IMPACT OF REFLECTIVE COACHING ON DEVELOPMENT OF TEACHING SKILLS OF THE TEACHER CANDIDATES

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Abstract:
Both the inadequate number of supervisors and the demands on supervisors presented by the latest learner-based conceptions both in and out of educational contexts have directed many to doubt about the quality of the supervision, actual time spent for the professional development of teachers and collaboration for better teaching and better learning. This research study attempts to explore the impact of the reflective coaching model developed by the researcher based on the principles of reflective teaching on the actual teaching performance of the would-be teachers. As the research design, one-shot case study design with one-group post-test only model was used. 30 student teachers from the primary school teaching department of a Faculty of Education at a university in Turkey were included. Student teachers were trained through a 15-h orientation on reflective coaching program developed by the researcher on how to be a reflective coach and give formative feedback before the 10-week research study. Participants were split into five reflective learning groups, each with six students. Every group was required to conduct a lesson led by a teaching representative. The researcher acted as a teacher trainer and coached them during the preparation of the lesson. Each lesson was videotaped for reflective conference sessions. Later participants were instructed to fill out a questionnaire with 26 open-ended questions including their opinions and ideas on the reflective approach (instrument1). As the second instrument, evaluation checklists prepared by the researcher to assess their teaching were employed. Data were collected in both quantitative and qualitative methods including: (a) conducting and evaluating a sample lesson based on the principles of reflective teaching, (b) discussing based on videotaped lessons during reflective conference sessions, (c) expressing results with
statistical data obtained from the pre/post-test application and, (d) employing open-ended surveys and sample dialogues, interviews, and anecdotal data. Findings showed significant differences in favor of the reflective coaching program implemented. The would-be teachers developed in their skills targeted after the reflective coaching program as compared with their performance before the implementation of the program. The findings also revealed that majority of respondents were satisfied with their progress. They stated that this model helped them identify their weaknesses in their teaching. Findings gained offer essential principles on how reflective coaching can be implemented both in school-based contexts and teacher education.

**Keywords:** reflective coaching, reflective teaching, pre-service primary school teachers, formative assessment, teaching skills

1. Introduction

Reflective coaching as a formative model mainly aims to courage self-evaluation and help teachers develop teaching skills. To understand the context of reflective coaching, one needs to grasp the meaning of reflection. Schon (1987), in an effort to differentiate between reflection- in/on action, clearly points out that the former one, reflection-in-action is when an experienced practitioner learns to think on her or his own and can cope with the new information. However, for the latter, the practitioner engages in further analysis for a better comprehension of roles of student and teacher in a learning context. Integrating experience with theory by revealing new possibilities to see weaknesses and to change, reflection is thought to improvise one’s thoughts, feelings, and actions.

Reflective coaches are the practitioners who are able to make use of reflective practices during and after an event. To accomplish this, coaches try to understand the environment and act considering it. Research studies maintain that reflective coaches engage in reflective practice continuously and reflective practice is an essential component in developing themselves as as experts (Gilbert & Trudel, 2001, Göker 2006a; UNESCO; 2015). Understanding how to think in a critical way can help coaches make changes and use new methods at different teaching and learning situations.

Any critical analysis, one of the key aims of reflective coaching, brings classroom experiences into teaching and learning contexts. And this reflective practice provides teachers and learners with a better and deeper awareness on what is actually happening in a class context. Reflective analysis of teaching is an efficient way to promote appropriate reflective practice developmentally and culturally (Burns & Lawrie, 2015;
Reflective implementations in pre-service teacher education programs and in-service process of teaching were studied widely (Kullman, 1998; Schon, 1987; Schon, 1996; Stanly, 1998). Like in all fields, reflective coaching can be a great asset in teacher education.

1.1 Background

Under the current supervision system of Turkey, it is not easy to maintain that teachers can benefit from professional development. Both inadequate number of supervisors and demands on supervisors presented by the latest learner-based conceptions both in and out of educational contexts have directed many to doubt about the quality of supervision, actual time spent for the professional development of teachers and collaboration for better teaching and better learning (Gmelch & Chan 1995; Goker, 2012a; Goker, 2015; Lutton, 1988). Questioning the current system of supervision in Turkey, this study introduces a school-based reflective coaching model, a formative model for improving teaching and learning to help teachers develop their teaching skills. Teachers, through this coaching model, can be coaches to learn from all types of discussions with other coaches. These critical environments give teachers different occasions to reflect on their own practice.

The other striking fact is that current pre-service teacher training system in Turkey seems to fail to offer prospective teachers opportunities to think critically on their own practice because of a great number of theory-based lectures at the universities. In other words, these lectures do not help prospective teachers be exposed to learning environments to experience evaluation based on critical analysis. However, the process of reflection is considered to be tough.

In spite of all constraints, reflective practice could be implemented in a school context. In fact, it should be exposed to regular practice. Critical analysis skills of coaches may be improved through discussions, during which new learning environments could be created where coaches can take active roles in discussions regarding learning and teaching processes. The second context in which teachers will benefit from is dialogue journals. Coaches can question their own feelings, questions and concerns for their new roles and provide alternatives and challenges to ways of thinking. The third and ultimate means in reflective coaching is video analysis during which, coaches can videotape their performance and create environments to discuss about them. Finally, opportunities should be given to teachers to analyze, reflect, and change their own practice.
2. Hypothesis and Research Questions

Three research questions are posed based on the discussion outlined above as this research study attempts to explore the impact of reflective coaching on the actual teaching performance of prospective teachers.

1. To what extent can reflective coaching develop pre-service primary school teachers’ teaching skills?
2. What is the impact of reflective coaching model on the development of pre-service primary school student teachers’ teaching skills in: introduction, planning of lesson, classroom management, employing new materials, and evaluation?
3. What are the opinions of prospective teachers on reflective coaching model?

3. Method

3.1 Research Design

The pre-experimental approach according to the one shot case study design was used. Because, this is a type of pre-experimental design, in which one group of test units is exposed to an experimental treatment and it just measures the post-test results without using a control group (Fraenkel and Wallen, 2000).

3.2 Participants

This study was conducted during the Fall term of 2015-2016 Academic Year. 30 student teachers from primary school teaching department, Faculty of Education, Artvin Coruh University, Turkey were included. There were 16 female and 14 male student teachers and their ages ranged from 20 to 26 years. The study was conducted during their regular Classroom Management course (OMES 305) from the current B.A. teacher education program. Classroom Management course mainly focuses on classroom observation as part of micro-teaching and later full-lesson teaching, putting pedagogy into practice together with evaluation. Awareness of the weaknesses and strengths of trainees while preparing for their teaching practice constituted the main focus in this type of reflective practice.

3.3 Data Collection Instruments and Procedure

Data were collected during the reflective practice of the Classroom Management course. Before the 10-week investigation, student teachers were exposed to a 15-h training on reflective coaching program developed by the researcher (2006b) on how to be a reflective coach and give formative feedback. The training program consisted of an
overview of the teaching skills, which were thought to represent desired teacher behaviors. Reflective coaching training also included 1) discussions and video analysis on pre-videotaped sample courses, 2) dialogue journals, and 3) feedback giving procedures based on the principles of reflective teaching during reflective conference sessions.

Participants were split into five reflective learning groups, each with six students. The researcher coached them during the preparation of the course. Each lesson was videotaped for reflective conference sessions which included both self-evaluation of the group itself and reflective evaluation by the other groups. To organize a framework for subsequent reflective conferences, two questions were used: (a) What were the weaknesses and strengths? (b) If you did the same lesson again, how would you do it? After training, they were asked to respond to a 26 open-ended questionnaire (instrument1), the questions were formed based on Richards and Lockhart’s (1997) showing their ideas and opinions about the reflective process. Later they were asked to elicit required information on their understanding of reflective practice. As the second instrument, evaluation checklists organized by the researcher to assess student teachers’ teaching were employed. Data were collected in both quantitative and qualitative methods including: (a) conducting and evaluating a sample lesson based on the principles of reflective teaching, (b) discussing based on videotaped lessons during reflective conference sessions, (c) expressing results with statistical data obtained from the pre/post test results and, (d) employing open-ended surveys and interviews, evaluation forms and anecdotal data. As to the reliability and validity of this instrument, it was established by the developers.

After the training session, the prospective teachers were introduced to a sample lesson with the procedures to be carried out in the pre-, during-, and post-sections they would be necessary to teach weekly during their Classroom Management course. The researcher as both a teacher trainer and reflective coach simulated a lesson based on teaching skills targeted after procedural discussion. Finally, a simulated reflective conference session after the sample lesson was given by a student teacher volunteer and the researcher. For enabling a structure to organize subsequent reflective conference session, following questions were posed:

1. What were the weaknesses and strengths?
2. If you did the same lesson again, what changes would you make and why?
3.4 Pre-assessment Data

One student teacher volunteer video-taped lessons for all students teachers during Week 1 and video-taped reflective conference session for the sake of collecting data. Prospective teachers came together with the researcher to plan a 20-min language lesson on the day 1 of the Classroom management course and each student teacher representative conducted their lesson on the day 2 and it was also video-taped for data analysis. Then, the reflective conference session was conducted after that teaching episode and prospective teachers engaged in it, using the same two questions, which were employed during the training session. For all the prospective teachers, the reflective conference session was conducted between the researcher and them in the coaching process and all the reflective conference sessions were video-taped.

4. Intervention

4.1 Procedure

Students, teachers all participated 80-min orientation organized weekly, which focused on teaching skills selected. During the seminars, the researcher conducted a micro-teaching session focusing a skill targeted and discussions were made on how that teaching episode would and could be conducted in different ways. The prospective teachers took part in different optional instances of a hypothetical teaching situation. Then, while watching a videotape featuring prospective teachers demonstrating the the skill targeted, they recorded examples for the use of that specific skill and discussions were made on teaching sessions.

The prospective teachers attended simulated the reflective conference sessions concentrating the lesson video-taped following each seminar, employing the same questions asked for reflective conference sessions conducted for the study. All prospective teachers discussed strengths, weaknesses, and improvements suggested. During reflective conference sessions, all student teachers had the chance to compare their teaching episodes, immediate feedback was given in every case when the lesson finished, and (c) the reflective conference sessions mainly focused on direct observation of instruction.

A 20-min micro-teaching was conducted by all groups twice each week during the Classroom Management course and the main target was on integrating a different skill into the lessons. All prospective teachers were assigned in six groups to three elementary classrooms where a representative along with the other members of the group observed each other teaching. They kept notes including specific facts for each
teaching skill to use them in the reflective conference sessions conducted as soon as each lesson finished.

All groups participated in reflective conference sessions together with the researcher four times weekly on every two days after the lessons finished. Apart from that, two formal reflective conference sessions after the direct observation by the researcher occurred during the Classroom Management course. Thus, the researcher took active part in both observations and conference sessions.

4.2 Post-assessment Data
The data collected for post-assessment were based on a lesson given during Weeks 9, 10. Students from all six groups organized a video-taped a lesson similar in length to the one employed for pre-assessment data and a videotape of the final reflective conference session. As a further part, they were asked to fill in the Likert-type instrument, which were also employed by others searching for reflective coaching (Ncuberg and Bratton, 1987), allowed prospective teachers to rate different parts of their course on a scale of 1 (low) to 5 (high).

Those parts contained (a) five teaching skills targeted; (b) analysis of the benefits of reflective conference sessions; (d) ability of demonstrating flexibility; (e) rating of complete growth; and (f) complete evaluation of the experience. Following open-ended questions were given together with the original instrument:

“The most useful parts of the field experience were ...” and “Finally, how would you rate your course related with professional growth? To what extent have you changed in your concept of the teaching skills? Please explain”.

4.3 Data analysis
SPSS (the statistical Package for the Social Sciences) employing t-test and Frequencies was used to analyze data. In addition, the evaluation checklists prepared by the researcher to assess student teachers’ teaching were employed to see treatment effects on each teaching skill development, resulting in quality, and complete performance (i.e., the degree to which there was evidence of all teaching skills in a lesson). Apart from these, many other points of discussion, interviews, anecdotes, responses focused on teaching skills, materials, the task, teaching methods videotaped during reflective conference sessions were also analyzed and some examples of those dialogues describing the researcher (as reflective coach) and teaching representative interactions during a reflective conference session were included in findings section. To sum up, a
brief discussion about the findings gained is given considering the research hypotheses and questions in the Findings section.

An open-ended questionnaire as the other instrument included the questions, which were constructed based on Richards and Lockhart’s (1997: 16) Guidelines on Reflection Questions. The validity and reliability of this instrument were established by the developers. Later they were asked to elicit required information on their understanding of reflective practice. Participants elicited and agreed on 20 open-ended questions. According to them, answers to those selected questions, would help them do more efficient and self-regulated teaching and this would reflect the belief of controlling professional development demands through improvising action.

Three raters, experienced in teacher education worked with the participants and they were trained on how to interpret the video-taped data. During four 2-h orientation sessions, discussions were made on implications of teaching skills highlighted. To show how to rate and compare, sample videotapes were employed. After the orientation session for each group, raters measured three more videotapes of lessons of prospective teachers independently. Internal consistency yielded 0.87 for quality of use and 0.91 for frequency of occurrence with the use of Cronbach’s alpha.

A total of 20 videotapes (5 from pre-assessment and 15 from post-assessment) were rated in accordance with the procedures independently after training; each rater evaluated each tape and while rating, one videotape was randomly chosen to maintain interrater reliability. This selection resulted in interrater agreement of 92% for overall demonstration, 85% for quality of use, and 87% for frequency of occurrence.

5. Findings

A. Research Question One

Means and standard deviations for overall teaching performance for the pre and post application of the evaluation checklist are displayed in Table 1. According to the findings, as can be seen in the Table 1, there are significant differences between the mean scores (t = 11.342 df= 28, significant at α= 0.01). At the pre-stage of the evaluation checklist, the mean score by student teachers on overall teaching performance was (8.978) as compared with that of the post application (12.981).

These findings are clearly in favor of the post application of the evaluation checklist. Furthermore, the estimated effect size value is 7.09, which clearly shows that the effect size of the training program has been quite effective on raising student teachers’ teaching performance. So, it can be concluded that reflective coaching...
orientation has proven to be effective in improving student teachers’ overall teaching performance for the skills targeted.

**Table 1: T-test findings to compare the student teachers' overall teaching performance**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Mean</th>
<th>S.D.</th>
<th>Mean Difference</th>
<th>S.D.</th>
<th>D.F.</th>
<th>T</th>
<th>Sig</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
<td>8.978</td>
<td>2.007</td>
<td>2.876</td>
<td>0.967</td>
<td>28</td>
<td>11.342</td>
<td>0.01</td>
<td>7.09</td>
</tr>
<tr>
<td>Post</td>
<td>12.981</td>
<td>0.697</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**B. Research Question Two**

Means and standard deviations for each skill targeted at the pre/post application of the evaluation checklist are shown in Table 2.

**Table 2: T-test findings to compare the student teachers' overall teaching performance in the skills targeted**

<table>
<thead>
<tr>
<th>Skills</th>
<th>Measure</th>
<th>Mean</th>
<th>S.D.</th>
<th>Mean Difference</th>
<th>S.D.</th>
<th>D.F.</th>
<th>T</th>
<th>Sig</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesson planning</td>
<td>Pre</td>
<td>4.899</td>
<td>0.796</td>
<td>2.003</td>
<td>0.789</td>
<td>28</td>
<td>11.5</td>
<td>0.01</td>
<td>4.96</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>7.773</td>
<td>0.312</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Introduction</td>
<td>Pre</td>
<td>7.4217</td>
<td>1.79214</td>
<td>6.1976</td>
<td>1.1798</td>
<td>28</td>
<td>12.989</td>
<td>0.01</td>
<td>5.96</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>12.4889</td>
<td>0.69875</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practice of new materials</td>
<td>Pre</td>
<td>13.8976</td>
<td>1.8974</td>
<td>2.9976</td>
<td>0.8486</td>
<td>28</td>
<td>9.896</td>
<td>0.01</td>
<td>4.23</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>16.9786</td>
<td>1.1314</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classroom management</td>
<td>Pre</td>
<td>7.7977</td>
<td>1.1895</td>
<td>3.914</td>
<td>.6229</td>
<td>28</td>
<td>12.943</td>
<td>0.01</td>
<td>5.6</td>
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<tr>
<td></td>
<td>Post</td>
<td>12.3897</td>
<td>.47014</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Evaluation</td>
<td>Pre</td>
<td>6.1865</td>
<td>.80.315</td>
<td>1.8614</td>
<td>1.6984</td>
<td>28</td>
<td>10.642</td>
<td>0.01</td>
<td>4.9</td>
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<tr>
<td></td>
<td>Post</td>
<td>8.1446</td>
<td>.3594</td>
<td></td>
<td></td>
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</table>

The T-test findings, as can be seen in the second table, showed statistically significant differences in favor of the post stage of evaluation. For the lesson planning, it is seen that the estimated t-value is 11.5, with a significant difference at 0.01 levels favoring student teachers’ performance on the post-stage. On the other hand, with the estimated effect size value of 4.96, it is seen that the reflective coaching training has proven to be effective in improving student teachers' performance in planning of lessons. In addition, for the skill of introduction part of the lesson, it is seen that the estimated t-value is (12.989) with a significant difference at 0.01 level in favor of student teachers' performance. Furthermore, the estimated effect size value is 5.96 showing that reflective coaching orientation has again proven to be effective in improving performance of student teachers to introduce the lesson.

As far as presentation and practice of new materials are concerned, it is seen that the estimated effect size value is 4.23, meaning that the reflective coaching orientation
has had a high impact on practicing new materials. The estimated t-value is 9.896 with a significant difference at 0.01 level in favor of their performance on post-stage of application. As to classroom management skills, as can be seen in Table 2, the estimated t-value is 12.943, which again shows significant difference statistically at 0.01 in favor of student teachers' performance on post-stage of checklist. Thus, one can conclude that reflective coaching training is high in improving their classroom management skills with the estimated effect size value of 5.6. Finally, for the evaluation skills, it is seen in the Table 2 that the estimated t-value is 10.642 having a significant difference at 0.01 level and in favor of participants' performance on post-stage of application with the estimated effect size value of 4.9. To conclude, reflective coaching training implemented in the study has made a great contribution to improving participants’ ability to evaluate their students.

Although responses during reflective conference sessions focused on teaching skills, the other considerations for the discussion on the task, teaching methods, materials and students were also available. The following examples describe the researcher (as reflective coach) and teaching representative interactions during a reflective conference session.

**Example A (taken from Videotape No. 6B)**

Reflective Coach: “What are your opinions about the strong parts of the lesson?”

Teaching Representative: “I supposed that the class was active in discussions about being a healthy person with me and they seemed to love the material of the lesson prepared about a healthy person.”

Reflective Coach: “The material was chosen from a real-life situation (authentic) and I understand that they are actually concerned about being a healthy person individually and socially.”

Teaching Representative: “Absolutely agree, the students were highly motivated and excited.”

**Example B (taken from Videotape No. 4C)**

Reflective Coach: “What are your opinions about the weaknesses of the lesson?”

Teaching Representative: “During the warm-up part, I clearly gave questions as part of brain storming for the sake of creating curiosity. I regret to say that they did not love it. Using a video script from a popular film about traffic rules could have been better.”

Reflective Coach: “Yes, as the warm-up part was not attractive and the questions you asked were not really about their life experiences, you could not control the class. However, in the next teaching episode, we should take it into consideration.”

Teaching Representative: “That is right, they did not get excited and motivated.”
Example C (taken from Videotape No. 2A)

Reflective Coach: “Are you happy with the teaching method you used in class?”

Teaching Representative: “Not indeed. I thought information technology they were familiar with was limited to use of cell phones. However, I should have included tablets. Responses were limited to cell phones. I could have extended it to other types of it equipment they used in real life situations.”

Reflective Coach: “Yes, the lack of examples affected your teaching method and you had to use direct method. Remember, I gave you some more IT devices they are using in their Daily life.”

Teaching Representative: “That is right. During the previous reflective conference session, I remember we had discussed it in details.”

Example D (taken from Videotape No. 5B)

Reflective Coach: “Are you happy with the evaluation you did during class?”

Teaching Representative: “Not indeed. I just had some time management problems and I had to do it at the end of the lesson. I ignored it, when some students gave good examples. However, I could have asked them to write to compare the IT equipment they used and their parents used as a homework.”

Reflective Coach: “It seems that they had good time talking about cell phones though.”

Teaching Representative: “That is right. I forgot to state my objectives.”

Reflective Coach: “Do not forget. You clearly told them what they would learn. What else would you do conduct a better lesson then?”

Teaching Representative: “My objectives would definitely be a starting point and I would mention about the advantages of using IT equipment in our regular life.”

Reflective Coach: “Also for role play, you could split them in groups.”

To sum up, as can be seen in the Table 2, reflective coaching training implemented in the study have contributed significantly to improving each teaching skill targeted.

C. Research Question Three

This question attempts to reveal the student teachers’ perceptions and understandings about reflective coaching model. Percentages and frequencies were gained on student teachers’ answers to 26 questions and answers considering the principles of reflective coaching. The responses of only 22 participants were analyzed as 8 were not present as the questionnaire was distributed. We also asked the participants what they thought about the reflective coaching training implemented. The answers gained show that a high majority of them (84%) were satisfied with the reflective coaching training giving positive comments.
Furthermore, 82% of them stated that they found the training very useful in terms of creating an awareness on their weaknesses and strengths and they stated that got the opportunity to identify problems. 74% of them stated that they had the chance to develop a new understanding to be a creative and wise teacher. On the other hand, 72% of them stated that they learned how to carry out objective and clinical evaluation for themselves and for others to see their strengths and weaknesses during a lesson. More than half of them (68 %) stated that they were introduced with effective strategies to grasp the problem solving method used in their teaching practice. According to 60% of them, a progress was achieved in realizing learning theories. However, almost 10 % of the participants stated that they did not want to take part in the training as they thought it would not contribute to their professional development.

6. Conclusion and Recommendations

Findings gained from the study are considered to be consistent with those of some scholars (Carrier, 2003; Crookes, 2003; Ferguson and Donno, 2003; Goker, 2006b); Jacobs and Farrell, 2001; Pickering, 2003; Vazir, 2006). Findings also offer essential considerations on how reflective coaching can be an implemented both in school-based contexts and teacher education. Considering the recent developments basically on how to create reflective learning communities and introducing different reflective practices, I maintain that these endeavors could create reflective learning communities, in which prospective teachers or teachers could be trained as reflective practitioners. These reflective practice endeavors could be created in other teaching and learning and contexts to gain countless benefits.

The would-be teachers developed in their skills: introduction, lesson planning, employing new materials, classroom management, and evaluation after the reflective coaching program as compared with their performance before the implementation of the program. The results also revealed that majority of respondents are satisfied with their progress through the reflective coaching program. They stated that this model helped them identify their weaknesses in their teaching, characteristics of a creative, and effective teacher. The other striking result is that they created a new understanding on how to observe and evaluate their own practice and this type of coaching assisted them in problem–solving tasks.

Reflective coaching, within this context, is considered to play a significant role in creating endeavors giving priority to collaboration. It is also a feasible and potentially reusable supervision model both in pre-service and in-service contexts. Taking this into consideration, reflective coaches trained may act as supervisors in all school contexts.
This type of reflective practice may offer school administrators, teachers and learners a better and deeper awareness on what is going on in a class context as reflective analysis of teaching is a powerful way to promote appropriate reflective practice both developmentally and culturally.

References


