement</th>
<th>Item mean</th>
<th>Std Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Relating the content of the textbooks to the individual's and country's needs</td>
<td>3.4</td>
<td>1.00</td>
</tr>
<tr>
<td>12</td>
<td>Preparing teaching aids to accompany the textbooks</td>
<td>3.1</td>
<td>1.50</td>
</tr>
<tr>
<td>13</td>
<td>Using modern teaching methods in my teaching</td>
<td>4.3</td>
<td>0.80</td>
</tr>
<tr>
<td>14</td>
<td>Considering individual differences in abilities among students</td>
<td>4.2</td>
<td>0.63</td>
</tr>
<tr>
<td>15</td>
<td>Using group teaching methods in my teaching</td>
<td>3.6</td>
<td>1.00</td>
</tr>
<tr>
<td>16</td>
<td>Utilizing the local environment in producing teaching aids</td>
<td>2.2</td>
<td>1.10</td>
</tr>
</tbody>
</table>
However, the moderate claim of “using new teaching methods” in the survey responses was not supported by responses to interviews when teachers reported they had not used modern teaching methods very often, and they gave a variety of reasons for this. Nor was it supported by their responses to other items on this scale such as “using group teaching methods” and “preparing teaching aids”, where means were 3.6 and 3.1 respectively. The latter item had a very large standard deviation, showing that teachers differed greatly in their preparation of teaching aids.

The relatively low mean for using group methods is in spite of the fact that the MOE has given considerable stress to the use of group teaching in daily teaching as an effective method. Hargreaves (1989) demonstrated that high teacher-student ratios and crowded classrooms make individual teaching, or even teaching in small groups, very hard for teachers. His advice to the policy maker wishing to promote a movement away from transmission patterns of teaching is to improve the physical facilities in schools as a whole. It is advice that applies within Jordan’s schools.

Ben Talal (1998) pointed out that teachers lack the knowledge and skills needed to implement new curricula effectively. Effective teaching requires in-depth understanding of the curricula content and teaching methods that will promote higher-order thinking skills and lifelong learning, and an ability to adapt to the development of individual students. When Governments initiate reform, they often do relativity little to involve teachers and schools in shaping the new curricula. The item “considering individual differences in abilities among students” received a moderate rating (mean = 4.2) from teachers, suggesting they are using techniques to cater to students’ individual needs. However, several teachers explained at interview that it is almost impossible to appreciate such differences in an overcrowded classroom with short times and much content to cover.

The low means for the items “preparing teaching aids to accompany the textbooks” (mean = 3.1) and “utilizing the local environment in producing teaching materials” (mean = 2.2) suggest that MOE policies on this aspect of teachers’ behaviours are not working. Using teaching aids is considered an integral part of modern teaching methods. The MOE encourages teachers to “invent” their teaching aids, employing local resources, as part of the country’s policy to save hard currency that would be
required to import these teaching aids. But teachers reported that they did not put much effort or time into preparing teaching aids and using the local environment, preferring to depend on ready-made materials even though these are not widely available.

In defence of the teachers, it needs to be acknowledged that the MOE does not offer any guidelines to help teachers to utilise their local environment nor provide support books on how to prepare teaching aids. There is a lack of qualified people to develop local textbooks and the last major exercise in writing textbooks occurred 30 years ago when a team of Jordanian university lecturers was used as authors. Although familiar with content knowledge, most of these authors had little or no experience of the situation in schools (Ahlawat & Billeh, 1996).

5.3.3 The Teacher’s Role as an Educational Evaluator

This role of teachers as evaluators has been reconceptualised for Jordanian schools to try to ensure that teachers assess their students’ performance in more reliable and valid ways, using newer procedures such as systematic statistical analyses and maintaining and using test item banks. Maintaining a question bank with a “collection of test items organised, classified and catalogued in order to facilitate the construction of a variety of achievement and other type of test” (Keeves, 1988, p. 417), using different types of tests (including criterion referenced tests), improved item writing, and techniques for analysing students’ answers are some of the ways teachers can improve their performance as evaluators. Ben Talal (1998) argued that new assessment approaches should be applied to identify both knowledge and performance of the students.

Table 5.4 reports the means and standard deviations for teachers’ responses to the eight items in the scale on “Teacher’s role as an Educational Evaluator.” Teachers showed strong agreement (mean = 5.0) with the generic statement that they frequently “evaluated students’ performance in accordance with educational goals”. However, the other more specific items received lower ratings.
Table 5.4. Means and Standard Deviations for Items in the Scale on Teacher’s Role as an Educational Evaluator

<table>
<thead>
<tr>
<th>Item no.</th>
<th>Item statement</th>
<th>Item mean</th>
<th>Std Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>Evaluating students’ performance in accordance with educational goals</td>
<td>5.0</td>
<td>0.80</td>
</tr>
<tr>
<td>18</td>
<td>Maintaining a “question bank” for use in tests</td>
<td>3.5</td>
<td>1.70</td>
</tr>
<tr>
<td>19</td>
<td>Taking individual differences into consideration while preparing tests</td>
<td>4.3</td>
<td>0.86</td>
</tr>
<tr>
<td>20</td>
<td>Using model answer for schools tests</td>
<td>3.9</td>
<td>1.30</td>
</tr>
<tr>
<td>21</td>
<td>Analysing questions to rank students’ achievement through scientific statistical approaches</td>
<td>3.2</td>
<td>0.93</td>
</tr>
<tr>
<td>22</td>
<td>Conducting regular evaluation of students’ progress</td>
<td>3.9</td>
<td>0.96</td>
</tr>
<tr>
<td>23</td>
<td>Using regular observation</td>
<td>3.2</td>
<td>1.00</td>
</tr>
<tr>
<td>24</td>
<td>Using scientific statistical approach to analyse points of strength and weakness in the students’ learning</td>
<td>3.0</td>
<td>1.10</td>
</tr>
</tbody>
</table>

The MOE prescribes goals that should be achieved by students at the end of the every unit. Teachers have to make sure that these goals have been achieved by giving tests and students’ results are systematically checked by district supervisors. Teachers have to pay careful attention to preparing their tests in accordance with strict MOE examination regulations that ask teachers to take into consideration individual differences among students. On this aspect (item 19), teachers reported relatively high compliance (mean = 4.3). Most often teachers would endeavour to prepare tests that allow for a range of student abilities. Using evidence from the test results, teachers are then expected to provide remedial programs for underachieving students.

In responding to other items on this scale, teachers gave medium ratings (means ranging from 3.0 to 3.9). Items with the lowest ratings were those requiring more technical skills and it is likely that not all teachers would have these skills.
5.3.4 The Teacher's Role as a Health Educator

The area of health is very broad, encompassing personal development, hygiene, physical education, and sport. This area is often seen as one that should address many of society's current problems as good health will manifest itself in vigour and energy and enthusiasm to learn. Hence, by developing good habits and positive attitudes to health issues in children, the nation is expected to achieve its goals for comprehensive and sustainable national development. Table 5.5 shows that teachers, in general, are playing positive roles as health educators.

Table 5.5. Means and Standard Deviations for Items in the Scale on Teacher's Role as a Health Educator

<table>
<thead>
<tr>
<th>Item no.</th>
<th>Item statement</th>
<th>Item mean</th>
<th>Std Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>Encouraging and assisting students to keep their bodies and clothes clean</td>
<td>5.1</td>
<td>0.59</td>
</tr>
<tr>
<td>26</td>
<td>Advising students to eat healthy food</td>
<td>5.0</td>
<td>0.73</td>
</tr>
<tr>
<td>27</td>
<td>Guiding students to put rubbish in containers</td>
<td>5.4</td>
<td>0.68</td>
</tr>
<tr>
<td>28</td>
<td>Guiding students to desist from unhealthy habits like nail biting and finger sucking</td>
<td>4.7</td>
<td>0.90</td>
</tr>
<tr>
<td>29</td>
<td>Encouraging students to play sports</td>
<td>4.4</td>
<td>1.00</td>
</tr>
<tr>
<td>31</td>
<td>Reinforcing students' self concepts</td>
<td>4.6</td>
<td>0.85</td>
</tr>
<tr>
<td>32</td>
<td>Making students aware of the risks of using charlatans, cures</td>
<td>4.5</td>
<td>1.20</td>
</tr>
<tr>
<td>33</td>
<td>Helping students to understand and implement the health concept that 'prevention is better than cure'</td>
<td>4.7</td>
<td>1.10</td>
</tr>
</tbody>
</table>
The item "Helping students to understand and implement the health concept that prevention is better than cure" was rated highly by teachers (mean = 4.7). As part of a national health campaign, "Prevention is better than cure" was chosen as a slogan. The Ministry of Health, Ministry of Education and National Media, among other national agencies, worked together to reinforce this basic health concept as the safest and easiest way to maintain good health. Teachers in schools played their roles in raising students' awareness of the meaning and importance of the slogan.

Self-concept is fundamental to maintaining good health and teachers also have a role in developing students' self esteem so they can have the ability to cope with a changing world. Self esteem is the over-all judgment people have of themselves. Students with high self-esteem have a good sense of their worth and identity and do not need to waste time to impress others. They already know their values. Teachers frequently are called upon to function in the role of counsellors. According to JERP, every school should have one or more counsellors as members of the staff. Hence it is not surprising that "Reinforcing students' self esteem" (mean = 4.6) was rated by teachers as behaviour that they engaged in frequently. Finally, it is worthwhile to mention that every student has a health record that is up-dated frequently and checked by the deputy principal to identify any recent change in a student's health. In addition, the MOE cooperates with the Ministry of Health to offer free glasses for students requiring them, according to an eye doctor's recommendation.

5.3.5 The Teacher's Role as a Technologist

As shown in Table 5.6, respondents reported infrequent behaviours related to the use of new technology. The mean responses ranged from 2.1 to 2.8.
Table 5.6 Means and Standard Deviations for Items on the Scale for Teacher’s Role as Technologist

<table>
<thead>
<tr>
<th>Item no.</th>
<th>Item statement</th>
<th>Item mean</th>
<th>Std Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>34</td>
<td>Using the internet in teaching</td>
<td>2.4</td>
<td>1.20</td>
</tr>
<tr>
<td>35</td>
<td>Using software programs in my teaching</td>
<td>2.7</td>
<td>1.10</td>
</tr>
<tr>
<td>36</td>
<td>Using computers to develop self-learning skills</td>
<td>2.8</td>
<td>1.40</td>
</tr>
<tr>
<td>37</td>
<td>Using computers to develop technical teaching</td>
<td>2.1</td>
<td>1.10</td>
</tr>
<tr>
<td>38</td>
<td>Using the computer as a teaching aid</td>
<td>2.6</td>
<td>1.10</td>
</tr>
</tbody>
</table>

One reason this role is not practised frequently by teachers might be their resistance to apply new technology in their teaching practice. Hawkridge, Jaworski and McMahon (1990), in their study about computer use in Third World schools, demonstrated that there was a fear that Jordanian teachers, among those in other Third World countries, would resist change. Moreover, they indicated that teachers were not ready yet to change their role because the computer represented a challenge to their traditional role as a source of knowledge.

However, the interviews indicated that teachers claimed they needed more time to absorb these technologies. Other reasons are linked to a lack of training. Thus the interview data suggested that most teachers, during their pre-service training, did not receive any instruction in how to integrate technology into their daily classroom practice. Tawalbeh (2001) similarly found that lack of teacher training hindered Jordanian teachers from integrating computers into their daily practice. He added that even the teachers who were teaching the information technology subject in Jordanian schools did not have any relevant teaching methods course during their university education.

Hawkridge, Jaworski and McMahon (1990) pointed out that many studies indicated that the level of teachers’ familiarity with handling computers is a crucial factor in the
success or failure of computer education they delivered. Moreover, shortage of telecommunications equipment reinforced teachers' insecurity in dealing with such technologies and therefore resulted in a weak role for teachers as technologists.

There is no general agreement between teachers and the MOE about how and when technology should be employed. A great deal of data available from the interviews shed more light on this problem. Availability of software for specific subjects was another major issue hindering the practice of this role. Recently the MOE has started to develop software by co-operation with foreign agencies, such as the British Council.

5.3.6 The Teacher's Role in Professional and Personal Development

As Table 5.7 shows, teachers responded with a very low mean (2.7) to the item “Participating in evaluating the effectiveness of professional development run by the Ministry of Education”. The minimal role by teachers in this activity reflects the absence of a feedback system between the MOE and teachers at the school level.
Table 5.7 Means and Standard Deviations for Items on the Scale on Teacher’s Role in Professional and Personal Development

<table>
<thead>
<tr>
<th>Item no.</th>
<th>Item statement</th>
<th>Item mean</th>
<th>Std Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>Reading books and periodicals in my subject matter</td>
<td>3.8</td>
<td>0.87</td>
</tr>
<tr>
<td>41</td>
<td>Keeping up to date with the current philosophy of education in Jordan</td>
<td>3.9</td>
<td>1.10</td>
</tr>
<tr>
<td>42</td>
<td>Evaluating continuously my teaching performance</td>
<td>3.7</td>
<td>1.20</td>
</tr>
<tr>
<td>43</td>
<td>Having a positive view of my role as a teacher</td>
<td>3.1</td>
<td>1.50</td>
</tr>
<tr>
<td>44</td>
<td>Sharing my teaching experience with my colleagues</td>
<td>4.0</td>
<td>0.84</td>
</tr>
<tr>
<td>45</td>
<td>Undertaking research and educational studies</td>
<td>3.8</td>
<td>1.20</td>
</tr>
<tr>
<td>46</td>
<td>Enrolling in academic educational programs in Jordanian universities</td>
<td>4.0</td>
<td>1.50</td>
</tr>
<tr>
<td>48</td>
<td>Participating in evaluating the effectiveness of professional development run by the Ministry of Education</td>
<td>2.7</td>
<td>1.40</td>
</tr>
</tbody>
</table>

In addition, the item “Having a positive view of my role as a teacher” had quite a low mean (3.1) indicating that teachers are not very happy with their current role. It is not surprising that teachers did not express very much job satisfaction because their salaries are generally insufficient to cover their life expenses. For example, it is hard for them to have their own suitable housing. Teachers earn the same wage as other public servants, but do not receive other benefits or professional recognition, leading to the fact that their social prestige is eroded. For example, teachers considered they did not have the same rights as their counterparts in other Government ministries, like doctors and engineers, to establish their professional organisation, despite the Jordanian law that gives this right to other public servants (Bader, 1994). Weher (1997) pointed out that the MOE needs to pay more attention to teachers’ social prestige in the society if teachers’ job satisfaction is to be improved.
However, on other items in this scale, teachers’ responses were generally positive. For example, “Enrolling in an academic educational program in Jordanian universities” had a mean of 4.0, reflecting teachers’ desires to improve their qualifications, knowing that a degree will help them to improve their social and professional status. Having a degree also gives teachers an advantage in securing work in the rich oil Gulf States and motivates a number of teachers to enrol in academic education programs. These programs are supported by the MOE on a competitive basis, taking into consideration teachers’ basic education degree and length of service. Priority is given to teachers with most years of service. However, there are a limited number of places available in Jordanian government universities through MOE scholarships. As a consequence, teachers often have to wait for years to have this opportunity to pursue their higher degrees as to do so without a scholarship would involve prohibitively high fees.

The item “Sharing my teaching experience with my colleagues” also had a high mean (4.5) indicating that teachers are willing to benefit from other teachers’ experience. For many years, the classroom was regarded by teachers as their sanctuary but the old taboo of not allowing others into their classrooms is now being broken down as teachers start to accept the idea that other teachers should be able to come into their classrooms.

This idea of collaboration received much attention from teachers, administrators and academics in the interview data in the present study. The MOE has been calling on teachers to work and plan together. Academics have pointed out that teachers are willing to work together and to give up their old working styles that served them for a long period in what Lortie (1975) described in his classic study School Teacher as teachers working in “egg crates”. When teachers collaborate, the school ethos can change as teachers no longer claim without evidence that they are doing a good job but they express their needs for opportunities to work others, exchanging their views and experiences.

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5.3.7 The Teacher's Role as a Social Change Agent

Table 5.8 indicates that the item “Utilising the results of educational research and studies as a basis for educational development” was perceived by teachers as a practice that did occur often (mean = 4.4). A great deal of importance is attached to using a scientific approach and teachers seemed keen to rely on the results of educational research. If this is the case, the results of such research will challenge many social values and attitudes.

Many other items in this scale had quite low means. Schools need to take a lead position and serve as instruments to rebuild the society in a different orientation. Jordan, through its education system, seeks to alter societal attitudes towards people with disabilities and blue collar workers. The MOE has included students with special needs such as gifted, disabled and slow learners in ordinary classrooms. However, teachers are not adequately trained in how to deal with such groups. Therefore, they did not play their proposed role, explaining the low mean of 2.0 for the item “Participating in educational programs for students with special needs, such as gifted, disabled, slow learners”. One of the teachers at interview provided a typical explanation by saying:

Mainstreaming students with disabilities in the ordinary classroom created a great challenge to me to meet their needs. There is no professional training program to help me so I did not have any competence to deal with them (Hayder, March 25, 2001).
Table 5.8. Means and Standard Deviations for Items in the Scale on Teacher's Role as a Social Change Agent

<table>
<thead>
<tr>
<th>Item no.</th>
<th>Item statement</th>
<th>Item mean</th>
<th>Std Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>Utilising the results of educational research and studies as a basis for educational development</td>
<td>4.4</td>
<td>0.86</td>
</tr>
<tr>
<td>51</td>
<td>Participating in educational programs for students with special needs, such as gifted, disabled, slow learners</td>
<td>2.0</td>
<td>1.20</td>
</tr>
<tr>
<td>52</td>
<td>Utilizing modern information and data relevant to educational change</td>
<td>3.0</td>
<td>1.20</td>
</tr>
<tr>
<td>53</td>
<td>Correlating the contents of textbooks with the needs of the national development plan</td>
<td>2.7</td>
<td>1.00</td>
</tr>
<tr>
<td>54</td>
<td>Presenting students with the principle of integrated education including the academic and the professional streams</td>
<td>3.3</td>
<td>0.92</td>
</tr>
<tr>
<td>55</td>
<td>Developing students' potentials for vocational learning</td>
<td>3.2</td>
<td>1.40</td>
</tr>
<tr>
<td>57</td>
<td>Developing the skill of lifelong learning</td>
<td>3.8</td>
<td>1.00</td>
</tr>
<tr>
<td>58</td>
<td>Utilize vocational practical experience in teaching to achieve the principle of 'learning by doing'.</td>
<td>2.7</td>
<td>1.10</td>
</tr>
</tbody>
</table>

People often look down on blue-collar jobs as a university degree provides entry to the most respectable career path and is a symbol of social prestige in the community. This situation has created many problems for the Jordanian labour market where thousands of educated people are waiting to secure a job in one of the Government agencies. Simultaneously, there is a severe shortage in the vocational labour market and there are 200,000 unemployed Jordanians. Under the education reform plan, teachers are expected to play a critical role in correcting this situation by helping students to transform their negative attitudes toward vocational careers and to learn to value them.
However, teachers did not report that they engaged in these activities very often, as the item “Developing students’ potentials for vocational learning” had a mean of only 3.2. A related item, “Developing the skills of lifelong learning”, was also rated quite low by teachers (mean = 3.8), indicating that they did not frequently help to turn students’ concerns to mastering skills that they would need for the rest of their lives rather than just having a degree to enter the labour market. As teachers were not involved in curriculum development, they did not have any control over it. It is therefore reasonable to expect that they would rate the item “Correlating the contents of textbooks with the needs of the national development plan” as low (mean = 2.7).

Discussion of the results of the above findings is postponed until the end of this chapter where it is included in conjunction with findings from the following section.

5.4 Teachers’ Background Factors Related to Their Responses on the Scales

5.4.1 Introduction

In this section, the focus is on those teachers’ background factors that potentially affect their practice in JERP. The evidence obtained from this enquiry is directly relevant to Question 4 among those which guided the research. The present research seeks to offer a better understanding of all the variables that might impact on teachers’ work (Flatz, 1987). Relationships between background factors and responses by teachers help to “explain” why they respond differently on the seven scales. The background variables considered were:

- teachers’ highest qualification (5 categories);
- specialisation (Natural Sciences v Humanities Sciences);
- gender (male v female);
- years of teaching experience (ranked into 4 levels of 1-5 years; 6-11 years; 12-15 years; and >15 years);
• number of training courses undertaken (ranked into four levels of none; one; two; and three or more); and

• school location (classified into City, Village, and Badia).

To examine the impact of these background factors, relationships were explored between each variable and the ratings on the seven scales. Each background variable was regarded as an independent variable and the ratings as dependent variables. An appropriate statistical test was selected, depending on whether the independent variable was a nominal variable (t test was used for two categories; analysis of variance (ANOVA) for more than two categories) or a continuous variable (when Spearman Rank Order correlation was used).

With multiple dependent variables, to guard against increasing the chances of identifying statistically significant results through chance variations (called a Type I error) beyond the set probability level (alpha = 0.05), multivariate analyses can be used. For example, a multivariate analysis of variance (MANOVA) can be used to test differences using all seven dependent variables simultaneously. In addition to attempting to interpret the overall results for a significant multivariate test, the researcher can then use univariate tests as follow-up tests to locate which dependent variables have contributed most to the overall significant outcome.

The present research considered the benefits of multivariate tests but, in the interests of simplicity in reporting and discussion, opted to report univariate results. However, the researcher used a conservative approach in interpreting results from a set of tests. For each independent variable, the results for the seven dependent variables are reported in a single table and due regard is given in the discussion to the magnitude (so-called “effect size”) and educational significance of results, and not just to the statistical significance alone. The results are discussed in sections below.
5.4.2 Teacher's Highest Qualification

In order to trace the impact of teachers' qualifications on their self-rating of performance of assigned roles in JERP, the factor was classified into five categories: diploma, bachelor conversion (see Chapter1), bachelor, graduate diploma and masters. Since these levels of qualification are not strictly ordered, they were treated as forming a nominal variable. It is worthwhile to mention here that teachers' qualifications formed a salient component in JERP since the majority of MOE teachers held two-year community degrees when the program was launched in 1987.

The education authority was concerned that this relatively low qualification could impede reform efforts and considerable emphasis was placed on teacher upgrading. Consequently, a cooperative program was started in the early 1990s between the MOE and Jordanian Government universities to raise teachers’ qualifications. This program was officially known as Education Rehabilitation Program (ERP) and it aimed to enable teachers with two-year community degrees to have free access to a bachelor conversion program in these universities. In addition, teachers and administrators who held a bachelors degree were given access to graduate diploma and masters programs.

As Table 5.9 shows, an ANOVA for each of the seven scales yielded a significant overall F value so there was a need to look at follow-up tests to see where the significant differences were evident. The Scheffe test was employed to locate the significant differences.
<table>
<thead>
<tr>
<th>Scale</th>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p</th>
<th>Results from Scheffe tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher’s role in developing students’ cognitive growth</td>
<td>Between groups</td>
<td>505</td>
<td>4</td>
<td>126.2</td>
<td>6.3</td>
<td>.00</td>
<td>Mean Diploma (42.6) &gt; Mean Bach (39.9)</td>
</tr>
<tr>
<td></td>
<td>Within groups</td>
<td>13160</td>
<td>658</td>
<td>20.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>13665</td>
<td>662</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher’s role in implementing curriculum and teaching methods</td>
<td>Between groups</td>
<td>563</td>
<td>4</td>
<td>140.8</td>
<td>8.6</td>
<td>.00</td>
<td>Mean Bach, Conv. (19.7) &lt; Mean Bach (21.6); Mean Grad. Dip (20.8) &lt; Mean Masters (22.7)</td>
</tr>
<tr>
<td></td>
<td>Within groups</td>
<td>10734</td>
<td>658</td>
<td>16.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>11298</td>
<td>662</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher’s role as an educational evaluator</td>
<td>Between groups</td>
<td>3150</td>
<td>4</td>
<td>787.6</td>
<td>22.3</td>
<td>.00</td>
<td>Mean Bach, Conv. (26.9) &lt; Mean All other sub-groups</td>
</tr>
<tr>
<td></td>
<td>Within groups</td>
<td>23174</td>
<td>658</td>
<td>35.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>26325</td>
<td>662</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher’s role as a health educator</td>
<td>Between groups</td>
<td>379</td>
<td>4</td>
<td>94.8</td>
<td>3.2</td>
<td>NS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Within groups</td>
<td>19088</td>
<td>658</td>
<td>29.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>19468</td>
<td>662</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher's role as a technologist</td>
<td>Within groups</td>
<td>570</td>
<td>4</td>
<td>142.5</td>
<td>4.3</td>
<td>.00</td>
<td>Mean_Masters (15.9) &gt; Mean_Bach_Cov (12.7) &gt; Mean_Bach (12.1)</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>---------------</td>
<td>-----</td>
<td>---</td>
<td>--------</td>
<td>-----</td>
<td>-----</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Between groups</td>
<td>20387</td>
<td>658</td>
<td>31.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>20958</td>
<td>662</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher's role in professional and personal growth.</td>
<td>Within groups</td>
<td>2869</td>
<td>4</td>
<td>717.4</td>
<td>14.2</td>
<td>.00</td>
<td>Mean_Bach_Cov (26.8) &lt; Mean_All other sub-groups</td>
</tr>
<tr>
<td>Between groups</td>
<td>33191</td>
<td>658</td>
<td>50.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>36061</td>
<td>662</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher's role as a social change agent.</td>
<td>Within groups</td>
<td>1551</td>
<td>4</td>
<td>387.8</td>
<td>10.8</td>
<td>.00</td>
<td>Mean_Bach_Cov (26.8) &lt; Mean_All other sub-groups</td>
</tr>
<tr>
<td>Between groups</td>
<td>23561</td>
<td>658</td>
<td>35.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>25113</td>
<td>662</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*The analyses reported in section 5.4 are based on summed scores for all items in each scale, but not divided by the number of items as reported in Table 5.1.*

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As Table 5.9 shows, teachers with a two-year diploma had a higher mean score than those with a bachelor's conversion qualification on the scale for the teacher's role in developing students' cognitive growth. One possible explanation is that teachers with a two-year community degree focus on their role in assisting students' learning, whereas those with more academic qualifications might tend to focus more on academic content of what is taught.

Concerning the teacher's role in implementing curriculum and teaching methods, surprisingly, teachers with a bachelor conversion had the lowest mean of all sub-groups. This is in spite of the fact that the teachers who were given priority for selection into the bachelor conversion program were the most experienced teachers and the ERP aimed to assist teachers to bring about change in their practice by employing different teaching methods that meet the diverse needs of their students. Perhaps this group of older teachers considered their long work experience had developed a successful teaching style and that they did not want to take any risks by attempting to reshape their classroom practice. Two teachers provided evidence of this possibility by saying:

I just kept doing what I usually do. This plan does not have any effect on the way I perform my job. I can manage to do what I think is right for my students (Hanna, March 18, 2001).

I am not happy with this change. I just close the door of my classroom and I teach in a way that I am happy with and it serves my students well, but when any outsider comes down to my classroom, I do my best to show them what they would like to see in my classroom (Amani, March 22, 2001).

Teachers in the interviews pointed out that JERP caused stress and anxiety for them. They spoke of not receiving sufficient assistance in schools to help them to feel secure in putting their theoretical learning into practice. For example, one teacher complained as follows:

I suffer from stress because there are heavy workloads. I have 24 teaching periods per week; it is too much. This stress has been generated by the change, as well as inadequate facilities, poor library and teaching resources, and inappropriate principal leadership styles. I would like to quit teaching but it is hard to find another job (Aida, March 21, 2001).
Teachers here may be exaggerating, as the more experienced teachers, in particular, may also be those most resistant to change (discussed later). However, this finding implies that the ERP may not be successful in affecting teachers’ practice. Perhaps the program should target those less qualified but also less experienced teachers who might be more susceptible to change. Ironically, many older teachers who completed the conversion program were close to retirement age.

The results for the teacher’s role as an educational evaluator showed that teachers with a bachelor conversion were the least likely of all sub-groups to practise the behaviours in this role. Even teachers with a two-year diploma had a significantly higher mean. The effective evaluation of a student’s performance is constrained by a lack of teacher’s knowledge about current measurement and evaluation methods. Although teachers in the conversion program would have been introduced to new methods, they seemed reluctant to use them. However, as already noted above, older and more experienced teachers with diploma qualifications were given priority in selection for the conversion program and the explanation for this finding might be related to the unwillingness of older teachers to implement change.

In terms of the teacher’s role as a technologist, it was found that teachers with a masters degree had a significantly higher mean score than those with bachelors and bachelor conversion degrees (see Table 5.9). A likely explanation for this finding is that teachers with a masters degree were more likely to have been introduced to knowledge and skills dealing with computers than other groups. In addition, teachers with masters degrees tend to be younger, recent graduates who are more open and enthusiastic to learn about information technology in their classroom practice. In general, this role is not widely practised by all Jordanian teachers.

Table 5.9 also shows that those teachers least likely to be active in professional and personal development and those least willing to bring about social change are those with the bachelor conversion award. As noted above, these were older teachers, many nearing retirement age. The teachers in this sub-group had significantly lower means for these two scales than teachers in all other sub-groups.
5.4.3 Teacher’s Specialisation

Teacher’s specialisation was classified into two categories: firstly, Natural Sciences including physics, mathematics, chemistry, biology, and geology; and secondly, Humanities, including social sciences, arts and psychology. This binary classification is common in Jordan. To determine the relationship between teacher’s behaviours on the seven roles and their specialisation, a Student’s t test was carried out.

Table 5.10 Significance of Mean Differences for Teacher’s Specialisation

<table>
<thead>
<tr>
<th>Scale</th>
<th>T</th>
<th>df</th>
<th>p (2-tailed)</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher’s role in developing students’ cognitive growth</td>
<td>3.25</td>
<td>661</td>
<td>.00</td>
<td>Mean Human. (41.5) &gt; Mean Nat. (40.3)</td>
</tr>
<tr>
<td>Teacher’s role in implementing curriculum and teaching methods</td>
<td>0.02</td>
<td>661</td>
<td>NS</td>
<td></td>
</tr>
<tr>
<td>Teacher’s role as an educational evaluator</td>
<td>3.58</td>
<td>661</td>
<td>.00</td>
<td>Mean Human. (31.0) &gt; Mean Nat. (29.2)</td>
</tr>
<tr>
<td>Teacher’s role as a health educator</td>
<td>-5.86</td>
<td>661</td>
<td>.00</td>
<td>Mean Nat. (40.4) &gt; Mean Human. (37.9)</td>
</tr>
<tr>
<td>Teacher’s role as a technologist</td>
<td>-2.24</td>
<td>661</td>
<td>.02</td>
<td>Mean Nat. (13.4) &gt; Mean Human. (12.4)</td>
</tr>
<tr>
<td>Teacher’s role in professional and personal development</td>
<td>.08</td>
<td>661</td>
<td>.NS</td>
<td></td>
</tr>
<tr>
<td>Teacher’s role as a social change agent</td>
<td>2.56</td>
<td>661</td>
<td>.01</td>
<td>Mean Human. (25.8) &gt; Mean Nat. (24.5)</td>
</tr>
</tbody>
</table>

Table 5.10 shows that five out of seven scales had significant differences between teachers with specialisations in Humanities and in Natural Sciences. For three scales, Humanities specialists had higher means, namely, teachers’ roles in students’
cognitive growth, evaluation, and social change. These teachers are more likely to
have been exposed to the concepts associated with human learning, growth and
change during their formal studies and this might explain their higher ratings.
Teachers with a specialisation in the Natural Science had higher means on the roles of
health educator and technologist. Natural Science specialists have more exposure to
biological sciences, including issues related to the human body and health, and to
technological concepts, including computers, during their studies and hence this
finding might also be expected.

5.4.4 Teacher's Gender

The study also explored the relationship between teacher gender and their reported
practice in the Jordanian context on the seven scales. Since this factor had two
categories of male and female, a t test was again appropriate to investigate statistically
significant differences. In one of the seven scales (teacher's role as an educational
evaluator), the Levene's test for equal variances was significant, and hence a modified
t test was used in this case. (The standard formula for t assumes equal variances in the
populations being compared.) As shown in Table 5.11, in six of the seven scales,
females had significantly higher means than males, the exception being the teacher's
role as a social change agent.
Table 5.11 Significance of Mean Differences Between Males and Females Using $t$-test

<table>
<thead>
<tr>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher’s role in developing students’ cognitive growth</td>
</tr>
<tr>
<td>Teacher’s role in implementing curriculum and teaching methods</td>
</tr>
<tr>
<td>Teacher’s role as an educational evaluator</td>
</tr>
<tr>
<td>Teacher’s role as a health educator</td>
</tr>
<tr>
<td>Teacher’s role as a technologist</td>
</tr>
<tr>
<td>Teacher’s role in professional and personal development.</td>
</tr>
<tr>
<td>Teacher’s role as a social change agent.</td>
</tr>
<tr>
<td>$t$ value</td>
</tr>
<tr>
<td>-2.5</td>
</tr>
<tr>
<td>-4.0</td>
</tr>
<tr>
<td>-2.7</td>
</tr>
<tr>
<td>-2.1</td>
</tr>
<tr>
<td>-5.6</td>
</tr>
<tr>
<td>-5.0</td>
</tr>
<tr>
<td>-5.1</td>
</tr>
<tr>
<td>df</td>
</tr>
<tr>
<td>661</td>
</tr>
<tr>
<td>661</td>
</tr>
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<td>623.9</td>
</tr>
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<td>661</td>
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<tr>
<td>661</td>
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<tr>
<td>661</td>
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<tr>
<td>p (2-tailed)</td>
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<td>.01</td>
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<td>.00</td>
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<td>.01</td>
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<td>.00</td>
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<tr>
<td>Direction</td>
</tr>
<tr>
<td>Mean $F$ (41.4) &gt; Mean $M$ (40.5)</td>
</tr>
<tr>
<td>Mean $F$ (21.6) &gt; Mean $M$ (20.3)</td>
</tr>
<tr>
<td>Mean $F$ (30.9) &gt; Mean $M$ (29.6)</td>
</tr>
<tr>
<td>Mean $F$ (39.3) &gt; Mean $M$ (38.4)</td>
</tr>
<tr>
<td>Mean $F$ (13.8) &gt;&gt; Mean $M$ (11.4)</td>
</tr>
<tr>
<td>Mean $F$ (30.5) &gt;&gt; Mean $M$ (27.6)</td>
</tr>
<tr>
<td>Mean $M$ (26.8) &gt;&gt; Mean $F$ (24.3)</td>
</tr>
</tbody>
</table>

Table 5.11 indicates that the mean differences are comparatively small in educational terms, the large sample size resulting in statistically significant differences for relatively small differences in means. The discussion here focuses on the last three scales where the differences are most significant. Compared to male teachers, female teachers are more likely to practise the role of technologist. An explanation for this finding is inevitably speculative. However, Jordanian women have striven to achieve approval in many work fields. Education is one of the fields where they achieved dramatic success at an early stage, as manifest in the proportion of female teachers in Government schools, where they comprise more than 60 percent of teachers (MOE, 1999).
As part of a drive towards self-actualisation, female teachers have sought to develop their work competence, even in areas of the labour market traditionally dominated by men. Perhaps this drive by female teachers extends to new areas of technology where they have sought, through in-service opportunities, to prove themselves as technically qualified and competent. The scale on professional and personal growth similarly showed women teachers with a considerably higher mean than men.

The rapid change in the frequency of women working outside their homes is widely recognised. However, although women are dominant as participants in the teaching workforce in Jordan, their participation in social change is still limited due to social and cultural forces. These factors have restricted women’s activities in a social context, especially in public life. In addition, family commitments have played a key role in requiring women to shoulder a greater burden in maintaining traditional values in the home and family. Generally, the Jordanian community and social change remain dominated by males, and male teachers, as key agents in this community, are more active in public life than female teachers (Alfanek, 2003). Hence it was not surprising that the means for the scale on social change reflected this difference.

5.4.5 Years of Teaching Experience

Another background factor investigated was the years of teaching experience. As noted in 5.4.1, this variable was ranked into four levels (1-5 years; 6-11 years; 12-15 years; and 16 years and above). In this case, the appropriate statistical test was correlation and, since the years of experience was not measured on an interval scale, Spearman Rank Order correlation coefficient was used. Table 5.12 shows the correlation coefficients for years of teaching experience related to each of the seven scales.
Table 5.12 Correlations Between Years of Experience and Scale Scores (N = 663)

<table>
<thead>
<tr>
<th>Scale</th>
<th>Spearman rho</th>
<th>p (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher’s role in developing students’ cognitive growth</td>
<td>-0.09</td>
<td>.02</td>
</tr>
<tr>
<td>Teacher’s role in implementing curriculum and teaching methods</td>
<td>-0.26</td>
<td>.00</td>
</tr>
<tr>
<td>Teacher’s role as an educational evaluator</td>
<td>-0.22</td>
<td>.00</td>
</tr>
<tr>
<td>Teacher’s role as a health educator</td>
<td>-0.17</td>
<td>.00</td>
</tr>
<tr>
<td>Teacher’s role as a technologist</td>
<td>-0.14</td>
<td>.00</td>
</tr>
<tr>
<td>Teacher’s role in professional and personal development</td>
<td>-0.26</td>
<td>.00</td>
</tr>
<tr>
<td>Teacher’s role as a social change agent</td>
<td>-0.23</td>
<td>.00</td>
</tr>
</tbody>
</table>

Table 5.12 reveals that the most experienced teachers tended slightly to resist change and distrust the administrators who introduced this change. All seven scales had a negative correlation with years of teaching experience, indicating that more experienced (and by inference older) teachers reported slightly less frequent use of the behaviours associated with JERP. A possible example of this difference according to experience is the attitude expressed by a teacher of long years of experience as contrasted with the attitude expressed by a teacher of only a few years of experience. As already noted above, this factor of experience and its association with resistance to change may also explain the relationship reported for qualifications and practice.

5.4.6 Number of Completed Training Courses

This background factor was used to answer the question: did the amount of in-service training attended by teachers relate positively to their practice of the seven roles identified in this research? It would be expected that the amount of in-service training courses attended by teachers would be positively related to what teachers report as their desirable classroom practice. The independent variable was divided into four
ranks: no courses; one course; two courses and three or more courses. Spearman Rank Order correlation coefficient was employed to explore the relationship.

The use of in-service training programs has been identified by the Ministry as a key mechanism to enable teachers to meet changing requirements placed upon them (MOE, 1988). In a practical manner, in-service training programs are carefully designed to link to the introduction of new curricula and the explosive growth of information and communication technology. According to JERP, teachers are expected to engage in a range of different types of in-service training activities. Based on teachers’ responses to the survey items as shown in Table 5.13, the research data from the present study suggest that teachers have not benefited greatly from this program.

Table 5.13 Correlations Between Number of Completed Training Courses and Scale Scores (N = 663)

<table>
<thead>
<tr>
<th>Scale</th>
<th>Spearman rho</th>
<th>p (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher’s role in developing students' cognitive growth</td>
<td>-0.12</td>
<td>.00</td>
</tr>
<tr>
<td>Teacher’s role in implementing curriculum and teaching methods</td>
<td>-0.03</td>
<td>NS</td>
</tr>
<tr>
<td>Teacher’s role as an educational evaluator</td>
<td>-0.15</td>
<td>.00</td>
</tr>
<tr>
<td>Teacher’s role as a health educator</td>
<td>0.02</td>
<td>NS</td>
</tr>
<tr>
<td>Teacher’s role as a technologist</td>
<td>0.01</td>
<td>NS</td>
</tr>
<tr>
<td>Teacher’s role in professional and personal development</td>
<td>-0.15</td>
<td>.00</td>
</tr>
<tr>
<td>Teacher’s role as a social change agent</td>
<td>-0.31</td>
<td>.00</td>
</tr>
</tbody>
</table>
As shown in Table 5.13, four of the seven correlations were statistically significant, though small. However, in all four cases, the correlations were negative suggesting that teachers who had attended more in-service training courses also tended slightly to make less frequent use of the desired JERP behaviours. The highest correlation (rho = -0.31) was for “Teacher’s role as a social change agent.” The results here probably again reflect the observation made in 5.4.4. That is, older and more experienced teachers, who are also those most likely to have attended more training courses, are also most resistant to change (Huberman, 1988). Even participation in the in-service training has not been able to alter this fundamental association. As a result, the effectiveness of programs developed by the MOE needs to be questioned. Abu-hello, Alkhalili and Salameh (1991), drawing on a number of research studies, concluded that Jordanian teachers lack a number of professional competencies, such as mastering their subject matter, using teaching aids and employing interactive teaching strategies. However, one teacher argued: “The lack of teaching aids makes it more difficult for teachers to utilise more meaningful teaching methods” (Fatima, March 28, 2001).

In addition, it is a major concern that a national test of quality assurance for basic skills, conducted by the MOE (1999) to measure the degree of students’ mastery of higher order thinking skills in all subjects, revealed that students had weaknesses in skills like problem solving in Mathematics and Science. The expectation that students will master such skills assumes that teachers will be exposed to relevant methods during their in-service training program and that they will then be able to apply relevant methods during their day-to-day work.

The MOE (1998) has claimed that teachers were trained to equip their students with higher order thinking skills and to bring about change in their daily practice. It has been claimed that teachers have all that they need to develop their skills, since teachers’ guides, training materials and exemplar investigations have been prepared in five subjects. In the words of one administrator:

Teachers are equipped with high level skills which will offer them the possibility of creating learning environments most suited to the needs of individual students. In short, if teachers do not have these skills, their students will not be able to benefit from that (Ali, April 15, 2001).
Why might in-service training programs, then, have been ineffective? Professional training programs, taken in isolation while teachers still have daily responsibilities, have seldom had much impact (Combs, 1991). As Avalos (1985) pointed out, a strong need in developing countries is to target teachers’ training programs to teachers with an awareness of the need for change and a willingness to implement such change.

Data obtained from interviews provide some insights in the case of teachers in Jordan. When teachers were asked if they attended any valuable training courses to integrate computers in their daily practice, one teacher spoke of a “naïve” training program to learn basic skills on how to run the computer while three teachers stated that they enrolled in a Word Processor computer training program offered by a private institution at their own expense. One of the teachers said: “Lack of teacher training prevents teachers from effectively implementing both technology and new teaching methods”(Fatima, March 28, 2001).

Another teacher stated:

My professional needs were not met during my study or even in my in-service training. They did not equip us with the skills to meet the diverse needs of students. They had too much theory; but class management and integration of the computer into teaching were not covered (Yasmine, March 27, 2001).

One teacher expressed a completely negative opinion about the in-service training program by saying:

I did not gain anything from training; I did not gain any information about what to do in front of a class. They just kept talking about teaching in a theory manner. You had to get into your class and survive. It was a bit daunting (Nadia, March 29, 2001).

Another teacher referred to the only professional teacher journal, Resalat Al muallim (Teacher Message), and pointed out that it was not research or academically orientated, but was full of praise for MOE achievements. Teachers are required to buy this journal but gain little from it.

A number of other teachers expressed their dissatisfaction with their professional training programs.
What they taught in in-service training programs was trivial. We are wasting our time and are brought down intellectually. I can honestly say that during my ten years of teaching, I have not attended one useful training course on the use of technology in teaching practice (Yasmine, March 27, 2001).

I would like to change my practice; I am keen to try new teaching styles. But what frustrates me is that the in-service training course did not provide me with much knowledge; most of the time is just lectures without any practical application (Hayder, March 25, 2001).

In conclusion, Day (1999) pointed out that teacher change is an important result for any professional development program but Lieberman and Miller (1990) argued that most in-service training programs served to reinforce the status quo rather than to change it. This conclusion can readily be applied to the Jordanian context.

5.4.7 School Location

School location is a factor which influences the quality of teachers' work and therefore it was necessary to investigate the possible relationship between school location and teacher practice. This factor was classified into three categories: City, Village and Badia (see Chapter 1). These three locations vary in the availability of school education facilities, which in turn reflects on the quality of teaching that students in these areas receive. Moreover, quality of working conditions of teachers is fundamentally connected to the chances of success in change (Fullan, 1982). Teachers who work in different locations vary in their qualifications, experience and abilities. To find out how teachers in these three locations varied in their reported classroom practices, analysis of variance was used with location as the independent variable and the seven scale scores as dependent variables.

Results of one-way analyses of variance appearing in Table 5.14 show that, for all seven scales, teachers in Badia are less likely to practise their roles on the seven scales than other teachers in cities and villages.
<table>
<thead>
<tr>
<th>Scale</th>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p</th>
<th>Results from Scheffe tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher’s role in developing students’ cognitive growth</td>
<td>Between groups</td>
<td>629</td>
<td>2</td>
<td>314.7</td>
<td>15.9</td>
<td>.00</td>
<td>Mean_{Bali} (39.8) &lt; Mean_{Vil} (41.4); Mean_{City} (42.0)</td>
</tr>
<tr>
<td></td>
<td>Within groups</td>
<td>13035</td>
<td>660</td>
<td>19.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>13665</td>
<td>662</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher’s role in implementing curriculum and teaching methods</td>
<td>Between groups</td>
<td>231</td>
<td>2</td>
<td>115.3</td>
<td>6.9</td>
<td>.00</td>
<td>Mean_{Bali} (20.3) &lt; Mean_{Vil} (21.5); Mean_{City} (21.6)</td>
</tr>
<tr>
<td></td>
<td>Within groups</td>
<td>11068</td>
<td>660</td>
<td>16.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>11298</td>
<td>662</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher’s role as an educational evaluator</td>
<td>Between groups</td>
<td>640</td>
<td>2</td>
<td>319.9</td>
<td>8.2</td>
<td>.00</td>
<td>Mean_{Bali} (29.1) &lt; Mean_{Vil} (30.9); Mean_{Vil} (31.3)</td>
</tr>
<tr>
<td></td>
<td>Within groups</td>
<td>25685</td>
<td>660</td>
<td>38.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>26325</td>
<td>662</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher’s role as a health educator</td>
<td>Between groups</td>
<td>2606</td>
<td>2</td>
<td>1402.8</td>
<td>55.6</td>
<td>.00</td>
<td>Mean_{Bali} (36.1) &lt; Mean_{Vil} (40.4); Mean_{City} (40.5)</td>
</tr>
<tr>
<td></td>
<td>Within groups</td>
<td>16663</td>
<td>660</td>
<td>25.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>19468</td>
<td>662</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher's role as a technologist</td>
<td>Within groups</td>
<td>1609</td>
<td>2</td>
<td>804.7</td>
<td>27.4</td>
<td>.00</td>
<td>Mean_Beda (11.0) &lt; Mean_vill (12.8); Mean_Ciy (14.9)</td>
</tr>
<tr>
<td>----------------------------------</td>
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<td>--------------------------------</td>
</tr>
<tr>
<td>Between groups</td>
<td>19349</td>
<td>660</td>
<td></td>
<td>29.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>20958</td>
<td>662</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher's role in professional</td>
<td>Within groups</td>
<td>5070</td>
<td>2</td>
<td>2534.9</td>
<td>54.0</td>
<td>.00</td>
<td>Mean_Beda (25.8) &lt; Mean_vill (30.0); Mean_Ciy (32.6)</td>
</tr>
<tr>
<td>and personal growth</td>
<td>Between groups</td>
<td>30991</td>
<td>660</td>
<td>47.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>36061</td>
<td>662</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher's role as a social</td>
<td>Within groups</td>
<td>1492</td>
<td>2</td>
<td>746.2</td>
<td>20.9</td>
<td>.00</td>
<td>Mean_Beda (23.3) &lt; Mean_Ciy (26.2); Mean_vill (26.7)</td>
</tr>
<tr>
<td>change agent</td>
<td>Between groups</td>
<td>23621</td>
<td>660</td>
<td>35.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>25113</td>
<td>662</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
These findings imply that, in spite of the fact that the Government has tried to improve the quality of education in Badia areas, people who live in these areas have not had much benefit from the investment in education, in improving the quality of teachers, the facilities and the expansion of opportunity that has characterized urban areas. As Fullan (1982) noted in a broader context, rural areas have limited access to change in comparison with that available for cities.

Elkhatibah (1995) and Eshradeh (1997) noted that there was a shortage of education facilities in Badia, such as laboratories, libraries and playgrounds, and that these shortages had a negative impact on students' learning. These researchers reported that Badia students considered that they were disadvantaged in terms of basic education and vocational technical education. This finding is consistent with findings reported by the United Nations Development Program (2001) which pointed out that there was bias against Badia areas in education and health services.

McEwan (1999) noted that disadvantaged areas in developing countries attract teachers with lower qualifications, experience, and subject knowledge compared with urban schools. However, in Jordan, the situation is even worse for there is a shortage of qualified teachers who want to work in Badia (Sari, 1999). In 2002, 233 nominated teachers refused to accept appointments to difficult-to-staff areas, despite the MOE's claim that a ladder of promotion has been established to attract qualified teachers to work in these areas and many incentives have been introduced for teachers to stay in these areas for long periods (MOE, 2002).

A number of administrators argued the merit of the MOE provisions. Thus one noted that the MOE ensures that "teachers in remote areas win faster promotion to their desired locations and are provided with extra allowance and free housing for female teachers" (Shareef, April 17, 2001). On the other hand, one academic expressed reservations about the scheme, saying: "It is difficult to attract well qualified teachers to work in Badia areas. There is no incentive for teachers to work there. Novice teachers are normally posted to areas which are more difficult to staff" (Nabeela, April 8, 2001).
Others said:

Teachers are poorly prepared for the special demands of the places that they teach in. Those who find that their living conditions are difficult, have additional problems, they are not likely to teach well even if they stay for the mandatory three years, more care and consideration must be given to them (Khadejah, April 4, 2001).

Salary incentive is insufficient to attract well-qualified teachers to Badia areas. Schools in these areas are considered ‘training places’ for novice teachers. When they have three or more years of experience, they will transfer to schools close to their homes. This is what has eroded the quality of teaching in Badia areas (Fadi, April 9, 2001).

Teachers have great difficulties in obtaining desired transfers to cities. The majority of teachers live in cities such as Amman, Mafraq, Irbid, and Zarqa, so they seek transfers to be closer to their homes as soon as possible. According to the MOE, in order to maintain stability of the teaching force, teachers who are appointed to unattractive areas should serve three years in these areas. Interview data provide some evidence that teachers are not happy to work in these areas because of their harsh conditions. One teacher said “Teachers do not like to stay on long term in places that are difficult to staff, particularly in the Badia area. MOE doesn’t give them proper incentives to stay there” (Jamal, March 19, 2001). Another said: “I am travelling three hours each day to get to and from school, therefore the quality of my work will not be the same as other teachers who live closer to their work place” (Lila, March 18, 2001).

These difficulties have a negative impact on students’ performance. Thus Alquraan and Alnabhan (1995) found that students of C4 and C8 in Badias had considerable weaknesses in Arabic, Mathematics and Science. Moreover, Eshradeh (1997) found that there is often no match between teachers’ specialisations and subjects that they are assigned to teach.
5.4.8 Conclusions on Teachers' Role Performance and Relationships Between Background Factors and Reported Teachers' Behaviours

Evidence relevant to Question 3 of the research agenda of this study concerned the extent to which teachers were implementing seven different teacher roles and indicated that there were considerable variations among the responding teachers in the ratings they made of their performance of the seven roles in question. The research findings also suggested that there was considerable variation on the extent to which, on average, the teachers performed the seven roles. While no criterion levels of performance were specified for the performance of these seven roles mandated for teachers as part of JERP, some teachers were doing particularly well in implementing the reforms while others were doing poorly. Similarly, some of the mandated roles were generally being enacted well while others were being performed poorly. The latter type of evidence should be useful in identifying roles on which teachers needed more help through the provision of special resources or training.

Findings relevant to Question 4, regarding the relationship between teachers' background factors and the performance of the roles suggested by the MOE, provided the present research with an understanding of the ways in which teachers' views about their roles were formed. It was natural to expect that teachers would encompass a broad variability in their qualifications, their degree of enthusiasm for change, and their degree of expertise in putting change into practice.

The picture that emerged showed that much work needs to be done in terms of eliminating many hindering factors preventing teachers from bringing proposed change to their practice and encouraging them to take the risk involved in change. The simple contrast between teachers who held two year community degrees and teachers who had upgraded their qualifications through a bachelor conversion indicated that the upgrading did not seem to have much positive impact on their practice. This raises doubts about the benefit of the Teacher Rehabilitation Program that costs the country millions of Dinars. However,
further exploration of the data revealed that those teachers reporting lowest frequency of desired JERP behaviours were the most experienced (and therefore older) teachers. Since these teachers are also the ones given highest priority in selection for upgrading their qualifications, it may be that the Teacher Rehabilitation Program would be far more effective if it selected teachers who were predisposed to change.

Similarly, attendance at in-service training programs was negatively associated with desirable classroom behaviours as reported in the seven scales of the survey. This might again be age-related as more experienced teachers had attended more in-service programs. However, qualitative comments from a wide range of teachers also indicated the need for improvement in the content and delivery of in-service training.

The Jordanian Government has devoted considerable effort to disadvantaged areas characterised by low socio-economic status but, as the Fifth Conference for Education Ministries in Arabic Countries (1994) found, teachers in disadvantaged areas are less motivated, not sufficiently qualified, and do not have proper access to in-service training to deal with students’ needs in these areas. The present study similarly found teachers from Badias were less likely to use desirable JERP behaviours than their colleagues in villages and cities.

Change has not had an impact on a certain group of teachers; they just keep doing what they used to do before this program was launched. Other teachers do seem more responsive to change. The analysis in this Chapter sought to identify the characteristics of teachers more willing to change, in terms of a number of background factors. The findings offer suggestions for targeting teachers to provide leadership in change and in designing ways of encouraging and assisting these leaders and other teachers to implement the reforms satisfactorily.
CHAPTER 6

RESULTS OF THE ANALYSIS OF THE INTERVIEWS

6.1 Introduction

The purpose of the interviews was to obtain the views and experiences of three important groups of stakeholders in the future of education in Jordan concerning the education reforms that had been taking place in that country since 1987, when JERP was initiated. Three groups of participants - teachers, administrators and academics - were selected as significant stakeholders to be interviewed in connection with four of the nine key questions concerning the reforms that this study was designed to explore. Details of the participants were reported in Chapter 4 and the key questions are also specified at the beginning of that chapter. This chapter is organised in terms of three of those four key questions which are numbered here as they were numbered in Chapter 4. The fourth and fifth questions are considered in Chapter 7.

6.2 Interview Evidence Concerning the Education Reforms

This section considers the views expressed in relation to Question 5.

Question 5: How did significant stakeholders, specifically academics and administrators, describe the nature of the changes and roles of teachers in the education change process in Jordan?
6.2.1 Academics' Views

6.2.1.1 The Nature of Education Change

The most common response by the academics interviewed was that, for them, education change involved changes in the nature of teachers' work. This was said to involve changes in teaching methods with greater attention to individual differences among students and community contexts. A few also saw change consisting of alteration of the types of relationships between teachers and the MOE, involving greater freedom for teachers to exercise their knowledge and skills, and one included pre-service teacher education, arguing for greater involvement of teachers. One academic talked about school-community relationships. Associated with the thoughts expressed about these topics were two other important concepts. The first was collaboration, which was to be part of the change in teaching methods, teachers’ involvement in pre-service teacher education, and relationships with their colleagues, parents and the local community. The second was consultation, which was to become a more common aspect of teachers’ relationships with the MOE.

6.2.1.2 Teachers' Work

One academic, when elaborating about planned changes in the nature of teaching, said:

When this change was initiated by the Ministry of Education in 1987, teachers were expected to change their classroom practice, giving up old teacher-centred approaches and adopting new student-centred practices, such as group teaching and collaboration. Student-centred teaching was the most important feature of this plan (Hussein, April 11, 2001).

To another, teachers should recognise that “much attention should be given to the experiences that students bring to the classroom” (Mohammad, April 1, 2001). Several interviewees acknowledged that teaching would have to change
from the transmission of knowledge to the organisation and facilitation of learning and helping students to express themselves. “Teachers need to listen to the students to find out their interests and gear lessons towards those interests” was the view expressed by Zakria (April 2, 2001) and “teachers need to change their teaching methods, ...master all sorts of knowledge, and move towards working together with colleagues, parents and the local community”, said Basma (April 2, 2001). The mention of “working together” by Basma was an allusion to the concept of “collaboration” that was to prove especially significant in these interviews. Somewhat apart from these “student-centred” emphases was one academic’s insistence that “teachers should place more emphasis upon the mastery of basic skills” (Fadi, April 9, 2001) and another’s claim that “rigorous standards should be implemented to prevent students finishing their basic education (C1-C10) without mastering the basic skills” (Khalid, April 10, 2001).

6.2.1.3 Relationships Between Teachers and the MOE

Regarding change to the types of relationships between teachers and the MOE, one academic implied that teachers should be consulted more than they traditionally had been, by commenting that:

Relations between teachers and the MOE have become more complex, teachers have sought a greater degree of freedom in the exercise of their knowledge and skills but the MOE wants to exercise more authority over teachers. Therefore, a new type of relationship should be established (Sultan, April 5, 2001).

6.2.1.4 Teacher Education

Pre-service teacher education was seen by one academic as a vital part of education change in that it had a responsibility to promote the new school reforms. One way of doing this was to involve teachers in the running of the pre-service program, because “using collaborative methods in teachers’ work is
a vital part of the development of professional competence, and professional competence is central to the professionalisation process” (Khadejah, April 4, 2001). Here again, the reference to “collaboration” was significant.

6.2.1.5 The Role of Teachers in Education Change

The academics’ perceptions of the nature of education reform, as described above, clearly made teachers central to that process. One said that “teachers will perform a new set of roles and many traditional roles will be restructured in response to changes in the social and education context” (Fadi, April 9, 2001). Another agreed that teachers would have new roles but added that they would also have new responsibilities. However, this person continued, “they were not consulted about these roles and most of them feel more comfortable with the old roles” (Nabeela, April 8, 2001). This criticism that teachers were not consulted was taken up by others, thus:

Teachers’ roles as respondents in this plan were non-existent; they were not involved at any stage in helping to determine what should be changed and how (Abraheem, April 3, 2001).

People in the MOE just increased the responsibilities of school teachers without listening to teachers’ voices. The time is right to ask the question, ‘Where are the teachers?’ (Hussein, April 11, 2001).

Finally, Khalid observed that teachers had not changed their behaviour and that the MOE should share the blame for that, implying that lack of consultation with teachers by the MOE was part of the reason for lack of change:

If teachers performed the roles that are suggested by this plan, it would revolutionise their practice. But after more than 15 years it seems that teachers have still not altered their practice. But we should not just blame the teachers; the MOE holds a great deal of responsibility for this (Khalid, April 10, 2001).

The repeated reference, either directly or by implication, to lack of consultation between the MOE and teachers, emerged as a significant aspect of the academics’ responses regarding the nature of education change and the
role of teachers in it.

6.2.2 Administrators’ Views

6.2.2.1 The Nature of Education Change

Like the academics, the administrators interviewed in this study saw education change in Jordan to consist partly in modifications to teachers’ work. Here again, desired change was seen to lie mainly in making teaching less teacher-centred and more student-centred, and less didactic and more involving of students in the teaching-learning process. There were other changes to be made here as well, most notably in the form of teachers’ involvement in collaborative planning and decision-making. Thus, “collaboration” became a significant concept for both the administrators and the academics.

A second major area of change was teacher education and a third was decentralisation. Other elements of education change were reported to be greater autonomy and responsibility for teachers. There were suggestions of some scope for consultation with teachers implied in the administrators’ comments about decentralisation, autonomy and responsibility, but on a strictly limited basis.

6.2.2.2 Teachers’ Work

As one administrator put it: “The reform plan represents a shift in emphasis, from direct, teacher-initiated learning to student-centred approaches. Teachers have to change their teaching patterns in accordance with this change” (Waleed, April 12, 2001). Another administrator put it thus: “Less didactic teaching and more learning dialogue is required. According to this plan, Jordanian teachers are expected to abandon didactic strategies in favour of interactive teaching strategies” (Mousa, April 15, 2001).

Changes in teaching methods were only part of the change in teachers’ work that administrators talked about. According to some administrators,
teachers must take more responsibility in curriculum decision-making and must make learning environments more suited to the needs of individual students. They must equip students with new skills demanded by the labour market, such as critical thinking, problem solving, communication, teamwork and leadership. One administrator elaborated as follows:

When students leave school, it is important that they not only have basic knowledge but, more importantly, that they have the ability and tools needed to acquire new knowledge for the rest of their lives. To achieve this, teachers must work very hard to give students opportunities to become self-directed in their learning. This will happen through the use of new teaching methods, so teachers should change their tools (Nezar, April 18, 2001).

6.2.2.3 Teacher Education

Clearly, the changes listed above would have important implications for the education and training of teachers, but the administrators did not say much about this aspect. One said that teachers were trained to “think critically and clearly on general issues, contributing new ideas about: curriculum content, teaching methods, school organisation and discipline” (Fawzi, April 17, 2001) which were thought to help them change their practice. Another spoke explicitly about implications for universities’ roles in teacher education:

We need to update teachers’ knowledge of the curriculum and subject-matter. Universities should play a leading role in this through the development of curriculum content for teacher training programs. When academics do so, teachers will be ready to bring about change (Mahmoud, April 19, 2001).

A second noted that opportunities would be made available to teachers:

All teachers who only have a two year community college degree will be given free access to a university degree and all who have a university degree will have the opportunity to undertake a postgraduate degree... (Kamal, April 16, 2001).
6.2.2.4 Decentralisation

This third element of education reform in Jordan was explained by administrators thus:

The current reform plan has placed a great deal of emphasis upon decentralisation, whereby education districts will perform new roles, which were previously considered to be central office duties (Suleiman, April 22, 2001).

Giving schools more power to bring about change and to make necessary education decisions to improve the quality of teaching and learning will assist teachers to reach a much greater degree of achievement (Ali, April 15, 2001).

The decentralisation of decision-making is a salient component of the education reform plan and it will establish new roles and responsibilities for teachers (Faleh, April 22, 2001).

Devolved authority as part of the education change plan establishes new roles and responsibilities for teachers (Fawzi, April 17, 2001).

In short, decentralisation was seen to have direct implications for change at district, school and classroom levels. However, there was some limitation on the extent to which decentralisation was to be introduced, for curriculum was to continue to rest in the hands of the MOE central office. To one administrator, who acknowledged this fact, the continued centralisation of curriculum development was not a matter of importance. He said:

Curriculum will be imposed centrally by the MOE, but teachers can choose their own teaching strategies. This is not an important issue from my point of view and should not even be raised. Jordan faces more serious problems which will take hard work to solve; making our education system produce more blue collar workers is one of these problems (Mahmoud, April 19, 2001).

There were other, less prominent inclusions in the administrators' ideas of the nature of education change in Jordan. These included the banning of corporal punishment and the development of textbooks for grades C1 to C12.
6.2.2.5 The Role of Teachers in Education Change

According to the administrators, teachers would come to play new roles, such as technologists, health educators and social change agents, but especially to work collaboratively. Collaboration was seen to extend to parental involvement and not just to be confined to school personnel: “Teachers have to work together. [They] no longer have to work in an isolated environment. Modern education demands close cooperation between home and school” (Kamal, April 16, 2001).

In the specific school context, teachers were urged to collaborate with their colleagues, as follows:

We want teachers to work closely in planning and carrying out their daily duties. Teachers should no longer work by themselves. According to the reform plan, collaboration will shape the work of Jordanian teachers (Mousa, April 15, 2001).

Special benefits were seen to accrue to teachers from collaboration: “Collaborative decision-making processes make a positive contribution to teacher morale, enthusiasm, dignity and commitment” (Nezar, April 18, 2001). Moreover, it was argued that teachers should introduce collaborative teaching methods into the classroom. The concept of collaboration was clearly of considerable significance to the administrators, as it was also to the academics.

Discussion of the above responses by academics and administrators is postponed until the last section of this chapter where, in the interests of consolidation, they are discussed in conjunction with evidence pertaining to Question 6, which is presented below.

6.3 The Impact of the Changes on Teachers

Research question 6 concerned the impact of the education reform on teachers,
both in terms of their behaviours and their perceptions of changed roles. The question was worded as follows:

**Question 6: What has been the impact of these changes on teachers and what do teachers think about the expectations for their role?**

### 6.3.1 Impact of Education Change on Teachers

Two specific questions on this topic were asked in the interview schedule for teachers, as follows: i) “What is the impact of education change on teachers’ work?” and ii) “How effective is the education change agenda?” Teachers’ responses tended not to distinguish between the separate demands of the two questions and so they are discussed together here.

According to the JERP, teachers were to play seven main roles in bringing about change. As discussed in earlier chapters, these roles were: facilitators of students’ cognitive growth; implementers of curriculum and teaching methods; evaluators; health educators; technologists; and agents of social change. Some of these roles, such as technologists, were new, while others were reconstructed from traditional roles, such as imparters of knowledge, and so posed considerable challenges to teachers. In addition to these seven roles, there were other changes which had the potential to provoke reactions by the teachers. One was the abolition of corporal punishment, which had been a traditional method of establishing and maintaining order in Jordanian classrooms. Another was the adoption of collaborative work practices among teachers themselves and between them and others. Chapter 5 reported teachers’ responses to questionnaire items concerning their performance of the seven roles. It remains to be seen whether teachers welcomed these roles and other changes, and whether they encountered problems in implementing them.

The teachers interviewed responded very negatively to the education reforms, with very few positive comments being made. They complained that, as a result of the changes, they were (a) ineffective in controlling their students, (b)
isolated, (c) overloaded and (d) generally unhappy in their work. On the other hand, some interviewees claimed that the changes had had no impact at all on their work practices. The views of the teachers are expressed in the following samples from the interviews.

6.3.1.1 Classroom Control

Several teachers were most concerned about the abolition of corporal punishment and the implications for classroom management.

I don't have any means of controlling students in my classroom. It is frustrating me. Since they have banned corporal punishment, teachers are left without any way of controlling students. I can do nothing about bad boys. I just send them to the Deputy Principal who sends them back to class. When I ask what action the Deputy has taken, the answer is 'Nothing!' (Salem, March 20, 2001).

It is a hard job and there are lots of papers and exams that I have to mark. There is a lot of fighting which disrupts my class. I can do nothing with trouble-making students except send them to the Principal (Jamal, March 19, 2001).

I cannot do my job as I used to. Ten years ago many things were different. Since that time, students have become very tough and it is hard to maintain discipline in the classroom after they banned corporal punishment. They leave us nothing to control the class (Safwan, March 26, 2001).

Change has left me with very little means of controlling students in my classroom. There is no support from the education district. They have followed the 'sink or swim' policy. Most of the time there is a big mess in my classroom (Zahra, March 25, 2001).

It seems that, with the abolition of corporal punishment, these teachers were left feeling impotent, without any effective alternative strategies for achieving and maintaining order in their classrooms. These problems suggest that provisions for training teachers in the new methods had not yet been successful. Moreover, their responses indicated severe lack of support from managers, both at the school and district levels.

6.3.1.2 Isolation

In spite of the rhetoric on collaboration, several teachers referred to feeling
quite isolated in a new school environment under JERP.

I feel isolated. I work by myself. For me, I think the most rewarding aspect of teaching is working together as a team at school. But I don’t have any training in teamwork. I am isolated. I am powerless (Nadia, March 19, 2001).

Teachers keep their distance from each other and from the Principal. Every teacher is busy with their own work. There is no collaborative climate in schools (Fatima, March 28, 2001).

In my school, the teachers were backstabbing each other to get higher positions. There is no friendly climate in this place (Yasmine, March 27, 2001).

Clearly, for these teachers, the ideal of collaboration had not been implemented and they had become frustrated and disillusioned.

6.3.1.3 Overload

The workload imposed on teachers by new demands was also an issue for many of those interviewed. In the words of the teachers themselves:

I suffer from stress because there are heavy workloads. I have 24 teaching periods per week. It is too much. This stress has been generated by the change as well as inadequate facilities, poor library and teaching resources and inappropriate Principal leadership styles. I would like to quit teaching but it is hard to find another job (Aida, March 21, 2001).

I find the workload heavier than it used to be. I have a lot of paperwork that I have to create for myself. I am asked to do many things during my workday. Teacher workloads increased when the MOE introduced new skills (Jamal, March 19, 2001).

I am overloaded by the large number of classroom periods: 25 forty-five minute periods per week and I have to cover the whole curriculum (Jawad, March 19, 2001).

These complaints suggest that a climate conducive to implementing the education reforms had not been established. If teachers felt that they were grossly overloaded in their efforts to introduce reforms, they were unlikely to
view the reforms positively and the changes were unlikely to be implemented successfully.

6.3.1.4 General Unhappiness

One of the worst signs any reformers can identify in their efforts is a desire by participants to leave the scene, that is, to abandon the change enterprise altogether. Unfortunately, some of the teachers gave these signs unequivocally:

I wish I could take a break from the teaching challenges which are thrown at me. Teaching is ‘just a job’ and I am a time-filler (Hanna, March 18, 2001).

I have lost interest in teaching. I do not respond to my students in the ways I am supposed to. This change has not led us in the right direction (Zahra March 22, 2001).

For me teaching is a job until something better comes along. I am not happy. For a while I was thinking about quitting but, unfortunately, I could not find another job, so I do it because I have to survive, nothing more (Aida, March 21, 2001).

There is no ambiguity about these comments. They indicate that the education reform process had been unpleasant for these teachers.

6.3.1.5. No Impact

The responses of a few of the teachers provided insight into the ways in which some individuals reacted to unwelcome change. They simply ignored it and continued along their existing path, sometimes with deception:

I just kept doing what I usually do. This plan does not have any effect on the way I perform my job. I can manage to do what I think is right for my students, but how can I ignore all the pressures placed upon me to change my thoughts? (Hanna, March 18, 2001).

I am not happy with this change. I just close the door of my
classroom and I teach in a way that I am happy with and it serves my students well. But when any ‘outsider’ comes down to my classroom, I do my best to show them what they would like to see in my classroom (Zahra, March 25, 2001).

These reactions also revealed that individuals sometimes regarded their personal preferences as superior to those of their managers, while others tried to lead double-lives by deceiving others into believing that they did conform, when in fact they did not.

6.3.2 Teachers’ Thoughts About Expectations For Their Role

Responses appropriate to this topic were elicited with the following question, “What do teachers think about the expectations of their role in the education reforms in Jordan?”

The teachers interviewed were strongly of the opinion that the expectations for their role in education reform were unreasonable. They argued that there were too many expectations of them and that they were neither adequately prepared to perform those roles nor given adequate support when they tried to perform them. Following is a representative sample of their comments.

People in the MOE expect teachers to be superman, doing many miracles, easily overcoming obstacles and solving the country’s economic problems (Jamal, March 19, 2001).

They now expect too much of teachers. They think we will solve all of the country’s problems. They have placed new demands on us (Salem, March 20, 2001).

It is not reasonable to make teachers face all these challenges without offering an active support system to help teachers to perform their duties (Aida, March 21, 2001).

This change brings many unreasonable expectations about the role of the teacher, including the role of teachers as technologists. They do not realise that most teachers do not have the basic skills to tackle the computer. How can they use technology in their teaching? (Hanna, March 18, 2001).
There are too many expectations placed upon teachers. They want us to perform everything in this plan. They keep talking about teachers being organisers of the education environment, but when I got into the training course I found that lectures equipped me to be a transmitter of knowledge, not an organiser (Yasmine, March 27, 2001).

These teachers left little doubt that some of the new roles expected of them under JERP were too challenging for them at their present level of professional development. Comments that they felt as though they were being expected to alleviate all of society’s problems suggest considerable loss of morale.

As with Question 5, discussion of the responses pertaining to Question 6 is postponed until the end of this chapter.

6.4 Variables Influencing Teachers’ Views

This section looks at evidence from the qualitative research pertinent to research Question 7:

What Factors and/or Variables Contributed to Teachers’ Views about Jordan’s Education Reform Program and the process of Implementation of the Reforms?

Some material relevant to this question was presented in Chapter 5 in order to illustrate the quantitative findings reported there with responses obtained during the interviews with teachers, academics and administrators. On several occasions, interview responses suggested factors that might “explain” the variations contained in the teachers’ self-reported frequencies of performance of the seven roles emphasised in the education reforms in Jordan. However, from the pattern of responses, implications can be drawn about factors likely to have contributed to teachers’ responses to the education reforms.

This question implied that it would be possible to separate teachers’ views about the education reforms in Jordan from their experiences of the reform
program and the implementation process, and that it would be possible to
evaluate, on the one hand, that some of the interview material consisted of what
could justifiably be called "teachers’ views" and that another body of the
material could justifiably be considered to be "contributing factors." Another
assumption was that a linear cause-and-effect chain linking the two could be
identified. However, the design limitations of the study made that impossible.
This study was not designed to be an experiment in which treatments were
applied under carefully controlled conditions and effects measured with
precision. Nevertheless, it is true that some of attributes of the Jordanian school
system that existed before the reforms were introduced continued to exist
during the implementation phase. These attributes would have become part of
the teachers’ experiences and, therefore, would have had the potential to
condition their views of the reforms. For example, if teachers’ working
conditions, such as class size, were unsatisfactory before the reform process
began and nothing was done to alter that situation as part of the reforms, then it
seems possible that those working conditions would affect teachers’ reactions
to the reforms themselves. It was those types of factors that were sought in the
attempts to answer Question 7 and that are reported in what follows in this
chapter.

In their responses to Question 6, teachers were highly critical of the education
reform process in Jordan. In their responses to Question 7, the teachers often
repeated the complaints they had made earlier. Indeed, it was often difficult to
see beyond those complaints and to detect the views of teachers about the
reforms themselves. In spite of these difficulties, four major factors of likely
influence emerged. These factors were as follows:

a. inadequate preparation for change;

b. poor working conditions;

c. poor teacher/manager relationships; and

d. lack of professional recognition.
6.4.1 Inadequate Preparation for Change

The quality of preservice and in-service education provisions for teachers had been criticized for many years in Jordan (Alnahar, Battah & Freijat, 1992; Alkhateeb, 1998) and it seems that this remained the case during the implementation stage of the education reforms. Thus, the first factor to emerge as having the potential to affect teachers’ reactions to the reforms was the lack of preparation of teachers for the changes they were to implement. On the one hand, the complaint was that there was an absence of adequate explanations to the teachers of the changes, while on the other hand, the complaint was that there were no adequate training courses in the skills needed to implement the changes. One teacher voiced the first type of complaint by saying:

I don’t have prior knowledge and full understanding of what change will entail. There should be one or two training courses to let teachers know what will happen in their school next year (Lila, March 18, 2001).

Another agreed by saying “I need to understand the reasons for change” (Fadwa, March 18, 2001). A third said, “Teachers are uncertain about the new demands that the change will place upon their role” (Safwan, March 26, 2001). These complaints about the absence of explanation of the changes were usually accompanied by other complaints, especially those about inadequate training in the skills and techniques required to implement the reforms. In some cases, the criticisms were of in-service courses already offered. As one teacher argued,

What they taught in in-service training programs was trivial. We are wasting our time; we are brought down intellectually (Yasmine, March 27, 2001).

However, many complaints were that there were no courses on offer:

“I need training courses in areas like working as a part of a team, assisting slow learners and integrating the computer into classroom teaching” (Safwan, 26 March, 2001).

This view was supported by three teachers who elaborated by saying, respectively:
Mainstreaming students with disabilities into the ordinary classroom creates great challenges for me in relation to meeting their needs. There are no professional training programs, which would enable me to meet the needs of students with disabilities. I do not have the competence to deal with them (Hayder, March 25, 2001).

I feel anxious because I am inadequately trained to deal with change. I need more skills. I must know how to diagnose and cater for students with learning problems. There are students in my class who know more than me when they sit down to the computer (Fatima March 28, 2001).

I need training in the uses of computers in teaching and producing teaching resources. But what is happening is they are bringing computers to schools and no one knows how to use them. They are putting the cart before the horse (Hayder, March 25, 2001).

Clearly, the continuing inadequacy in the professional in-service education and training courses for teachers was likely to be a prime influence on their poor reception of the education reforms, especially those that involved new roles, such as the technologist’s role, demanding new skills.

6.4.2 Poor Working Conditions

The second major area of influence upon teachers’ success in implementing the education reforms seemed to consist of the conditions under which they were expected to work. These included the salaries teachers were paid, their conditions of appointment, their prospects of career advancement, and the size and composition of classes they had to teach.

Fadwa compared the salaries of teachers’ and those of other public servants, thus:

If the teaching profession compares their salary with other professions, it is clear that teachers remain the poorest among them. The irritating question is, what are other professionals doing that the teachers are not doing? Teachers work beyond their hired hours, and many of them do exam marking during weekends and holidays (Fadwa March 18, 2001).
The most important thing for one teacher was her working conditions, including her salary. She said:

I am dissatisfied with my job, I just want a higher salary and better working conditions. I don't care about being involved in decision making at school or having a voice in the development of the curriculum. My core job is teaching, nothing more than that. Other stuff I leave to the administration people who should work to offer better circumstances for me to work in (Nadia, March 29, 2001).

Concerning conditions of appointment to areas that were difficult to staff, one teacher said, "Teachers do not like to stay on long term in places that are difficult to staff, particularly in desert areas. In addition, the MOE doesn't give them proper incentives to stay there" (Jamal, March 19, 2001). According to MOE regulations, teachers who were appointed to disadvantaged areas of Jordan had to spend at least three years serving in these areas. As another teacher explained:

I can't apply to obtain a transfer to another directorate. I have to work in this area for at least three years before I can transfer to a school that is closer to my home. Currently, [I spend] three hours each day travelling to and from school, and there is no promotion for that (Ahmad, March 19, 2001).

Another teacher explained the consequences of this policy by adding:

The MOE is not making effective use of promotion to attract well-qualified and experienced teachers to Badia areas. It just posts beginning teachers to these areas, and they transfer to city schools after they have gained experience. As a result, Badia's schools are like a field experiment to them (Jawad, March 19, 2001).

The way in which teachers gained promotion was explained as follows:

Teachers are placed upon a list and must wait until they have accumulated sufficient seniority to obtain a promotion. This list contains thousands of qualified teachers, and it could take five years to get a promotion" (Fadwa, March 18, 2001).

The direct implications of this policy for the education reforms were explained thus:
Teachers don’t receive rewards for their involvement in school change. School principals do not have the authority to promote teachers (Ahmad, March 19, 2001).

The standards that were applied in granting promotions were also queried by one teacher who said:

Mostly, teachers are honoured [promoted] in my school because they do not say ‘No’ and always agree with the principal on everything he says or does. I would like him to be honest in his evaluation of what I am doing. There are standards that teachers should meet before they are promoted (Hayder March 25, 2001).

Then there was the most immediate working condition of all for teachers, the size and composition of the classes they taught. Perhaps the most explicit link between working conditions and education reform was queried by one teacher who asked: “How can I meet the individual needs of 37 students in my classroom?” (Fadwa, March 18, 2001). Another teacher argued that the class was so large that resorting to teacher-centred methods was inevitable: “Most of my time is taken up with instruction and providing information that is included in textbooks. However, I can justify this. I have 35 students in my class. It would be hard to use other teaching styles” (Amani, March 22, 2001).

Class size was obviously an important constraint upon teachers, but so also was the composition of the class, including the standards of achievement the students had reached. Salem commented on this as follows:

Literacy is a basic requirement, needed for many education outcomes to be judged a success. However, many of our students do not master basic skills such as writing, reading, mathematics. Therefore, the change program has not yielded the desired goals (Salem, March 20, 2001).

6.4.3 Poor Teacher/Manager Relationships

Teacher dissatisfaction with their managers applied to administrators at the highest levels through to those who were the most immediate supervisors. Thus, some teachers complained about unsatisfactory relationships with the MOE
itself. Hanna was one of those, saying:

People in the MOE live in their ivory tower and just keep giving orders and discussing education change to the media without visiting schools to discover what is going on there. They do not conduct surveys to ask teachers about their needs, and wishes, and the problems that they face in the classroom (Hanna, March 18, 2001).

Not all of the teachers complained about their relationships with education managers. Two of them said quite positive things about their principals, as follows:

My school principal respects what I do and says I have the right to disagree with her and she intends to respect that right. Teachers can work in accordance with their own beliefs, which I'm pleased about (Fadwa, March 18, 2001).

My principal allows us to be involved in things that are important and pertinent to our students. She has invited me to her office many times to discuss specific matters. She works as best she can to make the right decisions. She is a fair woman who gives every teacher enough space to work (Fatima, March 28, 2001).

These were not the usual comments, however. It seems that one common source of tension in teachers' relationships with their managers was that most managers still saw their core job to be judging and not offering much help to teachers to bring about change. This perceived lack of support from above appeared to be one of the strongest sources of dissatisfaction among teachers. Aida said:

My supervisor was not really helpful. He just read the lesson notes, ticked them without comment, and told me where I could have done better. He just wanted all the paperwork; he didn't offer me any practical advice about performing my work in the classroom. At the end of his visit he produced a report, nothing more (Aida, March 21, 2001).

Jawad expressed a similar opinion when he said:

Frankly, I can't tell you how much desperation I feel about my supervisor. He did not offer much help. He was just finding faults in
my classes. There were a lot of students who were troublemakers and I needed to know how to deal with them, especially after the Ministry banned corporal punishments (Jawad, March 19, 2001).

Added to the ever present emphasis on evaluation was the unfriendly climate of interaction between teachers and supervisors, according to one teacher, who said:

The interaction between teachers and supervisors is not friendly. When the supervisor walks down to my classroom, I know that he has come to judge my work and I am afraid to ask him for help. Doing so tells him that I am not qualified enough to do my job and this appears in his report. From my point of view, this relationship should be strong and friendly to help teachers feel secure in their work environment (Safwan, March 26, 2001).

Then there was a teacher who said, “Supervisors have never taken the time to help teachers to improve, they just come to school to judge and most of them are not qualified enough to be a good supervisor” (Zahra, 25 March, 2001).

As a result of the changes, it seems, teachers were given more responsibility but less help to cope with the change. They apparently expected extra support from their supervisors in order to implement the changes in classroom practice. For example, the new emphasis on meeting students’ individual needs required extra support, as one teacher said:

There is no support system to help classroom teachers to implement change, they just ask us to do it. There are many questions going through my mind including: how can I meet the individual needs of 29 students? And how can I establish remedial plans for students with learning difficulties? I think there should be a comprehensive support system in every education directorate (Nadia, March 29, 2001).

Another teacher expressed her need for extra support from her school Principal to help her through the difficult time of change. She said:

Most principals have forgotten about what really goes on in the classroom and the kinds of problems that teachers face in their daily work. Principals forget that sometimes you need support and want to talk to them about your suffering. I essentially received no help from my Principal (Fatima, March 28, 2001).
Another teacher expressed a similar concern, thus:

I need support, and I need to know exactly how I will be a part of this change and what my duty is. I feel like I might get lost within the system now. They didn’t show us how to implement the change in practical ways. (Lila, March 18, 2001).

Novice teachers were particularly critical of the support they received from their supervisors, as the following comments from four beginning teachers indicate:

When I was assigned to this school I went crazy for the first few months. I did not think that I would ever be able to stand it. I faced serious problems trying to keep order in the classroom. No one offered me any help (Jawad, March 19, 2001).

There was no welcome on my first day at the school. I was not even familiar with the layout of the school, my duties or which classes I had to teach. They sent me to class straight away (Ahmad, March 19, 2001).

Teachers can’t bring about change without support. As a novice teacher, I received no induction or support from my Principal or regional education office (Ahmad, March 19, 2001).

There is nothing to prepare teachers for the experiences of their first year of teaching. Pre-service training alone is insufficient to prepare teachers for the realities of the classroom world (Jawad, March 19, 2001).

The authoritarian nature of the Jordanian school system had been commented on well before the education reforms had been introduced (MOE, 1988), and it seems clear from the above teachers’ comments that it continued. Indeed, it was manifested no more clearly than in the “top down” nature of the change model underlying the reforms. There can be little doubt that authoritarian relationships between those higher in the education hierarchy and classroom teachers would affect the latter’s perceptions of the reforms.

6.4.4 Lack of Professional Recognition

The professional status of teaching, or lack of it, was also of considerable
concern to the teachers who were interviewed. They expressed their concerns about a number of aspects of professional esteem, arising not only from within the MOE but also from students and the wider community. One teacher was prompted to say:

The respect for teachers from students and the community has been eroded. We are blamed for society’s ills that we have no control over. I am embarrassed to say I’m a teacher. I feel dissatisfied with the low status that we have in the community (Safwan, March 26, 2001).

Another made a connection between lower community status and teachers’ poor financial situation by saying:

They have just paid lip service to improving teachers’ living standards. Teachers are still suffering from poor financial status in the community (Fadwa, March 18, 2001).

One of the most irritating aspects of the issue of professional recognition to teachers was the refusal of the MOE to allow the formation of a teachers’ professional organisation. As one teacher said:

Recently, teaching was regarded as a profession in Jordan but the Government won’t allow teachers to form a professional organisation out of fear that teachers will form a syndicate and become involved with politics, which would cause a lot of headaches for the Government (Lila, March 18, 2001).

It was argued that a professional organisation would enable teachers to exercise influence on all decisions relevant to their work.

Another common theme affecting professional esteem consisted of criticisms of the ways in which decisions were made and the lack of teacher involvement in planning for change. It was not uncommon for teachers to say that they were not given a voice at any level. One teacher described how decisions were made in her school by saying, “The Principal of our school announces her decisions through the [school] attendant who carries the paper with the decision written on it and goes from class to class to collect our signatures on the paper”
(Amani, March 22, 2001). Another teacher said that there was a teachers’ council that should have been involved in decision-making in school, but was not. Aida said, “In school, power is still in the hands of one person, the Principal, who runs the show. Although there is a teachers’ council at school, it does not hold any power. The Principal has the last say on everything” (Aida, March 21, 2001).

Another teacher focussed upon the concept of teachers as professionals who are able to make important decisions related to their work. She said:

As teachers we are not treated as professionals. They show little respect for us as experts in our field. Sometimes I might be asked to give my opinions, but they really don’t matter and I know they don’t (Nadia, March 29, 2001).

A teacher emphasised the connection between teachers having a voice in decision-making and their morale by saying

There is a real need to involve teachers in all of the phases of administration that affect them. A collaborative decision-making process contributes positively to teacher morale and enthusiasm (Lila, March, 18, 2001).

Again, another teacher pointed out that the MOE excluded teachers from the decision-making process when he said, “They [MOE] ignored us and sent orders by mail, ‘Do this, do that.’ We don’t have a voice. They did not ask what our needs and opinions were. We don’t have any representatives” (Salem, March 20, 2001). Then another employed a metaphor to describe the MOE’s talking about involving teachers in decision-making but, when it came to practice, not doing that:

I would like to use a metaphor to describe our situation. It is like we have been invited to a meeting but when we arrived there we found a sign saying “No entry” and the guard banned us from getting through. We are talking about involving teachers in the decision-making process, but we do not allow them to establish their union, so how can teachers express their views (Hayder, March 25, 2001).

Ahmad reported that teachers were not even involved in initiating the change in education. He said, “I am not part of a developing network, which is helping to
generate change. I am just someone who is told what to do. They are giving
instructions, ‘Do this; do that.’ (Ahmad, March 19, 2001)

Closely associated with teachers’ participation in decision-making was
teachers’ autonomy. The teachers interviewed seemed quite disturbed by the
limited freedom they had in conducting their daily work. One teacher expressed
the problem as follows:

Teachers are not authorised to employ their own teaching methods
or run their daily activities. Once I took my students to the local
community clinic to see how a general practitioner doctor does his
work. When I got back to school, the Principal told me that I had
breached school policy, and should have obtained permission to
take students out of the classroom (Salem, March 20, 2001).

Another teacher said that the Principal was the ultimate symbol of power in the
school. Hence teachers could not exercise any authority over their work.
Safwan said:

I don’t think that the Principal should try to tell you what to do in
your classroom or interfere in any way in your teaching, but what
actually happens is that the Principal is the symbol of authority in
the school; he is the boss; what he says goes. You know what I
mean? (Safwan, March 26, 2001).

Another teacher claimed that tight instructions were given to teachers now. She
said, “I’ve been forced to do things that I am not happy to do because they are
considered to be the right way to do things” (Amani March 22, 2002). Amani’s
colleague said,

Now I receive instructions for doing everything. I don’t have the
autonomy to do what I wish. They don’t leave me to myself or
respect my experience as a teacher. The first duty of the Deputy
Principal is to observe and evaluate teachers’ work (Lila, March 18,
2002).

Amani also gave an example of direct intrusion by the Principal:

The Principal would come into my class and say ‘That student is not
paying attention, bring him to my office’, and I had to be obey. I
can’t argue with him otherwise I would get myself into trouble.
There is a power imbalance between teachers and the Principal
(Amani, March 22, 2001).
Another teacher expressed similar views by saying:

We can’t say ‘no’ to the Principal, and if I want to get a distinction degree in my annual report I should say ‘yes’ for every decision made by the Principal, even if I know that he has made the wrong decision. I can’t go with what I think is best for my students (Jawad, March 19, 2001).

Yet another teacher showed similar concerns and said:

The [Principal] wants to have his finger on everything and be aware of everything that is going on. He runs a one-man show and never tries to give ground to anyone. He always tries to prove that he knows more than we do, and that he knows what our students need (Ahamad March 19, 2001).

Salem complained that he did not have enough autonomy to express himself as a teacher and that his work was “watched” by school administrators and that frustrated him. He said:

I do what I do because I have to do it; this sort of work frustrates me. I’m bound by too many instructions. All the administrators at school observe my work. The Principal wants to have his finger upon everything and be aware of everything that is going on (Salem, March 20, 2001).

Traditionally, in cultures such as Jordan’s, teachers had accorded high esteem by their communities and their students (Altal, 1978). However, judging by the teachers who were interviewed in this study, this does not seem to have been the case in the recent history of Jordan, especially on the part of the “insiders”, that is, those occupying senior positions within the school system itself. There can be little doubt that teachers’ views of education reform would have been conditioned by being accorded little respect, especially by those they were attempting to serve, that is, the students and the wider community, and those who were in superior positions of responsibility within the school system itself.
6.5 Discussion

In relation to Question 5, which asked how academics and administrators, as significant stakeholders, to describe the nature of the changes that had occurred as part of the education reforms in Jordan, both groups responding that education change was predominantly a matter of change in the nature of teaching. In particular, it was change from teacher-centred to student-centred approaches, from didacticism to interactionism, from the transmission of knowledge to the facilitation of learning. To this extent, both these groups of participants reflected the initiatives of the MOE in 1987.

Both academics and administrators also gave prominence to teacher education in their concepts of education change. Both recognised the responsibility that teacher education had for preparing teachers to implement the education reforms. Among the academics, the concepts of collaboration and involvement were employed when discussing teacher education, while among the administrators, mention was made of training in critical thinking and in contributing new ideas. The administrators also advocated the need for upgrading teachers' qualifications and the role of universities in that process. Intertwined with these emphases by both groups of stakeholders was the concept of "collaboration", and for the academics, "consultation." It is interesting that the administrators appeared not to attach the same importance as the academics to the latter concept, considering that the academics seemed to think that it was lack of consultation between the MOE and teachers that partly accounted for failure to implement education reforms.

It is somewhat surprising that the academics and the administrators said so little about curriculum. Knowledge expansion was the primary motive for changes in the curriculum, which had not been changed since the mid 1970s. A great deal of social, technological, educational and political change occurred in Jordanian society after that time (Massad, 2001). Thus, there was an urgent need to develop a new curriculum to catch up with this change and to make it relevant to the learners' and country's needs (MOE, 1996a).
The common JERP goal was taken as a guide in curriculum development that considered individual differences, developed critical thinking skills needed in real life situations, and developed an integrated curriculum for the early years of schooling (C1-C3). The new curriculum paid great attention to the learning of English as a second language and standard Arabic written language, which is greatly different from informal, spoken Arabic. New study areas were included, such as computer studies, environmental issues, and social studies. All the new components of the new curricula were designed to have impacts on student learning and teachers’ practice.

This curriculum was centrally initiated by subject matter experts. Administrators and psychologists were also involved in the curriculum development (MOE, 1999). Teachers, however, had no involvement in this process. As Abu-heelo, Alkhaliili and Salameh (1991) pointed out, the curriculum had little connection with students’ lives and students were still required to play a passive role. Furthermore, the MOE argued that, in the new, integrated curriculum, students were central to the learning process and that teachers’ roles had shifted from teacher-centred instructors to learner-centred facilitators (MOE, 1999). After all these developments in curriculum, it would be expected that both the academics and the administrators would have talked more about change in curricula in the interviews.

In relation to the second part of Question 5 asking the two groups of stakeholders to describe the roles of teachers in education change, it is also surprising that these two groups of stakeholders did not say much about several of the roles prescribed for teachers in the JERP. There was no mention of the health educator role and almost no mention of the evaluator role, the technologist role, the professional development and personal growth role, or social change agent role in connection with Question 5 in these interviews. Apparently, to the academics and the administrators, these roles were of marginal importance in comparison with the more traditional teachers’ roles of promoting cognitive growth and implementing curricula and teaching methods.
As is reported below, in their responses to Question 6, concerning the impact of
the reforms upon teachers themselves and their reactions to the expectations
held for them, teachers made it clear that the banning of corporal punishment
was very important to them. It is interesting to note, therefore, that only one
academic and one administrator made reference to the abolition of corporal
punishment in the interviews. The academic was commenting on the impact of
the education reforms upon teachers and said, “The banning of corporal
punishment has left teachers with no effective tools to control students in the
classroom.” (Fadi, April 9, 2001)

The administrator said:

In Jordanian schools, corporal punishment is now widely regarded as
a brutal and unprofessional way of managing students. It is now
officially forbidden. Unfortunately, it is still practised in some
schools as a punishment for misbehaviour and failure to learn (Ali,
April 15, 2001).

Generally, the teachers interviewed had reacted very negatively to the changes
introduced under JERP. Although JERP had called for teachers to employ less
authoritarian approaches in the learning-teaching process (MOE, 1988), it
seems that teachers still wanted authoritarian methods to help them to control
students in the classroom. Teachers pointed out that their authority in
classrooms was threatened by more democratic approaches advocated by the
MOE because their students had lost respect for them.

The approaches advocated by the MOE to produce good, positive relationships
between teachers and students emphasised negotiation and suggestion which
were thought to result in a healthy classroom environment in which learning
would occur, consequently making life in the school more enjoyable for
students. The MOE had argued that teachers’ authority in the classroom would
be derived, not only from their traditional role as teachers, but also from the
new system of rules operating in the school at large and the classroom in
particular (MOE, 1994). It was clear, however, that these changes had not been
welcomed by teachers who presumably were used to relying on authoritarian
approaches to achieve and maintain order in the classroom.
The responses to Question 7 containing criticisms by teachers of their working conditions read like a recipe for failure of attempts to reform education. With inadequate preparation for change, poor working conditions, unhappy relationships with supervisors, and perceived lack of professional recognition, it seems little wonder that the teachers interviewed had not welcomed the changes.

These problems are taken up again in Chapter 7 where the implications of the findings reported above are discussed.
CHAPTER 7

CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

7.1 Introduction

This study attempted to explore the role of primary school teachers in the context established by the Education Reform Program in Jordan (JERP) that started in 1987 with the aim of reshaping teachers' work with particular reference to teachers' roles. Nine broad research questions were framed and adopted to guide the research and methods of collecting data relevant to those questions were developed and applied. In the first two chapters of this thesis, the background and context of the study were described and, in Chapter 3, relevant literature concerning education reform was reviewed. In those chapters, results of exploring the first two research questions were reported. Those two questions were:

Question 1: What processes, methods and strategies are used in Jordan to introduce and implement education change as part of Jordan’s Education Reform Program?

and:

Question 2: What roles have been stated for primary school teachers in Jordan’s Education Reform Program?

Chapter 4 described the instrument development, data gathering and analysis methods adopted in gathering evidence related to Questions 3-8. Chapters 5 and 6 were concerned with reporting findings concerning those questions. They were as follows:
Question 3: How do teachers perceive their performance in schools in terms of translating their knowledge and beliefs into actions?

Question 4: Are there any differences in the educational roles of primary school teachers due to: gender, number of in-service training courses attended, years of teaching experience, academic qualifications, teaching specialisation, and school location?

Question 5: How do two significant groups of stakeholders, specifically academics and administrators, describe the nature of the changes and roles of teachers in the education change process in Jordan?

Question 6: What has been the impact of these changes on teachers and what do teachers think about the nature of the education reforms and the expectations for their role?

Question 7: What factors and/or variables contributed to teachers' views about Jordan's Education Reform Program and the process of implementation of the reforms?

and

Question 8: From all the evidence in this research study, how effective has the education reform agenda in Jordan been and what factors have hindered it?

It remains for the present chapter to report the results pertaining to the final question:

Question 9: What are the implications of findings related to the above questions for future policy and practice in Jordan?
7.2 Recapitulation: Quantitative Findings

As reported in Chapter 4, quantitative data were collected from a large, representative sample of primary school teachers via a carefully prepared and trialled questionnaire, while qualitative data were obtained through in-depth interviews with small samples of three important stakeholders in schools in Jordan, namely, academics, education administrators and primary school teachers.

Analysis of the questionnaire data provided by the large sample of primary school teachers led to the following findings.

The attempt to change teachers’ classroom practices and to have them implement the seven mandated roles had met with mixed success. The research evidence reported in Chapter 5 was that teachers reported performing some of those roles more fully than others. Some of the roles appeared to be performed at, or close to, acceptable levels but others appeared to present problems in the implementation of the reform agenda. It is on the latter that the following sections concentrate.

7.2.1 Low Performance Levels of Some Teacher Roles

7.2.1.1 The Teacher’s Role as Technologist

Concerning the teacher’s role as a technologist, it was found that, on average, teachers reported a comparatively low level of implementation. However, there was more variation among the teachers in their reported degree of performance on this role than on any of the other seven roles. Thus, while some had achieved a very low level of performance on this role, others had managed to enact this role at a relatively high level. The overall conclusion that is most warranted, however, seems to be that the reform process had not succeeded in having teachers adopt this role in their daily practice to the degree desired in the reform plan. There was a statistically significant trend for the teachers with the highest
qualifications, science specialists, females and city and village teachers to enact this role to a higher degree than teachers with university level studies, humanities specialists, males, and those in Badia locations respectively. A partial explanation for the relatively low take-up of technology by teachers might be the limited number of technology based in-service training courses reported by teachers, suggesting that a greater number of training courses might result in a greater take-up of technology. In addition, participants in the interview phase of the study complained about lack of resources in some schools, particularly in Badia areas. Some teachers expressed fears that they might be replaced by technology, and there was evidence of more widely based teacher resistance to change, specifically in relation to technology.

7.2.1.2 The Teacher's Role as a Social Change Agent

This role also appeared to be performed to a relatively low degree by the teachers but the extent of variation among the teachers was considerably less than that for the technologist role. In other words, relatively few teachers reported higher levels of performance of this role. Planners of JERP would be disappointed with this finding because considerable importance had been attributed in the literature concerning the reforms to the key role that teachers were expected to play as change agents.

Exploration of the effects of background factors upon the performance of this role produced several statistically significant findings. First, it was found that teachers who had been involved in Bachelors Conversion courses reported lower performance of this role than all other groups and that those with Graduate Diploma qualifications reported lower performance than those with Bachelors degrees. These differences were difficult to explain. One suggestion was that, as more experienced teachers are given preference for entry to Bachelors Conversion courses, the former finding might merely be a reflection of the conservatism that apparently accompanies age. Hence further training was confounded with age and experience, and it hence it would be wrong to
infer simply that additional training resulted in resistance to change.

Another finding concerning this role was that teachers with a Humanities specialisation reported a higher level of enactment than the Science specialists. This might well be a reflection of a commonly believed trend for people with Humanities (including Social Sciences) backgrounds to be more disposed to altruistic pursuits, such as desirable social change, than others.

A third significant result was that male teachers scored significantly higher regarding this role than females. A plausible explanation for this was that there were strong social and cultural forces restricting women's activities in social contexts in Jordan, especially in public life. Furthermore, it was argued that women's strong family commitments made it less likely that they could enter into the types of activities associated with agents of social change.

Finally, location emerged as quite a strong influence upon performance of the social change agent role, with teachers from Badia areas acknowledging lower degrees of performance of this role than those teaching in villages and cities. It was argued that this finding reflected the generally low benefits from Government investment in education in desert areas. Moreover, teachers' working conditions in these areas were thought to militate against involvement in social change. Staffing policies meant that there were many novice teachers in these areas, living in relatively unattractive conditions, with inadequate resources. Rather than become involved in subjectively perceived futile attempts to bring about change, it would not be surprising if energies were more focussed upon endurance until transfer could be requested.

7.2.2 High Level Performance Levels of Some Teacher Roles

7.2.2.1 The Teacher’s Role as Health Educator

Teachers reported higher levels of performance of this role than for any other and there was relatively little variation among them here. In view of the fact
that there was no textbook associated with this role and that only cross-
curriculum guidelines were provided for it, this finding was somewhat
surprising. However, the reason was seen to lie in the strong emphasis on this
role in pre-service teacher education programs and, presumably, from the
culture of the school.

There were no surprises in the findings for the effects of background factors on
teachers’ reported performance of this role. As health awareness and healthy
practices have strong scientific bases, it was to be expected that science
specialists would score higher on this role. Moreover, given the depressed
conditions that seem commonly to apply to the Badia, and the nature of the
conditions under which teachers worked there, it was to be expected that
teachers appointed to schools in those locations would score lower on this role,
too.

7.2.2.2 The Teacher’s Role as Developer of Students’ Cognitive Growth

This role was performed at the second highest level of the seven roles, judging
by teacher’s reports. Furthermore, there was less variation among teachers in
the degree to which they performed this role than for any other role. Clearly,
this role is central among those that are involved in teaching and so it should
come as no surprise that this role is frequently performed by teachers.

The influence of background factors upon reported performance of this role
tended to quite small and even negligible. The fact that teachers with Graduate
Diplomas reported performance at a statistically significant higher level than
those with Bachelors degrees gave rise to the speculation that the higher scores
had been achieved by the former reporting higher performance of the content
knowledge element of this role, while the latter were more likely to emphasise
the higher level thinking elements. In any case, there was little to be explained
for any of the background factors, except location, where, once again, role
performance was lowest in Badia areas. Similar attempts at explanation to those
given above could be expected to apply here, too.

7.2.3 Roles Performed at Intermediate Levels

These were the remaining three roles, those involving implementing the curriculum and teaching methods, educational evaluation, and professional and personal growth. There is little left to say about those roles, except in so far as their performance appeared to be affected by background factors. This information is summarised below.

7.2.4 The Influence of Background Factors

Chapter 5 contained findings concerning relationships between six teacher background factors and reported performance of the seven roles. There it was reported that teachers' qualifications made a statistically significant difference to performance of all but one of the roles, that of health educator. With respect to four of the roles, teachers who had completed bachelor conversion courses were significantly more likely to report lower performance levels than others. This was true for the implementer of curriculum and teaching methods role, the educational evaluator role, the striving for professional and personal growth role, and the social change agent role, but not for the developing of students' cognitive growth role and the technologist role. The findings that were consistent across four of the roles prompted the comment that, as teachers selected to undertake bachelor conversion courses tended to be highly experienced, they might have developed successful teaching styles that they were reluctant to change. In addition, these teachers were also older, some nearing retirement, and hence they might be expected to be set in their ways and to resist pressures for change.

The only other interpretable significant findings involving teachers' qualifications were that teachers with Masters degrees reported higher
utilisation of the curriculum and teaching methods implementer role and technologist role than others. These findings are encouraging for those who advocate higher university degrees for teachers.

Findings regarding teachers’ subject specialisations were that, for all but two of the seven teaching roles, this factor made a statistically significant difference. The two were the curriculum and teaching methods implementer role and the striving after professional and personal growth role. Teachers specialising in the humanities subjects were significantly more likely to report higher role performance in the developer of cognitive growth, educational evaluator, and social change agent roles than teachers specialising in the sciences. However, the latter were significantly more likely to report higher performance of the health educator and technologist roles. Thus, it seemed that teachers’ subject specialisations might well hinder their performance of some of the elements of the education reforms but that they might also facilitate others.

Teachers’ gender emerged as a potentially influential factor in relation to performance of the seven teacher roles. With respect to all but one of those roles, it was found that women teachers reported significantly higher degrees of performance of the roles than men. The exception was the social change agent role which men reported enacting at a higher level. In Chapter 5 it was stated that although these differences were consistent and statistically significant, they were quite small (having low effect size) and might have little or no practical importance or educational significance. Attempts to explain the findings were admitted to be speculative and possibly of questionable validity.

Length of teaching experience proved also to be a potentially influential teacher background factor for, in relation to every one of the seven teacher roles, there was a statistically significant trend for more experienced teachers to report lower levels of enactment. Again, the trends were slight in every case and, therefore, might have no useful implications for policy formation. These findings, as noted above, may simply reflect the commonly observed trend towards conservatism with increasing age.
Significant negative correlations were found between attendance at in-service training programs and reported performance of four of the seven roles. Again, however, the size of the relationships was so slight as to be of little likely practical significance, except perhaps to call into question the effectiveness of the training programs themselves, which might have been expected to facilitate performance of the roles to such an extent that increasing levels of attendance would be accompanied by higher degrees of enactment. However, this variable is again confounded with teacher age, since, over time, older teachers had attended more in-service courses.

The final background factor investigated was school location. Here it was found that, in the case of every one of the seven teacher roles, teachers working in schools in Badia areas reported lower degrees of performance than teachers located elsewhere. It seems on that basis that, among the factors investigated in this study, location in the Badia is the most influential single background factor militating against implementation of the education reform program in Jordan.

7.3 Recapitulation: Qualitative Findings

The information gleaned from the interviews with academics, administrators and teachers and reported in Chapter 6 concerned Questions 5, 6, 7 and 8 of those framed for the purpose of giving guidance to this research. Those questions and the interviews raised a much broader range of issues involved in the education reform process in Jordan than those covered by the questionnaire and the quantitative evidence obtained, however valuable the latter were.

The assurances given by the academics and the administrators that education change was predominantly a matter of change in the nature of teaching strengthens the credibility of the quantitative component of this research and of the decisions of the planners of JERP. It was important to make central to the process the enhancement of teachers' work in schools and communities and it was important to monitor the success of the strategies implemented to ensure
that change occurred.

Given the different employment roles and responsibilities of academics and education administrators, it is not surprising that those two groups disagreed in many of their perceptions of the reform processes and their successes and failures. However, they did agree on the importance of teacher education. Both also agreed about the desirability of collaboration among teachers and between them and other participants in schooling. An important difference would appear to lie in the emphases the two groups gave to consultation, with the academics supporting that concept more vigorously than the administrators. Indeed, this concept emerged as one of the keys to judging and explaining the success or otherwise of the reform process.

Neither the academics nor the administrators appeared to attribute much importance to the curriculum, in spite of the fact that curriculum change was an important feature of the reform plans. Similarly, neither group expressed many ideas about several of the more innovative roles mandated for teachers in the JERP. Both groups seemed conservatively focussed upon the more traditional teacher roles of promoting cognitive growth and implementing curricula and teaching methods.

To the teachers, whose views were germane to Question 6, it was clear that the banning of corporal punishment had made them feel stripped of their main sanction in achieving discipline in the classroom. Teachers apparently had not become convinced of the philosophical undesirability of physical punishment and were driven more by expediency than ideals.

Especially important to attempts to evaluate the education reform process were the complaints teachers made of their working conditions. They felt inadequately prepared for the changes they were expected to implement. They felt underpaid and overworked. They experienced unsatisfying relationships with their supervisors and senior managers. They considered they were denied the professional status they thought they deserved. In all of these complaints they tended to be supported by the academics.
Interestingly enough, however, the academics tended to agree with the administrators that one of the most important impediments to education reform was teacher resistance to change. But while the administrators said little or nothing by way of explaining this phenomenon, the academics agreed that the many hindrances experienced by teachers were capable of seriously undermining their willingness to change.

The findings of both the quantitative and qualitative components of this research have supplied valuable evidence of the success of the JERP and of its shortcomings and have helped in the identification of problems to be remedied in the future. One of the problems is lack of knowledge of the reform process and its effects. Some of the questions to be answered are stated in the following section.

7.4 Implications for Policy and Practice

The findings of the quantitative part of this investigation had some quite clear implications for policy and practice in Jordan. Most clearly, at least two of the mandated teacher roles were in strong need of further resources to ensure that teachers were performing them at acceptable levels. Foremost among these roles were the technologist and social change agent ones.

7.4.1 Support for the Technologist Role

While most of the relationships of background factors with performance of the technologist role were quite small and possibly not worth a great deal of concern or expenditure, there is clearly a strong need, possibly an urgent one, for development of and support for teachers in the Badia. There would also seem to be good reason to provide many more pre-service and in-service courses in educational technology so that opportunities for those needing more support throughout the whole school system might benefit. The interview
evidence from teachers and academics reinforces these arguments, and also introduces another not available directly from the questionnaire evidence. That is the matter of the sheer availability of computers in schools, in particular, and the software that is required for them.

7.4.2 Support for the Social Change Role

The quantitative findings regarding this role are not easily translated into recommendations concerning some background factors. Providing further learning experiences for pre- and in-service teachers concerning this role is an obvious priority but changing cultural norms and values assumed to explain the lower performance of this role by women teachers is a more challenging proposal and attempts to bring about short term change here would probably be highly controversial, unwelcome to many and ultimately ineffective.

Much more optimism might be warranted concerning the performance of this role by teachers in Badia schools. Nothing could be clearer from the findings of this study than that the Badia are grossly under-resourced and that large changes need to be made to the conditions affecting teachers in those locations. Instead of the discouragement provided by the apparent unhappiness of teachers in desert area schools to engage in social change there, the MOE clearly needs to change its staffing policy to ensure that a larger number of more experienced teachers are employed in those schools and that there are strong incentives for accepting appointments there. When such teachers are appointed they must arrive at schools that are well-resourced and capable of contributing importantly to the communities they serve.

The findings that have emerged from the interview data indicate that JERP has had a negative impact on teachers both at personal and work levels. Tension was likely to appear when the MOE initiated JERP without involving teachers and that tension undoubtedly affected teachers' job satisfaction. According to Purkey and Smith (1985), sharing in decision-making leads to job satisfaction
and, therefore, it might be expected that denying teachers an opportunity to share would have the opposite effect.

Teachers' responses indicated that there was a strong need to provide professional development programs to develop in teachers the knowledge and skills needed to implement successfully the new policies adopted under JERP. In particular, the abolition of corporal punishment, however acceptable the philosophy underlying that change was, had created considerable morale problems among teachers, because they had not been equipped adequately to replace the traditional methods of achieving and maintaining order in their classrooms with effective, philosophically more acceptable, approaches to classroom management. The unfortunate results of the failure to provide such in-service programs were exacerbated, in some cases, at least, by failure by principals and others to support teachers who were experiencing difficulty. This suggests that professional development programs were needed that were directed to people appointed to positions at senior levels of the school system, not just to classroom teachers.

Similar observations seem appropriate concerning the implementation of the policy regarding collaborative work practices by teachers and others. Skills in collaborative approaches to work are not innate and cannot be acquired overnight. They need systematic, carefully planned and expertly carried out professional education programs directed to practitioners before they are likely to be successfully acquired. Furthermore, teachers were not likely to be convinced of the value of collaboration in their work place if they were not invited to collaborate in the process of policy making itself. Teachers must be consulted about changes that affect their working lives so comprehensively if those changes are to attract their support. Excluding teachers from that process was likely to result in resistance to the reforms and dissatisfaction, both of which are crucial factors in the adoption of reforms (Cuban, 1984). The clear implication here is that the education change process adopted in Jordan needs to alter from being exclusively "top-down" to being a judicious blend of "top-down" and "bottom-up", as the advice reviewed in Chapter 3 would have it.
The four factors identified in pursuit of evidence relevant to Question 7 are potentially of crucial significance in understanding teachers’ responses to the education reforms and the processes of their implementation in Jordan. If ever the education reforms were to succeed, they would require satisfactory conditions for those for whom the burden and responsibility of implementation would be the greatest, that is, the classroom teachers of Jordan’s young people. The four factors identified would seem to have the capacity to explain significant proportions of the success, or lack of it, experienced with the attempts to bring about improvements in the provision of public education in Jordan.

The evidence about those four factors was gathered in the hope that the interviews would give some indication of the types of factors, of the possible range of explanatory events and experiences, that might underlie teachers’ responses to the education reforms. To maximise the chances of obtaining that type of information, the 15 teachers interviewed were selected from a wide variety of contexts. The great predominance of unfavourable comments made by these teachers must be cause for concern and should be followed up in future research. Could it be true that a large proportion of the teaching force in Jordan claims to have been inadequately prepared for the reforms? Are the working conditions complained of by the teachers in the interviews so bad as to make successful implementation of the education reforms unlikely? Are the poor relationships between teachers and those who are their supervisors and managers in the school system really as poor and as common as was suggested in these interviews? Is it true that, in Jordan, teachers usually do not receive the respect normally considered appropriate for professionals employed in altruistic occupations of vital national importance? These are vital questions that need to be pursued much further than has been possible in this study. They ought to be accepted as parts of the agenda of research adopted for further analysis and evaluation of the education reform process in Jordan.
PLEASE NOTE

The greatest amount of care has been taken while scanning the following pages. The best possible results have been obtained.
Appendix A

The Role the Primary School Teacher in the Education Change in Jordan

Dear colleagues

The researcher doing this study, Saleh Swailem Alshurfat, is addressing the Roles of Primary School Teachers in Education Reform in Jordan as a requirement of his PhD degree at the University of Western Sydney Australia.

This study aims to explore teachers’ views and practice about their roles in this change process. The researcher has developed a questionnaire containing 58 items distribute over 7 domains. For every item there is a six- point scale.

Please read every item carefully and answer as accurately as you can.

Thank you for your help

Saleh Swailem Alshurfat,
Contact: P.O .Box 2863 Irbid Jordan
E-mail: s_shurfat@yahoo.com
Telephone: (02) 7257287
**Highest Qualification**

1. Diploma 1
2. Bachelor degree 2
3. Bachelor degree conversion course 3
4. Graduate diploma 4
5. Master degree 5

**Specialization**

1. Human Science 1
2. Natural Science 2

- **Gender**
  1. Male 1
  2. Female 2

**Years of teaching experience**

1-5 years 1
16-11 years 2
12-15 years 3
16 years plus 4

**Number of completed training courses.**

1. None 1
2. One course 2
3. Two courses 3
4. Three courses 4
### Location of your school

1. City 1
2. Village 2
3. Badia 3

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1 = I never do that......2......3......4...... 5......6= I always do that

### TEACHER’S ROLE IN DEVELOPING STUDENTS’ COGNITIVE GROWTH

**Q. To what extent you do the following?**

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<tbody>
<tr>
<td>1</td>
<td>Explaining new concepts and terminology to students.</td>
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<td>2</td>
<td>Offering opportunities for students to practise scientific and technical skills.</td>
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<td>3</td>
<td>Directing students toward more reading to enrich their knowledge.</td>
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<td>4</td>
<td>Assisting students in practising scientific experiments.</td>
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<td>5</td>
<td>Developing students’ abilities in research and investigation.</td>
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<td>6</td>
<td>Providing students with the latest information in my subject matter.</td>
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<td>7</td>
<td>Developing students’ abilities in constructing self-criticism.</td>
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<td>8</td>
<td>Drawing students’ attention to their errors and assisting them to correct errors.</td>
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<td>9</td>
<td>Developing students’ abilities in problem solving.</td>
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</table>
### B. Teacher’s Role in Implementing Curriculum and Teaching Methods

<table>
<thead>
<tr>
<th>Q. To what extent do you do the following?</th>
<th>1</th>
<th>2</th>
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<tbody>
<tr>
<td>10 Using textbooks to develop practical skills.</td>
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<tr>
<td>11 Relating the contents of the textbook to the needs of the individual student and country needs.</td>
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<tr>
<td>12 Preparing teaching aids to accompany the textbooks.</td>
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<tr>
<td>13 Using modern teaching methods in my teaching.</td>
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<td>14 Considering individual difference abilities between students.</td>
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<td>15 Using group-teaching methods in my teaching.</td>
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<td>16 Utilizing local environment in producing teaching aids.</td>
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</table>

### C. Teacher’s Role as an Education Evaluator

<table>
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<tr>
<th>Q. To what extent do you do the following?</th>
<th>1</th>
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<th>3</th>
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<tbody>
<tr>
<td>17 Evaluating students’ performance in accordance with education goals.</td>
<td></td>
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<tr>
<td>18 Maintaining, “question bank” for use in texts.</td>
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<tr>
<td>19 Taking individual differences into a consideration while preparing tests.</td>
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<tr>
<td>20 Using model exam answers for school tests.</td>
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<tr>
<td>21 Analysing questions to rank student achievement through scientific statistical approaches.</td>
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<tr>
<td>22 Conducting regular evaluation of students’ progress.</td>
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<tr>
<td>23 Using regular observation.</td>
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<tr>
<td>24 Using a scientific statistical approach to analyse points of strength and weakness in the students’ learning.</td>
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### D. TEACHER’S ROLE AS A HEALTH EDUCATOR

**Q. To what extent you do the following?**

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<tr>
<td>25</td>
<td>Encouraging and assisting students to keep their bodies and</td>
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<td></td>
<td>clothes clean.</td>
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<tr>
<td>26</td>
<td>Advising students to buy healthy food.</td>
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<tr>
<td>27</td>
<td>Guiding students to put rubbish in containers.</td>
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<td>28</td>
<td>Guiding students to desist from unhealthy habits like nail</td>
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<td></td>
<td>biting and fingers sucking.</td>
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<td>29</td>
<td>Encouraging students to plays sports.</td>
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<td>30</td>
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<td>31</td>
<td>Keeping classrooms clean and exposed to fresh air.</td>
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<td>32</td>
<td>Making students aware of the risks of using charlatans’ cures.</td>
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<td>33</td>
<td>Helping students to understand that “prevention is better than</td>
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<td>cure”.</td>
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### E. TEACHER’S ROLE AS TECHNOLOGIST

**Q. To what extent you do the following?**

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<td>34</td>
<td>Using Internet in teaching.</td>
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<td>35</td>
<td>Using software programs in my teaching.</td>
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<td>36</td>
<td>Using the computer to develop self-learning skills.</td>
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<td>37</td>
<td>Using the computer to develop technical teaching skills.</td>
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<td>38</td>
<td>Using the computer as teaching aide.</td>
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<td>39</td>
<td>Producing software programs in your field.</td>
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<td>Q</td>
<td>To What extent do you do the following?</td>
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<td>40</td>
<td>Reading books and periodicals in my subject matter.</td>
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<td>41</td>
<td>Keeping up to date with the current philosophy of education in Jordan.</td>
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<tr>
<td>42</td>
<td>Evaluating continuously my teaching performance.</td>
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<tr>
<td>43</td>
<td>Having a positive view of my role as a teacher.</td>
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<tr>
<td>44</td>
<td>Sharing my teaching experiences with other teachers.</td>
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<td>45</td>
<td>Undertaking research and education studies.</td>
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<td>46</td>
<td>Enrolling in academic education programs in Jordanian universities.</td>
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<td>47</td>
<td>Utilising the result of education research and studies as a basis for education development.</td>
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<td>48</td>
<td>Participating in evaluating the effectiveness of professional developments run by Ministry of Education.</td>
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<td>49</td>
<td>Correlating the contents of textbooks with the needs of national development.</td>
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<td>Q</td>
<td>To What extent do you do the following?</td>
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<td>50</td>
<td>Utilising the results of education research and studies as a basis for educational development.</td>
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<td>51</td>
<td>Participating in education programs for students with special needs, such as the gifted, disabled, or slow learners.</td>
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<td>52</td>
<td>Utilising modern information and data relevant to educational change.</td>
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<td>53</td>
<td>Correlating the contents of textbooks with the needs of national development.</td>
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<tr>
<td>54</td>
<td>Presenting students with the principle of integrated education including the academic and the professional streams.</td>
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<td>55</td>
<td>Developing students’ potential for vocational learning.</td>
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<tr>
<td>56</td>
<td>Utilising scientific concepts in solving problems facing students.</td>
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<td>57</td>
<td>Developing the skill of life-long learning.</td>
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<td>58</td>
<td>Encouraging students to participate in democracy and human rights activities.</td>
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Appendix B

بسم الله الرحمن الرحيم

دور معلمي المرحلة الأساسية بعملية الإصلاح التربوي في الأردن

الزلماء الأعزاء

 السلام عليكم ورحمة الله وبركاته

يقوم الباحث بدراسةعنوان "دور معلمي المرحلة الأساسية في عملية الإصلاح التربوي في الأردن".

وذلك استكمالاً لمتطلبات الحصول على درجة الدكتوراه في أصول التربية بكلية التربية بجامعة غرب سيدني الأسترالية.

تهدف هذه الدراسة إلى الوقوف على الأدوار التي يمارسها معلمو المرحلة الأساسية في عملية الإصلاح التربوي.

ولهذا الغرض فقد تم بناء إستبانة تتكون من 58 سؤالاً تعكس كل فترة دوراً من الأدوار التي يقوم بها معلمو المرحلة الأساسية في عملية الإصلاح التربوي وأمام كل فترة سلم متدرج من ست درجات. يامل الباحث الإجابة على كل فترة بوضع إشارة (X) تحت الدرجة التي تعتقد أنك تمارسها فعلياً في عملية التطور.

<table>
<thead>
<tr>
<th>الفترات</th>
<th>أقوم بذلك بدرجة كبيرة جداً</th>
<th>أقوم بذلك بدرجة (2)</th>
<th>أقوم بذلك بدرجة (3)</th>
<th>أقوم بذلك بدرجة (4)</th>
<th>أقوم بذلك بدرجة (5)</th>
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<tbody>
<tr>
<td>الفترات</td>
<td>أوضح للطلاب المفاهيم والمصطلحات الجديدة للطلاب</td>
<td>أوضح للطلاب المفاهيم والمصطلحات الجديدة للطلاب</td>
<td>أوضح للطلاب المفاهيم والمصطلحات الجديدة للطلاب</td>
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فيإشارات (X) تعني أنك تقوم بتوضيح المفاهيم والمصطلحات الجديدة للطلاب بدرجة كبيرة جدا. ارجو قراءة الفقرات الواردة في الإستبانة بعناية والإجابة عليها بدقة ووضوحية مؤكدا أن جميع الإجابات ستحاط بالسرية التامة ولن نستعمل إلا لأغراض البحث العلمي.

شكرًا لكم حسن تعاونكم

الباحث

صلاح سويلم الشرفات
الزميل المعلم المحترم
الزميلة المعلمة المحترمة
تحية طيبة وبعد.
أرجو التكرم بتعبئة المعلومات المطلوبة تانيا يقلاً.

أولاً: معلومات شخصية:

1- المؤهل العلمي: □ بكالوريوس تأهيل □ دبلوم عالي □ ماجستير □ نبضه
2- التخصص: □ علوم إنسانية □ علوم طبيعية □ أنثى □ ذكر
3- الجنس: □ أنثى □ ذكر □ غير محدد
4- عدد سنوات الخبرة: □ 1-5 □ 6-10 □ 11-15 □ 16 فما فوق
5- عدد الدورات التربوية التي شاركت بها: □ دورة واحدة □ ثلاث دورات □ دورات
6- موقع المدرسة التي تدرس بها:
□ ريف □ مدينة □ بادية
<table>
<thead>
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<th>الفئة</th>
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<td>أوفر للطلبة فرص ممارسة المهارات العلمية والتقنية</td>
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<td>أوجه الطلبة إلى قراءات أثرية تزيد معرفتهم</td>
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<tr>
<td>3</td>
<td>أسعد الطلبة في إجراء التجارب العلمية</td>
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<td>يتم قدرة الطلبة البحث والاستقصاء</td>
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<td>أطلع الطلبة على أخر المستجدات في مادتي الدراسية</td>
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<td>أطور لدى الطلبة النقد الذاتي البناء</td>
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<td>4</td>
<td>اعرف الطلبة بأخلاقهم المعرفية وأطلب منهم تصحيحها</td>
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<td>يتم لدى الطلبة القدرة على حل المشكلات</td>
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<td>الفئة المهمة للتعليم</td>
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<td>أقوم تحصيل الطلب في ضوء الأهداف التدريبية</td>
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شكرًا لكم حسن تعاونكم

الباحث

صالح سويلم الشرفات
Appendix C
Teachers' Interview Schedule

Highest Qualification
1. Diploma 1
2. Bachelor degree 2
3. Bachelor degree conversion course 3
4. Graduate diploma 4
5. Master degree 5

Specialization
1. Human Science 1
2. Natural Science 2

Sex
1. Male 1
2. Female 2

Years of experience
1. 1–5 years 1
2. 6–11 years 2
3. 12–15 years 3
4. 16+ years or more 4

Number of completed training courses.
5. None 1
6. One course 2
7. Two courses 3
8. Three courses 4
Location of your school

1. City
2. Village
3. Badia

Teachers’ Interview Questions

1. What has been the impact of education change program on you as teacher?
2. What do you think about the expectations for your role in education reform program?
3. What factors and/or variables contributed to your view about education change program?
4. What do think you are doing to facilitate education change?
5. How effective has the education reform agenda in Jordan been and what factors have hindered it?
Administrators’ Interview Schedule

**Sex**
1. Male
2. Female

**Highest Qualification**
1. Bachelor degree
2. Graduate diploma
3. Master degree
4. PhD degree

**Place of Work**
1. Ministry Central Office
2. District of Education

Administrators’ Interview Questions

1. How do you describe the nature of the education changes program?
2. What do you believe teachers are doing to hinder education reform?
3. What factors and/or variables are associated with hindering education change?
4. What factors and/or variables have contributed to encouraging education change?
5. How effective is the education reform program agenda?
Academics Interview Schedule

Sex
1. Male 1□
2. Female 2□

Highest Qualification
1 Bachelor degree 1□
2 Graduate diploma 2□
3 Master degree 3□
4 PhD degree 4□

Place of Work
1 University 1□
2 N.H.R.C 2□

Academics' Interview Questions
1. How do you describe the nature of the education reform program?
2. How do you describe the role of teachers in education reform program?
3. What do you believe teachers are doing to hinder education reform?
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THE ROLE OF PRIMARY SCHOOL TEACHERS IN EDUCATION CHANGE IN JORDAN

By
Saleh Swailem Alshurfat

A Thesis submitted in fulfilment of the requirements for the degree of Doctor of Philosophy

SCHOOL OF EDUCATION AND EARLY CHILDHOOD STUDIES
UNIVERSITY OF WESTERN SYDNEY

July, 2003
CERTIFICATE OF ORGINALITY

This thesis has been presented in fulfilment of the requirements of a PhD at the University of Western Sydney.

I certify that the substance of this thesis has not already been submitted for any degree and is not currently being submitted for any other degree.

I certify that any assistance received in preparing this thesis, and all sources used, have been acknowledged in the thesis.

Signature ...[signature]...

Date:..........................................................
PLEASE NOTE

The greatest amount of care has been taken while scanning this thesis,

and the best possible result has been obtained.
ACKNOWLEDGEMENTS

The distinguished Canadian educationist, Michael Fullan, once likened education change to "a planned journey into uncharted waters in a leaky boat with a mutinous crew" (1991). This could also be said of my PhD journey, but I was fortunate enough to be surrounded by a group of very helpful people who supported me through my difficult navigation and showed me exactly where I was heading. I would like to thank all those whose sincere efforts helped me to realise my great dream. They helped, guided and encouraged me.

This thesis was made possible through the continuous support and understanding of my Principal Supervisor, Associate Professor Christine Halse. She put me on the main highway after nearly two years of travelling on back streets. I would like to express my gratitude to my Co-Supervisor, Emeritus Professor Neil Baumgart, for his great help and caring manner. His insightful comments and suggestions assisted me in formulating this thesis.

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ABSTRACT

This thesis reports an evaluation of the Jordanian Education Reform Program (JERP) initiated in 1987. The thesis includes a review of the international literature on education reform culminating in a conclusion that the most widely accepted approach currently is a mixed-model one that is partly “top-down” and partly “bottom-up”. Both quantitative and qualitative types of data were gathered and analysed. The quantitative data were obtained with a carefully developed questionnaire containing measurement scales pertaining to the performance of seven teacher roles prescribed by the Ministry of Education of Jordan as a main part of the reform program. This questionnaire was applied to a large, representative sample of Jordanian primary school teachers. The qualitative data were obtained with in-depth interviews of small samples of important stakeholders in school education in Jordan – teachers, academics and administrators.

The findings of the study were that some of the seven teacher roles, particularly those of technologist and social change agent, were being performed at comparatively low levels, while others, particularly those of developer of students’ cognitive growth and health educator, were being performed at comparatively high levels. Background factors, such as gender, qualifications and school location, were found to have statistically significant, though generally small, effects on role performance, with teachers appointed to schools in the Badia (desert areas) experiencing considerable difficulty. Many problems in the implementation of the education reforms were revealed in the interviews, especially the failure to involve teachers in the process of planning the reforms. Implications for policy, practice and further research were suggested.
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# ABBREVIATIONS

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<tr>
<td>ANOVA</td>
<td>Analysis of Variance</td>
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<tr>
<td>BA</td>
<td>Bachelor of Arts</td>
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<tr>
<td>BEd</td>
<td>Bachelor of Education</td>
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<tr>
<td>BS</td>
<td>Bachelor of Science</td>
</tr>
<tr>
<td>C</td>
<td>Class</td>
</tr>
<tr>
<td>CEC</td>
<td>Central Education Committee</td>
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<tr>
<td>CTF</td>
<td>Central Task Force</td>
</tr>
<tr>
<td>DEO</td>
<td>District Education Officer</td>
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<tr>
<td>DFID</td>
<td>(British) Department for International Development</td>
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<td>EMIS</td>
<td>Education Management Information System</td>
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<td>EPC</td>
<td>Education Policy Commission</td>
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<td>ERAP</td>
<td>Examination Reform and Assessment Project</td>
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<td>GD</td>
<td>Graduate Diploma</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>GSSCE</td>
<td>General Secondary School Education Certificate Examination (Tawjehi)</td>
</tr>
<tr>
<td>HEC</td>
<td>Higher Education Council</td>
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<tr>
<td>HS</td>
<td>Human Science</td>
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<tr>
<td>ICT</td>
<td>Information and Communication Technology</td>
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<tr>
<td>INSET</td>
<td>In-service Education and Training</td>
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<td>IT</td>
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<td>JERP</td>
<td>Jordan Education Reform Program</td>
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<td>Ministry Of Education</td>
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<td>National Assessment Program</td>
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<td>National Human Resource Centre</td>
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<td>NCERD</td>
<td>National Centre for Education Research and Development</td>
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