

Reflective Teaching Practices in Teachers and Their Attitudes toward Professional Self-development

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Abstract

This study aimed to investigate the levels of teachers' reflective practices as well as their attitudes toward professional self-development in relation to various variables, including gender, number of workshops attended and experience. The study sample consisted of 162 teachers who work as teachers at a number of private schools in Amman. Two scales have been used in this study; the first questionnaire consists of (28) items to measure teachers' reflective practices in 6 dimensions. The second scale consists of (18) items to measure the attitudes-towards-professional-development. Results found that the level of teachers' reflective practices on the scale as a whole were within an 'acceptable' level; however, their practices in the subcategory of "appreciating criticism" were below acceptable. Findings indicated that teachers' attitudes toward professional development were positive. Findings further revealed a strong correlation of 0.485 between the reflective practices and the attitudes toward self-development in teachers.

Keywords: Reflective teaching Practices, Professional self-development, attitudes

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Introduction

The rapid changes and the nature of this developing modern society have given rise to new challenges, yet renewed calls for further improvements. In this light, many have voiced the urge for educational reform of schools and teachers, so that they may become capable of facing the current challenges, and fulfill the first and foremost objective of education: preparing all students, regardless of their abilities, to face a continuously-changing world, and empowering them to participate in developing their societies armed with high levels of academic and intellectual abilities, in addition to developing students' learning skills to become life-long learners (Sellars, 2012).

Due to this, it was of important for teacher-preparation administrators to turn away from traditional ideas in preparing teachers, and focus intensely on more modern approaches which emphasized the importance of preparing teachers and developing them professionally, so that they gain familiarity with content and how to teach it, what students are like, how students learn, and who teachers themselves are and what their values, in addition to teachers' abilities to reflect and make moral decisions. In other words, teacher preparation programs have moved from mastery techniques and learning the theoretical principles in favor of familiarizing teachers with analytical and reflective norms in teaching. Technical competences are considered a precondition for reflection, since acquiring these aids teachers in practicing additional analytical thinking (Korthagen & Wubbels, 1995). Preparing teachers in the light of reflective practices approach focuses on enhancing their performance as a result of reflecting on their classroom practices (Belviset al, 2013).

Reflective practices are one of the more vital fields which have been researched and discussed in the corpus of educational literature since the dawn of the 20th century by John Dewey who focused on generating knowledge through reflection (McAlpine, Weston, Berthiaume, Fairbank-Roch & Owen, 2004). Dewey pointed to the presence of three attitudes as prerequisite for reflective action: open mind, responsibility, and wholehearted (Grant & Zeichner, 1984).

According to John Dewey's ideas, reflective thinking is a process of giving meaning in which the individual can move from one experience to another with a deeper understanding of their relationship with a previous one. He also saw the process of reflection as a systematic process and way of thinking. He believed that it takes place in a society where interacting with others requires positive attitudes, and this increases the values of personal and intellectual growth of the person and others (Rodgers, 2002). To elaborate, he further suggests that reflection does not only prevent teachers from performing a routine or hast activity, but also directs activities based on insight and proper planning according to the end-in-view which is known to a teacher, and which allows him or her to act in an intentional and planned fashion (Odeh, Kurt & Atamtürk, 2010).

The spotlight has given way to reflective practices in the past two decades, since they are a powerful component in any successful teacher preparation program. This is because these practices aid teachers and learners alike in their problem-solving and appropriate decision-making processes, in addition to encouraging their critical thinking (Odeh, Kurt & Atamtürk, 2010) and improving student academic achievement (Akbari, Kiany, Imani Naeeni & Karimi Allvar, 2008).

Schön is one of the leading researchers who suggested a model of in-service teacher training on the basis of developing teachers' abilities to practice reflective processes in teaching. Teaching is a quite complicated process, thus teachers are incapable of applying everything they have learnt without planning; instead, they are required to think, analyze, and reflect on every aspect of their teaching process. Teaching is not product of knowledge and skill acquired by the teacher alone, but is also an outcome of a teachers' thinking processes, conceptualization, and beliefs about teaching events taking place in the classroom (Schön, 1984).

According to Schön's model (1984), teachers possess the ability to think reflectively in the classroom about their teaching practices whether before, during, or after holding a class lesson. Furthermore, he proposes that when teachers practice reflective thinking, they become more aware of

classroom practices, thus more capable of analyzing, critical thinking, and self-assessment. This helps reassure teachers of the importance of making proper amendments to undesired behaviors, which inevitably leads to enhanced teaching practices and professional development, as well as enhancing students' learning process (Mustafa, 1992).

One could describe reflective practices as a process of problem solving and reconstruction of meaning, as well as subsequent reflective judgments as teachers experience with new activities. In other words, reflecting on new experiences leads teachers to learn and cognitive development while abstaining from reflection could lead them to become dependent on routine teaching where teachers tend to accept the circumstances without posing any inquiries or questions (Efe, 2009). Reflective thinking enables individuals to evaluate previous knowledge and construct new knowledge with the help of experiences, thus helping teachers develop professionally (McAlpine, Weston, Berthiaume, Fairbank-Roch & Owen, 2004; Finlay, 2008).

Florez, (2001) asserts that reflective thinking is a process of four stages:

1. Collecting descriptive data of what is happening inside the classroom;
2. Analyzing collected data;
3. Planning the way in which activities are decided upon and what alternatives are available;
4. Evaluating the plan which would then contain a new perspective and perceptions aiming to improve teaching practices.

It could also be argued that reflection is a continuous formative evaluation process, as teachers gather and make use of feedback to review and improve their teaching process. A parallel exists between reflection and meta-cognitive thinking as it provides us with a cognitive structure which enables us to explain how individuals can modify and change their decisions and actions in a way which relates to their goals (McAlpine, Weston, Berthiaume, Fairbank-Roch, & Owen, 2004).

Using the reflective approach to develop teachers reinforces their inner doubt and dissatisfaction regarding what they do, which in turn encourages them to reflect on their actions, play the role of the researcher in collecting data, and use critical thinking to reach a deeper understanding of the problem, and thus develop appropriate solutions for it (Rayan, 2014).

A number of research papers on the subject suggest that it is best to encourage reflective practices among the most experienced teachers compared to novice teachers, rationed below:

1. The practices of more experienced teachers often depend on intuition, while novice teachers take each step carefully in a planned fashion when practicing teaching.
2. Experienced teachers are more willing to learn through reflection as they are rich with previous experiences.
3. It is difficult for experienced teachers to accept other peoples' ideas whereas novice teachers find it much easier to take in new ideas and incorporating them quickly (Efe, 2009).

Liston and Zeichner (1996) suggest a number of features which distinguish teachers that are practicing reflective thinking from others, which include:

1. Setting up frameworks and suggesting solutions to problems faced when performing classroom practices.

2. Being active in composing the goals and results of their actions, in addition to testing assumptions and values which he or she brings to teaching.
3. Playing a significant and active role in developing the school curriculum and the teaching reform movements.
4. Possessing numerous ideas, beliefs, and theories which contribute in reforming and improving teaching, since creating knowledge relatable to teaching is not exclusively preserved for universities, colleges or research centers.
5. Showing interest in and being attentive to, cultural and institutional contexts in which he or she works.

Various kinds of reflection are available for teachers to make use of: reflecting on the teaching and learning of students, on how effective their teaching decisions are, on teaching approaches and how to improve their practices, and on their cognitive awareness of reflective processes they are doing (McAlpine, Weston, Berthiaume, Fairbank-Roch & Owen, 2004).

Researchers have, in recent years, emphasized on the importance of professional development on teaching, mainly due to the fact that good teaching nowadays require providing students with sufficient and equal opportunities to learn, which in turn implies that teachers ought to possess the necessary knowledge and skills which enable them to provide such opportunities to their learners. In addition, teachers should be models to their students as life-long learners, and have enthusiasm and commitment toward continuous learning. Furthermore, the teaching profession demands that teachers become familiar with new updates emerging in their field of expertise in hopes of enriching their experience with time (Karaaslan, 2003).

Educational institutions worldwide have worked toward presenting teachers with programs meant to improve their performance inside the classroom while in service, so to enhance the quality of teaching. Two approaches or trends have appeared regarding professional growth and development: (a) the traditional approach which focuses on imitating the expert teacher, and (b) the other approach based on professionally developing a teacher through attending workshops and seminars, or professional self-development largely dependent on the personal initiatives taken by the teacher himself or herself achieved by self-learning, research activities, and reflective practices (Shaheen, 2012).

Drawing on what has previously been discussed, it can be seen that teachers' current professional development is no longer limited to in-service training, workshops, or short courses presenting new pieces of information to teachers in specific areas may be not relevant to their own work, but also consists of a long-term process which includes systematic opportunities and planner expertise meant to reinforce professional growth and development. Such endeavors view teachers as active constructive learners who partake in teaching, evaluation, observation, and reflection. Furthermore, professional development is a long-term process because teachers connect new experiences with previous knowledge. Professional development occurs in specific contexts which allow teachers to connect training experiences with those of real classroom experiences; also, teachers are regarded as active players which helps build new pedagogical theories and practices which doubtlessly aid them to become experts in the field, which highly improve performance (Villegas-Reimers, 2003).

Because of thus significance of reflective practices in developing teachers professionally, this paper aims to identify the level to which teachers use reflective practices and how that relates to their professional self-development and willingness to develop themselves career-wise.

Literature Review

Numerous studies conducted in the past, tackled the issue of teachers' reflective practices and their attitudes toward them. Furthermore, various studies have discussed teachers' attitudes toward professional development, while some others touched upon the connection which could be drawn between reflective practices and professional development. These studies can be split into three main groups, as follows:

Studies on reflective practices and teachers' attitudes toward them:

Tabassum & Malik (2014) have investigated teachers' attitudes toward reflective practices at private and public high schools in Pakistan. Their study aimed to explore teachers' attitudes toward the importance of reflective practices in teaching, as well as their attitudes toward utilizing such practices to better comprehend the difficulties students face during the learning process. Results indicated that teachers did not fully realize the need to have reflective practices to comprehend the difficulties their learners face.

Furthermore, Tok & Dolapçioğlu (2013) investigated how common reflective practices were found among primary school teachers in Turkey, using both qualitative and quantitative research methods for data collection. Their findings assert that teachers resort to using numerous reflective practices inside the classroom, yet fail at using practices that relate to appreciating students who express their thoughts freely which enabling students to deliver their criticism and opinions orally or in writing on teacher's classroom practices. In addition, the study found that teachers did not keep a daily record to document their professional development and effectiveness in teaching science.

Additionally, Ostaz (2011) conducted a study to unveil science teachers' abilities to practice reflective thinking in solving educational problems they may face in the classroom when completing teaching tasks in the primary stage, and whether the variables of gender, experience level, academic qualification, and type of institution they are employed at (public schools, UNRWA schools) had any effect on reflective thinking in Gaza. His study sample consisted of 108 teachers, whose responses were collected using a reflective thinking scale consisting of 9 teaching problems any science teacher could potentially run into when conducting educational tasks in class. The results indicated that teachers' levels in reflective thinking were below expected (below 70%), with significant differences on the experience variable in favor of more experienced teachers.

In another study conducted by Mustafa (1992) aimed to design a reflective thinking development training program for primary stage science teachers in Jordan, and how this would affect their teaching efficiency, the researcher specified seven indicators: (a) Class Management; (b) Planning; (c) Lesson Progress; (d) Organizing Activities; (e) Feedback, (f) the Interactive Process; and (g) Investing in the teaching and learning environment. With a study sample of 34 male and female teachers, findings indicated that such a program wielded great results in increasing the reflective thinking in teachers.

Studies on the relationship between reflective practices in teachers and their professional growth/development, critical thinking, and effective teaching.

Rayan (2014) conducted a study to investigate math teachers' reflective practices and how it relates to their teaching effectiveness using two scales for data collection; the findings indicated that teachers had a high level of reflective practices, in addition to unveiling statistically significant differences on the experience variable and in favor of teachers with low experience.

In a study aimed to identify the levels of reflective practices in faculty members at Al-Quds Open University and how this relates to their attitudes toward professional self-development, Shaheen

(2012) analyzed the responses of 117 participants. The findings revealed that participants in the sample had high levels of reflective practices, and no statistically significant differences were found in relation to academic qualifications, college, or years of experience; the results also revealed significant relationships between participants' attitudes toward professional development and their reflective practices.

Choy & Oo (2012) investigated the relationships between reflective thinking and critical thinking in teachers, attempting to pinpoint their levels of reflection as an indicator of their critical thinking levels. The findings indicated that the majority of teachers did not reflect on their teaching practices in depth, and did little to practice the four processes of learning: analysis of hypotheses, awareness of context, imaginative speculation, and reflection. Furthermore, the study found that teachers rarely practice critical thinking.

Furthermore, Giovannelli (2003) investigated the relationship between reflective disposition toward teaching and effective teaching on a sample of 55 teachers with the use of two scales: the first measures teachers' inclination toward reflection while the second measures effective teaching practices. The findings showed a statistically significant correlation between inclination toward reflection and effective teaching, especially when it came to teaching behavior, classroom organization, and teacher expectations.

Studies on teachers' attitudes and/or perceptions toward professional development

In 2003, Karaaslan conducted a study tackling teachers' perception toward professional self-development. The study explores the attitudes of the participants toward professional development and their perception regarding professional development activities, in addition to the factors which hinder professional growth and development. The researcher uses a questionnaire of both close and open-ended questions. Results indicated that teachers are aware of the importance of professional development and activities needed to grow professionally; however, they do not employ these activities in a way that matches the importance they previously assigned to them. Furthermore, findings indicated that female teachers, younger teachers, and those with less experience in teaching consider professional-development activities to be of great importance compared to their peers. Also, the study found that a number of factors may impede professional development, including a high work load, lack in self-motivation, and lack of support from the institution in which teachers work.

It became clear to us through previous studies that:

1. Studies have shown conflicting results regarding reflective practices and their levels in teachers participating as study samples (from high, to low, to being unaware of the importance of such practices).
2. Studies have shown conflicting results regarding the impact of a number of different variables on reflective practices; these include experience and academic qualification. A number of studies showed significant differences in teachers' professional practice levels on the experience variable, while others did not indicate any whatsoever.
3. Various studies used a number of different scales, tools, and methods to measure skills, including questionnaires, open questions, and analyzing teachers' personal documents.
4. A number of studies tackled the relationship between teachers' level of reflective practices and a number of variables, including critical thinking, professional development, and effective teaching.

This study is characterized by its interest in the connection between reflective thinking in private school teachers (cooperating with Petra University in teacher pre-service training programs) and their attitudes toward professional self-development.

Significance of study

The significance of this study lies in the following:

1. Highlights reflection practices as a contemporary approach for teachers' professional development and drawing teacher preparation institutions attention toward this.
2. It may drive researchers toward conducting further studies on developing reflective practices in pre-service and in-service teachers.

Study Problem and Questions:

Teachers' professional development is, and remains, a major and significant factor in developing the teaching and learning process. It has attracted increasing attention in the past few years due to the accelerating cognitive development and the revolutionary changes taking place in the information communication sector. Such changes prompted teachers and educational institutions to improve the learning and teaching process through dedicated and continuous collaborative work. Various educational institutions worldwide have adopted reflective practices and professional self-development as a way to professionally develop and improve teachers so that they become empowered to face the current challenges.

Thus, this study aims to explore reflective practices in Jordanian teachers, and to investigate if these reflective practices are being implemented in teaching process. Furthermore, it works to unveil strategies used by teachers in the reflection process. In addition, it explores teachers' attitudes toward professional self-development and the effect of various variables on it, including gender, experience level, academic qualification, and number of seminars and workshops attended.

More precisely, the study aims to answer the following questions:

1. To what extent (or level) do teachers commit to reflective practices?
2. Does the level of reflective practices in teachers differ on the variables of gender, experience, and number of seminars attended during service?
3. What are teachers' attitudes toward professional self-development?
4. Is there a correlation between teachers' levels of reflective practices and their attitudes toward professional self-development?

Study Terminology:

Teachers' Reflective Practices are constructive evaluative processes through which teachers may collect data and utilize feedback in reviewing and improving teaching. This enables teachers to review their previous knowledge and construct new knowledge based on previous experience they have undergone.

Teachers' Attitudes toward professional Self-Development are their ideas, conceptions, responses, and stances on self-reliance in their process of developing their knowledge, skills, and attitudes toward their teaching career.

Study Methodology

This study is based on the descriptive approach as that would be the suitable approach for studies which aim to describe and analyze a given phenomenon as it exists in reality through collecting needed data. Thus this study uses two scales to measure participants' reflective practices and professional self-development. Questionnaires were distributed and collected during the second semester of the academic year 2015/2016 at 10 private schools cooperating with Petra University in pre-service teacher training in Amman, Jordan.

Study Sample:

The study sample consisted of 162 teachers, both male and female, who work as teachers at a number of private schools in Amman, Jordan.

Study Tools:

The study tool consists of 3 main segments:

a) The first included personal data collected from the teachers, regarding their university major of choice, topics and courses taught to students, stage, gender, years of experience, academic qualification, and number of workshops/seminars attended.

b) The second consists of the Teacher Reflective Practices scale previously utilized by Tok & Dolapçioğlu (2013); this scale contains 28 items in 6 dimensions which include (1) creating a student-centered environment; (2) creating a reflective classroom environment; (3) appreciating criticism; (4) self-evaluation; (5) decision making; and (6) openness to professional development. The scale was translated into Arabic and presented to a collection of professionals to judge its consistency with the Jordanian environment culture as well as its linguistic soundness. Participants responded on a 5-dimensional response scale (always=5; usually = 4; hesitant = 3; sometimes = 2; and never = 1). An 80% score was considered to be the acceptable level teachers should have on this scale.

c) The third segment consisted of the Teacher Attitudes toward Professional Development scale. This scale has been designed after conducting a literature review on the subject (Yeung, 1998; Hamdan, 2011). Initially, the scale consisted of 22 items on teachers' attitudes toward their own professional self-development in their teaching career, and their willingness to attend seminars, pursue a post-graduate degree, or share and exchange experiences with their colleagues.

To confirm the validity of the questionnaire, it presented it to a group of expert judges for feedback on its appropriateness and linguistic soundness. In its final form, the Teacher Attitudes toward Professional Self-Development scale consisted of 18 items where participants responded on a 5-point Likert scale (Strongly Agree, Agree, Hesitant, Disagree, and Strongly Disagree). Each of these responses was given a score of 1-5, 5 being "Strongly Agree", and 1 being "Strongly Disagree". An average score of 80% was considered as "acceptable" for participants.

Furthermore, the reliability of the Teacher reflective practice scale was calculated using Cronbach's Alpha, with a reliability coefficient of 0.88 for the overall reflective practices. Reliability Coefficients for the six different dimensions of the scale were as follows:

Creating a student-centered learning environment: 0.70; Creating a reflective classroom environment: 0.69; Appreciating criticism: 0.52; Self-evaluation: 0.63; Decision making and problem-solving: 0.60; and Openness to professional development: 0.73. In addition, the Teacher Attitudes toward Professional Development scale had a reliability coefficient of 0.85.

Study Findings

To answer the first question (to what extent (or level) do teachers commit to reflective practices?), mean and standard deviation values were calculated for the overall Reflective Practices scale, as well as for each of its six dimensions, as shown in table (1):

Table 1. The Mean and Standard Deviation values for sample's scores on the Teacher Reflective Practices six dimensions.

| | D1 M(Std.) | D2 M(Std.) | D3 M(Std.) | D4 M(Std.) | D5 M(Std.) | D6 M(Std.) | Total |
|------|---------------|---------------|---------------|---------------|---------------|---------------|-------|
| Mean | 4.43 | 4.33 | 3.75 | 4.32 | 4.23 | 4.00 | 4.2 |
| std. | 0.45 | 0.47 | 0.69 | 0.48 | 0.51 | 0.61 | 0.40 |

By viewing the data presented, we see that the sample had a mean value of 4.2 on the overall scale, which indicates that teachers practice or perform an acceptable level of reflective practices. Furthermore, the highest mean score (4.34) for the sample was on the first dimension ("creating a student-centred learning environment), whereas the lowest was on the third dimension (appreciating criticism) with a mean score of 3.75.

To more precisely grasp the levels of reflective practices on each of the six dimensions on the scale, mean and standard deviation values and frequencies of the sample's scores were calculated for each separate dimension, as presented below.

For the first dimension, "Creating a student-centred learning environment" the researchers calculated the mean and standard deviation values and frequencies for items no. 5, 6, 9, 10, 11, and 12 as shown in Table (2):

Table 2. Mean and standard deviation values and frequencies for the items measuring the first dimension on the scale: 'Creating a student-centred learning environment'

| No. | Statement | | Freq. | Percent% | Mean | Std. |
|-----|--|-----------|-------|----------|------|------|
| 9 | When giving classes, I take care to relate the subject to students' daily life. | Always | 105 | 64.8 | 4.5 | 0.69 |
| | | Often | 41 | 25.3 | | |
| | | Sometimes | 15 | 9.3 | | |
| | | Seldom | 1 | 0.6 | | |
| 5 | I organize the learning/teaching process based on students' needs and skills. | Always | 89 | 54.9 | 54. | 0.62 |
| | | Often | 62 | 38.3 | | |
| | | Sometimes | 11 | 6.8 | | |
| 6 | I appreciate students who express their opinions freely. | Always | 92 | 56.8 | 4.4 | 0.70 |
| | | Often | 50 | 30.9 | | |
| | | Sometimes | 20 | 12.3 | | |
| 11 | I evaluate the results of activities that students engage in as homework | Always | 84 | 51.9 | 4.4 | 0.70 |
| | | Often | 60 | 37.0 | | |
| | | Sometimes | 17 | 10.5 | | |
| | | Seldom | 1 | 0.6 | | |
| 10 | I engage students in a variety of activities (tests, homework, meeting with students, meeting with parents, etc) to assess students' | Always | 85 | 52.5 | 44. | 0.80 |
| | | Often | 56 | 34.6 | | |
| | | Sometimes | 18 | 11.1 | | |
| | | Seldom | 1 | 0.6 | | |

| learning levels. | | Never | 2 | 1.2 | | |
|------------------|--|-----------|----|------|------|------|
| 12 | I provide my students with feedback on their learning level. | Always | 81 | 50 | 44. | 0.77 |
| | | Often | 61 | 37.7 | | |
| | | Sometimes | 17 | 10.5 | | |
| | | Seldom | 2 | 1.2 | | |
| | | Never | 1 | 0.6 | | |
| Total | | | | | 4.43 | 0.45 |

As illustrated in Table (2), mean values of the teacher's scores in the sample were 4.43 on the first dimension, indicating that they had high reflective practices in this particular aspect. Furthermore, from the table above, we infer that 64.8% of the sample make it a habit to constantly relate the lesson to students' daily life while 50%-54.9% of the sample appreciate and acknowledge students who stand up for their own opinions at all times, constantly engage their learners in a variety of activities, keep record of commitment to homework, and ensure that the learning process is always properly planned according to students' needs and skills.

For the second dimension, 'Creating a reflective classroom environment', the mean, standard deviation and frequencies values were calculated for items no. 1, 2, 7, 18, as show in Table (3):

Table 3. Mean and standard deviation values and frequencies for the items measuring the second dimension on the scale 'Creating a reflective classroom environment'.

| No. | Statement | | Freq. | Percent% | No. | Mean | Std. |
|-------|--|-----------|-------|----------|------|------|------|
| 2 | I encourage students to express their topic-related emotions, interests, fears, and enthusiasm to me with honesty. | Always | 113 | 69.8 | | 64. | 0.76 |
| | | Often | 33 | 20.4 | | | |
| | | Sometimes | 12 | 7.4 | | | |
| | | Seldom | 3 | 1.9 | | | |
| | | Never | 1 | 0.6 | | | |
| 1 | I Create a democratic classroom environment so that students can express themselves freely | Always | 79 | 48.8 | | 44. | 0.69 |
| | | Often | 69 | 42.6 | | | |
| | | Sometimes | 13 | 8 | | | |
| | | Seldom | - | - | | | |
| | | Never | 1 | 0.6 | | | |
| 7 | I enable my students to take part in making classroom-related decisions. | Always | 64 | 39.5 | | 24. | 0.76 |
| | | Often | 64 | 39.5 | | | |
| | | Sometimes | 34 | 21 | | | |
| 18 | I acknowledge students' opinions on problems that could arise during the lesson. | Always | 59 | 36.4 | | 24. | 0.74 |
| | | Often | 75 | 46.3 | | | |
| | | Sometimes | 26 | 16 | | | |
| | | Seldom | 2 | 1.2 | | | |
| Total | | | | | 334. | 70.4 | |

As seen in Table (3), teachers' mean score values on the second dimension were 4.33, indicating high levels of reflective practices. Furthermore, 69.8% of the sample always encourage their students to express their emotions and interests about the subject, while 48.8% construct a classroom environment which enables students to freely express themselves at all times. However, only a small percentage of 39.5% of teachers engage their students in making classroom-related decisions at all times, and even a lower percentage of 36.4% acknowledge students' opinions regarding classroom problems at all times.

For the third dimension, 'Appreciating criticism', mean and standard deviation values, as well as frequencies, were calculated for items no. 3, 4, 26, and 27 as illustrated in Table (4).

Table 4. Mean and standard deviation values and frequencies for the items measuring the third dimension on the scale 'Appreciating criticism'.

| No. | Statement | | Freq. | Percent % | No. | Mean | Std. |
|-------|---|-----------|-------|-----------|-----|------|------|
| 27 | I take my colleagues' criticism of my teaching processes into account. | Always | 52 | 32.1 | | 3.9 | 0.97 |
| | | Often | 60 | 37 | | | |
| | | Sometimes | 38 | 23.5 | | | |
| | | Seldom | 9 | 5.6 | | | |
| | | Never | 3 | 1.9 | | | |
| 3 | I enable my students to express themselves in evaluating my performance in the teaching/learning process orally or in text. | Always | 45 | 27.8 | | 3.8 | 0.99 |
| | | Often | 59 | 36.4 | | | |
| | | Sometimes | 42 | 25.9 | | | |
| | | Seldom | 13 | 8 | | | |
| | | Never | 3 | 1.9 | | | |
| 4 | I change my teaching processes according to my students' evaluation. | Always | 43 | 26.5 | | 3.8 | .960 |
| | | Often | 57 | 35.2 | | | |
| | | Sometimes | 50 | 30.9 | | | |
| | | Seldom | 9 | 5.6 | | | |
| | | Never | 3 | 1.9 | | | |
| 26 | I ask my colleagues to continuously evaluate my teaching professes and attitudes. | Always | 27 | 16.7 | | 3.5 | 1.09 |
| | | Often | 61 | 37.7 | | | |
| | | Sometimes | 45 | 27.8 | | | |
| | | Seldom | 19 | 11.7 | | | |
| | | Never | 10 | 6.2 | | | |
| total | | | | | | 3.75 | 0.69 |

As shown in Table (4), the mean score value of teachers on this dimension was the lowest with

a value of 3.75 (i.e. below acceptable levels). Furthermore, the results show that only very few teachers stick to these evaluation processes (whether it is their students or colleagues evaluating them) at all times, ranging in between 16.7% to 32.1%. The findings thus indicate that 32.1% of teachers always take their colleagues' criticism in regards to their teaching process into account, while only 27.8% of teachers constantly empower their students to evaluate their performance whether orally or in writing. The results also show that 26.5% of the sample continuously change their teaching methods based on students' evaluation of them, and no more than 16.7% of all teachers participating in this study point out that they always ask colleagues to evaluate their performance, which indicates that they are not fully aware of the importance of such reflective practices in developing their teaching practices.

For the fourth dimension, 'Self-Evaluation', mean and standard deviation values, as well as frequencies, were calculated for items no. 8, 16, 20, and 28 as shown in Table (5).

Table 5. Mean and standard deviation values and frequencies for the items measuring the fourth dimension on the scale 'Self Evaluation'.

| No. | Statement | | Freq. | percent | No. | Mean | Std. |
|-----|---|-----------|-------|---------|-----|------|------|
| 8 | I ask myself, "Are the practices I perform beneficial for my students/do they give better results when it comes to student learning?" | Always | 79 | 48.8 | | 64. | 0.56 |
| | | Often | 69 | 42.6 | | | |
| | | Sometimes | 13 | 8 | | | |
| | | Never | 1 | 0.6 | | | |
| 20 | I explore my points of weakness and strength in teaching. | Always | 90 | 55.6 | | 54. | 0.69 |
| | | Often | 58 | 35.8 | | | |
| | | Sometimes | 12 | 7.4 | | | |
| | | Seldom | 2 | 1.2 | | | |
| | | Never | 0 | 0 | | | |

| | | | | | | |
|-------|---|-----------|----|------|------|------|
| 16 | I think several times before making a decision regarding the aims of learning and teaching, as well as the topics, methods, techniques, evaluation methods, and making adjustments. | Always | 70 | 43.2 | 34. | 0.72 |
| | | Often | 69 | 42.6 | | |
| | | Sometimes | 22 | 13.6 | | |
| | | Seldom | 1 | 0.6 | | |
| 28 | I do constant revising and pose questions regarding the educational practices I am using. | Always | 48 | 29.6 | .04 | 6.80 |
| | | Often | 70 | 43.2 | | |
| | | Sometimes | 40 | 24.7 | | |
| | | Seldom | 1 | 0.6 | | |
| | | Never | 3 | 1.9 | | |
| Total | | | | | 4.32 | 0.48 |

As presented in Table (5), the mean score value of the sample on the 'self-evaluation' dimension was as high as 4.32, and that up to 48.8% of participants always ask themselves whether the practices they are performing are beneficial for student learning or not, in addition to 55.5% who continuously review their own points of strength and weakness in teaching. Furthermore, the table shows that 43.2% of participants regularly indulge in deep thinking before making decisions in regards to the educational process, while only 29.6% of all teachers reflect on their educational practices on a regular basis.

For the fifth dimension, "Decision-making and problem-solving", mean and standard deviation values, as well as frequencies, were calculated for items no. 13, 14, 15, 17, 19 as shown in Table (6).

Table 6: Mean and standard deviation values and frequencies for the items measuring the fifth dimension on the scale "decision-making and problem-solving".

| No. | Statement | | Freq. | Percent % | No. | Mean | Std. |
|-------|--|-----------|-------|-----------|------|------|------|
| 17 | I identify the problems that occur during the lesson (students cannot fully grasp topic, failure to capture students' interest, failure to communicate). | Always | 81 | 50 | 44. | 0.70 | |
| | | Often | 63 | 38.9 | | | |
| | | Sometimes | 17 | 10.5 | | | |
| | | Seldom | 1 | 0.6 | | | |
| | | Never | - | - | | | |
| 13 | I ask myself, "What are the changes which I could make when giving a particular lesson again in the future?" | Always | 76 | 46.9 | 44. | 0.70 | |
| | | Often | 71 | 43.8 | | | |
| | | Sometimes | 12 | 7.4 | | | |
| | | Seldom | 3 | 1.9 | | | |
| | | Never | - | - | | | |
| 19 | I collect pieces of evidence which support my decisions made regarding the process of teaching and learning. | Always | 64 | 39.5 | 4.2 | 0.74 | |
| | | Often | 72 | 44.4 | | | |
| | | Sometimes | 24 | 14.8 | | | |
| | | Seldom | 2 | 1.2 | | | |
| 15 | I think about alternative teaching methods or other viewpoints in this area. | Always | 57 | 35.2 | 24. | 0.73 | |
| | | Often | 75 | 46.3 | | | |
| | | Sometimes | 29 | 17.9 | | | |
| | | Seldom | 1 | 0.6 | | | |
| 14 | I ask myself, "What are the potential consequences of the changes I can do?" | Always | 46 | 28.4 | 4.0 | 2.80 | |
| | | Often | 79 | 48.8 | | | |
| | | Sometimes | 29 | 17.9 | | | |
| | | Seldom | 8 | 4.9 | | | |
| | | Never | 7 | 4.3 | | | |
| Total | | | | | 34.2 | 510. | |

Table (6) shows that the mean score value of participating teachers on this dimension was 4.23, where exactly half (50%) constantly seek to identify the problems arising in class (such as students facing difficulties in comprehending a certain topic, or failure to grab students' attention), and

slightly less than half (46.9%) regularly ask themselves what changes they could apply when giving future lessons. However, only 39.5% of the sample regularly seeks to gather pieces of evidence which support their learning/teaching process-related decisions, and no more than 35.2 % always think of alternative teaching methods which could be put into use. Not only that, but a strikingly low 28.4% of the sample asked themselves what potential effects could arise from the changes they apply in the classroom.

For the sixth and final dimension, “Openness to professional development”, mean and standard deviation values, as well as frequencies, were calculated for items no. 21, 22, 23, 24, and 25 as shown in Table (7).

Table 7. Mean and standard deviation values and frequencies for the items measuring the sixth dimension on the scale “openness to professional development”.

| No. | Statement | | Freq. | Percent % | No. | Mean | Std. |
|-------|--|-----------|-------|-----------|-----|------|------|
| 21 | I specify the fields in which I require development | Always | 85 | 52.5 | | 4.4 | 0.70 |
| | | Often | 61 | 37.7 | | | |
| | | Sometimes | 14 | 8.6 | | | |
| | | Seldom | 2 | 1.2 | | | |
| | | Never | - | - | | | |
| 25 | I talk to my colleagues about what we will do in class, why we are doing it, and how effective these practices are | Always | 60 | 37 | | 14. | 7.80 |
| | | Often | 64 | 39.5 | | | |
| | | Sometimes | 33 | 20.4 | | | |
| | | Seldom | 3 | 1.9 | | | |
| | | Never | 2 | 1.2 | | | |
| 24 | I benefit from professional newsletters. | Always | 49 | 30.2 | | 3.9 | 0.92 |
| | | Often | 52 | 32.1 | | | |
| | | Sometimes | 51 | 31.5 | | | |
| | | Seldom | 10 | 6.2 | | | |
| | | Never | - | - | | | |
| 23 | I constantly keep up with professional newsletters and new developments. | Always | 45 | 27.8 | | 3.8 | 0.93 |
| | | Often | 53 | 32.7 | | | |
| | | Sometimes | 55 | 34 | | | |
| | | Seldom | 7 | 4.3 | | | |
| | | Never | 2 | 1.2 | | | |
| 22 | I keep a journal in which I document my professional development and shortcomings. | Always | 51 | 31.5 | | 3.8 | 1.12 |
| | | Often | 50 | 30.9 | | | |
| | | Sometimes | 39 | 24.1 | | | |
| | | Seldom | 15 | 9.3 | | | |
| | | Never | 7 | 4.3 | | | |
| Total | | | | | | 04. | 610. |

In this dimension, teachers’ mean score value was no higher than 4.0, with more than half (52.5%) of teachers regularly identifying the fields in which they require further development and improvement, while only 37% discuss their classroom affairs with their colleagues and whether the practices used by them are effective. Furthermore, we notice that less than one-third of participants regularly follow or read professional newsletters, or benefit from them constantly. Furthermore, almost one-third (31.3%) keep a journal documenting their professional development.

To answer the second question (Does the level of reflective practices in teachers differ according to the variables of gender, years of experience and number of seminars and workshops attended during service?), first, mean and standard deviation values of participants were calculated for the overall test and its six dimensions separately on the gender variable. To determine if these results were significant, a t-test was conducted using the data, as shown in Table (8).

Table 8. Mean and standard deviation values of teachers’ scores on the Reflective Practices scale on the gender variable.

| | D1 M(Std.) | D2 M(Std.) | D3 M(Std.) | D4 M(Std.) | D5 M(Std.) | D6 M(Std.) | Total |
|-----------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------|
| Male n=22 | (0.46)294. | (0.54)14.4 | (0.70)33.8 | (0.48)194. | 4.05 (0.55) | 3.95 (0.66) | 4.1 2(0.44) |
| Female n=140 | 5(0.4544. | (0.46)24.3 | (0.69)33.7 | (0.48)44.3 | 4.25 (0.50) | 4.00 (0.60) | 4.2 0(0.39) |
| T | -1.614 | .8420 | .6130 | -1.363 | - | - | - |
| Sig. | .1090 | .4010 | .5410 | .1750 | 1.790 0.07 | 0.356 0.72 | 0.857 0.3 |
| | | | | | 5 | 2 | 93 |

From Table (8), the results show that the mean values of female teachers on the overall scale was higher than that of their male peers; their mean values were consistently high on the first, fourth, fifth, and sixth dimensions respectively. To investigate whether these results were significant, the t-value was calculated at $\alpha = 0.05$, meaning that there is no statistical significance.

Second, mean and standard deviation values of participants were calculated for the overall test and its six dimensions separately on the years of experience variable (ranging from low to intermediate to high), with the results shown in Table (9).

Table 9. mean and standard deviation values of teachers' scores on the overall Teacher Reflective Practices scale and on each of its six dimensions on the years of experience variable.

| Experience Level | D1 M(Std.) | D2 M(Std.) | D3 M(Std.) | D4 M(Std.) | D5 M(Std.) | D6 M(Std.) | Total |
|-------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|------------|
| Low N = 75 | 4.37(0.48) | 4.25(0.53) | 3.77(0.66) | 4.32(0.47) | 4.19(0.50) | 4.02(0.58) | 4.17(0.41) |
| Intermediate N = 44 | 4.50(0.40) | 4.43(0.39) | 3.74(0.69) | 4.36(0.51) | 4.27(0.47) | 4.00(0.62) | 4.23(0.35) |
| High N = 44 | 4.47(0.44) | 4.36(0.42) | 3.70(0.76) | 4.28(0.47) | 4.25(0.57) | 3.95(0.65) | 4.18(0.42) |

In table (9), it is evident that teachers with an intermediate level of experience had higher mean values on the first, second, and fourth and fifth dimensions respectively, as well as on the overall scale. The calculated f-value (using the ANOVA) however, indicated that there were no statistically significant differences related to the level of expertise teachers had (as shown in Table (10)) at $\alpha = 0.05$.

Table 10. Analysis of Variance for the statistically significant differences in teachers' means scores on the Reflective Practices scale on the experience level variable.

| | | Sum of Squares | df | Mean Square | F | Sig. |
|------|----------------|----------------|-----|-------------|-------|-------|
| Avg. | Between Groups | 0.116 | 2 | 0.058 | 0.367 | 0.694 |
| | Within Groups | 25.247 | 159 | 0.159 | | |
| | Total | 25.363 | 161 | | | |

Third, to investigate the effect of the number of seminars/workshops attended on teachers' level of reflective practices, mean and standard deviation values of participants were calculated for the overall test and its six dimensions separately on this variable (None, 1-5 seminars, 6-10 seminars, more than 10 seminars). Results are shown in Table (11).

Table 11. Mean and standard deviation values of participants' scores on the overall scale and its six dimensions on the no. of seminars attended variable (None, 1-5, 6-10, or More than 10).

| Workshops/ Seminars Attended | D1 M(Std.) | D2 M(Std.) | D3 M(Std.) | D4 M(Std.) | D5 M(Std.) | D6 M(Std.) | Total |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--------------|
| None N=54 | 4.37(0.52) | 4.20(0.51) | 3.65(0.77) | 4.23(0.56) | 4.19(0.53) | 3.83(0.69) | 4.09(0.45) |
| 1-5 N=85 | 4.44(0.42) | 4.36(0.46) | 3.83(0.64) | 4.36(0.43) | 4.23(0.49) | 4.09(0.53) | 4.23(0.36) |
| 6-10 N=14 | 4.46(0.44) | 4.38(0.34) | 3.61(0.72) | 4.27(.41) | 4.17(0.58) | 3.97(0.61) | 4.16(0.37) |
| More than 10 N=9 | 4.69(0.27) | 4.75(0.18) | 3.78(0.63) | 4.56(0.63) | 4.49(0.43) | 4.13(0.45) | 4.41(0.30) |

Here, we notice that teachers who attended more workshops and seminars had a higher mean value on the overall scale and on all dimensions (save for the third), followed by teachers who had attended only 1-5 overall seminars. The f-value was calculated with the use of ANOVA as shown in Table (12), indicating no statistical significance in the data.

Table 12. Analysis of Variance for the statistically significant differences in teachers' mean scores value on the Reflective Practices scale on the no. of seminars attended variable.

| | | Sum of Squares | df | Mean Square | F | Sig. |
|-------------|-----------------------|-----------------------|------------|--------------------|--------------|-------------|
| Avg. | Between Groups | 1.088 | 3 | .363 | 2.361 | .073 |
| | Within Groups | 24.275 | 158 | .154 | | |
| | Total | 25.363 | 161 | | | |

To answer the third question, 'What are teachers' attitudes toward professional self-development? Mean and standard deviation values of participants on each item on the scale were calculated, as well as on the overall scale, as represented in Table (13).

Table 13. Mean and standard deviation values of participants' scores on the Attitudes toward Professional Self-Development scale.

| No. | Statement | Mean | Std |
|------------|--|-------------|------------|
| 8 | I believe that teachers should be open to new ideas or changes that occur around them. | 4.68 | 0.51 |
| 7 | I believe that the desire to develop skills is a strong factor affecting the professional development of a teacher. | 4.62 | 0.53 |
| 9 | Teachers should reflect on their teaching practices in order to improve professionally. | 4.60 | 0.52 |
| 11 | I believe that teachers should keep up with the changes and updates in the teaching-learning process. | 4.58 | 0.54 |
| 2 | I believe that teachers should play a leading role in their professional development. | 4.58 | 0.52 |
| 6 | I believe that teachers should help one another in finding solutions to their problems. | 4.57 | 0.58 |
| 3 | It is important for schools to allow teachers to experiment their ideas and new teaching techniques freely. | 4.54 | 0.59 |
| 5 | I believe that it is important for teachers to support one another in evaluating their teaching practices and pinpoint their points of weakness and strength. | 4.53 | 0.59 |
| 15 | I believe it is important for teachers to attend seminars/workshops on electronic learning and to keep themselves updated in this field. | 4.52 | 0.61 |
| 1 | I believe that it is the duty teachers to enhance their professional skills and familiarize themselves with the subjects being taught without depending on the educational institution in which they work. | 4.52 | 0.76 |
| 12 | I believe that teachers should not waste the opportunity to attend various seminars and workshops | 4.50 | 0.60 |
| 4 | I believe that teachers should collaborate with their administrators or technical supervisors in evaluating their educational skills and level of familiarity with courses being taught. | 4.49 | 0.61 |
| 18 | I believe that it is necessary for teachers to attend workshops and seminars so to have the | 4.49 | 0.58 |

| | | | |
|----|--|------|------|
| | chance of exchanging experiences with other teachers who share their field or speciality. | | |
| 14 | I believe that when teachers attend seminars and workshops, they work toward improving the quality of education. | 4.47 | 0.65 |
| 13 | I believe it is a teacher's duty to be acquainted with professional development programs, as to have the opportunity to participate in accordance with his or her own needs. | 4.37 | 0.61 |
| 16 | I believe it is important for teachers to willfully participate in exchange programs in order to pass on new and successful ideas to their own schools. | 4.33 | 0.71 |
| 10 | It is essential for colleagues to be granted the opportunity to attend classes for data collection purposes regarding a teachers' performance. | 4.24 | 0.73 |
| 17 | I believe it is the duty of a teacher to pursue post-graduate studies to attain higher academic qualifications in order to develop professionally. | 4.14 | 0.92 |
| | Total | 4.49 | 0.33 |

The table shows how teachers' attitudes toward professional self-development were high with a mean value of 4.49 on the Attitudes toward Professional Self-Development scales, in addition to mean values ranging from 4.14 to 4.68 on each separate item.

To answer the fourth question (Is there a correlation between teachers' levels of reflective practices and their attitudes toward professional self-development?), the researcher calculated the correlation coefficient between teachers' reflective practices and their attitudes toward professional self-development, resulting in a statistically significant correlation coefficient of 0.485 at $\alpha = 0.01$.

Discussion

The interest of researchers in reflective thinking has significantly grown in the past few decades, as many assert that developing one's abilities to reflect is a major component of any teacher preparation program, and is also an effective tool for developing teachers professionally (Efe, 2009).

Results of the research at hand indicated that the level of reflective practices in teachers was of an "acceptable" level. Results have also indicated that teachers possess the same level of reflective practices regardless of various variables, including gender, experience level, or number of seminars attended during service. In addition, findings suggest that teachers' attitudes toward reflective practices were both high and positive.

Findings indicate that teachers' level of reflective practices from their personal point of view was high on all dimensions except for criticism, which indicates that teachers in Jordanian schools are more inclined toward using learner-centered learning strategies, strive to create a reflective teaching environment and self-evaluation, take appropriate decisions when solving classroom-related problems, and are persistent in self-development; however, they do not easily accept criticism from students or peers.

The high levels of reflective practices in in-service teachers could be due to the various and continuous updates implemented into the teaching system in Jordan as well as the various decisions taken to improve teacher training in Jordan since the beginning of the 21st century. This is most likely due to strong Jordanian interest in developing the education sector through teacher preparation programs, whether at public or private schools across the Kingdom. Furthermore, educational institutions have been encouraging teachers to attend workshops and seminars on different and contemporary student-centered learning and teaching strategies as well as allowing them the opportunity to practice these strategies, which reflects positively on their classroom practices and their learners' academic performance. Furthermore, various educational institutions have been offering financial and moral incentives and prizes for outstanding teachers, including the Queen Rania Teaching Award, which has had quite a positive impact on teachers' classroom practices and has deepened their analytical, critical, and reflective skills and experiences.

Moreover, this century is characterized by its ease and speed of communication and experience exchange through the internet, which allows teachers to expand their resources and keep up with updates in their field.

The findings of this study have been consistent with various previous studies in the field, including Tok & Dolapçioğlu, (2013); Shaheen, (2012), as well as Rayan (2014), who collectively assert that in-service teachers possess a high level of reflective practices.

On the other hand, these findings were inconsistent with those of Ostaz (2011) which indicated that in-service teachers had a reflective practices level far below acceptable. This is supported by Tabassum & Malik (2014) which also indicated that teachers lack sufficient knowledge on reflective practices in the classroom.

Furthermore, the findings show that teachers face a few issues in a number of reflective practices, such as accepting criticism (as stated earlier), as they do not usually ask their peers to evaluate their teaching methods nor allow students to express their opinions openly regarding their teaching methods. Thus, teachers are not receiving a sufficient amount of feedback from their peers and students despite the importance of such practices in improving the learning and teaching process. This could be due to teachers' fear of being judged by students or fellow teachers and staff members, especially if their classroom performance is below acceptable (which could negatively impact their chances of a promotion or renewal of contract for upcoming years, as well as their general sense of self-confidence). Findings further indicated that a large portion of teachers do not keep a journal to document their performance and points of strength and weakness. This could be attributed to teachers usually being overworked, especially in regards to the size of the curriculum due for completion in addition to their lengthy teaching hours, which could prevent them from finding the time to perform reflective practices such as lesson exchange visits or recording their progress and notes on a journal.

In addition to the aforementioned, the findings also concluded that there were no statistically significant differences based on gender, number of experience years, or number of seminars attended during in-service years on teachers' professional practices. Previous studies, however, provide conflicting results. For instance, Rayan (2013) asserts that there was a slight significance in the level of reflective practices in favor of teachers with less experience. However, a large number of studies assert that teachers with more experience are more likely to use reflective practices in teaching, while teachers with little or no experience do not give the matter enough thought (Efe, 2009; Ostaz, 2011). Add to that, a number of studies indicate that novice teachers are more likely to integrate technology in their teaching practices (van der Schaaf, Krull & Okas, 2014) and follow direct and clear steps in the classroom, while experienced teachers are more likely to use reflective practices and work on improving and developing their learners' skills (Efe, 2009).

A study conducted by (Galvez-Martin, 2003) demonstrates that the more experienced a teacher is, the more inclined toward reflective practices he or she becomes, even if they have never received training on reflective practices during their pre-service years; furthermore, such teachers are usually more open and effective compared to their less experienced peers.

This study has shown that teachers' attitudes toward professional self-development were high and positively correlated to teacher reflective practices, and it is quite assertive that teachers' attitudes direct their behaviors toward reflecting on classroom practices and improving performance. It is possible that teachers who possess more positive attitudes toward teaching have gained knowledge through the internet which is easily accessible as well as due to the changes and transformations currently occurring in teachers' roles as a natural response to the challenges posed by the 21st century (clearly visible in the information technology revolution currently underway, in addition to the vast amount of information now made available).

Recommendations

The following is a list of recommendations that, if implemented would contribute positively to develop and reinforce reflective practices among teachers:

- Teacher Preparation Programs could be redesigned to include courses which enable novice teachers to understand the importance of reflective practices for career improvement, which ought to be followed by further reflective practices and reflective journalism by students as a requirement for passing such courses.
- Prompt in-service teachers to record their reflections and request help from peers, in addition to allowing teachers the opportunity to share ideas and exchange visits.
- Encourage in-service teachers to record what they attempted earlier and the meanings and conclusions derived from such attempts, in addition to future suggestions to attempt in upcoming practices.
- Encourage teachers to attend peers' classes so to have such practices grow to become a part of the school culture, as they play an essential role in improving teachers' performance and widening their horizon and knowledge of their points of weakness and strength.
- Conduct further studies to investigate reflective practices in pre- and in-service teachers and how this relates to the components of effective teaching.

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