CHAPTER FOUR

METHODOLOGY

Introduction

This chapter describes the research design for the study and the research methods that were used to investigate the research questions. It also explains the rationale behind using a specific research paradigm and consequent data gathering and analysis techniques. There are six sections: a) an explanation of methods used to answer the research questions; b) how participants' were selected; c) a description of the stages of the investigation; d) an explanation and description of the data gathering and rationale of using such techniques; e) a description of the data analysis and interpretation; and f) ethical considerations.

Research Design

The research sought to describe the extent of the applicability of the NSWQT Model in the Jordanian primary school context. As mentioned in the literature review, quality teaching occurs within a context and many factors can influence that context. This context has been organized into three main hubs: 1) the policy of education; 2) the school context; and 3) the classroom practices. To investigate the applicability of a different model of quality teaching in a different context, it is essential to consider the nature of that context.

A qualitative research method was used for this study. In this section, the definitions of the qualitative research paradigm, rather than its traditions, are discussed. Denzin and Lincoln (2005) defined qualitative research as

> ... a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that... turn the world into a series of representations, including field notes, interviews, conversations, photographs, recordings, and memos to the self. ... Qualitative research involves an interpretive, naturalistic approach to the world... [Which] means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them. (p.3)

Strauss and Corbin (1990) defined qualitative research as:

> ...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, behavior, but also about organizational functioning, social movements, or interactional relationships. (p.17)

Taylor and Bogdan's (1998) definition referred 'to research that produces descriptive data – people's own written or spoken words and observable behavior' (p.7). Qualitative research methods are used in social contexts. Understanding insightful information about human behaviour usually comes from a natural setting with the researcher the key person in the area of research (Bogdan & Biklen, 1982; Lincoln & Guba, 1985; Minichiello, Sullivan, Greenwood, & Axford, 2004).

Qualitative research was used as the main paradigm of this study for several reasons. First, qualitative research gives significant concern to the 'meaning' of the phenomenon (Maxwell, 1996, p.17). Researchers in this arena have to make sense and gain a clear understanding of their participants' behaviour and how the participants understand and interpret their actions within the context in which they are acting (Maxwell, 1996). This context can be special 'events, actions and meanings' framed by exceptional circumstances (Bogdan & Biklen, 1982; Maxwell, 1996, p.19). Minichiello, Aroni, Timewell and Alexander (1995) pointed out that qualitative research methods 'are said to allow the researcher to gain access to motives, meanings, actions and reactions of people in the context of their daily lives' (p.10). Second, qualitative research occurs in a natural setting. The researcher in qualitative research has to spend sufficient time in the setting in which actions occur, whatever data collection techniques used (Bogdan & Biklen, 1982; Maxwell, 1996). 'Qualitative researchers go to the particular setting under study because they are concerned with context. They feel that action can best be understood when it is observed in the setting in which it occurs' (Bogdan & Biklen, 1982, p.27) and this was the aim of the current study, to observe the interactions in the field. Finally, this approach is 'descriptive' which gives the researcher opportunity to describe precisely what is happening on the ground or in the field. Bogdan and Biklen (1982) said:

> The data [in the qualitative research] include interview transcripts, field notes, photographs, videotapes, personal documents, memos, and other official records. ... [Q]ualitative researchers ... try to analyze it [the data] with all its richness as closely as possible to the form in which it was recorded or transcribed. (p.28)

According to this paradigm, the researcher has to understand the meaning from the real or natural context and from the view of participants in a holistic situation (Cohen, Manion, &

Morrison, 2000; Taylor & Bogdan, 1998). The researcher has to immerse himself in the natural setting of the participants, trying to understand and describe the complexity and the interaction processes that occur in that setting. Quality teaching, as an interactive process between teacher and students, can be understood within the context of where those people are positioned.

The aim of this study was to explore the extent to which the NSWQT Model could be applied to the Jordanian primary school context. The main question was: to what extent can the NSWQT Model be applied to the Jordanian primary school context? To understand the problem of the research, the main question was divided into four further questions. First, how is quality teaching described in Jordan? This question helps in understanding the current situation in primary schools before a new model of quality teaching is considered. While a description of quality education in Jordan has been developed, quality teaching itself has not been explored sufficiently by the MOE. Information in the Jordanian MOE's official documents was used to answer this question. Second, how is quality teaching described in the NSWQT Model? This question sought to understand the concepts of quality teaching according to the model, comparing these concepts with the Jordanian concepts. This helped the researcher to understand the conceptual framework of both models. Content of documents related to the model were analysed to answer this question. Third, what are the current quality teaching practices in Jordanian primary schools? This question sought to understand and describe current quality teaching practices in order to compare those practices with the description of the quality teaching concept before starting to consider a new model of quality teaching. Data were collected by observing and writing field notes about students' actions, teachers' actions and the interaction between students and teachers. Finally, what are the perspectives of Jordanian primary school stakeholders of quality teaching and the factors that influence it? This question sought to understand the schools stakeholders' perspectives of quality teaching and the potential factors that can influence quality teaching and learning before adopting a new model of quality teaching.

Participants

Sampling

Sample size in qualitative research is relatively small. Having a small number of individuals enables the researcher to understand in depth the context in which participants are acting and the influence of that context on their actions (Maxwell, 1996). In this study a

small number of participants were selected using 'purposive or judgment sampling' (Babbie, 2004, p.183). Babbie (2004, p 183) defines this type of sampling as 'a type of nonprobability sampling in which you select the units to be observed on the basis of your own judgment about which ones will be the most useful or representative'. A small number of participants were selected for this study because, firstly, the participants had to be quality teachers. Quality or effective teachers are unique members among their population and usually comprise a small proportion of the total teacher population. Secondly, the participants' settings or contexts and the people associated with them, such as principals, needed to be included in the study. Finally, this type of sampling gives the researcher an opportunity to understand the participants in depth. Therefore, because of the nature of the study, specific participants with known characteristics needed to be selected (May, 2001). The description of the participants and the selection process will be explored in the following section.

Description of the Participants and the Procedure

Description of the Participants

The participants included seven quality teachers in primary schools and six principals of the selected teachers. The data for this study were obtained in the context of the classes in which those teachers taught. The participants in this investigation shared three characteristics: they are primary classroom teachers; they teach in public schools run by the MOE; and they have been recognized by their supervisors as effective teachers, having received excellent annual reports for more than two years according to their supervisors. Most teachers teaching in basic Jordanian schools are female, in line with the MOE policy to prefer women teachers in the first four classes (C1 to C4). It is not surprising that the participants in this study were five females and two males. All the teachers held Bachelor degrees and they were teaching all subjects for their grade. Table 4.1 shows the details of the participants. As can be seen from the table, the length of teaching experience varied from eight years up to 21 years. Four teachers taught grade one, two taught grade three, and one teacher grade two. The number of students in each school varied from 95 to 1200. The number of students in each class varied from 13 to 36. The number of teachers in each school varied from 13 to 50. The schools were four mixed schools, one female school, and two male schools. The subjects observed were mathematics and Arabic language. These subjects were selected specifically because literacy and numeracy are the main subjects at

this stage and also in the foundation stages. Both subjects are good examples for teachers to demonstrate their teaching abilities by applying elements of quality teaching. The researcher used four criteria to identify the quality teachers.

Supervisors' Recommendations: A supervisor usually visits the teacher at least twice every year, observing their classes and filling out an observation report. This report includes four categories: 1) planning, which includes a semester plan and lesson plans (14 items); 2) classroom management (12 items); 3) implementation of teaching and learning (48 items); and 4) evaluation (26 items). The items under each category are used as performance criteria. A four scale rating, excellent, very good, good, and medium, is applied to the items. At the end of the report there is a three-part section for the supervisor's impressions: positive and creative aspects, points for improvement, and proposals for necessary or required training courses. A self-assessment sheet for professional development is also provided for the teacher. This sheet consists of six main categories: planning, classroom environment and management, assessment, mastery of language, creativity, and innovation. At the front of each category there is a three-level rating scale, strong points, satisfactory points, and points for improvement, included. Teachers with excellent results for the last two years in their annual supervisory reports were selected for the study.

Principals' Confirmations: The researcher asked all principals about the quality of the teachers been nominated by the supervisors. All the principals agreed with the supervisors' recommendations.

Colleagues' Confirmations: Other teachers who taught in the same school and same basic grades were asked for their opinions. Most agreed with the choice of the nominated quality teachers.

Parents' Confirmations: Two parents of students in each class taught by the quality teachers were also asked for their opinions. The parents were parents of talented students, and parents of below average students. All the parents agreed with the supervisors, colleagues, and principals about the effectiveness of the nominated teachers. More details about the process and the participants will be explored in the following section.

Table 4.1: *Details of Participants*

Participant	School Name	Teacher's Gender	Grade	Number of Students in the Class	Number of Students in the School	Students' Gender	Observed Subjects	Teaching Experience (in years)	Number of Teachers in the School
Maha	Maha Secondary School/ Girls	Female	Third	25	773	Female	Mathematics and Arabic language	8	41
Jamal	Jamal Basic School/ Boys	Male	First	25	482	Male	Mathematics and Arabic language	21	20
Hassnah	Hassnah Basic School/Mixed	Female	Third	40	201	Male and Female	Mathematics and Arabic language	11	15
Samar	Samar Basic School/ Mixed	Female	First	32	174	Male and Female	Mathematics and Arabic language	13	14
Sharefah	Samar Basic School/ Mixed	Female	Second	25	174	Male and Female	Mathematics and Arabic language	13	14
Mahmmoud	Mahmmoud Basic School/ Boys	Male	First	13	95	Male	Mathematics and Arabic language	8	7
Nada	Nada Basic School	Female	First	36	1200	Male and Female	Mathematics and Arabic language	19	50

Procedures

Permission was sought from the Jordanian MOE for the study on quality teaching in primary classrooms. The MOE gave permission for the research to be conducted in Jordanian primary schools. This was then approved by the Directorate of Education in Amman and further approval was sought from the Department of Educational Supervision because the research required classroom observations by video camera and taped interviews with the teachers and principals. Head of the Department of Supervision arranged meetings with the supervisors who were able to provide the researcher with the names of suitable teachers and their schools. The selection criteria for the teachers were teachers who:

1. Were teaching primary classes
2. Had excellent results for the last two years in their annual reports from supervisory visits.

The supervisors provided ten names of quality teachers, their schools' names, addresses and telephone numbers. All five supervisors agreed that the ten teachers nominated were excellent, both in their abilities and their performance. It was essential to interview the teachers and principals in order to understand the context of quality teaching from the teachers' and principals' perspectives. The data collection methods, classroom observations, interviews, and field notes and the nature of each technique were explained to the participants at these interviews.

Pilot of the Data Collection Techniques

The main aim of the pilot study was to identify potential problems and so avoid mistakes. The pilot study provided the researcher with feedback about the quality of the recording and also the quality of the classrooms filming. It also gave the researcher, the participants and students the opportunity to get to know each other and feel confident in the actual stage of data collection. All the schools visited are in Amman. Data collection took five days, one day in each school. After completing the data collection, three videotapes and three audiotapes were sent to the research supervisors to make sure of the quality of the classrooms videotaping and the sound quality of the interviews.

Feedback on those videotapes and interv ews suggested: the process of observation needed to be as unobtrusive as possible and as many aspects of the lesson as possible needed to be captured. In the first observations, the camera followed the teachers quite closely rather than looking at the class as a whole. It was difficult to know how the students were responding to the teacher's instruction. It was suggested the camera be fixed and at a wide angle to pick up the teacher and at least the majority of the class off to one side; closer to the front of the room would have been better. The moving camera was clearly a disruption to the students, so the classes had to become accustomed to the camera before the actual data collection. The researcher also had to make sure of the elimination of other people, except the teacher and the researcher, from the classroom. The initial quality of the recording was quite poor, with a lot of background noise; much of the speech was not clear. The data, therefore, needed to be collected again and techniques revised.

The Actual Data Collection: Phase One

First Step

The schools were on holiday, so the researcher had to wait until the schools opened their doors again for the second semester; in other words, the researcher had to wait one week. The researcher spent this week collecting information about the Ministry's teacher evaluation process: What criterion does the MOE use to evaluate teachers? Why do they use these criteria? What are the evaluation methods? (e.g. observations? interviews?). Also, information was collected on the factors that drive the focus on quality teaching and who decides how to define a quality teacher. Because of the audio and video problems as mentioned earlier, the teacher and the r principals needed to be interviewed again. After an explanation of the difficulties, and the need to repeat the observations, three teachers decided they were unable to participate the second time.

Teacher A refused because she felt her class was very small and the research caused an inconvenience to her teaching program. This meant that her principal was not interviewed either. *Teacher B* refused and she did not give any reasons for her refusal. *Teacher C* was seriously sick and apologized for not participating and not even coming to her school that month. The principal suggested another teacher at the same school who taught the first grade, the same as the first teacher. She was willing to be part of the study. Her supervisors reported she was a good teacher and had had excellent annual reports for the last two years.

Teacher D welcomed the idea of being part of the study for the second round. *Teacher E* was enthusiastic about being part of the research a second time, as was his principal.

Second Step

With only names for three quality teachers, permission was sought from the Department of Educational Supervision which gave permission for the school supervisors to provide the names of another six effective teachers.

Third Step

The six new teachers who had been nominated by their supervisors agreed to be part of the classroom observation. Their principals also agreed to be interviewed. Three teachers out of the six taught at the one school. Before finalising arrangements, the teachers were asked to think about their participation in the research project. Two teachers changed their minds

The social context of those teachers is a tribal, religious and conservative community. The researcher has had experience with this community, in other words he is a member of that tribe. However, the researcher does not know these teachers personally. Access to such a community is hard, if not impossible, for someone who is not part of this type of community; the researcher understands the local dialect, customs and the way in which such a community can be reached and accessed. Furthermore, the researcher has had experience with the students from the same type of community, having worked as an educational counsellor for eight years in the same community. Therefore, it was relatively easy for him to make the students feel comfortable and confident about his presence in the classroom.

In order to ensure the validity and reliability of the quality teacher selection, the researcher consulted with those who knew the teachers in the workplace, such as colleagues and principals of their respective schools. All the principals confirmed their teachers' quality; all had been evaluated as excellent teachers for more than two years according to the respective school's annual report. This report is usually filled out by the principals. Parents also confirmed the quality of these teachers. Seven teachers in six schools agreed to be part of the study. Information about the sites and more details about the participants will be explained in the results chapter.

The Actual Data Collection: Phase Two

As mentioned before, the nature of this study required the researcher to use multi-methods for data gathering. This approach, triangulation, can strengthen the study by 'combining methods' (Patton, 2002, p.247), that is, using 'two or more methods of data collection in the study of some aspects of human behaviour' (p.112). The advantage of the triangulation approach comes from different factors. One of these factors is that the researcher's confidence about the data collection. This means that the researcher feels confident when he/she achieves the same results or findings from different methods and is not reliant on one method that can be biased by the researcher. In other words, 'the more the methods contrast with each other, the greater the researcher's confidence' (Cohen et al., 2000, p.112). The logic of using the triangulation method is based on an assumption that:

> [N]o single method ever adequately solves the problem of rival causal factors. Because each method reveals different aspects of empirical reality, multiple methods of observations must be employed. This is termed triangulation. I now offer as a final methodological rule the principle that multiple methods should be used in every investigation. (Denzin 1978, p. 28, quoted in Patton, 2002, p.247)

Methodological triangulation allows the researcher to ensure the validity of the investigation by using multiple methods. In such an approach, if one technique has some limitations or weaknesses the other techniques will compensate (Maxwell, 1996; Merriam, 1988; Paterson, 2000; Patton, 2002) The triangulation method, in data collection and subsequently in data analysis, gives strength and quality to the research. To achieve reliability and validity of findings (Bogdan & Biklen, 1998; Lincoln & Guba, 1985), the researcher has to use multiple methods for data collection. In this arena, Patton (2002) states that 'qualitative findings grow out of three kinds of data collection: (1) in-depth, open-ended interviews; (2) direct observation; and (3) written documents' (p.4). Therefore multiple methods in the data gathering and analysis were used in this study, but unequal weight was given to each method for a number of reasons. The most important reason was that the nature of the research aimed to examine the extent to which the NSWQT Model can apply in different contexts. To examine that, the researcher had to observe the teacher-student interactions as the main element of the quality teaching process. Although, the main technique was classroom observation that does not mean that the researcher undermined other techniques. This model consists of different elements of teaching and learning actions. These actions could only be explored through natural observation. The other techniques were important for secondary questions, which covered the elements of

the quality teaching context. The methods used will be explained in more detail in the following sections.

Documents

To understand the description of the quality teaching concept according to the Jordanian MOE and the NSWQT Model's perspectives, the researcher had to refer to and analyze official documents to answer some of the research questions. Documents were used for this data for the following reasons: first, documents are usually accessible and have rich and comprehensive information about the context in which they are generated (Bogdan & Biklen, 1998; Guba & Lincoln, 1981; Kellehear, 1993; Lincoln & Guba, 1985; May, 2001; Merriam, 1988). Second, they can be obtained at a low cost; it only needs time and effort. Third, they represent a formal statement about an investigation. Fourth, documents are nonreactive, unlike human beings (Bogdan & Biklen, 1998; Guba & Lincoln, 1981; Kellehear, 1993; Lincoln & Guba, 1985; May, 2001; Merriam, 1988). They represent ideas and views of people whether those people have died or are still living. Fifth, they can be secondary and contextual data for the study. Finally, by using this technique, the data represents a high level of reliability, which can be easily tracked and checked by researchers (Bogdan & Biklen, 1998; Guba & Lincoln, 1981; Kellehear, 1993; Lincoln & Guba, 1985; May, 2001; Merriam, 1983).

Official and published documents from the Jordanian MOE were collected and examined. These documents relate to the criteria of quality teaching evaluation, which highlights the concepts of quality teaching in different contexts. These criteria were explained at the beginning of this chapter. The researcher found and identified these documents by inquiring and consulting teachers, principals, supervisors, heads of departments in the MOE, electronic resources, the General Directorate of Curriculum and Textbooks, and the General Directorate of Examinations. For the NSWQT Model, the researcher collected all the important documents about this model in addition to the model itself, which are available from the NSW Department of Education and Training.

All selected documents are significant and relevant to some of the research questions. The selected Jordanian documents represent the MOE's vision for a new education system in Jordan. These documents are set within an integrated comprehensive system for human resource development, which includes most of the educational sectors. Furthermore, these documents comprise the major dimensions and priorities, the future of educational change

desired the system of innovative programs adopted by the MOE. These documents aim to make known the Ministry's plans, aspirations, innovative programs, and developmental achievements. They summarize the national discussion and review of the education system's reform through several national conferences. They are a fertile ground base to develop the national education strategy in Jordan, and a reference framework for wording the general education plan and sub-plans which are being prepared by the Ministry. Therefore, these documents are meant to be a valuable reference for researchers. For example, one of the selected documents was the *General Framework: Curriculum and Assessment*. This document considered by the MOE as an important framework for all stakeholders to support the next stage of curriculum revision development.

People in the field and in administrative positions in Jordan were consulted about the significance of the selected documents and whether more documents needed to be examined. Having worked with the MOE, the researcher is familiar with the educational reform movement and the published documents related to that. In other words, no relevant documents were omitted or not consulted. The NSWQT Model's documents allowed the researcher to understand this model and its roots. All relevant documents are listed in Figures 4.1 and 4.2.

- Ministry of Education. (2006). *General Framework: Curriculum and Assessment (in Arabic).* Amman, Jordan: Ministry of Education.
- Ministry of Education. (2006). *The Vision of His Majesty King Abdullah II.* Retrieved 13 July, 2006, from http://www.moe.gov.jo/
- Ministry of Education. (2004). *The Development of Education: National Report of the Hashemite Kingdom of Jordan.* Amman, Jordan: Ministry of Education.
- Ministry of Education. (2004). *Classroom Observation Report (in Arabic).* Amman, Jordan: Ministry of Education.
- Ministry of Education. (2004). *The Development of Education: National Report of the Hashemite Kingdom of Jordan.* Amman, Jordan: Ministry of Education.
- Ministry of Education. (2003). *Education Reform for a Knowledge Economy.* Amman: Ministry of Education.
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- Massaad, M., Al-Rehanee, S., Ewedat, A., Al-Najar, H., Al-Shaikh, O., Jarwan, F.,Naseer, Y., Abu-Alsameed, H., Al-Fra, S., Hashesho, N., Al-Momani, G., Abu-Alshaiq, M., Hananda, A., Jaradat, T. (1999). *The Jordanian School and the Challenges of the Twenty First Century (in Arabic).* Amman: Abdul Hameed Shoman Foundation.
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- Ministry of Education. (1988). *The First National Education Reform Conference (in Arabic).* Amman, Jordan: Ministry of Education.
- Jaradat, I., Obedat, S., Abugazalah, H., & Abdullatef, k. (1983). *Effective Instruction (in Arabic).* Amman: Educational Library.

Figure 4.1: The Jordanian MOE's Documents

- The NSW Department of Education and Training's Kit: this kit is titled; *Quality Teaching in NSW Public Schools* (2003). It kit includes:
    1. *Quality Teaching in NSW Public Schools: An annotated bibliography* (book
    2. *Quality Teaching in NSW Public Schools: Discussion paper (book)*
    3. *Quality Teaching in NSW Public Schools: Starting the discussion (book)*
    4. *Quality Teaching in NSW Public Schools: Continuing the Discussion About Classroom Practices (book)*
    5. *Quality Teaching in NSW Public Schools: A classroom practice guide (book)*
- *The Queensland School Reform Longitudinal Study, Final Report* (2001). Education Queensland, Brisbane.
- Killen, R. (2005). *Programming and Assessment for Quality in Teaching and Learning*. Southbank, Vic: Thomson.
- Newmann, F., & Associates. (1996). *Authentic Achievement: Restructuring Schools for Intellectual Quality*. San Francisco: Jossey-Bass Publishers.
- Newmann, F., Marks, H., & Gamoran, A. (1996). Authentic pedagogy and student performance. *American Journal of Education*, 104 (August), 280-312.

Figure 4.2: The NSWQT Model's Documents

The documents allowed the researcher to compare and contrast the criteria of quality teaching in Jordan with the NSWQT Model. The description of quality teaching from the MOE perspective was compared with what is occurring in the classrooms. This technique enabled the following research questions to be answered: How does the MOE described quality teaching? How is quality teaching defined in the NSWQT Model? How could the operation of the NSWQT Model be identified in the teachers' actions? How could the operation of the NSWQT Model be identified in the students' actions? How could the operation of the NSWQT Model be identified in the interaction between the teachers and the students? These questions helped the researcher to answer the main research question and subsequently to explore the description from both sides.

Observation

Teaching is an interactive process between the teacher and students and it is essential to observe the sights and the sounds of this interaction (Anderson & Burns, 1989). Medley and Mitzel found observation as a research tool essential, stating 'certainly there is not a more obvious approach to research on teaching than direct observation of teachers while they teach and pupils while they learn' (Medley & Mitzel 1963, p. 247 quoted in Anderson & Burns, 1989, p.135).

Observation gives a precise picture or description of the interaction between the people in the context of the social phenomena and 'permits the reader to enter into and understand the situation described' (Patton, 2002, p.262). It allows the researcher to study the teaching-learning process as it occurs in its natural place, which is the classroom. Change in and evaluation of the teaching process is based on evidence from the field. People tend to avoid reporting their real perceptions about issues and their contexts and these perceptions can be gained by observation; people's actions can tell more than their verbal accounts, especially for people who have communication, verbal and/or emotional problems. By observation, the observer can gain impressions and feelings about the people being observed, and these can contribute effectively to the analysis stage (Anderson & Burns, 1989; Kellehear, 1993; Minichiello et al., 2004; Patton, 2002).

The researcher has attempted to provide a visual picture of the quality teachers' and students' actions and interactions in the classroom. Video-recording allowed the 'capture [of] versions of conduct and interaction' in the classrooms (Health & Hindmarsh, 2002, p.103). Studying of the recordings in slow motion allowed analysis of the details of the classroom activities and interactions, enabling the researcher 'to track the emergence of gesture, to determine where people are looking' (Health & Hindmarsh, 2002, p.103). 'Video-recording can become a data base for further investigation into similar subjects' (Health & Hindmarsh, 2002, p.103). The researcher was able to capture actions and reactions, at the same time he was busy writing his field notes about actions that were not able to be captured by video.

Observation can make the participants suspicious, guarded and uncomfortable, so, to minimize this, the researcher met the participants several times before the actual observations. He met the students in their classrooms and talked to them about what he intended to do and why. The researcher used simple and clear language and sometimes

used the local dialect. Some of the schools in this study are located in rural areas and the students, who were members of tribes, had just left their homes and still needed time to construct their understanding of formal language. Students in such contexts need someone who is able to talk to them with simple language and preferably in their own dialect. The researcher explained the reasons for using video filming and the reasons for his presence in the classroom prior to the actual observation. Each of the participants was happy with this explanation, and the researcher was invited to sit in the classroom.

The camera was arranged and fixed at an angle to capture the teacher and the students in front of the class in one lesson and in the back of the class in the other lesson for each teacher. Expressions, gestures, words of the students and the teacher were captured. The camera was mounted on a tripod and, once the camera started recording, the researcher positioned himself some distance from the camera and out of view of the camera. While the camera was filming, the researcher observed the teaching and learning process and completed a coding sheet specified for this purpose (Appendix A). The coding sheet was the coding sheet of the NSWQT model of quality teaching. This sheet consisted of three dimensions and eighteen elements. The three main dimensions and the eighteen elements are:

1) ***The Dimension of Intellectual Quality.*** This dimension 'refers to pedagogy focused on producing deep understanding of important, substantive concepts, skills and ideas. Such pedagogy treats knowledge as something that requires active construction and requires students to engage in higher-order thinking and to communicate substantively about what they are learning' (NSW Department of Education and Training, 2003c, p.9). This dimension consists of six elements: a) Deep knowledge; b) Deep Understanding; c) Problematic Knowledge; d) Higher-order Thinking; e) Metalanguage; and f) Substantive Communication.

2) ***The Dimension of Quality Learning Environment***. This dimension 'refers to pedagogy that creates classrooms where students and teachers work productively in an environment clearly focused on learning. Such pedagogy sets high and explicit expectations and develops positive relationships between teachers and students and among students' (NSW Department of Education and Training, 2003c, p.9). This dimension consists of six elements: a) Explicit quality criteria; b) Engagement; c) High expectations; d) Social support; e) Students' self-regulation; and f) Student Direction.

3) ***The Dimension of Significance.*** This dimension 'refers to pedagogy that helps make learning meaningful and important to students Such pedagogy draws clear connections with students' prior knowledge and identities, with contexts outside of the classroom, and with multiple ways of knowing or cultural perspectives' (NSW Department of Education and Training, 2003c, p.9). This dimension consists of six elements: a) Background knowledge; b) Cultural knowledge; c) Knowledge integration; d) Inclusivity; e) Connectedness; and f) Narrative.

The coding sheet was headed with basic information: teacher's pseudonym, subject, lesson topic, grade, the date, and the number of students in the class. The coding sheet was divided into three columns: the element, evidence or coding notes, and the score. In the end of the coding sheet, the researcher specified a margin for his extra notes and comments about the teaching–learning process for each teacher.

Each element was broken down into five 'codes' or 'scores' with a descriptor given for each one (Appendix B). Each element was described in general terms to indicate what might be observed when the element was highly evident, as opposed to what might be observed where there was little or no evidence of the element in the classroom practice. After the classroom observations, the videotapes were viewed several times and each element checked and assigned a score. Any notes taken on the coding scale/sheet during the observations also affected the score for each element on the coding sheet. When the researcher coded the classrooms practices, he scored only what he could see; where there was no evidence of an element the score was 'not applicable'. When there was difficulty in selecting between two scores, he considered whether the minimum conditions of the higher score been met and if these conditions were not met, the lower score was used. Despite this, the researcher treated the scores of each element as assumptions not presumable indicators of the extent to which these elements were applicable. These scores were a general guide, not standardized scores. To ensure that the given scores for each teacher were reliable, a sample of videotaped lessons were given to an independent person who was fluent in both English and Arabic, had knowledge of the NSWQT Model, and had experience in primary school teaching. There was an 81.5% agreement between the researcher's scores and the independent scores (see Inter–Rater Reliability). This reliability is important for the study because the main aim of the study is to examine the applicability of the NSWQT Model to the Jordanian context. Consequently, most of the data which have revealed that were heavily drawn from the classroom observations. According to the

NSWQT Model's coding sheet, the given scores for each teacher have to be agreed scores between two or more observers or coders.

Fourteen lessons were observed and recorded on seven videotapes, two lessons for each teacher. The subjects were mathematics and the Arabic language. Each lesson lasted 40 minutes. The total time for observations was 560 minutes. Table 4.2 shows the context of the observations.

Table 4.2: *Context of the Observations*

Participant	Grade	The Observed Subjects	Lasted Time	Number of Videotapes
Maha	Third	Mathematics and Arabic Language	80 minutes	One videotape
Jamal	First	Mathematics and Arabic Language	80 minutes	One videotape
Hassnah	Third	Mathematics and Arabic Language	80 minutes	One videotape
Samar	First	Mathematics and Arabic Language	80 minutes	One videotape
Sharefah	Second	Mathematics and Arabic Language	80 minutes	One videotape
Mahmmoud	First	Mathematics and Arabic Language	80 minutes	One videotape
Nada	First	Mathematics and Arabic Language	80 minutes	One videotape
Total	**Seven Classes**	**14 Lessons**	**560 Minutes**	**Seven Videotapes**

In conclusion, observations enabled the researcher to answer the following research questions: What are the students' actions in the classroom? What are the teachers' actions in the classroom? What are the interactions between the teachers and students? These questions are sub-questions of the secondary question: What are the current quality teaching practices in Jordanian primary schools? The observations, which provided rich data about the practices in Jordanian primary schools, ultimately paved the way for the researcher to describe, contrast, and compare the NSWQT Model and the Jordanian primary classrooms teaching-learning practices.

Interviews

The interview is a common technique in the qualitative method (Bogdan & Biklen, 1998; Merriam, 1988; Patton, 2002). Minichie lo et al (1995) define interviews as the 'means of gaining access to information of different kinds. It is done by asking questions in direct face-to-face interaction' (p.62). Interviews can assist researchers to find different types of information and can help them to inquire or seek to answer specific questions about specific phenomena.

The interviews enabled the school stakeholders to express themselves and comment about the context in which they work. May (2001) states that 'interviews yield rich insights into people's biographies, experiences, opinions, values, aspirations, attitudes and feelings' (p.120). The researcher was able to understand the context of quality teaching and the factors that influence it in primary classrooms, from the teachers' and principals' perspectives. The aim of any type of interview is to let the people talk about their perspectives regarding issues related to the subject of the study (Kellehear, 1993); they are in central to the context, they live it day after day. The interviews also compensate for the things that cannot be observed, such as: 'feelings, thoughts, and intentions' (Patton, 2002, p.341); these can be understood and induced by interviewing the people face-to-face. The interviews allowed the researcher to compare and contrast the education policy and the actual teaching practices (rhetoric and practices), enabling him to answer the following research questions: How do quality teachers describe quality teaching? How do schools' principals describe quality teaching? These questions helped the researcher to explore, contrast, and compare the descriptions of quality teaching from the perspectives of the Jordanian school stakeholders and the NSWQT Model. Each participant was interviewed once and each interview lasted 30 to 40 minutes. The participants interviewed were the six principals and seven teachers. The teachers' interviews were guided by interview questions listed in Figure 4.3.

1. How long have you been teaching?
2. How much do you know about the students in your class? How well do you know their ability?
3. How did you go about formulating your lesson plans? How does the presence of specific group of students (with learning disabilities) affect the formulation of these plans?
4. What sort of benefits, if any, do you think the students in your class gain?
5. What do you think is expected of you as an effective teacher?
6. What do you consider to be your strengths as an effective teacher?
7. What were the key moments or events that contributed most to your professional learning, growth and achievement?
8. In what ways do you maintain an informed understanding of the content of your teaching areas?
9. How and in what ways do you know that learning has been achieved?
10. How do you think your students would describe you a teacher? As a person?
11. What would your colleagues and principal say about you?
12. What do you enjoy about teaching?
13. What do feel you have contributed most to the learning of others (student, teachers...etc?
14. What do you think are the main factors that influence effective teaching?
15. Are there any other comments you wish to make on your work and career as an effective teacher?

Figure 4.3: Interview Schedule –Teachers' Interviews

In the principals' interviews, the researcher was also guided by interview questions; these are listed in Figure 4.4.

1. Would you like to begin by telling me how and in what ways Mrs X or Mr Y has helped the learning of others in the school/workplace (e.g teachers, students...etc)?
2. What overall influence on the professional learning of others has Mrs X or Mr Y had in the school/ workplace (students, teachers...etc)?
3. What do you think Mrs X's or Mr Y's teaching approach is like?
4. If you were summarizing some of the key professional values that underpin Mrs X or Mr Y's teaching, what would they be?
5. To what extent do you believe that Mrs X's or Ms Y's effectiveness is related to the context in which he/she is teaching?
6. To what extent do you think that Mrs X or Ms Y would be an effective teacher in any context?
7. What do you think are the main factors, which may make teaching successful in an inclusive classroom?
8. Are there any other comments you wish to make about the school context or effective teaching?

Figure 4.4: Interview Schedule –Principals' Interviews

The questions asked by the researcher in this study sought to explore particular issues which were not explored by other techniques. The questions, for both interviews, were

developed by reviewing the literature related to quality teaching and some of them were adapted from other researchers who conducted research in the same field (NSW Ministry for Education and Training & Australian College of Educators, 2004).

For the teachers' interviews, the questions were designed to explore the teachers' perspectives about the context of quality teaching and their teaching practices. For principals, the interviews aimed to explore their perspectives regarding the quality teachers in their schools. The principals' interviews were also used to ascertain their views about the context of quality teaching and how they understand quality teaching. I would like to acknowledge that some of the interview questions are adapted from the *Site Visit and Report Booklet for Quality Teaching Awards in NSW Ministry of Education and Training*. This booklet consists of criteria for selecting teachers nominated for the NSW Quality Teaching Awards. Interviews of teachers and principals are included in these criteria (NSW Ministry for Education and Training & Australian College of Educators, 2004). The interviewees were given a written copy of the questions to be asked on the first visit by the researcher. This helped them to prepare for the interview and gave them an idea of the subject areas. The interviewees were informed that the interviews would be recorded on audio-or videotapes. Tape-recordings allowed the conversation between the interviewer and the interviewee to take place in a relaxed and confident atmosphere, where the researcher was able to listen thoughtfully to the interviewee. The researcher was able to concentrate on the questions asked and the answers at the transcript stage and the interview could be repeated for translation and accuracy (Minichiello et al., 1995).

The video camera microphone was used for recording because of its better sound quality. Participants were asked about their recording preferences, whether the videotape was used for video and audio or just audio. Questioning started with general conversation, such as, 'How are you today?' During the interviews, the researcher used encouraging single words or phrases, such as 'Go on' 'can you tell me more' and 'yes' with a courteous, friendly, attentive manner. The participants were interviewed in the Arabic language, because they can communicate more fluently and effectively in it. Furthermore, because the researcher knows the local dialect of some of those participants, they found the questions easier to understand.

Field Notes

Field notes are a significant and common feature in qualitative research for describing people, places, activities, events, and behaviour in the natural setting. They allow reflection on what has been written in the field (Bogdan & Biklen, 1998; Paterson, 2000; Patton, 2002; Taylor & Bogdan, 1998). The field notes provided the researcher with a rich written description about the actions that occurred in the classroom, capturing many things, such as people, places, events, impressions, actions, sounds, sights, smells, ideas, and hunches which cannot be captured by other techniques (Anderson & Burns, 1989; Bogdan & Biklen, 1998; Merriam, 1988; Paterson, 2000; Taylor & Bogdan, 1998). The field notes added to a holistic picture of the data provided by other techniques (Anderson & Burns, 1989; Bogdan & Biklen, 1998; Merriam, 1988; Paterson, 2000; Taylor & Bogdan, 1998). This technique gives an opportunity to whoever is interested in tracking and rectifying these fields notes (Paterson, 2000) and provides incident details which subsequently have helped with data analysis.

The researcher used these techniques simultaneously with other techniques: notes were kept with the researcher all the time and on all visits to schools. These notes were written and attached to each teacher's file, in order to give the researcher a complete picture about each teacher and the context in which he or she teaches. The written notes involved giving information that shows the schools', classrooms', students' and the teachers' locations. Keeping field notes gave the researcher a clear vision and assisted him in interpreting data collected by other techniques.

Field notes were taken in each school and each classroom, one file for each school visited. This file included all the notes written by the researcher in his visits to each school. The researcher spent a whole day in each school, arriving at the school in the early morning, even before the students and the teachers arrived at the school, and leaving after the students and the teachers had finished the school day. During each visit, the researcher observed the whole school's context, such as teachers and their interactions with each other, and how students and acted and behaved in the schools' playground, corridors, and classrooms. The file notes included the principals' actions and how they treated the school's staff, including teachers, administrators and cleaners. The field notes are comprehensive, including descriptions of the schools' personnel, and events (which happened incidentally) such as parents' visits to the school and how the principals or the

teachers dealt with those parents' concerns and inquiries. The field notes also covered the researcher's impressions about life in a specific school and his feelings about incidents which happened in some schools and how these incidents related to the teachers, principals, students and the context around the school. The researcher spent most of the time observing and interviewing the teachers and the principals. Despite that, the researcher was aware of and eager for each incident that happened in each context. These notes derived from the researcher's observations before, during and after each visit to each school. In addition, the field notes included the researcher sketches of the classrooms' locations, students' locations, how the teachers organised them inside the classrooms and how the teachers located themselves inside the classrooms. This technique helped the researcher to answer all of the research questions.

Data Analysis

The data analysis stage is the most important and critical stage in the qualitative research paradigm. It is the stage where the researcher encounters the challenge of making sense of the collected data (Patton, 2002). However, there is no common formula or recipe for data analysis, each researcher analyzing their data in a unique pattern (Patton, 2002). In qualitative research, the data usually shape themselves 'in the form of words' (Miles & Huberman, 1994, p.1) and behaviours or actions. These words and behaviours are based on 'observation' through 'watching', 'interviews' through 'asking', and 'examining' 'documents' (Miles & Huberman, 1994, p.9). Miles and Huberman (1994) feel that

> A chronic problem of qualitative research is that it is done chiefly with words, not with numbers. Words are fatter than numbers and usually have multiple meanings. This makes them harder to move around and work with. Worse still, most words are meaningless unless you look backward or forward to other words... (p.56)

Qualitative data has to be handled and treated in a sophisticated manner. Because of the nature of this study and the unique nature of this study, the researcher analyzed the data in the same manner as they were collected. The data analysis techniques and the process will be explored in the following sections.

Process of Analysis

Once data collection had been completed, the data were processed so they would be clear and available for analysis. To achieve that, the researcher followed the following steps.

Translation and Transcription

All the questions in the interviews were initially designed in English. As the fieldwork was done in Jordan, it was necessary to translate the questions into Arabic and similarly the answers translated back after conducting the research in the field. After the data had been collected, the researcher translated and transcribed the interviews simultaneously by using a cassette transcriber. The additions, which have been captured in the field notes, were considered as extra credit points 'against bias' (Miles & Huberman, 1994, p.51). The initial interviews had been recorded on videotape because of the better audio quality; it was necessary to transfer them to audiotapes. All observation sheets, field notes and the documents were translated from Arabic to English. After the researcher had transcribed the tapes into text, he grouped and classified the data under the file titles (observations, field notes, interviews and documents). The data were analyzed to meet the requirements of the questions: How is quality teaching described in Jordan? How is quality teaching described in the NSWQT Model? What are the current quality teaching practices in Jordanian primary schools? What are the perspectives of Jordanian primary schools stakeholders on quality teaching and the factors that influence it? The researcher started analyzing the data based on the following techniques.

Context Descriptions

Data relating to the context of each participant were derived from the field notes. The researcher described in detail the context of each participant in order to give the reader a clear picture of his/her unique setting. '[C]lassic qualitative studies share the capacity to open up a world to the reader through rich, detailed, and concrete descriptions of people and places' (Geertz 1973 and Denzin, 2001, cited in Patton 2002, p.438). '[By description] we can understand the phenomenor studied and draw our own interpretations about meanings and significance' (Patton, p.438).

In the current study, the descriptions included the classrooms in which quality teachers taught, the schools in which these classrooms were located, the number of students in the classrooms and the schools, and the number of teachers in these schools. The context descriptions gave a clear picture of the classrooms, the students' and the teachers' locations in the classrooms, the classrooms' locations in the schools, and the social context surrounding the schools. These descriptions gave a clear image to the reader, taking the

reader to the context in which the data had been collected. The elements of these descriptions enable the reader to compare and contrast the results with the framework on one side and what had been found on the ground on the other.

Patterns, Themes and Categories from the Description of Quality Teaching

In this investigation, the researcher had to explore the description of quality teaching according to the perspectives of the Jordanian MOE, the NSWQT Model, and the school stakeholders. For the Jordanian description of quality teaching, the related question was divided into sub-questions to explore, inclusively, the description of quality teaching. The sub-questions were: How does the Jordanian MOE described quality teaching? How do school stakeholders describe quality teaching? For the NSWQT Model the researcher also, subdivided the related question into sub-questions: How is the quality teaching model defined? How could the operation of the NSWQT Model be identified in the teachers' actions? How could the operation of the NSWQT Model be identified in the students' actions? How could the operation of the NSWQT Model be identified in the interactions between the teachers and the students?

The data collected to answer these questions were from interviews with principals, interviews with teachers, and official and relevant documents from the MOE and the NSWQT Model. The researcher treated the documents and the transcripts of the interviews as a whole body of text. The documents were analyzed in this way because there were few documents and so the researcher had to read and analyze these documents thoroughly. The documents from Jordan were in Arabic and were ad hoc; in analyzing such documents the obvious document analysis techniques, such as electronic or computer programs, were very difficult to apply. The researcher, therefore, treated these documents as texts together with the texts from the interviews and analyzed them by developing a category system. The first aspect to the analysis was the search for the dimensions of quality teaching, which were determined in the research framework. The dimensions of quality teaching were derived from the points of view of the teachers, principals, the MOE documents, and the NSWQT Model documents. These dimensions revolved around three hubs: the teachers' actions, the students' actions, and the interactions between students and the teachers. The researcher was also looking for factors that could influence quality teaching. These factors also revolved around three main hubs: the influence of the education policy,

the influence of the school, and the influence of teaching practices. The researcher then considered the newly merged patterns, themes, and categories.

The interview and document data were analyzed deductively and inductively. Deductively because the researcher brought to the fieldwork 'research questions', themes, '[a] hypotheses', 'problem areas', and 'key variables' (Miles & Huberman, 1994, p.58). This approach avoids an 'overload' of the data (Miles & Huberman, 1994, p.56). In the data analysis, the researcher started searching for themes and concepts by coding categories that could match the determined themes and concepts distinguished in the research framework. Patton (2002) defined 'deductive analysis' as a way in which 'the data are analyzed according to an existing framework' (p.453). Furthermore, the analysis was inductive because the researcher built patterns, themes, and categories which emerged from the data. 'Inductive analysis', according to Patton, is '*discovering* patterns, themes, and categories in one's data. Findings emerge out of the data, through the analyst's interactions with the data' (p.453). This technique involved several methods explained in the following section.

To make sense of the volume of collected data, the MOE documents, the NSWQT Model and the participants' interviews were reviewed to explain how they described quality teaching and its context. The transcripts and documents were analyzed to identify recurring themes, 'developing concepts, and developing a story line' (Anderson & Burns, 1989, p.201). The meaning of the words, sentences or even paragraphs were coded. Codes here 'are tags or labels for assigning units of meaning to the descriptive or inferential information ... Codes usually are attached to "chunks" of varying size – words, phrases, sentences, or whole paragraphs, connected or unconnected to a specific setting' (Miles & Huberman, 1994, p.56). These codes were essential to organize the amount of information derived from the preceding data techniques and sort it into categories (Anderson & Burns, 1989). The essential matter of such an analysis technique is to search for meaning rather than an amount of words (Miles & Huberman, 1994); to 'quickly find, pull out, and cluster the segments relating to a particular research question, hypothesis, construct, or theme' (Miles & Huberman, 1994, p.57). The 'units that cohered' and linked with a common topic or theme, were marked, broken into sub-topics and clustered under a common topic or theme (Miles & Huberman, 1994, p.57). When the data were a text or words, the researcher categorized these to make sense of the data. Anderson and Burns (1989) suggest that 'when words are the data, the general data analytic strategy is to organize the data into categories representing characteristics, patterns, or themes of the phenomenon and then to

illustrate and support the categories with quotes, vignettes, anecdotes, field notes, or narratives' (p.207). Categorizing gathers themes or concepts related to the same meaning (Lincoln & Guba, 1985; Miles & Huberman, 1994). In this analysis, similar issues were categorized under tentative headings by continual reference to the documents and interview transcripts until all the data were realistically, described and fitted in themes. The researcher confirmed the elements of quality teaching and the factors influencing it as identified by the MOE, the NSWQT Model and the participants as a holistic and comprehensive description of quality teaching. The identified themes were matched or linked with the main actions or themes of the quality teaching process, which were teachers' actions, students' actions and the interaction between students and teachers. This technique helped the researcher to answer the questions: How is quality teaching described in Jordan? How is quality teaching described in the NSWQT Model? Table 4.3 shows example of data analysis process.

The Observed Elements from the Practices of Quality Teaching

Elements of quality teaching were extracted from the observations and from the field notes and videotapes. This technique was used to explore the nature of quality teaching as it observed in the natural settings. The videotapes and field notes were coded to explore the elements of quality teaching and to compare them with the elements identified in the conceptual framework on the one hand and with the NSWQT Model on the other. These elements were identified in the literature as an interactive process between the teacher and students. For the classroom observations, the researcher first carefully watched the videotapes and transcribed them into text. The texts for each lesson were carefully reread. Each unit of data, which can be a sentence or paragraph, was marked. The purpose was to come up with major codes and to look for specific concepts of quality teaching which were determined in the research framework and the NSWQT Model. The major codes were divided into sub-codes allowing the data to be arranged into elements representing the practicing dimensions of the quality teaching process. Coding enables the researcher to know which elements 'contain more coded data' (Anderson & Burns, 1989, p.211), and elements 'with more coded data are likely to be considered more or considered more important than [elements] with less data' (Anderson & Burns, 1989, p.211). Another purpose of coding is 'to specifically examine frequencies of events or actions, or to compare frequencies of events or actions in different settings or between different participants' (Anderson & Burns, 1989, p.211).

Table 4.3: *Example of Data Analysis Process*

Official Documents		
Codes	**Text**	**Themes/Concepts/Categories**
Ch (change) SR (student's role) TC (teacher competence) QC (quality change) TLS (teaching and learning strategies)	the features of desired change concerning the future role of education in achieving lifelong development, developing administrative organisation and main tasks of the Ministry at all levels, bringing about quality change in the student's role, teacher's competence, teaching-learning strategies, electronic connection, and effective utilization of ICT.(Ministry of Education, 2002 p.4)	• Student's role • Teacher's role • Quality teaching and leaning • New organization of the MOE
Interviews		
G (God) C (Conscience) RT(Responsibility for teaching) GT (good teaching) M (mission) SR (students right)	For me, thanks to God, I try to teach those students from my conscience and I am responsible for teaching them before my God. and I have to produce good teaching regardless ... if she [her principal] does not like that, that is up to her and she is entitled to her opinion, but for me I have to deliver my mission because I am responsible for those students. When He (God) lines them up [at doomsday] and one by one ask me for their rights they will take their rights from me. So how I am going to face that?! (Samar, February 22, 2005).	• Conscious • Honesty • Responsibility
M C (mould children) K (knowing things) W (write) R (read) A (achievement) T (teaching)	I enjoy teaching first grade very much because the teacher can easily mould them [the children]. I mean the students are immature [when they come here]; they don't know anything. So when the students start to write and read [even] one word that I have taught them, it's something I don't forget. I feel as if something is carrying me and I am flying, because it means I have really achieved something that I worked hard for. ... So when they achieve something I am more than happy and I keep telling my friends and my husband about it. I tell everyone who comes to the school about my experience. Thanks to God, when I get in the classroom I forget all my private problems and issues, and focus on teaching those children (Samar, February 22, 2005).	• Knowledge acquisition • Knowledge Implementation

After the elements were specified, the researcher supported each element with examples from the texts. The elements were, first, 'exhaustive so that all instances' could be categorized under one element (Anderson & Burns, 1989, p.212); and second, 'mutually exclusive so that the same instance is not categorized more than once on any given dimension or with respect to any one variable in the same analysis' (Anderson & Burns, 1989, p.212). Finally, 'each [element] ...involve[d] a single categorization rule so that all instances placed in the same [element] are at least similar in terms of one rule' (Anderson & Burns, 1989, p.212). In this manner, the researcher worked back and forth between the data and coding construction until the conceptual saturation had been reached. After the determined elements had been saturated comprehensively from the data, the researcher started listing the elements (NSWQT Model's elements) regarding quality teaching practices and exploring the extent to which the determined elements of the NSWQT Model could be applied (see chapter six). As mentioned in the classroom observation section, the researcher went through the completed coding sheets and deduced from the significant evidence the extent to which each element of the NSWQT Model was evident in each observed lesson. The researcher guided by questions in the field notes and the videotape analysis (see chapter six). Specific elements and indicators were observed in terms of student-teacher interactions in the quality teaching and learning activities (see Appendix A).

Relationship Between Descriptions and Practices from three Perspectives

The multiple relationships in quality teaching were examined: the relationship between the Jordanian MOE's description of quality teaching from the documents, and the teaching practices in the primary schools' context from the observations and field notes; the relationship between the Jordanian MOE and the NSWQT Model's description of quality teaching from the relevant documents; the relationship between the description of quality teaching in the NSWQT Model from the documents, and the quality teaching practices in the Jordanian primary school context from the observations and the field notes. The researcher described these relationships, based on and validated by the collected data. For more information about these multiple relationships, please see chapter eight. The data analysis started with the documents to extract a conceptual framework from the documents, enabling the researcher to compare and contrast this framework with the classrooms practices. The logical sequence for the results was: the description of the quality teaching concepts from three points of view (the MOE, the school stakeholders and

the NSWQT Model), the classroom practices, and comparison and contrast between the description of the concept of quality teaching and the classroom practices.

Validity of the Data

Validity in qualitative inquiry means that the researcher interprets the participants' perspectives and experience that reflect the reality of the participants (Bogdan & Biklen, 1998; Merriam, 1988; Paterson, 2000). The validity of the study, therefore, can be measured by the extent to which the participants' perspectives have been truthfully judged (Bogdan & Biklen, 1998; Paterson, 2000). In this study there were several measures used to ensure the validity of the data. These measures were: triangulation, thick descriptions and clarifying the researcher's perspectives.

Triangulation

By using this technique the researcher was able to trust and confirm the findings because they were derived from multiple resources or methods (Merriam, 1988). This method gave the researcher a holistic picture about the participants and their perspectives in the context in which they work. It provided the researcher with an opportunity to hear and see the findings from multiple methods or sources (Miles & Huberman, 1994), which gave the researcher a suitable position to talk about the authenticity of the findings. It gave the researcher confidence about the credibility and the certainty of the interpretations and the findings (Lincoln & Guba, 1985), because it was confirmed by more than two sources of data.

Thick Descriptions

The researcher described the context in which the participants had been observed in some detail. The aim was to give the reader a clear and holistic picture related to the circumstances and aspects of the participants. These descriptions emerged from interviews transcripts, observations, field notes and documents. The researcher did this in order to leave judgments about the transferability of the findings up to the reader.

Clarifying the Researcher Perspectives

It was clear that the researcher's perspective, as a research instrument, can be evident in the data analysis. The clarification of the perspective was a fundamental issue in the provision of a difference between the perspective of the researcher and the participants. This has been clarified by writing a statement of professional perspectives (Appendix C) in which

the researcher's professional experiences were made clear. The researcher distinguished between his own perspectives and those of the participants by including illustrative quotes from the transcripts during the data analysis. The researcher distanced his perspectives from those of the participants during the data analysis by referencing his statement during the data analysis to sensitize himself to the data interpretations. This interpretation could have been built on personal experience rather than on the data itself. By including quotes from the transcripts, and including the researcher clarification, the reader will be able to make judgments about the extent to which the interpretations represent the data.

Reliability of the Data

Reliability or consistency refers to the measure of issues related to the consistency of findings and the extent to which the findings can be 'replicated' (Merriam, 1988, p.170). Human behaviour cannot be inert; therefore, it is hard to keep the same findings if this study were to be repeated. Qualitative research only 'seeks to describe and explain the world as those in the world interpret it', not to establish separate laws on peoples' actions (Merriam, 1988, p.170). In the current study, reliability was achieved by a) clarifying the procedures, b) triangulation, c) inter-rater reliability, and d) clarifying the researcher's perspective.

Clarifying the Procedures

The procedures used in the data collection and analysis were explained in detail in the first half of this chapter. In the data analysis three themes were identified from three angles and comparisons made between these angles. The researcher provided an audit trail for data collection and for the derivation of themes and categories. Such a trail enables others to repeat the same study (Lincoln & Guba, 1985; Merriam, 1988). Lincoln and Guba (1985) claimed that 'an inquiry audit cannot be conducted without a residue of records stemming from the inquiry, just as a fiscal audit cannot be conducted without a residue of records from the business transactions involved' (p.319).

The current study was audited by following the following steps: 1) data, collected and recorded through video- and audiotapes, transcripts, field notes and documents; 2) 'data reduction and analysis products', which included translation and transcriptions, allowing data to be summarized, condensed and classified (Lincoln & Guba, 1985, p.319); 3) 'data reconstruction and synthesis products', which included coding and categorizing the data,

interpretations, and connections made between the literature and the findings (Lincoln & Guba, 1985, p.319); and finally 4) 'process notes', which included procedures, designs, rationale, validity and reliability, 'audit trail notes', and ethical considerations (Lincoln & Guba, 1985, p.319). Therefore, this study has been presented in detail to help other researchers understand how the findings and interpretations were derived and to enable them to authenticate the study (Lincoln & Guba, 1985; Merriam, 1988).

Triangulation

As was explained in the beginning of this chapter, triangulation strengthened the credibility of the data collection and analysis by providing multiple methods for data collection and analysis. It gave the opportunity to recheck and revise the interpretations to ensure that the findings were consistent with the participants' authenticity (Merriam, 1988; Paterson, 2000).

Inter-Rater Reliability

To insure the reliability of the scores given to each observed lesson for each teacher, a sample of videotaped lessons were given to an independent person, fluent in both English and Arabic, and who has knowledge of the NSWQT Model and experience in primary school teaching. The researcher determined the percentage of agreement between himself and the other rater by adding up the number of agreements and dividing them by the total number of items. The percentage was 81.5%. This result gave the researcher confidence about the reliability of the coding of classroom observations. Agreement between raters is defined as raters attributing the same score or scores with a difference of one unit between scores. A difference of more than one unit indicates no agreement between coders. For example, if one coder gave a score of two and the other coder gave score of four, this would indicate no agreement between coders. If one coder gave a score of two, and the other coder gave the same score or a score of three this would indicate coder agreement. The justification for this definition is that the distribution of five scores on this likert scale allows scoring decisions to be relatively close. In the Likert scale, with a narrow distribution of scores, coder decisions would be more absolute; scores of two and three approximate relatively similar decisions, as suggested by the NSWQT Model (NSW Department of Education and Training, 2003a). As the coding design of the model acknowledges relative distinctions, it is legitimate for the researcher to interpret coding agreement in this way.

Ethical Consideration

This section includes a description of the steps followed to ensure that the conduct of the research met the standards of ethical issues. The researcher had been granted ethical approval from the University of New England in addition to an approval from the MOE in Jordan. This approval allowed the researcher to access the participants' sites. After that, the researcher went to the schools and met the identified participants and explained to them that it was necessary for the observations of the class to be videotaped to maximise the trustworthiness of the research findings. The observed teachers were given code numbers so their identity would not be known by anyone but the researcher. The researcher informed the participants that they were free at any time to discontinue participation. The researcher informed the participants that he would use three methods to collect the data:

- Classroom observations: the researcher would use videotape to observe the classrooms in two lessons for each teacher; each lesson observation would take approximately 40 minutes. Only the researcher would observe the classrooms.
- Interviews: interviews would be conducted with the teachers and principals and each interview lasted approximately 40 minutes.
- Field notes, whereby the researcher would write down inclusive notes about the teaching process, the schools' and the classrooms' context.

Furthermore, the researcher informed the participants that it was necessary to record the interviews with teachers and principals on audiotape in order to maximise the trustworthiness of the research findings. During data collection and analysis and in the final report, all participants were given code numbers so that their identity would not be known by anyone but the researcher. The recordings would be transcribed. The tapes and the transcripts would be secured in the researcher's office. The participants were informed that they were free at any time to discontinue participation. Moreover, the participants and their schools were given pseudonyms during all stages of the study and in the final draft of the thesis. The students in the identified classrooms were informed by the researcher before the videotaping, consent being sought from parents/carers. The researcher explained the nature of the research prior to the observations and the students were informed that they were free at any time to discontinue participation.

Confidentiality

During the study the data, including videotapes, records, audiotapes and transcripts of audiotapes, were stored in a locked filing cabinet in the researcher's office. Informed consent documents were stored securely and separately from notes, tapes and transcripts. After completing the study the data, including tapes, records, transcripts and videotapes, were stored in a locked filing cabinet in the researcher's office.

Courtesy

The researcher appreciated the commitment of the participants and all the interactions were conducted in a respectful manner. The fact that it was a great opportunity for the participating teachers to see themselves was recognized and appreciated. All the visits to the schools were conducted in a suitable manner and convenient to the participants. At all stages of the study, the researcher was polite and friendly with all participants including students. At the conclusion of the data collection, the researcher thanked all participants for allowing him to work at their schools and for having opened their classes for his observations. Copies of the videotapes, which included the observations and the interviews, were made and given to each participant.

Chapter Summary

This chapter has summarized the methods of the study. The aim of the study was to examine the applicability of NSWQT Model in the Jordanian primary school context. The study was restricted to seven primary school teachers in Jordan. The study utilised qualitative methods of data gathering and analysis. For data gathering, multiple methods were used: observations, interviews, field notes, and document analysis. The chapter began with descriptions of the qualitative method and the rationale for using this method. In the section that followed, the procedures used for participant selection and the procedures of the selection were presented. Explanations of the triangulation techniques used and the rationale for using these techniques were explored. Data analysis techniques and the rationales for using these techniques were explained. Also in this section, the choice of inductive and deductive data analysis was justified in terms of validity and reliability. At the end of this chapter, ethical considerations were included. The following chapter will reveal the first chapter of results of this study.