

THE VIEWS OF PRE-SERVICE TEACHERS WHO TAKE SPECIAL TEACHING COURSE WITHIN THE CONTEXT OF PEDAGOGICAL FORMATION CERTIFICATE PROGRAM ABOUT MICRO-TEACHING METHOD AND A PHYSICS LESSON PLAN

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ABSTRACT

The purpose of this study is to determine the views of the pre-service teachers who received training on pedagogical formation certificate program about micro-teaching method. The study was carried out with a case study method. Semi-structured interviews were used in the study as a data collection tool to gather pre-service teachers' views about micro-teaching method. The data obtained from the interviews were interpreted using descriptive analysis. The research was carried out with 8 pre-service teachers who were continuing their training on pedagogical formation certificate program in a university located in Eastern Black Sea Region in Turkey. The pre-service teachers developed materials suitable to their majors within the context of special teaching methods course and benefited from necessary educational technologies and thus they implemented micro-teaching method for 12 weeks. All of the implementations were performed under the supervision of the researcher and after the practises, the video recordings were watched with the pre-service teachers and necessary feedback was given. At the beginning of the study, the pre-service teachers were informed about micro-teaching method and they were told what to do in step by step. The study was completed with using micro-teaching method and suggestions about how to benefit it in physics course.

Key Words: Micro-teaching Method, Pre-service Teachers, Physics, Pedagogical Formation.

INTRODUCTION

Undoubtedly, teachers are the most important factors in teaching-learning activities because teachers fulfil important functions like developing students and having them gain terminal behaviours with these activities. Therefore, all the developed countries and developing countries attach importance to train qualified teachers in our day. Learning and teaching how to learn is a very important goal for a qualified teacher (Güney and Semerci, 2009). When considered in this context, the most important factor a teacher should have is regarded as professional competence. It is aimed at promoting teacher competencies in the faculties which train teachers via graduate and pedagogical formation certificate programs and the courses prepared via Ministry of National Education In-service Training Institutes. A qualified teacher means that the generations they train become good individuals. However, the weaknesses in teacher education affects all generations and also decrease the quality of education. For that purpose, one of the most important practices regarding teaching profession in in-service training is the activities carried out within the context of teaching practices course. Teaching practice is the first opportunity which provides pre-service teachers with an opportunity to practise teaching knowledge and skills they acquired in real classroom settings. However, the activities in teaching practices might be difficult and confusing for pre-service teachers who have not had any experience before (Kuran, 2009). Moreover, pre-service teachers gain a lot of professional or academic knowledge theoretically but they are not able to apply them in schools (Goodman, 1986; Lanier and Little, 1986). Observations and implementations carried out in schools are a very important stage to raise awareness in pre-service teachers. However, they are not enough without the presence of others. Thus, micro-teaching method and similar methods are attempted to be developed in order to meet the needs and cover the problems encountered in teacher training programs (Güney and Semerci, 2009).

Micro-teaching program is defined in many ways. Deniz (1993) defines micro-teaching method as a laboratory method to simplify the complexity of normal teaching-learning processes. Allen (1980) discusses micro-teaching method as a technique which aims at having pre-service teachers gain and develop teaching skills in environments which are compared to real classrooms but scaled down in number of students and class time. Wallace (1979) defends that micro-teaching method is an instruction carried out regarding goals, behaviours, skills, and scaling down teaching encounter in class size and class time.

Micro-teaching method was first put into practice by a group of educators from the Stanford University in the USA in 1960 to improve the quality of teacher education program. Micro-teaching method has a quality to promote real time teaching practices using the relationship between theoretical and practical knowledge. Thus, it has a very important place for the pre-service teacher training (Sevim, 2013).

Micro-teaching method offers different and new opportunities to pre-service teachers about planning and practising a lot of theoretical knowledge which they have learned throughout their undergraduate studies. So, pre-service teachers gain teaching experience without feeling the fear of failure and they have a more controlled teaching practice than a normal classroom environment. This helps pre-service teachers to eliminate and correct their weaknesses by seeing them and to gain more experience before starting teaching profession. It was revealed in many studies which explored the effect of micro-teaching method (Bayraktar, 1982; Bell, 2007; Dennick, 1998; Fernandez, 2005; Hall and Leveridge, 2006; Hadfield, 1998; I'anson, Rodrigues and Wilson, 2003; Kazu, 1999; Kinchin and Alias, 2005; Klinzing and Floden, 1991; Kpanja, 2002; K ulahçı, 1994; Mellon and Dence, 1971; Metcalf, Hammer and Kahlich, 1996; Phelps, 2006; Saunders, Gall, Nielson and Smith, 1975; Semerci, 1999; Simbo, 1989; Ően, 2010; Wilkinson, 1996) that this method was successful.

Special Teaching Methods Course in teacher education included in the curriculum of education faculties and in the pedagogical formation certificate program is undoubtedly very important for the implementation of micro-teaching method.

When the relevant literature was reviewed, it was found that there were a lot of studies which examined the efficiency of micro-teaching method. However, the research studies about pre-service teachers who do not have any teaching experience and who continue pedagogical formation certificate program to enter a teaching profession have not been found. The most important reason for conducting this research study is that after pre-service teachers who will shape our future eliminate their weaknesses about professional competency, they are required to start their profession. For that purpose, it is considered that this study will pave the way for other studies which will be conducted in the field of teacher training.

METHOD

Because this study which was conducted to determine the views of pre-service teachers who receive training in pedagogical formation certificate program about micro-teaching method aims at describing a pre-existing condition, it is a descriptive study. Case study method, one of the descriptive research methods, was preferred in the study. The most important reason for using case study in this study is that data collection tools facilitate in-depth examination of a phenomenon via including all the resources. Thus, the subject being studied is examined in-depth and in-detail.

The Sampling of the Study

The research was carried out with eight pre-service teachers who take pedagogical formation certificate program in a university located in Eastern Black Sea Region in Turkey. Purposeful sampling was used in the study. In qualitative studies, small sample size was selected for in-depth examination of the sampling. For this reason, purposeful sampling is preferred to random sampling (Munn, Johnstone and Holigan, 1990). In purposeful sampling, a clear set of important criteria for selection is determined and the sampling selected in terms of these criteria is considered to represent the particular characteristics of the population of the study (Yin, 2003). Out of eight pre-service teachers, 6 of them are females and two of them are males.

Data Collection Tools

A semi-structured interview form consisting of eight questions was developed to determine the pre-service teachers' views about micro-teaching method. While preparing the interview questions, the relevant literature was reviewed and the questions which would cover micro-teaching method with its all aspects were designed. At the first stage, the interview form consisted of 12 questions and this form was reviewed by two faculty members who were experts in their major. After the examination, four questions were extracted from the interview form and two questions were revised, so they reduced the number of questions to eight and the interview form was finalized. The interview form designed was carried out with the pre-service teachers at the end of a 12-week implementation. The interviews were generally performed in two stages. These stages are given below:

- 1- The pre-service teachers were informed about the reasons for carrying out interviews. While the pre-service teachers were stating their views about the questions in the interview form, they were asked to indicate the questions which they were not sure about the answers or if they did not have any information about the subject, they would answer the question as "I do not have an idea about the subject". It was realized that the pre-service teachers had different jobs apart from teaching profession and they communicated with people for years due to their occupations but they got nervous. Therefore, in order to overcome their nervousness they were engaged in small talk. The interviews did not start until the pre-service teachers felt themselves ready.
- 2- In this stage, the pre-service teachers were asked the questions in the interview form. In line with the responses of the pre-service teachers, sub-questions were asked to them for detailed explanations when required. Each interview lasted 20 minutes. While presenting the findings obtained from the interview data, some abbreviations were used. The meaning of these abbreviations were given below:

R: Researcher, PST: Pre-service science teacher, PST₁: First pre-service teacher, PST₂: Second pre-service teacher, PST₃: Third pre-service teacher, PST₄: Fourth pre-service teacher.

Data Analysis

In order to obtain reliability and validity in this study, the following were carried out:

The interviews conducted face-to-face with the researcher and the participants were recorded with a tape recorder after receiving the participants' approval and they were reassured that all the data recorded would be deleted after the study. After the interviews, the pre-service teachers listened to the data recorded and they were asked whether there were any points they would like to add or correct. The pre-service teachers approved that the recordings were accurate and complete. The data obtained from the interviews conducted by the pre-service teachers were analysed utilising content analysis technique. Content analysis is defined as a systematic and a replicable technique for summarizing some words of a text into fewer content categories based on explicit principles of coding (Büyükoztürk, Kılıç Çakmak, Akgün, Karadeniz and Demirel, 2013). Regarding this technique, the data were divided into categories and they were evaluated. The people who are experts in their fields watched some videos and listened to some voice recordings of the categories identified and expressed their views on the topics. The data were analysed and their frequencies (f) and percentages (%) were given. The responses to the interview questions were supported with direct quotations from the pre-service teachers. In the next section of the study, the findings obtained from the analyses were presented in-detail.

Using Micro-teaching Method within the Context of Research

It was determined that the pre-service teachers who continued pedagogical formation certificate program had different jobs. After the certificate program, the pre-service teachers wanted to work as a teacher but because they did not have any experiences about teaching, it was considered as a problem. Thus, it is considered that the candidates will have problems during their first year of teaching. Moreover, because they have had different jobs for years, this will lead to some adaptation challenges of the candidates in induction period of teaching practice. The researcher had interviews with the faculty member to overcome this problem. The interviews conducted revealed that the sampling that experienced the problem consisted of pre-service teachers and therefore, they suggested that micro-teaching method be used.

In line with these suggestions, a term plan including relevant subjects given within the context of Special Teaching Methods course and from their majors was prepared for the pre-service teachers who continued to receive training in pedagogical formation certificate program. The pre-service teachers made the necessary preparations about the topics assigned (literature review, lesson plan about the subject, developing suitable materials and so on) and benefiting from educational technology, they presented their lessons using micro-teaching method for 12 weeks. Four pre-service teachers were given one lesson time each week and the implementations were carried out. Throughout such implementations, each teacher had an opportunity to use micro-teaching method six times. Micro-teaching sessions took place within the context of special teaching methods course for 10 weeks. In the last two weeks, the pre-service teachers conducted micro-teaching sessions regarding their majors. A physics lesson plan belonging to one of the pre-service teachers was given in Appendix 1.

During the lesson presentations, the pre-service teachers were not intervened. All of the practices were carried out under the supervision of the researcher. At the end of each lesson, the researcher met the pre-service teachers one by one and they watched the videotaped lesson for review and feedback was given about the presentation. During these meetings, the pre-service teachers were asked to evaluate themselves. The researcher mentioned the weaknesses observed during the lessons and made some suggestions. Then, the researcher held meetings with all of the pre-service teachers and they watched the videotapes again and the researcher asked the pre-service teachers to evaluate one another. At the end of the term, the researcher watched the lessons which the pre-service teachers presented in the practice schools within the context of teaching practice. These lesson presentations were recorded with a camera and they were watched with the pre-service teachers again and necessary feedback was given.

Semi-structured interview forms were developed to determine the pre-service teachers' views about micro-teaching method. The aim of the interview form involves in-depth analysis of the pre-service teachers' views on micro-teaching method. The interviews were conducted after the implementation of micro-teaching method for 12 weeks.

Considering the evaluation of the data obtained via interview recordings during the interviews, they were reflected without making any changes to support the data. And finally all the data obtained and the analyses and interpretations within the context of the research study were checked via receiving the expert opinions apart from the researcher and the research findings were enriched with different perspectives.

FINDINGS

The Findings Obtained from the Interviews Carried out at the end of the Research

The findings obtained as a result of analysis of responses given to the questions in the interviews carried out to get the pre-service teachers' opinions about micro-teaching method in the research study were given below:

Question 1: *“Have you ever practised micro-teaching method in your previous educational experiences or in your profession? If yes, can you please explain in which lessons you have used and how you have implemented it?”*

The participants' responses to question 1 were presented in Table 1.

Table 1: The analysis results of the responses to the question 1 by the participants.

INTERVIEW QUESTION	CATEGORIES	FREQUENCY and PERCENTAGES	
		f	%
<i>Have you ever practised micro-teaching method in your previous educational experiences or in your profession? If yes, can you please explain in which lessons you have used and how you have implemented it?</i>	No, I have never practised it.	6	75.00
	Yes, I have.	2	25.00

When the first question which was asked to measure pre-service teachers knowledge about micro-teaching method and to determine whether they implemented it before or not was examined, six pre-service teachers stated that they had never known about micro-teaching method. Two pre-service teachers stated that they implemented micro-teaching method before. However, these two pre-service teachers were asked another question about how they practised micro-teaching method. It was understood from the responses that pre-service teachers evaluated the lectures which they gave during their undergraduate studies or in some courses within the context of pedagogical formation certificate program within the scope of micro-teaching method.

An example from the responses given about each category in order to explain the existing situation was cited below:

-PST₁: “No, I have never had the opportunity to implement micro-teaching method.”

-PST₈: “Yes, I taught in some courses before.”

-R: “Was the lesson which you taught recorded with a camera and did your teacher watch it again and give feedback to you?”

-PST₈: “No. But I taught the whole topic. For nearly twenty minutes our teacher did not interrupt me. I even asked questions about the topic I taught to my peers.”

The pre-service teachers are not graduates of education faculty and they have never performed a task regarding teaching profession before. Therefore, it was understood that any of the pre-service teachers did not know micro-teaching method and they could not implement it. It was considered that the responses given might have been resulted from these.

Question 2: “What were the benefits of micro-teaching method which you implemented as a pre-service teacher?”

The participants’ responses to question 2 were presented in Table 2.

Table 2: The analysis results of the responses to the question 2 by the participants.

INTERVIEW QUESTION	CATEGORIES	FREQUENCY and PERCENTAGES	
		f	%
<i>What were the benefits of micro-teaching method which you implemented as a pre-service teacher?</i>	I really loved teaching profession.	3	37.50
	I had an opportunity to overcome my excitement and fears	4	50.00
	It did not have any benefits.	1	12.50

While seven teachers gave positive answers to the question 2 which was asked to learn their opinions about the benefits of micro-teaching method, one pre-service teacher gave a negative answer. Out of seven candidates who answered the question positively, three of them identified that micro-teaching method made contributions to them to like teaching profession. Four teacher candidates stated that it made contributions to eliminate personal negativities. When the pre-service teacher who gave a negative answer to the question was asked other questions about the reason of it, he stated that he had a bad experience in his undergraduate studies.

An example from the responses given about each category in order to explain the existing situation was cited below:

-PST₂: "My only purpose to get a pedagogical formation is to have a profession. However, because I am going to have a profession which I like, I am looking forward to meeting my students because micro-teaching method made me love teaching profession very much. I became very happy when I saw that by transferring my knowledge and teaching them, some people tried to learn something by listening to me."

-PST₆: "I have always been afraid of talking in public in my life. You noticed it when you watched my video recording after the implementation of micro-teaching method and you criticized me for my anxiety and nervousness. However, I overcame these weaknesses as I gave a lecture with micro-teaching method. Now, I feel that I am ready for teaching profession."

-PST₈: "I believe that micro-teaching method did not bring any benefits to me."

-R: "Can you please explain why you think like that?"

-PST₈: "Sir, while I was teaching I felt that my peers were listening to me as if they were teasing me. I was getting bored during the implementations. That's why I could not even speak my mind as I wanted to finish as soon as possible."

-R: "However, I was not witness to any behaviours of your peers which intended to mock you. To what extent do you think you are right?"

PST₈: "Sir, during my undergraduate studies I lectured on a topic once and my peers teased me. Therefore, during these practices, I was anxious about experiencing the same thing again. However, when I start teaching profession, as I will address to the early years age group, I don't think that I will encounter such problems."

While micro-teaching method developed positive feelings in seven pre-service teachers, it could not change the negative feelings of one teacher. The reason for this was that the candidate had a bad experience about talking in front of the other people. However, it was thought that if the researcher had identified the bad experience the candidate had at the beginning or during the implementations, he would have coped with it.

Question 3: *"What were the problems you encountered during the implementations of micro-teaching method?"*

The participants' responses to question 3 were presented in Table 3.

Table 3 :The analysis results of the responses to the question 3 by the participants.

INTERVIEW QUESTION	CATEGORIES	FREQUENCY and PERCENTAGES	
		f	%
<i>What were the problems you encountered during the implementations of micro-teaching method?</i>	did not encounter any problems.	4	50.00
	Time was not enough.	3	37.50
	It was difficult to lecture to my peers.	1	12.50

While four pre-service answered the question 3 which was asked to determine the problems they encountered during the implementations of micro-teaching method that they did not have any problems, one teacher candidate stated that it was difficult to teach the same age groups. Three teacher candidates mentioned lack of time.

An example from the responses given about each category in order to explain the existing situation was cited below:

-PST₃: "Sir, the implementations were quite enjoyable and productive. I did not encounter any problems or difficulties during the implementations."

-PST₇: "The most important problem I had was that I had to explain the topic in one lesson hour. I did not have enough time while teaching the physics topics from my major."

-PST₈: "I got stressed while teaching my peers. To me, this is the biggest problem of micro-teaching implementations. If I had taught early age group students in a normal class environment, I would not have encountered this problem."

During the implementations of micro-teaching method, what draw attention is the students' views on the lack of time while teaching physics topics. It is considered that because the pre-service teachers tried to revise a lot with physics topics, the course hour was not enough.

One pre-service teacher stated that it was very boring to teach people who were his peers. As it can be understood from this candidate's previous responses, the reasons why he gave this answer could be that he has a prejudice towards the topic.

Question 4: *Can you compare and contrast the implementations you carried out within the context of special teaching methods course and the practises you carried out in schools within the context of teaching practice course?*

The participants' responses to question 4 were presented in Table 4.

Table 4: The analysis results of the responses to the question 4 by the participants.

INTERVIEW QUESTION	CATEGORIES	FREQUENCY and PERCENTAGES	
		f	%
<i>Can you compare and contrast the implementations you carried out within the context of special teaching methods course and the practises you carried out in schools within the context of teaching practice course?</i>	The practises in the lesson were more productive.	1	12.50
	The implementations we carried out in schools were more productive.	5	62.50
	Both practises supported one another.	2	25.00

The pre-service teachers were asked to compare and contrast micro teaching method carried out within the context of special teaching methods course and teaching practice with the 4th question. When the responses were examined, it was understood from the statement of one teacher that the implementations carried out in special teaching methods course were more productive. Five pre-service teachers said that the implementations carried out in the schools were more productive. Finally, two pre-service teachers defended that both implementations supported one another.

An example from the responses given about each category in order to explain the existing situation was given below:

-PST₄: "Sir, I felt myself comfortable during the implementations in the lessons. I think that it was a more sincere environment. On the other hand, because the teacher was in the class and the students behaved naughtily, they prevented the lesson from being taught efficiently."

-PST₁: "When I went to the blackboard to teach a topic in special teaching methods course, I felt nervous. In my opinion, its effect may have resulted from the fact that I was teaching my peers. But, I did not have the feeling of unease in the practice school because the students were much younger than us, the subjects were related to our majors, and I had full knowledge of the topics. I mean it was much easier for me to tell what I have already known."

-PST₇: "Both the implementations in the lessons and in the schools were quite productive. I believe that I could teach more efficiently during the implementations in the schools with the experience I gained during the implementations in the lessons. Moreover, the practices we carried out in real classroom settings in the schools offered an opportunity to compensate for my weaknesses during the implementations in the lessons."

It was revealed that one of the pre-service teachers responded that the implementations carried out within the context of special methods courses were more effective. It is considered that this situation may have resulted from the fact that teacher candidates did most of their practices regarding this course. Moreover, considering the pre-service teachers' views about the effective implementations in the schools, they may have used these expressions because they felt themselves more relaxed due to the age of students. Two pre-service teachers stated that both implementations supported one another. It was observed that these two pre-service teachers acted quite calmly and self-confidently during the implementations both in the schools and in special methods course. It is regarded that the responses of teacher candidates may have resulted from that.

Question 5: *"What are your views about the implementations of micro-teaching method?"*

The participants' responses to question 5 were presented in Table 5.

Table 5: The analysis results of the responses to the question 5 by the participants.

INTERVIEW QUESTION	CATEGORIES	FREQUENCY and PERCENTAGES	
		f	%
<i>What are your views about the implementations of micro-teaching method?</i>	We kind of rehearsed teaching practice.	2	25.00
	It was very productive.	4	50.00
	Preliminary preparations were exhausting.	2	25.00

The responses of pre-service teachers to the question 5 which aimed at learning their views about the implementations of micro-teaching method were evaluated under three categories. In the first category, two pre-service teachers stated that the implementations were like a rehearsal of teaching profession. In the second category, four of them said that the practices were very productive. In the last category, two teacher candidates said that preliminary preparations for the practices were exhausting.

An example from the responses given about each category in order to explain the existing situation was cited below:

-PST₂: "The practices we did both in special teaching methods course and in the schools were like a rehearsal of teaching profession. During the implementations, I think that I have gained experience about teaching"

profession. I have gained important experience about class management in the implementations carried out in schools.”

-PST₆: “At the beginning of the practices, I felt nervous and restless. But as the time passed, I felt that I got rid of these negativities. I do think that I would have become a good teacher if I had started teaching like that. But now I feel that I am ready for teaching profession. Moreover, another advantage was that teaching methods and techniques which I used while teaching made contributions to me. To sum up, I think that all the practices we did were very effective.”

-PST₅: “Sir, the implementations were generally enjoyable but intensive. However, having to make preparations and prepare a lesson plan in advance for the practices which we were going to do in the lesson was very difficult for me.”

The responses of the pre-service teachers revealed that they had positive views about the implementations of micro-teaching method.

However, two pre-service teachers stated that the implementations were exhausting. These pre-service teachers had another job apart from teaching profession and they had to make preparations for the lesson besides their heavy work load. Therefore, it was considered that they responded like that due these reasons. It was observed that one of the candidates who answered the question under this category was exhausted while he was carrying out implementations because he finished his night shift.

Question 6: *Did you have any positive or negative conditions you experienced during the teaching practices? Please explain it.*

The participants’ responses to question 6 were presented in Table 6.

Table 6: The analysis results of the responses to the question 6 by the participants.

INTERVIEW QUESTION	CATEGORIES	FREQUENCY and PERCENTAGES	
		f	%
<i>Did you have any positive or negative situations you experienced during the teaching practices? Please explain it.</i>	No, I didn't	2	25.00
	I had a positive experience.	4	50.00
	I had a negative experience.	2	25.00

The aim of the question 6 was to determine whether pre-service teachers encountered any negative or positive situations during the implementations of micro-teaching method. Two of the pre-service teachers stated that they did not have any memories. Four teacher candidates mentioned their memories and two pre-service teachers said that they had bad memories.

An example from the responses given about each category in order to explain the existing situation was given below:

-PST₁: “No, any bad or good memory does not come to my mind now.”

-PST₈: “Sir, while I was teaching in a practice school, one of the students gave correct answers to the question I asked and it made me very happy because they understood the subject I explained very well and the practices yielded promising results during the lesson which caused positive feelings to develop in me.”

-PST₇: “Yes. I experienced something bad. You also know it, sir. A student from a practice school was continuously disturbing his friend sitting next to him. When I warned him not to do it again, he told me that I was not his real class teacher and I could not meddle in his affairs and this made me very sad.”

As understood from the responses, the pre-service teachers had both bad and good experiences in practice schools. Because practice schools are completely natural learning environments, it is inevitable that the incidents which can be mostly experienced in teaching profession can occur in such settings. Thus, it is considered that the pre-service teachers regarded them as bad memories.

Question7: *Can you please tell what kind of benefits the experiences you had during the micro-teaching implementations will provide you when you become a teacher?*

The participants' responses to question 7 were presented in Table 7.

Table 7: The analysis results of the responses to the question 7 by the participants.

INTERVIEW QUESTION	CATEGORIES	FREQUENCY and PERCENTAGES	
		f	%
<i>Can you please tell what kind of benefits the experiences you had during the micro-teaching implementations will provide you when you become a teacher?</i>	About class management.	1	12.50
	About using teaching methods and techniques.	4	50.00
	feel self-confident.	1	12.50
	About preparation for the lesson and using time efficiently.	2	25.00

The question 7 aimed at determining what kind of benefits the experiences pre-service teachers gained during the micro-teaching implementations would provide them in their professional life. One teacher candidate stated that he would manage the class better with the experiences he had. Four teachers said that with the experiences they had they would use the teaching methods and techniques much better. One pre-service teacher responded that he felt more self-confident about teaching profession. And finally two teacher candidates stated that they would benefit from their experience regarding the preliminary preparations and time management during the lesson.

An example from the responses given about each category in order to explain the existing situation was given below:

PST₁: "I gained a lot of experience during the micro-teaching implementations. I am sure that this experience will bring a lot of benefits to me in my professional life. However, I think that I will benefit from this experience mostly about class management because when I taught the first lesson in the practice school, I was aware that the students were not listening to me. But as the weeks passed, I managed to have the students listen to me and teach the lesson effectively and efficiently."

-PST₇: "Although I had a lot of theoretical knowledge about teaching methods and techniques, I realized that I did not know how to use them in practice during the implementations. I also learned how teaching methods and techniques were used in practice during the micro-teaching implementations. I believe that this will be the most important benefit it will bring to my professional life."

-PST₈: "It has always been very difficult for me to speak in public. However, the experiences I had gained demonstrated that I can speak in public. Well, I feel confident now."

-PST₅: "Sir, it was really difficult for me to get prepared for the course in advance. However, I am aware now that these preliminary preparations made me gain a lot of experience. I think that the preparations I made before the lesson and the experiences I gained during the lesson will be very useful to me in my career. I believe that I can use the time efficiently in the lesson."

The responses of the pre-service teachers to question 7 in the interviews were discussed under four categories and it was observed that there was positive feedback. It was understood from the given responses that all of the pre-service teachers gained variety of experiences. Out of the experiences they gained, the responses about using teaching methods and techniques stand out. The reason for this might have resulted from the fact that during the implementations ultimate attention was paid to the teaching methods and techniques.

Question 8: *What are your recommendations about micro-teaching method?*

The participants' responses to question 8 were presented in Table 8.

Table 8: The analysis results of the responses to the question 8 by the participants.

INTERVIEW QUESTION	CATEGORIES	FREQUENCY and PERCENTAGES	
		f	%
<i>What are your recommendations about micro-teaching method?</i>	I have no recommendations.	1	12.50
	More time must be spared.	5	62.50
	More concentration must be paid on the implementation in the schools.	2	25.00

The pre-service teachers were asked to make recommendations about micro-teaching implementations with the last question in the questionnaire. One teacher candidate stated that he did not have any suggestions. Five pre-service teachers suggested that more time should be spared to implementations. Two pre-service teachers suggested that micro-teaching method should be carried out in practice schools.

An example from the responses given about each category in order to explain the existing situation was given below:

-PST₆: *"In my opinion, the implementations were quite successful and efficient. Sir, I do not have any recommendations."*

-PST₇: *"I think that practices must be carried in more than one lesson hour, so the topics can be thought more effectively."*

-PST₃: *"Sir, because the implementations we carried out took place in real classroom settings, I felt myself like a real teacher during the implementations. In my opinion, more weight must be given to the practices carried out in schools."*

One teacher candidate stated that he did not want to make any recommendations in the last question which asked the pre-service teachers' suggestions about micro-teaching implementations. It was thought that the pre-service teacher who gave this answer got fed up with the interview and he gave this answer to finish it as soon as possible. It is considered that the reason why five pre-service teachers suggested that more time should be spared to the practises may have resulted from the fact that the topics related to physics course took more time. Two pre-service teachers suggested that more weight should be given to the implementations carried in the schools. It is considered that the reasons for this may have resulted from the fact that the topics related to the majors of pre-service teachers were only included in the implementations in the schools and because they had full knowledge of the subject, they thought that the implementations in the schools must be carried out intensively.

DISCUSSION AND RESULTS

When the findings obtained from this study which was carried out to determine the views of pre-service teachers who were continuing the pedagogical formation certificate program about micro-teaching method were examined, the most important finding was that pre-service teachers had positive views about the implementations. This result shows parallelism with the studies which revealed that most of the students who participated in micro-teaching implementations had positive attitudes towards the practice and they wanted the implementations to continue (Akalın, 2005; Aksan and Çakır, 1992; Bayraktar, 1982; Ceyhun and Karagolge, 2005; Erökten and Durkan, 2009; Gürses, Bayrak, Yalçın, Açıkıldız and Doğar, 2005; Ismail, 2011; Kazu and Külahçı, 1996; Kazu, 1999).

It was found from the responses given to the questions in the questionnaire that pre-service teachers did not have any experience about teaching practices before. It was also observed that throughout the implementations carried out about micro-teaching method, the pre-service teachers realized their weaknesses and they took responsibilities for taking the opportunity of self-evaluation. This made contributions to teacher candidates to gain a lot of experience about teaching profession. This result is compatible with the previous studies which state that it made positive and permanent contributions to pre-service teachers' teaching skills (Amobi, 2005; Evans, 1980; Görgeç, 2003; Kazu, 1996; Kılıç, 2010; Kuran, 2009; Lee and Wu, 2006; Şahinkaya, 2009; Şen, 2010). In a study conducted by Evans (1980), the findings obtained revealed that micro-teaching implementations made contributions to acquire teaching skills, to help overcome some personal fears about class management, and to learn teaching methods more closely. Lee and Wu (2006) in their research found that micro-teaching implementations promoted pre-service teachers' teaching experiences. Moreover, the findings of this study are completely compatible with the findings of Peker (2009) which indicated that this implementation made contributions to pre-service teachers to promote their teaching skills.

The pre-service teachers' responses to the 3rd question in the interviews revealed that the time allocated for the implementations of micro-teaching method was not enough. Moreover, when the pre-service teachers were asked to make suggestions about micro-teaching practices in the last question of the interview, they suggested that more time was required for the implementations. This demonstrates that the time allocated for the implementations were not enough. The findings of the research show similarity with the findings of the studies carried out previously which revealed that pre-service teachers felt uncomfortable due to the lack of time during the micro-teaching implementations (Fuller and Manning, 1973; Holzman, 1969; Kazu, 1996; Külahçı, 1994; Steward and Steward, 1970).

The responses given to the last question which asked suggestions about micro-teaching method revealed that the pre-service teachers gave responses at critical dimensions via promoting reflective thinking. This shows that the implementations carried out about micro-teaching method were actualized quite efficiently and successfully. This result obtained from the study findings shows parallelism with the studies of (Lily Orland and Hayuta, 2007; l'Anson, Rodgers and Wilson, 2003; Li,X and Lal, 2005).

RECOMMENDATIONS

In line with the results obtained in the research, the following suggestions were made:

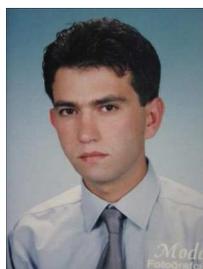
It was determined from the implementations carried out within the context of the research and the responses of the pre-service teachers to interview questions that more time must be allocated for micro-teaching studies carried out with some courses which contain abstract concepts like physics. Fewer pre-service teachers must be included in the future research studies as sampling. By this means, more opportunities can be offered to pre-service teachers to do more practices and thus coping with the problem of time experienced during the implementations.

Pre-service teachers who study at Education faculties graduate from the university in 4 or 5 years depending on the departments they are studying and during their education they have opportunities to do practices about

teaching profession. On the other hand, pre-service teachers who continue pedagogical formation certificate program graduate from the faculties apart from education faculties. They do not have any practice opportunities for teaching profession in the undergraduate programs from which they graduate and also the time allocated for teaching practices within the context of pedagogical formation certificate program is limited. Thus, the courses particularly in pedagogical formation certificate program must be designed according to micro-teaching method. Therefore, pre-service teachers will gain more experience about teaching profession.

Pre-service teachers who go to practice schools within the context of teaching practice can only teach two or three times throughout the whole term. Unfortunately, micro-teaching method is not used while lecturing. Thus, pre-service teachers are unable to realize their weaknesses themselves. In order to solve this problem, coordination must be established with the practice schools and the courses involved in pedagogical formation certificate program about teaching practice must be taught with micro-teaching method.

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APPENDIX-1

PHYSICS LESSON PLAN

Date: 02/05/2015

Course Name	Physics
Grade	10 th grade
Topic	Light-Shadow-Reflection-Refraction
Duration	50 minutes
The Purpose of the Topic (Goal)	The aim is to have students make deductions on the behaviour of light and image formation in different settings and on optical tools by associating light and the act of seeing.
Objectives / Learning Outcomes	<ul style="list-style-type: none">- A student can explain the light transmission features of transparent, semi-transparent, and non-transparent materials.- Examine the behaviour of light during reflection and make deductions.- Explain the concept of refraction and give examples to refraction.- Analyse phenomenon of total internal reflection of light and critical angle.
Methods and Techniques	Lecturing-Question and Answer- Analogy
Equipment and Tools	Computer, Projection
THE COURSE PROCESS	

Introduction:	
<p>The students' attention was drawn by asking them what makes our eyes see.</p> <p>If atoms of matter are given energy in different ways, the atoms turn to their old state and they emit the energy they absorbed as light. Visible light is the energy released outside and perceived by the human eye and invisible light cannot be perceived by the eye (Motivation).</p> <p>We will learn the light sources encountered in daily life, how light is propagated, the formation of shadow, refraction and reflection.</p>	
Result:	
<p>Light is a kind of energy type. Light sources are divided into two as hot (incandescent) and cold. A light which comes from a light source or effuses from a small opening travels in straight lines. When the light hits the matter, an interaction occurs between the light and the matter. This interaction may change depending on the type and structure of the matter. The materials are divided into three categories as transparent, semi-transparent, and non-transparent materials. Light has both physical and chemical effects. One of the physical effects of light is that it creates pressure. Tools called radiometer are used to measure the light pressure. If the rays of light emitted from a light source are obstructed by an opaque object, the rays cannot pass thorough the object and they form black regions behind the object. This black region is called a shadow. Lunar eclipse and solar eclipse are identified as the most current examples of a shadow.</p> <p>Light rays can undergo <i>reflection or refraction</i>. It is stated that the direction of the reflected light ray changes abruptly and the direction and speed of the refracted light ray changes. Refraction can be illustrated using analogy technique. Considering the behaviour of light, phenomena encountered in daily life like rainbow and mirage can be given as examples to the students.</p>	
Conclusion:	
<p>Light is an important concept and light and the act of seeing are associated with one another. Considering the relationship between behaviour of light and image, the phenomena encountered in daily life can be inquired.</p>	
Evaluation and Assessment	<ul style="list-style-type: none"> - A student can explain the light transmission features of transparent, semi-transparent, and non-transparent materials. - A student is asked to explain the behaviour of light in reflection. - A student is asked to explain refraction and give examples to refraction. - A student is asked to explain the phenomenon of total internal reflection of light and critical angle.
Evaluation	<p>As the subject of the course taught today attracted students' attention a lot, the lesson was completed without distraction of students. The students participated in the lesson. Because the feedback is positive, I believe that the goals and objectives were attained.</p>

Approved
 .../05/2015

.....
 Physics Teacher

.....
 School Director