Learning Experiences of Pre-Service Teachers and the Lecturer's Role in a Qualitative Research Methods Course

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Abstract

Instructors involved in teacher education believe that the language and skills required for qualitative research methods (QRM) provide teachers with the expertise needed for lifelong learning. In this research, I explore the learning experiences of pre-service teachers in a QRM course and examine the role of the lecturer in designing these experiences. I chose the design research method (Kali, Levin-Peled, & Dori, 2009; Wang & Hannafin, 2005) and collected data from 71 students over three academic years. Data analysis uncovered three types of student experiences: motivation for learning, mediation of learning, and meaningful learning – all of which are supported by the lecturer.

Keywords

Teaching Qualitative Research, Qualitative Research Pedagogy, Learning Processes, Teacher Training, Lecturer's Role

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Acknowledgements

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Instructors involved in teacher education believe that the language and skills required for qualitative research methods (QRM) provide teachers with the expertise needed for lifelong learning. In this research, I explore the learning experiences of pre-service teachers in a QRM course and examine the role of the lecturer in designing these experiences. I chose the design research method (Kali, Levin-Peled, & Dori, 2009; Wang & Hannafin, 2005) and collected data from 71 students over three academic years. Data analysis uncovered three types of student experiences: motivation for learning, mediation of learning, and meaningful learning – all of which are supported by the lecturer. Keywords: Teaching Qualitative Research, Qualitative Research Pedagogy, Learning Processes, Teacher Training, Lecturer's Role

Introduction

Teaching qualitative research is an important topic and, as such, it has garnered and continues to garner a lot of attention in teacher training, especially in the past two decades. It is, therefore, not surprising that many researchers wish to understand various aspects involved in teaching and learning the qualitative research methods course (QRMC). QRMC is considered a challenging course for both students and lecturer (Cooper, Chenail, & Fleming, 2012; Reisetter, Yexley, Bonds, Nikels, & McHenry, 2003) and the effort they invest in the course provides pre-service teachers with the language and skills they will require in their future profession, which is based on lifelong learning (Hazzan & Nutov, 2013). In-depth knowledge about students' learning experiences in QRMC can therefore, help lecturers design a more effective QRMC curriculum (Drisco, 2008; Hazzan & Nutov, 2013; Onwuegbuzie et al., 2012).

In this paper, I will first review the literature on students' learning experiences in QRMC and the lecturer's role in the course design. Then I will describe the research method I chose for this research. Based on data analysis, I will propose a model for students' learning experiences and discuss the lecturer's role in creating them. I will conclude the paper by presenting some practical implications of the model.

Literature Review

Existing literature on QRMC pedagogy was developed mainly by lecturers of QRMC and it encapsulates the learning experiences of primarily graduate students. There are several research-based teaching models for QRMC; two of them are described in what follows.

Research in this area has been conducted primarily by QRMC lecturers who teach this course at the graduate level. Their findings often show that the uniqueness of students' learning processes is related to the shift that students are required to make from quantitative to qualitative research methods (Booker, 2009). This shift is characterized by the questions that the students explore: their beliefs and perceptions of reality and themselves as individuals in this reality; the way research is conducted—verifying a theory versus constructing a theory;

research data analysis—statistics versus text analysis; and generalization, reasoning, and objectivity versus subjectivity (Barrett, 2007; Humble & Sharp, 2012, Reisetter et al., 2003). In their meta-synthesis of 25 case studies, Cooper, Chenail, and Fleming (2012) identified three overlapping dimensions of learning experiences of students in the QRMC: affective, cognitive, and experiential (i.e., learning by doing).

The effective experiences of the students in the QRMC range from positive emotions such as surprise, creativity, and inspiration, to negative emotions such as anxiety, frustration, and confusion (Cooper, Chenail, & Fleming, 2012). The emotional spectrum experienced by students during the QRMC characterizes different stages in knowledge acquisition that learners usually go through (Butler-Barnes, Williams, & Chavous, 2012; Laukenmann et al., 2003; von Rhöneck, Grob, Schnaitmann, & Völker, 1998).

Emotions are also an important factor when learners are coping with learning tasks. Efklides (2006) suggests that people subjectively assess the difficulty of a learning task according to the time and effort they think will be required to complete the task. Various studies revealed that expressing positive emotions (e.g., interest, curiosity, joy) contributes to the task performance and conversely, the expression of negative emotions (e.g., fear, pressure, lack of interest) hinders task performance. Efklides also mentions a phenomenon called "*illusions of feeling of difficulty,*" according to which a person can assign different levels of difficulty to a particular task, depending on his or her familiarity with the task type. In other words, if a person has had previous experience with tasks of the type he or she is required to perform, then the new task "*feels familiar.*" The feeling of task familiarity leads to fluency in the process, despite the objective difficulty level of the task. If the task does not seem familiar to the learner, then its difficulty level in the learner's eyes increases, despite the objective difficulty level of the task. In the case of the QRMC, the emotional aspect of learning is significant since most of the students go through the shift from quantitative to qualitative research methodology. This shift requires from them substantial emotional and cognitive efforts when qualitative research is introduced for the first time (Waite, 2014).

The cognitive experiences in the QRMC involve "*learners expanding their view of what constitutes research, understanding the difference between quantitative and qualitative research, and reevaluating what contributes to validity in research*" (Cooper, Chenail, & Fleming, 2012, p. 9). In particular, during the QRMC, students must deal with the salient features of qualitative research whereby the researcher is the main qualitative research tool as opposed to quantitative research in which the researcher is not part of the research (Barrett, 2007) and qualitative thinking as opposed to the tendency of students to think quantitatively (Abuhav & Melzer-Geva, 2013; Booker, 2009; Kelly & Kaczynski, 2007). In other words, students tend to ask closed research questions or seek links between factors, as is the case with quantitative research, in contrast to open questions and a description of an investigated phenomenon, which characterize qualitative research. Qualitative research also requires students to deal with multilayered text analysis, a task that may be problematic for some (Raddon, Raby, & Sharpe, 2009). Another challenge for some students may be the stages of this kind of research, which differ from those of the quantitative research students have experienced previously (Hein, 2004; Reisetter, et al., 2003). Qualitative research is characterized by a back-and-forth structure as opposed to the linear structure of quantitative research.

To help students overcome the challenges of understanding the qualitative content and acquiring the skills needed to execute it, many QRMC lecturers think, research, and look for efficient ways to teach this course. Tuval-Mashiach (2013) presents three main challenges in designing a QRMC for undergraduate students: conceptual, methodological, and political. Conceptual challenges reflect the lecturers' concerns when teaching about the nature of

qualitative research; methodological challenges relate to the methods that lecturers use, and political challenges reflect the context in which qualitative research is studied.

The literature review reveals two research-based models for dealing with QRMC conceptual challenges: one of them is Cooper, Chenail and Fleming's (2012) model (described above), which suggests that "*the student experience of learning qualitative research is made up of three central and interrelated dimensions—experiential, affective, and cognitive—which combine to form an experience of active learning necessary to understand and practice qualitative research*" (p. 14). The second is Hazzan and Nutov's (2014) teaching framework, which is based on the concept of "*teaching and learning a course that deals with qualitative research implements the principles of qualitative research*" (p. 1). The 10 principles of this framework are:

- The students conduct a full qualitative research project;
- The course serves as the research setting for the students' course assignments;
- The students present published qualitative research papers to the course plenum and discuss them;
- The course topics are demonstrated using research students conduct as part of the course assignments. (For instance, in the session on formulating research problems, the formulation process of a research problem is demonstrated using the research problem featured in the research of one of the students);
- Trust is built between the teaching staff and the students and among the students;
- Reflection is integrated into the learning process;
- Course discussions are conducted like interviews;
- The students are guided to think at various levels of abstraction;
- Awareness is raised to the researchers' emotions and their role in the research;
- A gradual learning process is facilitated. (p. 8)

QRMC lecturers offer various solutions to methodological challenges which relate to the methods that lecturers use; some require their students to carry out full qualitative mini-studies (Hazzan & Nutov, 2014), others prefer to give several practical exercises (Ball & Pelco, 2006; Dunn, 1991). Some lecturers ask their students to keep a journal (Porto, 2008), while others choose to maintain a blog (Harper & Harper, 2006). Some allow students to do research on subjects that interest them (Hazzan & Nutov, 2014), others suggest students should conduct a collaborative research project according to the research structure designed by the lecturer (Roulston et al., 2008), while Kuhn and Davidson (2007) recommend focusing on things that support learning and teaching (e.g., texts, images, software, concept maps).

Existing research on QRMC pedagogy focuses, however, on teaching and learning experiences of graduate students, and I found no research that focuses on pre-service teachers' learning experiences in this course. This is surprising since many practitioners involved in teacher education (i.e., training and professional development) believe that the language and skills of qualitative research provide teachers with the expertise needed for lifelong learning (Abuhav & Melzer-Geva, 2013; Dobber, Akkerman, Verloop, & Vermunt, 2012; Mitchell, Reilly, & Logue, 2009). In practice, this belief is translated into courses that teach how to do qualitative research, which are offered by many higher education teacher training institutions. A literature review leads to two conclusions: one concerns the lack of knowledge

about pre-service teachers' learning experiences in the QRMC, and the second concerns the QRMC lecturer's role in shaping these experiences. In this research, I will therefore address this gap by exploring two research questions:

- What are the learning experiences of pre-service teachers in QRMC?
- How is the lecturer's role reflected in the learning experiences of pre-service teachers in the QRMC?

Method

In this section, I present the research method and includes the following themes: the research method and the researcher's role, the structure of the QRMC which served as the research environment, the research participants, the research tools for gathering data, the research process and ethics, and the data analysis process.

The Research Method and the Researcher Role

I chose the design-based research to achieve the objectives of the study. This research type enables researchers to create theories that describe and explain learning processes in their natural environment and to design appropriate activities and learning materials that support these processes (Kali, Levin-Peled, & Dori, 2009; Wang & Hannafin, 2005). I achieved these two goals through an iterative process of developing learning materials, documenting the changes made in these materials and activities, and understanding their impact on learners.

During the research, my role was dual, as I functioned both as lecturer and as researcher. This approach is not only accepted in qualitative research in general and in design-based research in particular (Postholm, 2008), but also, according to Woods (1996), it reflects the essence of qualitative research since the researcher's self is integrated into the study. In addition, the lecturer is the person who determines the contents of the course as well as the instruction methods, and the researcher, based on the data analysis, can propose changes designed to improve the course. McNiff (2002) supports this practice by saying that there is a need for practice-based research that focuses on the teacher's own work. Postholm (2008) relies on Vygotsky (1978) and argues that performing the dual lecturer-researcher role means conducting an internal dialogue on three levels: on the first level, the lecturer designs all of the course components, on the second level, the researcher reflects on the course and its outcomes, and on the third level, the lecturer and the researcher, who are the same person, are in constant dialog about the course and the analysis of its outcomes. Reflection at the various levels by the same person will contribute both to the course and to all those involved in the field provided the data, the analysis, and the interpretation are of course published.

The choice to perform a dual role, researcher-lecturer, has more advantages than the internal ongoing dialogue. When performing this dual role, I could demonstrate to the students, in real time, both how to do qualitative research and what the role of a qualitative researcher is: how the researcher sets the research goal, formulates the question/s, enters the field, treats participants, addresses ethical aspects, collects data, and so on. In other words, I could be a role model for my students. Another advantage is the ability to sharing challenges, dilemmas, and conclusions with the students, in real time. For example, I could tell them what changes I had implemented in the course structure following my previous research stage. This dual role allowed me also to delve into qualitative pedagogy, one of my research fields of interest.

The Research Environment – QRMC Structure

I designed the QRMC for undergraduate students studying at a teachers' training college in northern Israel. The course was one semester long, that is 14 weeks with two academic hours (90 minutes) per week dedicated to lectures, discussions, and group work. The research covered three semesters during the 2011-2014 academic years and so included three different groups of students, one in each semester.

The goal of the course was to enable students to experience all stages of qualitative research, and so the final course project was to plan and conduct a full-scale research study. The students' final project included all of the components of a qualitative research report: introduction, literature review, research method, findings, and discussion. Students were required to collect the research data by conducting three 30-minute interviews and three 30-minute observations. Students could choose to do this project in pairs. The final two lessons of the semester were dedicated to the presentations of the students' research projects; some presented their research results, others, who did not yet finish their research, presented their deliberations regarding the research process in order to consult with their classmates.

To prepare for this task, students were required to complete intermediate tasks: reading theoretical chapters that teach the foundations of qualitative research, submitting bi-weekly reflections, planning and conducting an interview, and submitting its transcript. For the midterm assignment, students had to find a qualitative research paper published in a referred journal and analyze it according to predetermined criteria (define the research problem, its objective and the research questions; describe the research population; describe the research data and its findings; and add some critical, personal thoughts about the research process). This design of the midterm assignment enabled students to practice the concepts learned and to recognize the structure of a qualitative research report.

Due to the short course duration and the students' difficulties coping with shifting from quantitative to qualitative research methodology (Harel & Sela, 2011; Hazzan & Nutov, 2014; Waite, 2014), I decided to teach the basics of grounded theory (Strauss & Corbin, 1990) with no discussion of qualitative research epistemology. The course focused on the process and skills required in qualitative research. This choice was based on two main assumptions. First, according to the essence of grounded theory, the students experiment with qualitative research; based on this experience, they can build their epistemological basis (Hazzan & Nutov, 2014; Onwuegbuzie et al., 2012). Second, it is my belief that experiencing this kind of research and acquiring the skills required to execute it will serve the learners both as students and as future teachers. As students, they are required at the end of their training at the college to do a seminar project, so they need to know how to execute qualitative research. As teachers, they will need to manage hearings with their students or with students' parents. These kinds of conversations require a teacher's ability to speak without being judgmental and to ask open-ended questions, as researchers do during an interview. Another skill that teachers can implement from their qualitative training is taking notes during lessons or doing reflection after the lesson in order to learn and improve in the same manner as researchers use their field notes. Accordingly, the topics covered in the course included formulating a research objective and a research question, making acquaintance with data collection through observations and interviews, practicing data analysis, and facilitating a discussion on reliability and validity[1].

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[1] I followed Golafshani (2003), Noble and Smith (2015), Silverman (2013), and other scholars in their use of the terms reliability and validity in the context of qualitative research.

The Research Participants

The research population included a total of 71 pre-service teachers who each participated in one of the three courses included in the research. The pre-service teachers came from a variety of faculties that included linguistics education, mathematics education, early childhood education, and special education.

The Research Tools

The research tools were the students' assignments during the course (i.e., reflections, interviews, and the final paper), the course survey, and the researcher's records of classroom discussions as documented in the research diary. That means that the students' assignments were simultaneously used as learning material and as the research data. Table 1 shows a summary of the collected data.

Reflections. Students were required to submit at least five bi-weekly reflections (out of six possible). The students were asked to write an open reflection on their thoughts, feeling and insights about the subject being studied, which means that no specific instructions were given. Students were free to choose the subject, the length, and the manner of writing. The students were graded for submitting the reflection and not for its content.

> *This requirement is presented in such a way so as to get the students used to accepting things without a given framework: a skill that researchers conducting qualitative research should acquire and implement (for instance when listening to interviewees or when searching for a theoretic framework in which to organize research findings).* (Hazzan & Nutov, 2014, p. 18)

Interview. Students had to design and execute an interview with their peers. Each semester, the subject of the interview was different: students' understanding of the qualitative research (in 2011), students' needs in the course (in 2012) and the subject chosen by the students (in 2013). The interview was conducted during the lesson session in pairs so that each of the students experienced being both an interviewer and an interviewee. After performing the interview, they transcribed it and summarized their insights.

Final paper. The students' final assignment included all components of a qualitative research report: introduction, literature review, research method, findings, and discussion. Students were required to collect their data by performing three 30-minute interviews and three 30-minute observations.

Course survey. At the end of the semester, the college administers a survey on each and every course given, including the QRMC. The survey consists of a questionnaire on the course content, method of teaching, and lecturer-student's interactions, as well as open questions in which the students can express their opinions on the course and make suggestions for its improvement.

The research journal. The journal contains the researcher's records of classroom discussions, events, processes, thoughts, questions, conclusions, insights, and reflections on the research work and the conduct of the course.

Table 1
Summary of research data

Academic year	2011 -2012	2012 - 2013	2013 -2014
Total			
Number of students	23	24	24
Number of reflections	115	120	120
Number of interviews	23	14	24
Number of surveys	13	17	19
Research journal	+	+	+

The Research Process, Ethics, and Data Analysis

This designed-based research had three stages; each stage includes formulating a research goal; defining a research question; collecting and analyzing data; and, based on the research results, examining and improving educational materials.

The students in the courses I taught were the research participants. Although the call to the students to be research participants in a research conducted by the course lecturer is not ethically ideal, it is a common practice in action research and in design-based research (Booker, 2009; Hein, 2004; Richards, 2011). If we are to explore and improve our practice, then our students are our natural partners in this process. The college ethics review commission approved every stage of this research. In addition, means were taken to ensure student-participants' rights at each and every research stage, as described in what follows.

The first research stage took place during the 2011/12 academic year. At this stage, the research goals were to categorize students' needs in the QRMC and to characterize the lecturer's deliberations during the course. In the first lesson of the course, I presented the research goal and explained to the students that participation in the research would not involve additional assignments. I asked them, however, to allow me to use their assignments as research data. I also explained that if there were students who objected to participating in the research, I would cancel it. To protect their rights, I suggested that those who object to participate should put an anonymous letter in my teachers' lounge mailbox (Lieblich & Weisman, 2009). None of the students objected to participating in the study, which means that all of the students who took the course participated in the research. Moreover, some of them even expressed a desire to read the final research report. In addition, in order to distinguish between my positions as course lecturer and as researcher, and to protect the students' rights, I promised to start analyzing the data only after I gave them their final grades.

The data I collected after the end of the semester, were 115 reflections, 23 interviews, 13 surveys, 13 final projects (most of the students did it in pairs), my research journal. For the data analysis, I based on the method presented by Strauss and Corbin (1990). According to this method, I first read each document separately and identified categories. Since there were five different types of documents, I prepared a table for each type of document that summarized the categories for each participant (see for example, Table 2).

Table 2
An example of reflection analysis

Student's name	Reflection 1	Reflection 2	Reflection 3	Reflection 4	Reflection 5	Reflection 6
Sam	- to learn research is scary - quantitative research was hard to learn	Not submitted	- the college observation task was interesting	- the midterm assignment was helpful - interview was a wonderful experience - fear to fail in final project	- the grade of midterm was disappointing - lecturer comments were helpful - I gained knowledge	Not submitted
Salma	- quantitative research was hard and it shades this semester - despite the difficulty I did well	- the exercise done at the lesson helped to formulate the research goal	- peer learning is good - the midterm assignment was helpful	- summery of the lesson – how to do data analysis	- summery of the lesson	Not submitted
Olga	- the lesson is very late at night - the practice aroused interest	- the lesson was interesting and gave energy to learn	- the midterm assignment is stressful - the group practice helps	- the midterm assignment needed more explanations - active learning is good - the college observation assignment was good	- the first interview made me fill as a researcher - I am discovering a new world - I gain confidence for the future courses	- learning process was meaningful learning - thank you Liora - I hope to learn more about qualitative research

After the first reading of the data, I formulated three main categories: *survival, mediation of learning, and meaningful learning*. Survival consists of negative feelings such as fear, stress, disappointment, and difficulty. Mediation of learning includes the teacher's support, interest and/or emotional connection, compliance, the desire to learn something new, and individual learning. Meaningful learning is expressed by positive emotions such as curiosity, contribution to personality, satisfaction, and so on. I presented my research results at a conference held at my college and I was encouraged by feedback I received from my colleagues. Then, I examined the relationships between the categories, and identified primary and secondary categories.

Table 3
Primary and secondary changes

Survival	Mediation Factors	Meaningful learning
Fear (3 students)	Lecturer support	Great (1 student)
Afraid (5 students)	Creating interest and/or emotional connection	Good (4 students)
Stress (1 student)	A desire to learn something new	Helpful (3 students)
Hard (7 students)	Individual learning	Contribution (4 students)
Disappointment from grade (4 students)	Regulatory compliance	Interesting (7 students)
Anxiety (3 students)		Curiosity (3 students)
		Positive (1 students)

The second research stage took place during the 2012/13 academic year. According to the first stage findings, I re-evaluated the course structure and the students' assignments. I decided to explain and to relate all course topics on the main research goal, the students' needs in the QRMC, and invited the students to be my research colleagues rather than only a data source. The students' collaboration was manifested in classroom discussions and in their assignments, which focused on clarifying their needs in the course. For example, the interview conducted by the students as a course assignment focused on clarifying their needs in the course.

At the second research stage, like in the first one, the first lesson began with a presentation of the course requirements and the research framework accompanying it. I gave students the opportunity to submit objections to being part of the research. At the end of the semester, after grading the students, the data I collected were 120 reflections, 14 interviews, 17 surveys, 14 final projects (most of the students did it in pairs), and my research journal. I analyzed the data using the exact same procedure. Here is an example of a reflection analysis after the first reading of the data and coding, where each category was colored: *survival*, *mediation of learning*, and *meaningful learning*:

> I am a bit disappointed by the midterm task grade… but even when I make mistakes, I can learn something because every comment you (the lecturer) wrote, I carefully read. The truth is there are many things that I did not pay attention to. I am sure that next time I will not do such mistakes. That is, I made one step forward in my learning.
> I am afraid of the final project… but the knowledge I gained is reassuring – I really do understand a lot. At first, I thought I would not understand anything at this course. I hope for the best and I will do my best, no matter what. The main thing is that I gain knowledge and it makes me happy.

After the first reading of the data collected at the second stage and the identification of the categories, I summarized the categories for each participant, examined the relationships between the categories, and identified primary and secondary categories. Then, I re-read the data from the first and second research stages and repeated the above described procedure. I obtained the same model again, which I presented at a national, bi-annual conference that focuses on qualitative research.

The research findings did not indicate that the model as designed in the first research stage should be changed. However, I had insights about the course structure which I applied in the subsequent year.

Based on the data analysis of the first two research stages, I made three changes in the course:

- The classroom discussions and student assignments would focus on the students' final research project instead of my research aim, to understand student's needs in the course. For example, the interview that the students would conduct with each other would focus on their research aim and could be one of three interviews required for the final project.
- Classroom climate would be emphasized though peer learning in order to build trust and openness among the students (Hazzan & Nutov, 2014)—in every class exercise, the students were asked to work with someone they had not yet worked with or had not previously met.
- During the first lesson, I will present my personal story, which will reveal why I chose to engage in qualitative research and the difference it made in

my life. The goal of this personal exposure will be to create trust, openness, and positive classroom climate and to expose myself as a qualitative researcher.

The third research stage took place at 2013/14 academic year. Originally, I did not intend to continue the research. However, at the end of the semester, after reading most of the students' reflections, I concluded that it was important to continue the research. I shared my thoughts with the students and with their encouragement decided to complete an additional, third stage. To ensure research ethics, I suggested that the students would approve or reject their participation in the study only after receiving their final course grades. None of the students objected to participating in the research. Thus, I could collect data from this academic year: 120 reflections, 24 interviews, 19 surveys, 13 final projects (most of the students did it in pairs), and my research journal.

At this research stage, I once more executed the analysis described above, first using data collected only from that year. I then re-read all of the data collected from the beginning of the study and re-analyzed it so as to validate the model (Lincoln & Guba, 1985). At this stage, I modified both the research questions and the model (Eisenhardt, 1989). This procedure is common practice in qualitative research: *"A grounded theory is durable because it accounts for variation; it is flexible because researchers can modify their emerging or established analyses as conditions change or further data are gathered"* (Charmaz, 2000, p. 510). The outcome included new research questions (cited at the end of the literature review) and two newly-defined opposing themes: *learning-promoting motivation* (which was previously part of the *meaningful learning* category) and *learning-hindering motivation* (which was previously the *survival* category). Finally, I constructed a model that illustrates the students' QRMC experiences (see Figure 1).

Results

My data analysis revealed that the learning experiences of students in the QRMC were always a combination of two processes: *motivation for learning* and *mediation of learning*. In addition to these two, some students also experienced *meaningful learning*. The three learning experiences are not hierarchical, that is, students can experience each of the processes at each stage of the course (see Figure 1).
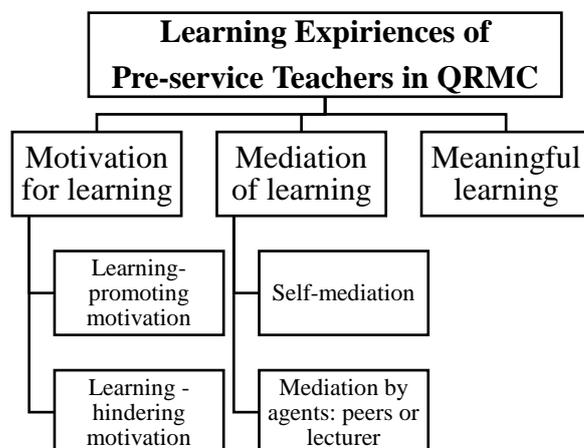

Figure 1: Learning Processes of Pre-Service Teachers in the QRMC

Motivation for learning refers to the emotional intent of the student to learn. Two opposite themes were found in this context: (a) *learning-promoting motivation* and (b) *learning-hindering motivation*. *Learning-promoting motivation* includes positive emotions like curiosity, satisfaction, and a desire to succeed. *Learning-hindering motivation* consists of negative emotions such as fear, stress, and a feeling of hardship. Mediation of learning refers to the relationship between the stimulus (the content of the course, the nature of the qualitative research, and the skills required of the qualitative researchers) and the student's nature, previous knowledge, and previous experiences. From data analysis I produced two types of mediation of learning experiences: *self-mediation* and *mediation by agents* (i.e., colleagues or lecturer). An additional process that some of the students experienced was *meaningful learning*. Meaningful learning is emotional, social, and cognitive learning, independent learning within interpersonal relationships. This process is based on three components simultaneously: value to the learner and society, learner and learner involvement, and relevance to the learner. Meaningful learning is characterized by the insights the students have, the questions they ask, the feedback they give to their colleagues, and so on.

My data analysis also shows that the QRMC lecturer plays an important role in shaping the students' learning experiences, whether by creating learning situations that enable learners to undergo each of the three learning experiences or by being an agent of the mediation of learning process.

Motivation for Learning

Motivation for learning captures emotions experienced by students before and during the course, that range from positive emotions that promote learning to negative emotions that hinder learning. These two categories create the emotional spectrum that characterizes the learning process.

Learning-promoting motivation. This category reflects students' positive emotions, such as curiosity, desire to succeed, positive expectations, and interest in course content, that promote the student's motivation to learn. Some students, like Iris, enrolled in the course with positive expectations:

> I think I will be interested in qualitative research because it deals with human beings and their behavior, and I have always been interested in human behavior and what drives it. [Iris, Reflection 1, 2011][2]

Some students did not immediately experience motivation to learn, but they did feel it after implementing their theoretical knowledge. In the following excerpt, Mia describes how her interest in the course arose after experimenting with research tools, observations, and interviews:

> I feel that the course became more interesting, more practical. We experienced what it means to be a researcher. We did an observation on the college and wrote everything we saw. I saw things that although I have been in college for 2 years, I did not notice them at all! ... I learned how to write an interview questionnaire and it was interesting. I never thought that to interview someone, means to prepare questions in advance and ask them. I liked it. [Mia, Reflection 4, 2013]

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[2] Each student quoted is denoted by an alias, followed by the reflection number (each year there were six possible reflections), and the academic year (denoted by the year in which the academic year began).

Other students' starting point was learning-hindering motivation (*"At first I thought I would not understand anything in this course"*). As time passed, however, they did understand the content and at the end of the course, they had the motivation to learn more, as in the case of Sophia.

> I was relieved to know that I really understood many things even though at first I thought I would not understand anything in this course. I hope for the best because I have the desire to succeed. I will endeavor no matter what my grade will be. The main thing for me is the fact that this course gave me insights and knowledge, and that makes me happy. [Sophia, Reflection 6, 2012]

Learning-hindering motivation. Some students did not experience an increase in their motivation to learn. These students expressed negative emotions like stress, fear of failure, and a feeling of hardship that hindered their motivation to learn. Data analysis revealed some sources of these feelings, which include previous personal experience (e.g., a course in quantitative research methods taken in a previous semester) and, the experience of peers who described the course difficulties and its high demands. Additional sources for negative feelings were the interpretation of the word "research," which some of the students associate with science and mathematics. Here is an example of the negative emotions Sasha experienced at the beginning of the course.

> When I saw that I was going to study a course in "qualitative research," I was afraid, perhaps because the word "research" frightens me. Maybe I have this feeling because I studied quantitative research and I had a hard time. I thought it would be the same. [Sasha, Reflection 1, 2011]

Additional sources of stress may be related to course guidance in terms of insufficiently defined content, not enough exercises on a particular subject (e.g., data analysis), not enough time between assignments, and even the freedom to choose a topic for the final research assignment of the course.

> Half of the course is over and I still do not know what to research. I have not been able to write a research question yet, and I do not know how to interview people who are not interested in being interviewed. As time goes by, I think I would prefer a test, so I could "puke" everything I know about qualitative research, instead of being stressed out between the midterm assignment and the final course assignment. [Sophia, Reflection 3, 2012]

Another source of students' stress could be the lecturer—in this case, me, my demands, and my character. For example, my demands to refrain from leaving the classroom in the middle of the lesson and to arrive on time were met by the students with a lot of criticism. Here are two illustrative excerpts.

> The lecturer's demand not to leave the classroom in the middle of the lesson is annoying—we are not little kids. [Course survey, 2013]

> [The lecturer] should be more flexible about getting to the lecture on time. I come from far away and I cannot find parking nearby. Sometimes I am late because of this. [Course survey, 2012]

Mediation of Learning

Mediation of learning describes the interaction between the qualitative research (its content and the skills required of a qualitative researcher) and the student's nature, knowledge, and previous experiences. As mentioned previously, the students who participated in this research were undergraduates and most of them (if not all) were not familiar with qualitative research. They were, therefore, required to make a shift from quantitative research, which requires a considerable effort (Booker, 2009; Kelly & Kaczynski, 2007). The data analysis reveals that mediation of learning can be affected through the student (self-mediation) or through an agent, who may be a classmate or the lecturer (this category will be discussed separately in the section on the lecturer's role).

Self-Mediation. Some students identify similarities between their personality characteristics and those of a qualitative researcher. For example, Ava defines herself as a curious person, and curiosity is an important quality of qualitative researchers. This similarity created self-mediation and enhanced her connection to the course contents.

> Today I learned that in order to be a good researcher, the researcher must be curious about the subject he is studying. When the lecturer mentioned the term "curiosity," I felt happy because curiosity is one of the main forces that drive my life forward. Another reason for my feeling of happiness is that I am full of curiosity to investigate the subject I chose, which means that I will be more efficient. [Ava, Reflection 3, 2011]

Other students found that their previous successful learning experiences paved the way for learning qualitative research. For example, Karen connected what she knows about the QRMC to other courses she had previously taken.

> When I saw that I was going to take a course called Qualitative Research, I tried to link this name to other courses that I had already taken, like Academic Skills and Quantitative Research. These two courses required a lot of effort; therefore in the beginning, I was concerned that this course would be difficult. This feeling quickly disappeared when I remembered that despite the difficulty, I succeeded in both of the courses and in this course, it would be possible to succeed too. I also tried to understand whether this course is related to what we have already studied. [Karen, Reflection 1, 2012]

Sometimes the dissonance between what a student thinks about the course and what happens in the course mediates learning, as illustrated in the following excerpt.

> The last two lessons taught me that there is a difference between what I think [about the course content] and reality. I felt happy—I am learning something new, something different about myself, my interests and my inspirations. This course does not deal with numbers and calculations, which is my anxiety. Slowly, at my own pace, I am beginning to understand the content, and I have realized that if there is something that interests me a lot, it is worth trying to study it and check it out a little more deeply, and enjoy it as well. [Samantha, Reflection 1, 2011]

Mediation by Peers. During all three research stages, the students did their assessments in pairs or in small groups of up to four participants. This way they could review each other's research objectives and questions, formulate interview questions together, interview each other, and discuss data analysis. Students were also given the opportunity to do the final assessment in pairs. The following two quotes illustrate the peer mediation between the two students and the course content.

> In the last lesson, we practiced our research presentation in small groups. Each of us helped group members formulate a correct research question and objective. I felt that I implemented what I have learned successfully while helping others. [Lisa, Reflection 2, 2011]

In addition to the course activities described above, during the last two lessons of the course, each pair or group of students presented either their research findings (even if partial) or the dilemmas that arose during their research. The goal of these presentations was to give feedback to each of the students. Students referred to these presentations as a mediation of their learning: whether they were presenters and received feedback (the first quotation) or whether they gave feedback to the presenters or just listened to the discussion of their classmates' presentations (the second quotation).

> In this lesson, my research partner and I presented our research to the class. The presentation helped us a lot because we were stuck in our research. We did not know whether or not we should change the research subject... After the class discussion we found a solution and we were happy that we did not have to change the research subject because it interests us. [Sara, Reflection 6, 2013]

> I believe that merely by listening to my classmates I realized that my research is progressing well. I think that being able to hear new opinions and being exposed to my classmates' ways of working, enabled me to form new ideas about how to continue my research. [Emma, Reflection 5, 2011]

Meaningful Learning

Meaningful learning is characterized by the learner's emotional involvement with the subject matter and its relevance to the learner. During meaningful learning, learners interact with their environment in a way that contributes to their development. Students who experienced meaningful learning expressed this process in their reflections. One of the examples is Alex's course summary, in which she reviews her learning process from learning-hindering motivation ("*sounds scary, far from reality, not interesting, unnecessary*") to meaningful learning ("*many ideas are racing through my mind*").

> In my final reflection, I would like to review the process I underwent during the course. When this course started, I did not understand what the learning requirements were and what qualitative research is. Everything seemed scary, unreal, and not interesting, in other words, another unnecessary thing I have to squeeze into my busy schedule. Writing my first reflection, first lesson, exhaustion, another lesson, and another assignment ... Why am I not falling asleep at this late hour? I am at home after 12 hours at the college and I'm feeling fresh and full of energy. Many ideas are racing through my mind. I am writing drafts before I forget. I have fallen in love with qualitative research. I

> did interviews with kindergarten teachers. Overwhelming feelings. I feel respect, pride, and self-worth. I am finally doing something real. I am pleased that I can understand, think, plan, feel, and go through the entire process. Thank you for the difficult but interesting and challenging course. I hope this is not my last exposure to qualitative research. [Alex, Reflection 6, 2012]

It is not surprising that the students learned about themselves during the course. Two principles of the QRMC teaching framework suggested by Hazzan and Nutov (2014), namely "Integrating reflections into the learning process" and "Raising awareness to the researchers' emotions and to their role in the research," train students in reflective thinking (Schön, 1983, 1987). The writing of reflections reveals itself as a process that creates conditions for introspection, listening, and self-discovery, and as a process of learning the subject being studied (Richards, 2011). It is interesting to note that despite the absolute freedom to choose their subjects of reflections, only a few students chose to submit reflections that did not directly address the course (e.g., observation of children playing in preschool or some personal story). In other words, the students' reflections were means for the meaningful learning of qualitative research basics and for their personal development. Following are three examples that illustrate the contribution of the course to the students' personal development, as they perceive it. The first quotation demonstrates learning data analysis by expanding intellectual horizons, both of which were triggered by a picture presented in one of the lessons.

> The lesson took me a step forward in learning qualitative research. The lecturer's presentation contributed to my understanding of interview analysis— take what is relevant and produce as much research information as possible. I really liked the picture and was so excited about it that after the class, I looked up this artist's work. The connection that the lecturer made between the picture and data analysis excited me and made me think differently: When you look from afar, you do not notice all the details. However, when you get close and look deeply, you notice many interesting and intriguing things. [Emily, Reflection 6, 2013]

The following quote demonstrates how one of the students discovered personality traits she was not aware of following an interview with her classmate.

> In the last lesson, it was very nice to meet new classmates and to interview them. I realized how bad I was as an interviewee. I do not like to give up personal information to strangers, and this whole situation causes me a lot of discomfort. [Abigail, Reflection 4, 2011]

Another important QRMC teaching framework principle, "*Building trust between the teaching staff and the students and the students themselves*" (Hazzan & Nutov, 2014), which ensures that the interaction between the students encourages an open classroom climate, was implemented and was expressed in students' reflections. The key to implementing this principle was to help the students become acquainted with all of their classmates by requiring them to execute assignments in pairs or small groups. I made sure that the pairs or small groups consisted of students who did not know each other or had not yet worked together. This approach ensures that everyone is exposed to different points of view than the ones he or she is used to and based on personal and mutual acquaintances. The intimacy required for the high level of personal exposure needed in the course is built. Here is an illustrative example.

> In the class, the lecturer asked us first to pair up with a classmate whom we did not know. I worked with a girl who would not have exchanged a word with me if it had not been for the lecturer's request. Within seconds, we began helping one another and it was nice. Afterwards, the lecturer divided us into pairs again. Again, I worked with someone else I did not know, and this time we had to go to a quiet corner and interview each other... There was enough time for us to have a very nice connection ... [Amelia, Reflection 4, 2013]

Not all students experience meaningful learning. There are many reasons for that, such as a lack of understanding of the course content or of a lecturer's demands or stress as a result of the college studies or life outside the college. Following is part of an interview conducted by two students in which the interviewee shares her concerns about her learning experience.

> It is very difficult for me to understand the content of this course ... I am sure that the final assignment will be very difficult for me. I listen to what the lecturer says, I do my homework, and I participate in classroom group-work... I may not have read all the required reading material yet, but I believe that when I start to do the final assignment, I will begin reading as well. Despite all of the class exercises and despite everything we learn in class, it is still not something that helps me understand the course content in detail. [Miriam. Interview, 2012]

There were also students who summarized their meaningful learning by stating that they understood that despite the merits of qualitative research, they would prefer to engage in quantitative research.

> I understand what you tried to show us during the semester: to see the distinction between the two types of research, quantitative and qualitative. Although at first it seems more interesting to do qualitative research (and it is interesting, I can express my opinion, I can take part in a person's life, I can interview), but at the end of the day, I would prefer to do quantitative research—statistics, and reach some kind of outcome. [Sveta, Reflection 5, 2013]

Lecturer Role

Based on the research data analysis, the lecturer's role is encapsulated in each of the students' experiences of QRMC. This finding is not surprising as the lecturer determines the emphases given in the course, the teaching and learning methods, the assignments, and the classroom climate. However, this finding demonstrates how the lecturer role is important in each of the student's learning experiences. That means the lecturer's actions and choices have the potential to contribute to each of the students' learning experiences: motivation for learning, mediation of learning, and meaningful learning.

Motivation for learning. At the onset of the course, some students experienced hindering of learning motivation, but the lecturer's comprehensive explanation of the course structure, content, and assessments changed their emotional readiness to learn and the subsequently gained learning motivation. The following is a representative example.

> I came to the class feeling negative and frightened. However, I was surprised when the lecturer explained the subject, and it is not about numbers and calculations, but the opposite. Perhaps in the future I will learn to love this

subject. I have learned from the above that sometimes the name of the course sounds complicated and difficult, but the rumors are not always correct. In the future, I will check reliable sources and not rumors, to see what the course is about, before automatically panicking. [Zina, Reflection 1, 2011]

Classroom climate is a mixture of various components. In addition to previously mentioned components, students pointed out that my personal exposure enabled some of them to develop a positive emotional orientation towards the course it promoted their learning motivation. The following is a representative example.

The lecturer's story and her reasons for studying qualitative research fascinated me profoundly. Her desire to learn it and to pass what she has learned to us made me change my mind. It made me want to learn this course and explore! [Maggie, Reflection 1, 2012]

Mediation of learning. The connection between a student and each topic that is learned is a personal and nonlinear process; a successful connection between a student and one of the topics does not insure success in the next topic. Using different styles of mediation of learning increases the possibility that the student will connect to the course content. Hanna describes how my learning strategies as a mediator benefited her in learning how to formulate her research question.

The lecturer's strategy, learning through discussion and collaboration, helped me understand how to formulate the research question. I learned that every word, even a small one, changes the content. Therefore, it is necessary to think and to look for suitable words so as to express my thoughts carefully. [Hanna, Reflection 2, 2013]

For Iris, it was the exercise I chose as a classroom activity that helped her understand how to formulate interview questions.

The exercise we did in the classroom helped me understand how to formulate interview questions, how to sort the questions, and what information can be extracted from the answers. [Iris, Reflection 3, 2011]

Meaningful learning. The data analysis also revealed that the way of teaching created situations that facilitated some students to experience meaningful learning (Aguado, 2009; Booker, 2009; Karpicke, 2012). Following is Dan's description of my teaching strategies and its impact; he was encouraged to become an active learner, which a characteristic of meaningful learning.

In this lesson, we learned about the qualitative research tools, and we focused on collecting data through interviews. Before the lecturer began explaining, she asked what we want to know about the interview. We raised a few points and she addressed each one of them… I like the lecturer's teaching methods, she shares the process of structuring the lesson with us and that makes me feel active throughout the entire lesson. [Dan, Reflection 4, 2013]

Another way for lecturers to encourage meaningful learning of students is through the classroom climate. Active learning usually involves revealing learners' opinions, dilemmas,

difficulties, and questions in the context of their research. Students are encouraged to undergo personal exposure, which the classroom climate must enable and support. Hazzan and Nutov (2014) recommend holding class discussions as interviews, which means that anyone can express his or her opinion without fearing a critical response. Danielle describes the classroom climate as such one that enabled her to be active.

> I want to describe the classroom climate. It contributes to the efficient coping with the course as a whole. Every teacher or lecturer strives to introduce this kind of learning climate in his classes, but not everyone succeeds. Perhaps because they do not specifically invoke it as you did in the last lesson. It is not superfluous to point out that everyone has the right to speak, and even if they talk "nonsense," that is also OK. I do not tend to be active in classes, I will always prefer to listen to the others and not to speak up, and if I had "courage" to speak this time, then something here is working properly. [Danielle, Reflection 2, 2012].

Course assignments also contributed to some students experiencing meaningful learning. One such example was the midterm individual assignment, a critical reading of a qualitative research paper and its analysis according to defined criteria. It is important to note that I did not provide a list of papers for the students to choose from; the students had to find a qualitative research paper on their own. The search for a suitable paper ensured two things. First, the students implemented their knowledge (for example, they had to distinguish between a qualitative research question and a quantitative one). Second, the paper they chose could be used later for their final project. The following excerpt highlights the contribution of the midterm assignment to a student's meaningful learning.

> There is no doubt that after the midterm assessment, I feel much more confident executing such a research. Any definition we might learn in the classroom could not provide me with the knowledge, the illustration, and the experience I gained analyzing qualitative research on my own. [Joseph, Reflection 3, 2011].

In spite of my efforts as the lecturer, I did not succeed in responding to every one of the students' needs. Those whose needs were not met highlighted the importance of the lecturer's role and the tools that can help to identify these students (in this case, a bi-weekly student reflection assignment). Here is one example.

> In the last lesson, I felt stress; I felt that I did not understand anything. After reading all of the additional reading material, I still feel I do not have enough tools to deal with the course demands. We have an assignment and I really do not understand what to do. A short explanation in the classroom was not enough for me. I think that an in-depth, clear explanation was needed as well as a possibility to ask questions during the lesson. [Anna, Reflection 2, 2013].

Discussion, Conclusions, and Limitations

The contribution of teachers' research to their professional development and to education has become widely acknowledged in recent years (Cordingley, 2015; Hahs-Vaughn & Yanowitz, 2009; Villegas-Reimers, 2003). It is therefore important to provide pre-service teachers with theoretical and practical knowledge on conducting research, including qualitative research (Abuhav & Melzer-Geva, 2013; Bell, 2004). In addition, the future trend of academic

education worldwide, as identified by the Horizon Report, refers to learners not as "knowledge consumers" but as "knowledge creators" (Johnson, Adams Becker, Estrada, & Freeman, 2014). This approach to academic education is consistent with the qualitative paradigm (Strauss & Corbin, 1990). Indeed, the QRMC provides answers to these two trends in educational practice and in higher education, and therefore the knowledge about students' learning experiences is valuable for the effective design of QRMC curricula.

Previous studies indicate that emotional experiences accompany any learning process (Efklides, 2006). This fact is true in the case of the qualitative paradigm as well (Barrett, 2007; Booker, 2009; Cooper, Fleische, & Cotton, 2012; Hein, 2004; Reisetter et al., 2003). The findings of this research confirm these facts and expand them in two ways. First, this study focuses on a group that has not yet been studied (i.e., pre-service teachers). Second, the findings identify and describe three learning processes experienced by pre-service teachers: motivation for learning, in which two types have been identified—learning-promoting motivation and learning-hindering motivation; mediation of learning, in which two types can be identified—self-mediation and mediation by agent, and meaningful learning that is relevant to learners and their environment. Identifying, describing, and naming these learning processes is the theoretical contribution of this study.

The research participants differed from the previous cohort (graduate students) in at least two ways—most pre-service teachers have no experience conducting research and they do not think they need to acquire research skills for their future profession. Indeed, according to the research findings, factors that hinder learning motivation, such as negative emotions, were associated with the above. Even some of the high-achieving and enthusiastic QRMC students, who had experienced meaningful learning, did not at first understand the connection between qualitative research and their teaching training ("*another unnecessary thing I have to squeeze into my busy schedule*"). This result may indicate the insufficient maturity of pre-service teachers to study QRMC. In future research, it may be worthwhile to examine whether this immaturity is a factor in their difficulty to shift from quantitative to qualitative research methodology. Identifying the factors that make it difficult for students in general, and for pre-service teachers in particular, to make the shift required in this course, can contribute to more effective planning of the course in the future.

It seems that each of the identified learning experiences can characterize learning in any academic course and not only in the QRMC. However, since this course requires students to make a considerable change (Cooper, Fleische, & Cotton, 2012; Efinger, Maldonado, & McArdle, 2004) because its content and needed skills are unfamiliar to the majority of pre-service teachers, it is particularly important to identify these processes in order to help students make the shift in the most efficient way. One of the ways to make the needed shift is based on Efklides (2006), namely, to make the course assignments more familiar, or in other words, to relate the QRMC assignments with assignments students perceive as related to the teaching profession. This connection will help students recognize their QRMC learning assignments as "familiar" and easier than they thought them to be, and hopefully, will help them shift from learning-hindering motivation to learning-promoting motivation.

Another research result highlights the lecturer's contribution to the students' learning experiences through the emphases given in the course, the teaching methods, and the chosen assignments. Although this result is neither surprising nor new, this research emphasizes the lecturer's contribution to the students' learning experiences in two additional ways: the exposure of the lecturer's personal perceptions regarding qualitative research and the creation of an open, friendly, and social classroom climate. The lecturer's personal exposure helped some students transition from learning-hindering motivation to learning-promoting motivation. This act also contributed to the mediation of learning experiences for some students. An open, friendly, and social classroom climate was created by strict adherence to the requirement for

constant changing of class assignment partners. This teaching method provided opportunities for students to become familiar with one another, thus contributing to the mediation experience and social learning in the course (Vygotsky, 1978).

Although I put much effort into the study, it is not without limitations. The first of two main limitations is the duration of each research stage, which was also the course duration, 14 weeks. Only after submitting the final course assignment do students undergo a full experience of the qualitative research process. Students can then reflect on the process and gain a different perspective on their learning experiences and the lecturer's contribution. If the research had continued past the end of the semester, it would have been possible to maximize the potential of students as my fellow researchers.

The second limitation has to do with my dual role during the research, as both researcher and lecturer. Despite the advantages discussed in the method section, collaborating with another lecturer or researcher could have provided the opportunity to test the proposed model on additional research participants and to obtain more data. Another challenge faced when performing a dual role is the feeling that you are always being watched, which can increase the existing pressure on both the lecturer and the students.

Practical Implications

Following are some practical suggestions for a more efficient course design that are based on the research findings:

1. Encourage students to shift from learning-hindering motivation to learning-promoting motivation.
   - Students can be asked to make a list of associations that the course title, content, syllabus, or lecturer arouse in them, as is the practice in bibliotherapy (Lutovac & Kaasila, 2011). The lecturer can refer to this list during the first lesson of the course or alternatively, he or she may ignore this list. Preparing this list can, in itself, help students minimize the negative emotions that are indicative of the learning-hindering motivation some of them reported before they even enrolled in the course.
   - Opportunities for venting emotions may be created so as to identify students who are unable to move from learning-hindering motivation to learning-promoting motivation. One possible venting tool is the writing of reflections throughout the course. Regular follow-up on the reflections by the lecturer can serve to detect students who are experiencing learning-hindering motivation. The lecturer can then help these students by writing a response to the reflection.
   - More tasks that illustrate the relevance of qualitative research to the teaching profession may be given to decrease the learning-hindering motivation.
2. Create multiple opportunities for learning mediation.
   - The students' exposure to various aspects of the lecturer's involvement in qualitative research, through the presentation of his or her previous and present research, helps create an open classroom climate and contributes to creating a feeling of "familiarity" with qualitative research. For example, stories about various research events that are integrated into the teaching can act as a mediator between the students and the lecturer's messages.

- Many ways can be found to involve students in designing the course. For example, students may be asked to offer texts that will be integrated into the course.

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