



## The development of critical reflection skills: An application of school and teacher themed movies<sup>1</sup>

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### Abstract

The present research aims to determine the effect of films including school and teacher whose learning processes are applied with “Critical Reflection Skills (CRS)” on the critical reflection skills of 4<sup>th</sup> primary education teachers. In accordance with this purpose, the research was carried out with 73 participants who were the 4th grade students in the Primary Education Teacher Training Department of Gazi Faculty of Education in Gazi University in 2012-2013 education year. The qualitative and quantitative research methods were applied together during the process. Data were collected with “The Critical Reflection Self-assessment Scale (CRSS)” - “Critical Team Application Focus Team Interview Form (CTAFTIF)” and “Meta Team Observation Form”. During the data collection process, the participants watched the school and teacher containing films at first and then, “Critical Reflection Application (CRA)” adapted from “Critical Reflection Strategy with Teams” was applied. Content analysis was adopted in the analysis of the qualitative data gathered during the research process. In the analysis of the quantitative data, t-test and one-way variance analysis were used. The results of the conducted research demonstrated that teachers started to generate thinking of critical reflection with school and teacher containing films and the CRA process. It was noticed that statistically a significant difference occurred between the control and experimental groups in terms of critical reflection skills.

**Keywords:** Primary education teacher candidates; critical reflection; school and teacher themed movies.

### INTRODUCTION

Teaching profession is one of the crucial facts, which affects the society directly. The importance of the social life, which is becoming more complex, put on the tasks and responsibilities related to the teaching profession, are increasing day by day. Therefore, the topic of determining the standards of teaching profession is a matter that should significantly be focused. In Turkey, the topic of “teacher qualifications” and determining these qualifications are among the topics, which are lately under discussion.

Teachers are to be trained to have a broad general culture, suitable to the determined standards and enough branch of knowledge. Yet, even if the pre-service teacher is tried to be prepared ideally in the university, some situations such as the difference of practice, the excitement of starting the job (Yalçınkaya, 2002), adapting the environment to live in, starting the career...etc,

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show that he/she will have some problems during the very beginning of the profession and need a broad orientation.

Some situations such as living a foreign place far from the hometown, adapting to a new place, making new friends and having a new family occurred with starting the profession are the first steps to the adult world. The teachers starting the job are crossing from the freedom of the years in school to the life of profession and its limitations and responsibilities. Therefore, crossing from the teacher training to teaching profession can be difficult and worrying for pre-service teachers. Because of this situation, which is defined as “reality shock”, some differences may occur in the perceptions of the teachers, who are new in the profession, compared with their past. “The reality shock” can be defined as the effect of paradox, which the pre-service teachers encounter in their professional applications, on their perspectives of the profession (Veenman, 1984). That the teachers’ get rid of the problems generated by this adapting problem with the least harm is thought to be a significant stage in terms of the professional development.

When the teacher training process is investigated, it is thought that the adaptation of teachers to real professional practice is disregarded and the process is mainly intended to transfer the knowledge. The pre-service teachers, who take place in teacher training process, claim that they recognize themselves deficient during the real professional practices, and unprepared towards the possible problems (MacDonald, 1999). It is thought that using school and teachers included films in the process of teacher training will be useful in terms of preparing the pre-service teachers for real professional practices, transferring the theoretical knowledge into the practice suitably, enabling the pre-service teachers to realize the sides similar to the real ones... etc. With their constituting the similar condition, the films help us to criticize our beliefs and values related to the teachers or teaching process. Thus, it may be possible to avoid disappointing and encourage the pre-service teachers by struggling with prejudices. So, the pre-service teachers will have the opportunity to be real heroes who enable consistent and highly qualified learning experience to their students in order to constitute successful generations (Fisher, Harris, & Jarvis, 2008).

At that point, when the relationship between the film and viewer is considered, it will be appropriate to remember the term “identification” as a concept. The largely usage of the identification concept is the viewer’s awareness of some “similarities” between the viewer and a character or situation in a film. Apart from “Understanding” or “making sense”, identification is related to emotional reaction about the film, entering, appreciation, empathy, catharsis or affectivity. Identification means our active participation with the passage. We “care about” the character as it is claimed (Kirel, 2010).

Identification is an intellectual process as well as an emotional process. When the identification reviewed, it can be argued that it is a pragmatic process of undertaking in which the emotionally, intellectually and socially useful ones are selected and applied among the emerged components because of all the narrative arrangements in the film watched by the viewer. While the one who is identified may sometimes be a powerful male, sometimes may be the whole representations... etc, (Kirel, 2010). Because of the identification, it can be expressed that the pre-service teachers may set identification with the teacher characters in the film.

Therefore, it is thought that school and teacher included films can be considered as a sample case application during the teacher training process. Therefore, it is claimed that pre-service teachers may set an identification with the characters in the films, can share their ideas related to the real events in an environment without risk, make reflection and thus the films can contribute to transfer the theoretical knowledge to the practice easily (O’Farrel, 2000; McCammon, Miller, & Norris, 1997; Şahin, Atasoy, & Somyürek, 2010). It is claimed that films have effect even on the pedagogical beliefs of pre-service teachers (Boyd, Boll, Brawner & Villaume, 1998; Phelan and McLaughlin, 1995).

There are researches demonstrating that the pedagogical beliefs can be changed through reading, in-class discussions... etc, in addition to real experiences (Beyer, 1991; Boyd, Boll, Brawner & Villaume, 1998; Tatto, 1998; Tran, Young & DiLella 1994; Yost, 1997; Yost, Forlenza-Bailey and Shaw, 1999). Considering this, it is thought that discussions made through the films which reflect real experiences or similar to real experiences are effective in change the beliefs of pre-service teachers. The purpose here is to create tension and uncertainty; thus, make pre-service teachers focus on multiple sides of the paradox and then help them make choice among lots of choices (Boyd, Boll, Brawner & Villaume, 1998; Kaşkaya, Ünlü, Akar & Sağırlı, 2011; Phelan and McLaughlin, 1995).

Therefore, rather than recreating the professional knowledge, it is expressed to be the way to develop the practice (Barnett 1994), described as “thinking about the conditions and effects of one’s actions” (Steier 1991) and the critical reflection process which means to demonstrate the effects and results of the behaviors and make teachers have the critical reflection skill as an ability for pre-service teachers (Birch & Miller 2000).

When the critical reflection is considered in terms of professional development, the understanding of reflective approach in the studies of Argyris & Schon (1974), Schön (1983, 1987), Valli (1997), Hatton & Smith (1995) is taken into the consideration. Within the base of the reflective application thinking, specifically related to the teaching of professional applications, reflecting the experiences take place (Dewey, 1933). According to Schön (1987), this approach is considered as an approach, which should be adopted for the solution of possible difficulties in the very beginning of their professions.

The idea of “Reflective Application” became significantly impressive especially with the studies of Donald Schön (1987) in the middle of the 1980’s (Krim, 2009). Schön (1987) described the reflection in three forms. These are “technical viewpoint”, “reflecting on action” and “reflection in action”. “Technical viewpoint” is comparing the applicant’s own applications with a known authority on related topic or an idea admitted within the field or an application of a colleague who is worked with and is expressed to be lowest level reflection field. “Reflecting on action includes an arranged planned and systematic application to solve a problem. This concept is described as evaluating the action after it is done, thinking about it in an arranged, planned and systematically (Russell & Munby, 1991). “ Reflection in action” is a reflection which occur simultaneously with the action. Reflection in action is a skill which occurs instantly during the procedure of the action and includes rearrangement of the action within the process (Russell & Munby, 1991).

Hatton & Smith (1995) took forward the studies of Schön (1987) on teacher training. In addition to the reflection classification of Schön (1987), the nature of reflection was handled in five dimensions. Hatton & Smith (1995) described the technical nature of reflection as the basic shape of the reflection. Technical viewpoint is an application, which constitutes theories from the method to the controlled experiments (Schön, 1987). The descriptive nature of reflection on action requires reaching the best possible application and enables a logical description to the reason why the pre-service teachers chose the action or approach.

The communicative nature of reflection on action that the individual’s making reflection individually or as a group related to his/her own teaching process. In order to do this as a teaching task, the pre-service teachers can be directed to make “peer” discussion or interview throughout the process related to their watching videos, films... etc, or their experiences. When the aim is not reached through the situations such as peer feedback and video records, some alternative solutions can be searched.

The critical nature of reflection on the action is a process in which the pre-service teachers recognize their own ethical values with a critical understanding. This is the process, which enables

the individuals to think of how their actions are affective on the others and requires being equal and objective in social, cultural and political facts (Schön, 1983; Smith & Lovat, 1990; Schulman 1987; Van Manen, 1991). The Fundamentals of critical reflection is mainly equal to the critical natural reflection in the classification of Hatton and Smith (1995). The last of the reflection types defined by Hatton and Smith (1995) the nature depended on the multiple viewpoints of in action reflection is considered to be the most complicated and the highest level of reflection type.

Similarly, Van Manen (1991) dealt with the reflection as an improvement including three stages different from each other. The first is effective usage of skills and technical knowledge in the classroom. The second one is the stage in which the teachers evaluate their implications related to the education of their actions and beliefs. The third stage includes criticizing the moral and ethical sides of the decisions related to the situations of the classroom directly or indirectly.

Another viewpoint related to the reflection is the 5-reflection orientation recommended by Valli (1997). The first is a technical reflection in which the teachers evaluating themselves according to the outer criteria. The second is the reflection on and in action that is a type of reflection in which the decisions are made according to the experiences. The third intentional reflection is that the decisions do not made according to the others' thoughts or personal values but in a way with the combination of all together. While the teacher evaluates him/herself about the contribution of teaching profession in personalized reflection, in the highest level of critical reflection, criticizing the aims and targets of the education within the lights of the ethical criteria such as social justice and equal opportunities. At that point, the critical reflection is dealt with in a different way not within the on action reflection defined by Hatton and Smith (1995).

Within the concept of education, the critical reflection is rather than only recreating professional knowledge, it is also recognized to be a way of developing the professional applications (Barnett, 1994). The approach here encourages the individuals to behave with a critical attitude towards their own works and determine their place according to the ideas and applications they come across (Leach, Neutze & Zepke 2001). Consequently, the critical reflection can be defined as a professional development application in a pre-service and in-service education process. Critical reflection, in addition to provide a more personal process, directs the teacher to determine his/her own personal theories on the topics related to the education. The teachers who have the skill of critical reflection demonstrate improvements in teaching and relationships with others.

Within the scope of educational sciences, a purpose of critical reflection, which is as criticizing the hypotheses, beliefs and meanings, is being discussed (Brookfield, 1995). Thus, it is aimed to help teachers consider the events and applications with a wide angle through critical reflection. Teachers recognize that they do not limit themselves with only one viewpoint with the critical reflection process. Critical reflection enables evaluating the known items repeatedly in new conditions. Therefore, teachers criticize the reason of their behaviors and this provides them to recognize the conjecture they behave with, its possible harms for themselves and whether they choose it intentionally or not. In addition, they can recognize their attitudes and the assumptions under them and the values they have (Fook & Gardner, 2007).

Within the scope of hypotheses, it is pointed out that the inconsistency between what people said and done does not generate from the inconsistency between theory and practice but from two different theories (Argyris & Schon, 1974). These two different theories are "defended" and "used" theories. "Defended theory" includes the philosophy of the world and values which the individuals believe that they are the fundamentals of their behaviors. "Used theory" includes the philosophy and values which underlies in their real behaviors. While the individuals are generally aware of the defended theories and defend this towards their surroundings continually, they are not aware of the theory they used, they follow these theories with subconscious processes (Aderson, 1997; Cunningham & Weschler, 2002).

With the critical reflection skill, it is aimed to help teachers emerge their sides, similarities and differences completing these theories evaluating different theoretical frames, constitute their own theoretical meanings and at the same time, settling a connection between the theory and practice. At that point, the critical reflection skill can be described as the need of teacher's being ready for any situations, considering any choices and adapting any possible changes within the scope of professional applications.

Dewey (1993) refers the importance of teachers' using various hypotheses to develop critical thinking skills. That means, it will be hard to refer the applications, in which critical reflection exists, without referring the role of teachers. The teacher is both the subject and object of the process in critical reflection process and in interaction with the process without isolated from it (Wolf, 2007).

Russell (2005) refers that the conception of teacher as a critical reflected person is significant in teaching the critical reflection. Mueller (2003) discovered that pre-service teachers and education make more improvements with the combination of being a model, guidance and self-reflection. Brookfield (1995) advises teachers to develop their own critical reflection skills through autobiographies, student feedbacks and colleague feedbacks.

When the critical reflection theories and methods are believed to help the students' learning, they will also help to develop the educational applications. As Rogers put forward, the most useful learning in modern world socially is teaching the learning process with being ready for the experiences and assimilating the changing process (Rogers 1969, akt; Smith, 2011). As well as that the curriculum of Faculty of Law use Socrat methods to help the students learn new ways of thinking and analyze their hypotheses, we also pay attention to that educators in universities can develop an intrinsic form which they help the pre-service teachers get the critical thinking skills with. This can only be developed with teaching critical thinking skills directly and with combining various strategies. The literature related to the teaching theory demonstrates that every student have different types of learning styles. Therefore, it will be necessary to use various types of strategies to develop the thinking skills of pre-service teachers (Yost, Forlenza-Bailey, & Shaw, 1999).

Hereof, Smith (2011) classified the indications of critical reflection in 4 fields. The first of these stages is the field of "developing himself" which means the reflection related to his own thoughts and actions. Another one is "interpersonal" field. In this field, there exists the reflection related to the communications with others. The 3rd field is referred as "contextual" field. It includes the reflection related to the applied concepts, theories and methods. "Critical" field is finally referred field and it takes the reflection within the political, ethical and social context as a base.

All the pre-service teachers' having the skills of critical reflection is referred that can be held with a direction in the formed curriculum in teacher training process (Yost, Forlenza-Bailey, & Shaw, 1999). It is referred that the teacher training programs determination of critical reflection as a principle and throughout the teacher training program, they should be reflect specifically their experiences (Dewey, 1993; Hatton & Smith, 1995; Reagan, 1993; Yost, Forlenza-Bailey, & Shaw, 1999).

Critical thinking is a thought and problem-solving tool for teachers to produce solutions in schools. When it is considered within the scope of critical level, it is necessary for the teachers to be able to reach the situation with various perspectives and create reasons for alternative solutions (Yost, Forlenza-Bailey, & Shaw, 1999). According to Reagan (1993), the educators in universities should try to provide opportunities to settle relationships between the applications and theoretical base, in addition to a strict base for them to think.

As a result, the carried research is thought to be significant in terms of emphasizing the critical thinking skills in teacher training process, suggesting an educational situation with taking the

media elements ( film, TV series, documentaries... etc) as a base. Thus, the study aims to determine the effects of school and teacher included films with educational process in which “Critical Reflection Application (CRA)” is used on the critical reflection skills of pre-service primary education teachers.

## METHOD

During the research process, a mixed method, in which included the qualitative and quantitative approaches together, was used. The researches, in which mixed method is used in are the studies in which qualitative and quantitative data collection and analysis techniques are used simultaneously or co-ordinating each other in different times (Tashakkori & Teddlie, 2003; Creswell, 2009). The explanatory design model was applied among the mixed methods in the research. Explanatory design necessitates the qualitative data for supporting, describing and reevaluating the quantitative data (Patton, 2002).

The quantitative dimension of the research was held by considering experimental patterns with pre and post test control groups (Karasar, 2004). To support, describe and analyze the quantitative data gathered from the research, qualitative data collection process was applied. As the quantitative data collection process was designed to understand the critical reflection skills of the pre-service primary education teachers, it can be referred that the quantitative research process was held within the scope of a case study. Case study is a strategy aims to understand a social event and research the facts in the environment (Bloor and Wood 2006).

### Research Group

The research group of the study included 73 participants who were the 4th grade students in the Primary Education Teacher Training Department of Gazi Faculty of Education in Gazi University in 2012-2013 education year. 38 of the participants were determined as the experimental group. The sampling of the research was determined with homogeneity sampling method among the purposive sampling methods.

Table 1: Some characteristics of the pre-service teachers within the scope of the research

		Experiment Group		Control Group		Total	
		f	%	f	%	f	%
Age	18-21	16	42,11	12	34,29	28	38,36
	22 years and over	22	57,89	23	65,71	45	61,64
Gender	Female	30	78,95	29	82,86	59	80,82
	Male	8	21,05	6	17,14	14	19,18
Average Scores	2,00-2,49	8	21,05	8	22,86	16	21,92
	2,50-2,99	16	42,11	14	40	30	41,1
	3,00-3,49	14	36,84	13	37,14	27	36,99
	3,50-4,00	-	-	-	-	-	-

When the age and genders of the participants are considered, it is seen that 61% of them are 22 years old and over and 80% of them are female pre-service primary education teachers. When the average scores of the pre-service teachers are analyzed, it is realized that there is not any

pre-service teacher, who has over 3.50 average scores and 41% of the pre-service teachers have average scores between 2.50 and 2.99.

### Data Collection Tools

To measure the critical reflection skills of pre-service teachers in the research, “The Critical Reflection Self-assessment Scale (CRSS)” developed by Sofo and Kendall (1995) was used. Experienced language experts translated Turkish form of it and the last form was constituted. To evaluate the meaning of the emerged forms, a pilot study was held with 10 students and 3 teachers.

The validity and reliability of the “The Critical Reflection Self-assessment Scale (CRSS)” was held upon the gathered data from 234 pre-service primary education teachers who were the students in 3rd and 4th grade students in the Primary Education Teacher Training Department of Gazi Faculty of Education in Gazi University and the Primary Education Teacher Training Department in Faculty of Education in Erzincan University.

Primarily Exploratory Factor Analysis (EFA) was applied for the data gathered from the CRSS scale. Later, in order to test the confirmation of the factor structure of scale determined by DFA with Confirmation Factor Analysis (CFA), the EFA process was applied.

At the end of the EFA, it was realized that the factor burden value was realized to constitute between 0.73 and 0.41 under a single factor and the total variance that they described under a single factor was about 36%. According to Büyüköztürk (2010) that the total variance determined in single factor scale is 30% and more may be admitted to be enough. In order to gather additional proofs related to what level of accordance did the single factored form of the scale determined with Exploratory Factor Analysis, EFA was held on the data collected from the study group. The confirmation parameters related to the developed EFA process were indicated in Table 2.

Table2: The confirmation parametres of scale related to the EFA model

Scale	$\Delta x^2$	sd	$\Delta x^2/sd$	RMSEA	CFI	IFI	GFI	TLI	AGFI
CRS	446.08	230	1.93	0.06	0.88	0.88	0.86	0.87	0.83

The least squares analysis technique was used in EFA. The ki-square value calculated for the model data harmony is significant. That the rate of  $x^2=446.08$ ,  $p<0,01$ .  $x^2/d$  is between 2 and 5 represents good harmony, the value lower than 2 represents the perfect harmony (Marsh & Hocevar, 1988; Jöreskog & Sörbom, 2001). From the results of the Confirmative Factor Analysis, the determined harmony indexes such as RMSEA and RMR being lower than .05 is regarded as the indications of good harmony of the model and it is claimed that the values lower than .10 are regarded as considerable values (Anderson & Gerbing, 1984; Cole, 1987; March, Balla & McDonald, 1988). As the GFI being over .85, and the AGFI over .80 are considered to be reasonable values (Anderson & Gerbing, 1984; Cole, 1987; March, Balla & McDonald, 1988), it is understood that the model shows harmony in terms of these indexes. As it is evaluated totally, the model can be said to have a reasonable harmony. Moreover, as a result of the analyses, it was realized that the internal consistency coefficient counted for the reliability of CRSS was (Cronbach Alfa)  $\alpha=0.86$ . Instead of the basic scale including one-factor 35 items, a Turkish one way-factor form, which includes 23 items was used.

In addition, an interview form was constituted considering the group tasks placed in “Critical Reflection Application (CRA)” developed by Sofo (1995). Moreover, an observation form including 12 items was designed taken the expert views to evaluate the application process of the focus team’s members in CRA process in the study.

## Collecting Data and The Process

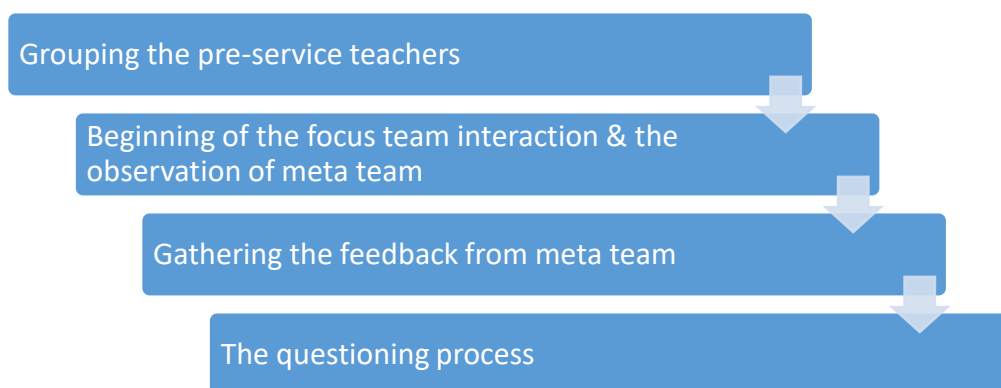
During the research process, the data were collected with the process of developed CRA with demonstrating school and teacher included films. The films, “The School in Life”, “Ron Clark Story” and “Beyond the Blackboard”, were placed in the study. “The School in Life” is a 2005 made film. The film was fictionalized on the life of two teachers named Michael Di Angelo (Mr. D) and Matt Warner. Matt Warner is the son of a former “legend” teacher in the school and is not as popular as him. The film is based on good teacher and bad teacher in his own sight. “Ron Clark Story” is a film, which was made in 2006. The film, which was fictionalized from a real life story, describes the real events which Ron Clark run into in a primary education in Harlem. While Ron Clark demonstrates a profile of stubborn, devoted teacher, his students are just like ones who hit rock bottom, without hope and expectations.

The film shows the events that a teacher who tries to gain the laziest students, who are irrelevant to learning in a school in a backwoods, came across and nobody helped them before, in life. The film, “Beyond the Blackboard”, is a real life story and was first shown in 2011. In the film, the difficulties of a woman married with children are shown in the film as a topic. A teacher’s determination in struggling with teaching the students and overcome infidelities in extremely difficult situations are shown in the film.

During the research, in order to develop the critical reflection skills of pre-service teachers after the presentation of the films including school and teacher, the method named as Critical Reflection Application (CRA), which was developed by Sofo (1995), was used. With the interviews held after CRA, the data was collected via focus group applied scales, before and after the application and meta team observation forms. A pilot study was carried out with experimental group before research process.

Contrary to the mentioned application process by Sofo (1995), some differences were brought to the appearances in practice by the researcher in accordance with the essence of the study. The application was held through the tasks of only 2 teams among the 6 teams placed in the application developed by Sofo (1995). The CRA developed during the research was held in 4 stages in two group activities consisting Focus Team (the group to solve the problems and analysis) and Meta Team (the group to make observations and evaluations related to the discussion process of focus team). So;

Figure1: The CRA process held during the research process



In practice, the Meta Team members determine the emotional differences occurred in focus team members via the observation form. In the determinations related to the emotions of the focus team members, it is necessary that they should also evaluate in terms of communication elements such as language, verbalism and voice tone. Then, determining the problem situations in the films expressed by the focus team, the thoughts related to these were recorded. In addition, the suggestions of solution referred within the context of problem situation were recorded and the



thoughts related to those were written down. In the stage of determining the problem situation and solution suggestions, the members of meta team evaluated the ability to take joint decision of the focus team members and determined the changes in their thoughts. In this process, taking the notes of their own viewpoints, the meta team members, who interrogate their own ideas, evaluated these behaviors with their team-mates. In the other stage of the process, the members of meta team gave feedbacks to focus team members and ensured the members of focus team to make defense related to these feedbacks and express their thoughts.

### Analysing The Data

The data collected from the interviews of focus group, meta team observation forms, and the CRSS scale during the research process were analyzed according to the research problem. The Nvivo9 package program were used in analyzing the qualitative data. The content analysis approach was applied during the qualitative data analysis process. The content analysis includes the processes of gathering similar data within the frame of definite concepts and themes and arranging those for readers to be understood and interpreted easily (Yıldırım and Şimşek, 2005).

According to the CRSS normality test results, it is found out that the (Kolmogrov Smirnov  $p > 0.05$ ) demonstrated a normal distribution. Within the lights of these findings, t-test and one-way variance analysis processes was used in the analysis of the data.

### FINDINGS and COMMENTS

In this part, after the process of CRA carried out within the base of school and films, there are the findings related to the changes of critical reflection skills in pre-service teachers. With this purpose, there are some findings related to the critical reflection behaviors considering the self-assessments of pre-service primary education teachers in their critical reflection skills and problem-solving analyses related to the films.

The self-assessment results related to the critical reflection skills of control and experiment groups of pre-service teachers before the application are indicated in Table 3.

Table 3: CRSS t-test Analysis Results of Control and Experiment Group Before the Application

	Group	N	X	df	t	P*
CRSS	Control	36	89,89	72	-1,59	0,11
	Experiment	38	92,99			

$P < 0.05$

Considering the Table 3, it was found out that no significant difference occurred in their self-assessment related to the critical reflection skills of the control and experiment group. The self-assessment results of the pre-service teachers related to their critical reflection skills in experiment and control group after the films and CRA are indicated in Table 4.

Table 4: T-test Analysis results of experiment and control groups after CRSS

	Group	N	X	df	t	P*
CRSS	Control	36	88,66	63	-2,41	0,02
	Experiment	29	97,17			

$P < 0.05$

Considering the Table 4, it is found out that the self-assessments related to the critical reflection skills of pre-service teachers placed in control and experiment group after the application differed significantly in favour of experiment group ( $\bar{X}=97.17$ ) statistically. From this point, it was noticed that the critical reflection skills of pre-service teachers in experiment group after the application were at higher level.

The self-assessment results of the control group's critical reflection skills after the application are indicated in Table 5.

Table 5: CRSS control group pre-test-post test t-test analysis results

	Control	N	X	df	t	P*
CRSS	Pre-test	36	89,88	70	0,36	0,72
	Post-test	36	88,66			

P < 0.05

As it is noticed in Table 5, there is no significant difference in self-assessment results of pre-service teachers placed in control group related to their critical reflection skills before and after the application. The self-assessment results of the experiment group after the application related to their critical reflection skills are indicated in Table 6.

Table 6: CRSS Experiment group pre-test, post-test t-test analysis results

	Experiment	N	X	df	t	P*
CRSS	Pre- Test	38	92,98	65	-2,45	0,02
	Post- Test	29	97,17			

P < 0.05

When the Table 6 analyzed, it can be noticed that the self-assessment results of the experiment group before and after the application related to the critical reflection skills differed significantly in favor of post-test ( $\bar{X}=97.17$ ) statistically. Thus, it can be referred that the critical reflection skills of the pre-service teachers in experiment group reached at higher level with this application.

When the data gathered from the observation forms related to the discussion process of Meta team members with focus team investigated, it can be observed that there are the results supporting this finding. With the first film *School in Life* and the last film *Beyond the Blackboard*, the one-way variance analysis results of the findings gathered from the observation forms related to the focus group application process are indicated in Table 7.

Table 7: The ANOVA Analysis Results of Meta Team Observation Form

M	Films			Total	F	p
	School in Life	Ron Clark Story	Beyond the Blackboard			
1	N	17	9	15	41	0,8 0,45
	X	5,7	5,77	5,33	5,58	
	SS	0,98	0,83	1,04	0,97	
2	N	17	9	15	41	0,3 0,74
	X	5,47	5,66	5,4	5,48	
	SS	0,71	0,86	0,91	0,81	
3	N	17	9	15	41	0 0,97
	X	5,11	5,11	5,2	5,14	

	SS	1,16	0,92	1,2	1,1		
	N	17	9	15	41		
4	X	2,17	2	3,33	2,56	5,2	0,01*
	SS	0,72	1,32	1,44	1,28		
	N	17	9	15	41		
5	X	5,29	5,77	4,86	5,24	1,3	0,26
	SS	1,21	0,97	1,55	1,31		
	N	17	9	15	41		
6	X	5,17	6,44	5,66	5,63	3,9	0,02*
	SS	1,13	0,72	1,23	1,17		
	N	17	9	15	41		
7	X	4,47	4,66	5,6	4,92	4,9	0,01*
	SS	1,06	1,22	0,91	1,14		
	N	17	9	15	41		
8	X	5,23	5,44	6,13	5,6	3,6	0,03*
	SS	1,2	0,88	0,63	1,02		
	N	17	9	15	41		
9	X	5,23	5,77	5,93	5,6	2,2	0,11
	SS	1,09	0,66	0,96	0,99		
	N	17	9	15	41		
10	X	5,47	6	5,06	5,43	2,1	0,14
	SS	0,94	0,7	1,38	1,11		
	N	17	9	15	41		
11	X	4,47	4,66	5,73	4,97	4,9	0,12*
	SS	1	1,58	1,09	1,29		

Analyzing Table 7, it can be claimed that, comparing with the first application related to evaluating the meta team members (Life in School), some differences in item of the last application (Beyond the Blackboard) differed in favour of the last application statistically.

It is noticed that a difference came to appearance statistically significant in favor of the film Beyond the Blackboard among the three films Life in School (1st application), Ron Clark Story (2nd application) and Beyond the Blackboard (3rd application) related to the items of teachers as: "Defends his/her opinions when he/she comes across with an opposing view", "I have different ways of observing the events", "I take the others' views into account", "I am aware of it when I'm confused". In addition, it is noticed that a significant difference comes to existence within the scope of the item "I evaluate positive and negative sides of different opinions" between the first application (Life in School) and the second application (Ron Clark Story).

In CRA process, it was aimed to get the pre-service teachers to create the critical reflections by determining the problem situations in the films and make solution offers to these situations and think of the solutions if they were correct or not and suitable for their own skills or not.

The critical reflection samples were discussed evaluating the problem solving analyses of pre-service teachers related to the first film-first application and second film-second application. Hereof, the problem solving analysis of the pre-service teachers related to the first film "Life in School" is indicated in Table 8 and the expression including critical reflection were discussed.

Table 8: Problem-solving analysis of the film, Life in School.

Problem perception		Offers of solution	
Teaching	Placing active teaching techniques	Outer support	Get help from experienced people
	Unable to help students love the lesson	Teaching improvement	Making the lessons enjoyable
	Only giving the knowledge to the students		Placing various teaching techniques
	Using only presentation technique during the lesson	Provide Opportunities	Developing physical conditions and facilities
Individually	Having a traditional mentality	Directing	Directing the students according to their interests and skills
	Having a positive viewpoint	Appreciating students	Giving the message sincerity with students
	The aim of teaching (reward)		Consider them as humans
	Not being aware of his/her skills	Self-assessment	Should know himself
	Having bias		Should watch and evaluate himself
	Lack of self-confidence		Should exceed his bias and limits
Being closed to innovation and creativity	Should have the skill of empathy		
Communication	Being considerate based on strict rules	Knowing the students	Should observe the students
	Can't be sincere to the students Ignoring the student characteristics		Should try to know them
Student Characteristics	Ignoring their problems	Supporting the students	Should increase their self-confidence
	Can't understand the students' behaviours		Should make students believe the change Should be a model for them

As it is understood from Table 8, the pre-service teachers handled the problems stated in the film within the scope of teaching process of the lesson, characteristics of teachers, communication process and student characteristics. The pre-service teachers, who think that the reason of the basic problems in the film are because of the teaching process of the lesson, stated that the problem origin was that the teacher character in the film presented the lesson with "ordinary presentation method" for only with the aim of giving knowledge, without placing active teaching techniques, having a traditional mentality and so unable to make students love the lesson. In addition, according to the pre-service teachers another reason of the problem was about the personality of teacher in the film. The pre-service teachers also stated that the problem which the

teacher had in the film (Matt) originated from the reason of negative viewpoints for the life, being unaware of his abilities, having biases, old-fashioned and having lower self-confidence. Another point, which the pre-service teachers perceived as the origin of the problem, was that the teacher in the film did not have effective communication skills. Moreover, it was pointed out that the teachers ignoring the student characteristics was handled as a factor and therefore the behaviors such as being unable to understand the students, to notice their characteristics and not care about their problems constituted the basic problems.

When it is analyzed in terms of solution, it was noticed that there were many solution offers considering the problem situations of pre-service teachers. Among these solution offers, there were offers of solutions such as getting environmental support, improving the opportunities (physical), directing the students according to their skills, giving an effective teaching, knowing the students, appreciating and supporting them and the teacher's taking the self-assessment process into account.

When the problem perceptions and solution suggestions of the pre-service teachers are investigated, it is thought that they commonly did technical and practical reflection among the reflection fields and they rarely did critical reflections. For instance, some comments are some examples for solution such as the teacher's using the presentation technique, his pretending to be a good teacher to get the "teacher of the year" award, not using the active teaching techniques and his making the lessons enjoying, placing various teaching techniques, being a model can be given as examples for technical reflection.

In addition, it is thought that such problems as: the teacher's deficiencies in self-confidence, not taking the student problems into consideration and with such solution comments as the teacher should know himself, has the skill of empathy, increase their self-confidences are among the examples for practical field reflection. However, there were examples for critical field reflection in the first application even if they were limited. For instance, such evaluations on the teachers negative point of view for life in problem situation or such suggestions stated in the ways of solution as "he should make the students feel like he is the one among them" and "he should make them feel important as humans" can be considered within this concept.

Even it is limited; there are the teachers' thoughts, which can be given as examples, about the critical reflection skills of pre-service teachers in the first application. When the examples of pre-service teachers' about their real life just like the problem situation in the film is analyzed, it can be thought that they did critical reflection considering their expressions.

"... This happens in all of our lives, our classes are always divided into the groups which include good and bad students. Even if it is not a direct division, it originates from psychological, friend choosing, attitudes of parents, parental directing, and the direction of people around us. This child is intelligent, this one is not, why this child is hardworking and why the other not. Education is thought to be a child own way of choice, as if not one is around to express ideas. Just like that child behave on his own, becomes successful or not. It is not because of this, the matter is that if child is directed correctly or not."

"...I have a problem with the matter that each people is special in our daily life. It is similar in the schools where I go for internship. As the participant stated, even the lessons are taught with only a few students. Even when only two students give a solution, the teacher behaves them different. There is a problem with the understanding that each people is important. In addition, there is a problem about the people's changing. We try to shape the individuals according to the ideal person in our minds instead of changing them positively and ideally."

When the expressions of pre-service teachers analyzed, it can be claimed that they think within the scope of critical reflection. That is, according to the first pre-service teacher, an invisible discrimination among the students is pointed out in the classrooms, the problem is expressed to be

originated from directing the students, and the reason of the failure is claimed to be originated not because of individual characteristics. In addition, another pre- service teacher pointed out that the problem originated from the discrimination of teachers and different behaviors in the classrooms, especially the teacher tried to make the students believe his truths, and the students criticised the teacher's dictations.

In terms of the solution, there are findings, which show the pre-service teachers think within the field of critical reflection considering their expressions.

“Researcher: You said that you should love your job. How it will be possible, what should be done, Should the salary be increased?

Participant24: No, that is; there are many people who say they can not be a teacher. Because, they say they do not like spending time with children, they can not care about them. There are people like this. But they stil work as teachers.

Researcher: So, is the solution you have mentioned be possible?

Participant24: No. That is why: in our country, no somehow. People want to get a job in a short time. Or, my score requires this, there are people who think that they able to get a job from here easily. However, if there is another opportunity. If the government gives more possibilities to us, if we can do the jobs we want, that is when the real teachers will come into existence I think.

While the pre-service teacher, in his expressions, stated that as an approach as a solution of the need to love the job, many people do the job without loving it and evaluate this as a social event and this shows that they try to find the solution within the scope of social and ethical point and it is possible to say that this is an indication which the thoughts are produced in the field of critical reflection.

The application process, which enables the pre-service teachers to make reflection, support their critical reflection process continued and finally the process, finished with the film “Beyond the Blackboard”. Throughout the process, the pre-service teachers demonstrated an 6 hour discussion evaluation process.

In the last film and last application, the problem solving analyses of the pre-service teachers related to the film “Beyond the Blackboard” were evaluated and the critical reflection samples were tried to be discussed. So, a problem solving analysis related to the film “Beyond the Blackboard”, which is the first film being watched by the participants were indicated in Table 9 and the expressions including critical reflection were discussed within this context.

Table 9: The problem-solving analysis of the film “Beyond the Blackboard”

Problem Perception		Solution Offers	
Family	That the families' being uneducated	Authority	The authorities' being sensitive
	Parental stolidity		Requesting help from the authority
	Acknowledging the people as worthless		Improving the facilities economically
Family Teacher Society	Giving the individuals value	Teacher	Teacher's acknowledging his job for earning money
Authority	The deficiency in governmental policies		Teacher's having high self-confidence
	The lack of giving equal opportunities		Teacher should believe that his students can succeed

	The negative conditions which the students live in		Teacher's not criticising the values of students
	The inappropriate situations of the teaching environment		Teacher's being bellicose
	The irrelevant authority in dealing with the problems		Being relevant to the problems of students
	The irresponsible attitudes of managers		Making the students believe in success
	Lack of facilities		Taking parental support telling them the change in students' behaviours
Authority Teacher	Ignoring the students' wish to learn		Knowing the students by visiting their homes
Teacher	The indifferent behaviours of teacher		Using all the opportunities in hand
Student	The large number of individuals in trouble	Teacher Authority	Starting campaigns to get support
Society	Discrimination because of the different status	Family	Spending more time with parents
			Giving homework to the parents
			The parents' believing and trusting their children
		Teacher Family	Giving importance to the works of students
			Make the parents believe in success of students with concrete examples
		Authority-Family	Effective company between the school and family
		Teacher Authority Family	Taking the students into account

As it is seen in Table 9, the pre-service teachers dealt with the problems stated in the film within the scope of family, teacher, student and social and authority. The pre-service teachers, who relate the basic problem in the film with the family, claimed that the origin of the problem was because of the uneducated and insensitive families and in addition the families ignoring them. In addition, the teacher's irrelevant behaviours and the high number of the students with problems are among the origins of the problem.

The pre-service teachers stated that the problematic education process placed in the film was because of the discrimination in social life occurred because of the status difference within the scope of society related to the origin of the problem in the film. In another side, it is understood that the common origin of the problem is because of the authority. The problem with the authority was described as the supply-facility deficiency, the deficiency of place and conditions, the problems originated by the authority, the failure to ensure equal opportunities and the deficiencies in the policy. During the CRA process of the last film application, *Beyond the Blackboard*, when the mentioned problems are taken into consideration, it can be claimed that the critical reflection samples were come across more frequently. Specifically, their evaluations in terms of social and administrative aspects related to the origin of the problem support this finding. The pre-service

teachers' emphasizing the topics such as making the students feel themselves worthless, the failure to provide equal opportunities, the discrimination related to the status differences, the problem solving style of the authority and the policies of authority as an origin of the problem are among the facts which support the critical thinking process. For instance, during the procedure of focus team, the pre-service teachers expressed their opinions as follows.

Group: That the individuals who are ignored by the society and government are not able to benefit from the education enough. The problem is this for us.

Researcher: Can you describe?

Participant30: for example, we are in the capital but I don't think the people who live in many provinces, especially in eastern provinces can not benefit from the education enough.

Researcher: How?

Participant30: Because, there are negative conditions, sir. The teachers who go there without willing or loving there. This condition, of course, reflects the children. Education cannot be done without willing and loving. That is, the place seems to be a place of exile. If a police officer makes a mistake, he will be sent there. They send the teacher there at first. These teachers are deficient among the other officers. When the people there see them, they criticise the system with these sorts of negative examples and I do not believe effective teaching under these circumstances.

Participant 24: I have not come across before in my hometown, but these types of teachers went there without willing and wanted to leave there as soon as possible or wanted to designate for several reasons and so on. Sometimes, you may think they are right, they may not want to come there because of unfavourable reasons, they may really frighten but they should admit the situation. If you went there, you have to get used to and give these people a hand indeed. Also, there is another point: all of us have heard before that someone went to Şanlıurfa. There is no students in the classroom, the education starts in November. The students work in the fields or somewhere else. No students, no education. This is also because of the socio-economic reasons. The authorities do not help them well enough and students have to work.

Participant4: For example, one of my friends graduated from the university last year and got the job as a teacher in Mardin. None of the children speaks Turkish, only one of them knows and my friend teaches him and he tells his friends in the classroom. That is he has a great deal of trouble.

Considering the problem situation in the film, from the expressions of the pre-service teachers, it can be understood that they did a reflection to the circumstances of the country they live in. When the pre-service teachers claimed that teachers do not want to go the someplace as a teachers is a negative effect for education and that the citizens, who live these sorts of places, have also negative attitude in this context, they mentioned that they may bear out the teachers because of some negative situations there. Yet, in spite of all these situations, they referred that being a teacher requires acknowledging the situations of the place. Related to the problem, some reasons were claimed such as the children's obligation to work because of the low socio-economic status, the families' insusceptibilities for their children's educations, the government's deficiencies to deal with the problems there are among the reasons. Within the context of the first sub-problem related to the "lack of facilities" placed in the film *Beyond the Blackboard*, the pre-service teachers' reflections for politically, ethically and socially are thought to be related to their critical reflection skills.



## DISCUSSION & RESULTS

Because of the films including school and teacher and the CRA application applied, it was tried to determine the changes in the critical reflection skills of pre-service teachers. In the study, the observations of meta team members on the performances of focus team members placed in The CRA process and the ideas of focus team members during the process were recorded. In addition, to determine the changes in critical reflection skills of pre-service teachers, the “The Critical Reflection Self-assessment Scale (CRSS)”, developed by Sofo (1995), was applied.

According to the results reached via CRSS, showing the films including school and teacher and the CRA were found out to be effective in the critical reflection skills of pre-service teachers. It is claimed that the critical reflection skill help the pre-service teachers understand their professions (Larivee 2000; Schön 1991) and inner meanings of the field they study (Foucault 1982).

During the application process, the pre-service teachers were observed to criticise their own thoughts. In addition, it was noticed that they evaluate themselves in terms of reaching the events from different aspects. At that point, it is claimed that, with the educational usage of films (Nugent & Shaunessy, 2003), the subjects can be dramatised and thus, the pre-service teachers are able to make reflections in terms of their personal experiments determining a start point during the discussion process (Harper & Rogers, 1999).

According to the observation results of meta team members, it was found out that the changes of the focus team members’ considering others’ opinions, their awareness of the misunderstood points, their skills to make evaluations about the positive and negative sides of various opinions increased statistically in favour of the application of the last film. In the first film, *Life in School*, it was noticed that the pre-service teachers dealt with the problem placed in the film in terms of the teaching process of the lesson, the personality of teacher, the communication process and student characteristics. Considering the solution offers of the pre-service teachers, there were some solution offers such as getting the support of the environment, improving the facilities (physical), directing the students according to their abilities, providing an effective teaching, knowing the students, regarding and supporting them and the teacher’s giving importance on the self-assessment process. When the problem conceptions and solution offers of the pre-service teachers are analysed, it is thought that they commonly made technical and practical reflections but rarely critical reflections among the reflection fields.

In the last film, *Beyond the Blackboard*, it was noticed that the pre-service teachers considered the problem within the scope of family, teacher, student, social and administrative aspects. It can be claimed that the critical reflection examples were come across frequently in the last film application. Especially so, the pre-service teachers’ socially and administrative evaluations related to the origin of the problem support this finding. The pre-service teachers’ evaluations related to the origin of the problem, their thoughts about that they are worthless, that the teachers cannot provide equal opportunities, the discriminations related to the differences in their status, the problem solving styles of the authority and the emphasis on government policies support that the critical reflection thinking process occurred. Breault (2009), when the school system and policy are considered in terms of the relationships between the teachers and school authorities, it can also be expressed that the problems between teachers and authority in the school have great importance and the personalities of film characters have also great effects on viewers. At that point, during the research process, it is thought that there is a link between the “lack of facilities” related to the first sub-problem of the film *Beyond the Blackboard* and the critical reflection skills of pre-service teachers in terms of political, social and ethical aspects.

Hatton & Smith (1995) stated that many pre-service teachers focused mainly on the technical sides of education at first. In another study, which investigates the differences of the pre-service teachers’ thinking styles, indicated that as the pre-service teachers gain experience, they

reached to the complicated thinking patterns step by step from the technical thinking patterns (Guillaume & Rudney, 1993). Especially within the scope of the first and last film application, it can easily noticed that the problem perceptions of pre-service teachers related to the problem and therefore the solution offers changed when the change in critical reflection perceptions is taken into consideration.

During the research process, it is found out that the films and the CRA method applied within the context of it are effective in teaching the critical reflection skills to the pre-service teachers. In addition, the critical reflection is thought to be an extremely complicated action including lots of different skills and specifications (Yost, Senter, Bailey, 2000). It is thought that the pre-service primary education teachers may have reflective thinking skills through some sorts of media items, and may make critical reflections with applications as CRA. As a result, with the carried study, it was found out that the pre-service teachers generated ideas considering the situations related to make reflections watching the films including school and teacher and the process of CRA carried accordingly.

Considering the results of the study carried out to determine the effect of films including school and teacher and the critical reflection application on pre-service teachers' critical reflection skills, the researchers and applicants put forth these recommendations:

Firstly, applying the situations which is real or similar to real events during the teacher training process, the pre-service teachers should be provided to make reflections on these situations and make ethical, social, moral etc. critics through these situations. So, as they may apply many media elements, there are also domestic and foreign films aiming teaching and learning. These films are suggested to be used in the teacher training process.

The pedagogical analysis of the media items such, films etc. that can be used during the teacher training process should be done, and thus, a media items archive should be created with advised items. In addition, we should focus more on the academic studies related to the various fields and skills thought to be effective on teachers and pre-service teachers, the pre-service teachers should also be supported with the styles of understanding the media items.

During the teacher training process, the teacher training activities enabling the pre-service teachers to criticise their thoughts, beliefs and being aware of their bias. To make the pre-service teachers to become aware of the difference between their beliefs and actions, the critical reflection applications should be placed during the training process.

To develop the critical reflection skills in pre-service teachers, various research projects should be carried with pre-service teachers. Especially, it is thought that placing various research process will be functional. The teacher training activities should be considered within the scope of problem solving. On the other hand, it is thought that the faculty instructors should also have knowledge about the critical reflection process within the context of teacher training.

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