



PREPARING STUDENT TEACHERS TO TEACH: A TECHNOLOGY-ENHANCED, REFLECTIVE, AND COLLABORATIVE MODEL

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Abstract:

In language teacher education programs, to train learners to become effective and qualified teachers, theories of learning and teaching are taught. In the methodology courses, learners experience teaching to their peers as a link between theory and practice. To improve teaching experiences, the current study focuses on a special methodology course, Teaching English to Young Learners, by implementing technology, reflective feedback, and collaborative learning, and it presents a model that is grounded within the social constructivist theory. Sixty-two learners participated in the study. Two groups were randomly assigned to the Technology Enhanced Group and Control Group to investigate the effectiveness of the technology-enhanced, reflective, and collaborative model; and to explore the learners' perceptions. The qualitative data was analyzed using feedback, reflections, and learner interviews. The technology-enhanced, reflective, and collaborative model of teaching how to teach to young learners proved to be effective. Participants noticed the pedagogical aspects of the teaching model presented to them and their perceptions were positive. It is concluded that it is crucial to search for ways to help learners learn the theory and prepare future teachers for their actual classroom experience in language teacher education programs.

Keywords: teacher training, technology-enhanced reflective and collaborative model of teaching, preparing student teachers to teach

1. Introduction

Education is regarded as the source of social and economic development around the world. Every nation aims to enhance its educational system, and teachers constitute the most important resource in schools. The quality of the teachers working in schools would help improve student outcomes (Bahr & Mellor, 2016). In this respect, the goal of teacher education programs is to train competent, effective, and qualified teachers. To educate

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competent and qualified teachers, language teacher education programs focus on theories. *“The purpose is rather to appraise and critically discuss theories: to use them as a way to extend one’s own professional knowledge, to raise awareness of key issues in language teaching and learning, and to think about their plausibility and implications for one’s own teaching”* (Urr, 2019; p.456). The next step in teacher education is to link theory into practice. *“A good way to combine theory and practice in teacher courses is to activate the teachers in a classroom procedure that implements the theoretical concept, elicits or explains the concept, and then challenges teachers to apply it in different contexts”* (Urr, 2019; p. 457).

To address the link between theory and practice, most language teacher education programs offer methodology courses. The main aim of the methodology courses is to train future language teachers to become effective, competent, and qualified by presenting the theories of language learning and language teaching. Moreover, learners are allowed to apply some teaching techniques and activities in the classroom environment to their peers as a link between theory and practice. *“Teaching English to Young Learners”* is a course that aims to help learners become qualified teachers of young learners studying in the English Language Teaching (ELT) departments. The current study focuses on this special methodology course that is given in the language teacher education programs to educate language teachers of young learners and presents a model to improve the teaching experiences of preservice teachers by integrating technology, reflective feedback, and collaborative learning.

2. Literature Review

2.1. Technology Enhancement and Blended Learning

Technology has been integrated into language learning and teaching since its beginning in the 1950s (Hubbard & Levy, 2016; Levy, 2000; Li, 2017). *“Most, if not all, teachers, educators, and policymakers would support the use of technologies in enhancing learning”* (Li, 2017; p.5). Technology integration takes the form of blended learning in the current study. Ko and Rossen (2017) define a blended course as *“a course that includes both face-to-face meetings and online components”* (p. 35). In a blended learning course, positive features of both face-to-face and virtual learning environments are integrated and students and the teacher interact with or without technology (Tselios *et al.*, 2011). According to Tselios *et al.* (2011) *“blended learning provides the opportunity to integrate advantages offered by online learning with the best practice and benefits of traditional learning”* (p. 225).

Several investigations on blended learning concluded that blended learning situations possess the capacity to increase the efficacy of learning and teaching (Garrison & Kanuka 2004; Picciano 2009). Moreover, several research concluded that blended learning enhances the feeling of community among students (Rovai & Jordan 2004) and improves the success and satisfaction of students when compared to face-to-face courses (Dziuban & Moskal 2011; Means *et al.* 2013). De George-Walker and Keeffe (2010) stated that successful blended learning is not only integrating information and communication technologies (ICT) with face-to-face approaches but also implementing a learner-centered

blended learning design in which students participate and develop their skills as self-regulating, self-directed, self-determined and reflective learners.

In the current study, student teachers had their theoretical knowledge in the face-to-face classes, and for teaching experience, they taught to their peers out of class and video-recorded their teaching experiences. Technology was implemented by video-recording teaching experiences, using any tool of their choice, and uploading them into the learning management system (LMS). Blended learning was used as a method to watch the video-recorded teaching experiences outside of the classroom and give feedback on the teaching experiences.

2.2. Reflective Practice and Collaborative Learning

Social constructivist theory was primarily introduced by Lev Vygotsky who claimed that the child is an active learner in a world full of other people (Cameron, 2001; p.6). Social constructivist theory offers justification for giving feedback to scaffold learners. *"Feedback is one of the most powerful influences on learning and achievement"* (Hattie & Timperley 2007; 81). Boud and Falchikov (2006) state that assessing self and others' work is an important quality, particularly for students in higher education.

Moreover, reflective practice theory which grew from Dewey's (1933) and Schon's (1983) research involves a critical examination of professional practice. Di Stefano *et al.* (2023) argued that providing an opportunity to engage in and reflect on key lessons from experience is more important to learning than repeated experiences without any opportunity to reflect. Odo (2021) noted that *"reflective practice can expand our understanding of beliefs, knowledge, and attitudes about our practice as well as the teaching and learning process itself"* (p. 329). Alt *et al.* (2022) noted that learners typically exhibit reflection in their actions when participating in reflective practice.

Yuan *et al.* (2022) conducted a study on reflective practice with pre-service teachers in a language teacher education course. They videotaped the reflections and had interviews with six pre-service teachers. They found that the majority of pre-service teachers had favorable opinions about using video-based reflective practice and they concluded that video-based reflective practice provided an authentic, meaningful, and collective context for them. In addition to being able to evaluate their instruction, the participants were able to grow in their sense of professional autonomy and ownership.

Grounded on social constructivist theory, learning is a constructive and shared process and collaboration with peers is central to active learning (Talamo *et al.*, 2016). Positive effects of collaboration on learners' social and cognitive development were reflected in studies that emphasized the value of collaborative learning (Johnson *et al.* 2001; Slavin, 2004; Veenman *et al.* 2002). Millis and Cottell (1998) provided empirical evidence at the higher education level and they concluded that collaborative learning resulted in improvements in student performance; students' motivation and cognitive effort in learning increased and they had an increased sense of responsibility and willingness, moreover; collaboration improved learner activity and learner interaction.

According to Voogt *et al.* (2015), regarding both educating teachers and the professional development of teachers, collaborative design is important. Several studies on collaborative learning emphasized the influence of collaborative learning on the learning process of student teachers (Bouas 1996; Wilhelm 1997). Kolić Vehovec *et al.* (2022) investigated the results of a structured environment for cooperative learning on the performance of 223 participants enrolled in a teacher education program; they found that collaboration significantly improved performance. In the light of research, collaboration in the current study was obtained through written and oral feedback given by peers to the student teachers' teaching experiences.

2.3. Significance and Aim of the Study

The main aim of language teacher education is to train competent and qualified teachers, for this purpose, teacher candidates are given varied courses to equip them with knowledge and necessary skills. In a study, Johnson (1994) investigated how pre-service teachers perceived their practicum instruction and found that the methods they used were shaped by their prior experiences, the activities they used, and the organization of the classroom. Several other studies (Borg, 2006; Kiely & Askham, 2012; Mattheoudakis, 2007; Ogilvie & Dunn, 2010;) also concluded that prior learning experiences may influence teaching. In this regard, it is important to help future language teachers gain positive learning experiences during their study in language teacher education programs. By keeping the theory and new paradigms in language teacher education in mind, there is a need to implement the previous findings and search for new and effective models of teaching to better educate language teachers in teacher education programs. To educate language teachers of young learners, language teacher education programs offer "Teaching English to Young Learners" courses. The current study aims to present a technology-enhanced, reflective, and collaborative model to help learners learn how to teach young learners, based on the need to explore the effects of this social constructivist approach to training teachers of young learners. To investigate the effects of the teaching model and learners' perceptions, the study seeks to answer the following research questions:

- 1) To what extent does the technology-enhanced, reflective, and collaborative model of teaching help learners learn from their teaching experience?
- 2) How do learners perceive the technology-enhanced, reflective, and collaborative model of teaching implemented in their "Teaching English to Young Learners" course?

3. Material and Methods

3.1. Participants and Context

The current study was conducted in the context of the "Teaching English to Young Learners" course which is a requirement of the language teacher education program in ELT departments. The aim of the "Teaching English to Young Learners" course is to make

students aware of the basic terminology, knowledge, and skills of language teaching to young learners considering their characteristics. The content of the course includes teaching listening, storytelling, speaking, reading, and writing to young learners as well as characteristics of young learners, classroom language, and principles of teaching English to young learners. According to the learning outcomes, by the end of the course, students are expected to be able to design listening, storytelling, speaking, reading, and writing lesson plans for young learners; to identify various activity types, to analyze the stages of the teaching process, and to apply various activities and techniques to the skill they are focusing on. In this context, to educate competent and qualified language teachers of young learners, a technology-enhanced, reflective, and collaborative model was developed.

Sixty-two third-year learners studying in the ELT department participated in the study. The researcher was teaching two groups of "Teaching English to Young Learners" course in the 2022-2023 academic year spring semester, when the study was conducted. Groups were randomly assigned as the Technology Enhanced Group (TEG) (n=32) and Control Group (CG) (n=30). The learners in each group were introduced to the syllabus, content, assessment, and procedures of the course and they were informed that the procedures and the results of the teaching model of the course would be used in research; therefore, they would be the participants in the research, and the results of the study would not affect their grades. They were also made aware that the objective of the study was to investigate the effectiveness of the teaching model. Thus, all the participants (n=62) were given consent forms stating that they agreed to let their teaching experience, feedback, and reflections be used for the current study and they volunteered to take part in the study.

3.2. Procedure

The study lasted for a semester, a total of 13 weeks following the procedure below. For teaching how to teach, in the TEG:

- 1) The learners were presented with the theoretical knowledge and pedagogical aspects by the instructor and the instructor modeled the teaching, thus learners were able to observe how the theory was put into practice. As the learners were provided with the model teaching, they were asked to notice the important points that were introduced such as the steps of teaching, how to start the activity, and how to get the attention of the students via a reflection guideline provided by the instructor. After that, the TEG wrote a reflection on what they noticed about the teaching of the skill, and this reflection was used as a pre-test. After this session, for each skill which took one or two weeks depending on the length of the theoretical knowledge and model teaching of the instructor, the learners were assigned topics to prepare their lesson plans. For each skill (listening, storytelling, speaking, reading, and writing) approximately seven student teachers were assigned topics to experience teaching the skill. By the end of the semester, each

- learner in the TEG had prepared lesson plans for each skill (a total of five lesson plans) and taught one of the lesson plans to the target young learner group.
- 2) The student teachers prepared their lesson plans and taught the topic. They had five days to complete this task after the instructor's session finished. For their teaching experiences, the student teachers asked at least six classmates to act as the target student group. These teaching experiences took about 20 minutes either in a classroom in the department or at their home and they video-recorded the teaching experience and uploaded it with a tool such as YouTube or any tool they were familiar with. They were told to have a good angle as they were recording to make the details clear such as the materials and use of board.
 - 3) After the student teachers video-recorded their teaching experience, they uploaded the link to the "discussions" page in Mergen, which is a LMS used by the university.
 - 4) TEG had two days to watch the video recordings of teaching experiences. For each skill, approximately seven teaching experiences were watched. Then, everybody in the group wrote feedback on each of the teaching experiences via feedback guidelines. Feedback guidelines included questions such as 1. Which steps are included in teaching? 2. What did he/she do right? 3. What needs improvement? After writing, they uploaded the feedback to the "discussions" in Mergen. The student teacher and the TEG read all of the feedback before the class session.
 - 5) In the class, oral feedback and reflection sessions were completed by asking questions and negotiating meaning. The student teacher reflected on what she/he did while teaching, referring to the theoretical knowledge and pedagogical aspects that were introduced by the instructor; first, TEG, and lastly the instructor gave oral feedback to the student teacher.
 - 6) After the class, the student teacher wrote a reflection. The reflection guideline for the student teacher consisted of these questions: 1. What was good about your demo? What did you do right? Why were they right? (explain and justify) 2. What was not good enough in your demo? What did you do that was not right, and caused certain problems? What was/were the problem(s)? TEG wrote their reflections by using reflection guidelines. The questions for the group included:
 - Part I: 1. What have you learned out of demos? a) What was good about each particular demo? What did they do right? Why were they right? (explain and justify) b) What was not good enough in each particular demo? What did they do that was not right, and caused certain problems? What was/were the problem(s)? (explain and justify) How could you solve that/those problem(s)? What would you change to make it/them better? What are the possible ways to fix the problem(s)?
 - Part II: Your friend has been absent and missed the last lesson where you learned about teaching "listening/storytelling/speaking/reading/writing" to young learners. To help him/her understand create a sequence diagram showing the major stages of teaching

“listening/storytelling/speaking/reading/writing”? to young learners. These reflections were used as a post-test. Figure 1 shows the summary of the teaching model.

Instructor: Provide theoretical knowledge and model teaching → (In class)
TEG: Write lesson plans → Upload to LMS (Out of class)
Student teacher: Teach peers who were acting as target students → Video record the teaching experience → Upload the video to LMS
TEG: Watch the video and write feedback → upload to LMS → (Out of class)
TEG, the student teacher, and the instructor: Give oral feedback, and reflection (In class)
Student teacher and TEG: Write reflection → upload to LMS (Out of class)

Figure 1: The Teaching Model

In the CG the same classroom procedures were applied in the instructor’s teaching sessions for each skill. After learners were provided with the model teaching, the CG wrote a reflection on what they noticed about the teaching of the skill in the classroom, and this reflection was used as a pre-test. After that, the learners were assigned topics to prepare their lesson plans. CG met in the next course hour, one week later. The student teacher taught the lesson plan in the classroom to peers who were acting as the target student group and they also noted the important points to give feedback. After the teaching experience, the CG and the instructor gave oral feedback via the guideline and the student teacher reflected on what she/he did while teaching, in the classroom. After the class, the student teacher wrote a reflection focusing on what she/he changed in the lesson plan after the feedback session, what she/he learned from the feedback session, and what she/he learned about teaching the skill. Lastly, the student teacher added a diagram to the reflection summarizing all of the important points to consider in teaching the skill to young learners. CG wrote their reflections and added a diagram to the reflection summarizing all of the important points to consider in teaching the skill to young learners. These reflections were used as a post-test.

3.3. Instruments and Data Analysis

In the analysis of the qualitative data gathered from feedback, reflections, and interviews, the content analysis was carried out. For each skill- listening, speaking, storytelling, reading, and writing- feedback and reflections were analyzed to find out whether they consisted of segments that were focused on the theoretical part of the course by the instructor. These segments included: the inclusion of steps/activities in teaching; the suitability of the activity to the age, level, aim, etc.; body language/mimes and gestures/ facial expressions/eye contact; responding to the student’s immediate needs such as clarification, reaction, praise, feedback, etc.; giving instructions; and suitability of the materials to the aim and young learners in size, clarity, color, and consistency. These important points of teaching the skill were coded and the ones with in-depth and sufficient explanations were counted in the process of analysis. These segments to be taught in the theoretical part of the course were developed by six instructors who were

teaching the “Teaching English to Young Learners” course teaching at the same department as the researcher.

In the process of analyzing the feedback, reflections, and interviews, two separate raters took place to code and categorize the items to decide whether the coded items had in-depth and sufficient explanations to increase the reliability of the qualitative analysis. One of the raters in the analysis was the researcher of the current study and the instructor of the “Teaching English to Young Learners” course. To overcome any subjective bias, another rater who was teaching methodology courses in the same department as the researcher coded and counted the data for each skill. The codes consisted of seven segments and the raters decided which segment the participants referred to and whether they included in-depth and sufficient explanations in each feedback and reflection. Then, the values for Cohen’s Kappa were calculated, and the values ranged from 0.90 to 1.00 which showed high levels of agreement.

Moreover, post-course semi-structured interviews were carried out with TEG individually to investigate their views and perceptions of professional learning experience through the model presented to teach the “Teaching English to Young Learners” course. To be sure that the learners did not perceive the interviews as one of the assessment ways in the course, the interviews were carried out after the course grades had been given. The post-course interview guide attempted to explore the views and perceptions of student teachers toward the technology-enhanced, reflective, and collaborative model of teaching. Specifically, the post-course interviews focused on video-recorded teaching experience, the benefits and challenges of providing feedback to peers after watching video-recorded teaching experiences and getting feedback from peers on their own video-recorded teaching experience, and the benefits of reflections.

4. Results

The first research question asked the extent to which the technology-enhanced, reflective, and collaborative model of teaching helps learners learn from their teaching experience. TEG video-recorded the teaching experience but CG observed the teaching experiences in the classroom. After the groups observed the teaching experiences, both groups wrote feedback. To answer the research question, the written feedback of all participants was analyzed through content analysis.

4.1. Feedback

The results displayed that watching the teaching experiences outside of the classroom helped TEG to engage in repeated viewing which helped increase the intensity and depth of their thinking. This procedure seems to deepen their pedagogical understanding of theoretical teaching and also, enable them to notice the details about how to teach each skill; they identified and gave feedback mainly on seven segments as the extracts display:

4.1.1. Inclusion of all steps

TEG 1 (Listening): *“She made her students play a game for vocabulary review; it was really enjoyable to watch students have fun reviewing vocabulary. In the while listening stage, she involved students with actions.”*

TEG 2 (Storytelling): *“He created the right frame of mind with a hat, the students were ready mentally. He gave a purpose to listen to the story, he asked students to find what happened to Goldilocks at the end but while telling the story he could be more fluent.”*

TEG 3 (Speaking): *“She started with a mini dialogue which helped introduce the pattern. She had one guided activity and one controlled activity but she gave the guided activity first. In the guided activity students had two-sided choice cue cards which was okay but this could be used after chant which was more controlled.”*

TEG 4 (Reading): *“In the lead-in part, she had the students guess what the subject of the text might be, using pictures. Then she asked them to scan the text and find the words. This is a good pre-reading activity. In the follow-up part, she asked the students to write a different ending for the text; this is a motivating follow-up.”*

TEG 5 (Writing): *“She introduced the topic of writing and set the context for the activity. She analyzed the model text in detail and discussed the relevant vocabulary and concepts that will be used in the writing material. In the free activity, the teacher checked the answers saying that they should prepare a recipe book for the classroom, I liked this purpose.”*

4.1.2. Suitability of the characteristics of the song or mime story/story/dialogue/model text

Depending on the teaching skill, TEG focused on the suitability of the teaching material in depth, they mostly explained why it was suitable or not as the extracts show:

TEG 1 (Listening): *“His students’ level is 2nd-3rd grade. He focused on adjectives such as happy, angry, scared, and sleepy, which were suitable to the student level.”*

TEG 2 (Storytelling): *“She could adjust the story and make it clearer, and simpler so that students do not lose focus and understand the story better.”*

TEG 3 (Speaking): *“Her dialogue was a bit complex for 4th-grade students, she used which clause and that clause sentences in the model dialogue.”*

4.1.3. Body language/mimes and gestures/ facial expressions/eye contact

TEG 1 (Storytelling): *“She effectively used mime, gestures, and body language while telling the story, she acted out Cinderella and her sisters.”*

TEG 2 (Speaking): *“I enjoyed watching her lesson as she followed all the necessary stages and acted out the dialogue with the puppet. We could see how she was happy when she met her old friend.”*

TEG 3 (Writing): *“Mimics, body language, and gestures are all important for young learners to understand what the teacher said, so, he could improve these as he was presenting the model poster, for example, he could add some mimics showing how he is about environment.”*

4.1.4. Effective use of materials & puppet

TEG 1 (Reading): *“It was good how she gave learners a context for the subject by using a puppet. In this approach, children’s motivation and interest in the subject were sparked at the start of the class. Another significant advantage was the decision to use a puppet with a moving mouth.”*

TEG 2 (Writing): *“Overall, the main thing that was absent in his demo was the effective use of materials. He had colorful materials but how he used them was a little bit problematic since he could not involve them in doing the controlled and guided activities. He could introduce the topic with a nice puppet instead he spoke too much which caused students to lose their attention.”*

4.1.5. Responding to students’ immediate needs (clarification, reaction, praise, feedback)

TEG 1 (Listening): *“Another part that I appreciated is that he responded to students’ immediate needs with praises, feedback, etc. For example, when students sang the song correctly without the teacher, he said “Well done”.”*

TEG 2 (Reading): *“She also appeared to be quite good at answering students’ urgent needs. I loved how kids were encouraged to correct their mistakes by getting help from other students’ mistakes.”*

4.1.6. Giving Instructions

TEG 1 (Storytelling): *“Additionally, one of the good things about the demo was that the instructions were expressed in clear and simple language that made the instructions and use of language appropriate for the level of the young learners.”*

TEG 2 (Speaking): *“I recommend using simple and clear instructions considering students’ age and level; the instructions she gave were not divided into segments and were complicated, and this made her students confused about what to do in the guided activity.”*

4.1.7. Materials

TEG 1 (Listening): *“I can say that teaching listening to young learners requires fun. For example, she used an attractive worksheet, colored papers, puppets, and lots of pictures. All of these are promoters of learning when teaching listening. Moreover, the pictures she used were consistent, I mean, in the mime story, there was a little boy, and all the pictures of the boy and his mother were the same in each different place at home.”*

TEG 2 (Storytelling): *“The fact that there were so many images throughout was a major benefit for young learners, who require visual aids for their courses. In this story, the images that she used gave the meaning clearly and they were colorful which made the images suitable for young learners.”*

The feedback analysis was completed by counting the comments that TEG and CG focused on the important points of teaching the skill with in-depth explanations. 85 % of noticed points by TEG were given sufficient explanations by referring to theoretical knowledge. On the other hand, CG was able to notice the important points in teaching experiences less, and only 55 % of the noticed points were written with sufficient explanations. The results of feedback analysis show that TEG gave much more in-depth feedback as compared to CG which was able to notice some main points but unable to give clear explanations about what they wrote.

The feedback results show that video recording the teaching experience helped TEG to engage in repeated viewing to give feedback and write reflections. Thus, they were more attentive to the points discussed in the classroom.

4.2. Reflections

TEG read the feedback given to each teaching experience before coming to the class. In the classroom, they discussed what was written in feedback and the learner who video-recorded the teaching experience reflected upon what and why she/he did in teaching. CG came to the classroom and took notes on the important points they noticed and at the same time they participated as students in the teaching experience. After the class, both TEG and CG wrote reflections focusing on what was good and what needed

improvement about each particular teaching experience and they wrote what they learned about teaching the skill.

Pre-test reflections were written just after the instructor presented theoretical knowledge and modeled teaching the skill. Pre-test and post-test reflections of TEG and CG were analyzed to investigate whether the explanations referred to concepts or correctly used theoretical terms and whether learners noticed the steps and teacher behavior in teaching the skill. The reflections were coded in the way they were coded in feedback analysis for each skill. Each code referred to teaching steps and teacher behavior and the percentages of correct codes with sufficient explanations were calculated. The results of the percentage analysis are presented in Table 1.

Table 1: Percentages of learner attention: Reflective focuses

	Pre-test reflection (%)		Post-test reflection (%)	
	(n=32)	(n=30)	(n=32)	(n=30)
	TEG	CG	TEG	CG
1. Inclusion of all steps/activities				
a) Vocabulary list	15	18	60	48
b) Lead in (creating the context)	12	10	75	58
d) Pre	10	14	68	52
c) While/during (controlled and guided activities)	14	16	80	60
d) Post /follow-up (free activity)	18	22	85	62
e) Checking answers of activities	25	20	80	65
2. Suitability of the activities (age, level, etc.)	16	12	70	60
3. Body language/mimes and gestures/ facial expressions/eye contact	8	10	90	75
4. Effective use of materials & the puppet	40	46	68	60
5. Responding to students' immediate needs (clarification, reaction, praise, feedback, etc.).	7	10	52	35
6. Suitability of instructions and correct language use (grammar-pronunciation)	15	21	60	45
7. Materials				
a) appropriate in size, number, color, brightness, clarity, and consistency	24	26	80	70
b) suitability to the activities	26	31	68	49
c) suitability for young learners (appealing)	35	40	85	56

Table 1 shows that more than half of the learners had difficulty noticing the teaching steps in both TEG and CG in pre-test reflections. These results indicate that it is not enough just to focus on theoretical knowledge when teaching how to teach, there seems to be a need to let learners experience teaching themselves.

The post-reflection percentages of TEG are higher than CG, which shows that learners in TEG were more attentive to the points that were presented. Post-reflections asked what was good about each particular demo and what needed to be improved in each particular demo. The results of the post-reflection analysis show that TEG noticed

the steps of teaching the skill, and identified how the teacher should give instructions, what type of materials should be used, and how the teacher should use these materials. Before TEG wrote reflections, they had watched the teaching experiences and had given feedback on each teaching experience. However, CG observed the teaching experiences in the classroom, so, they did not have the chance to focus on each detail and observe it as many times as needed. Moreover, TEG looked at the peers' feedback before coming to the feedback and reflection session so, they had the chance for further and deep reflection. While TEG wrote down their feedback about their peers' teaching experience, they were engaged in reflective thinking to share their feedback, they were able to seek clarification, and were able to ask follow-up questions. The diverse written and oral feedback enhanced their learning opportunities and assisted them in reviewing and evaluating the information they had learned about teaching the skill.

4.3. Interviews

The second research question investigated how learners perceived the technology-enhanced, reflective, and collaborative model of teaching implemented in their "Teaching English to Young Learners" course. The post-course interviews focused on video-recorded teaching experience, the benefits and challenges of providing feedback to peers after watching teaching experiences and getting feedback from peers to video-recorded teaching experiences, and the benefits of reflections as a whole whether the technology-enhanced, reflective, and collaborative model facilitated their professional learning.

4.3.1. Perceptions of video-recorded teaching experience

Twenty-two students in TEG (n=32) stated that it was beneficial to video-record their teaching experience. They expressed that video-recording their teaching experience caused relief because they had the chance to edit their videos. Moreover, TEG stated that they had the opportunity to observe and evaluate themselves as they were teaching and this helped them to develop their stance as teachers. The explanations of TEG showed that they were aware of their self-monitoring and self-evaluating processes.

For watching the video-recorded teaching experiences more than half of TEG stated that they learned a lot from their peers' teaching experiences and it was enjoyable to watch the teaching experiences with a critical eye.

The examples from transcriptions of interviews showed that they were positive about technology enhancement implemented as video-recording the teaching experiences:

TEG 1: *"It was hard to sit and watch all the videos in a limited time at the beginning but later I became aware that I like watching the teaching experiences of my friends because I was able to notice good and bad points and I was learning."*

TEG 2: *"I like technology, so, having technology inserted into my class made me happy."*

TEG 3: *"I was having fun as I was experiencing teaching. We worked with my friends to find a good angle to video-record, and we practiced before the video-recording sessions, it helped me overcome my anxiety about teaching."*

As these examples show, TEG had positive attitudes towards technology enhancement in their teaching experiences and technology served as a way to provoke motivation in their learning how to teach experiences.

Despite positive perceptions, a few participants noted some challenges such as the quality of sound and visuals, and not being able to show the board and materials properly, having limited time to watch the videos.

4.3.2. Perceptions of Feedback and Reflections.

The interviews revealed that TEG was positive about getting feedback from peers and more than half of TEG stated that they learned from their peers' feedback as the following transcriptions of interviews show:

TEG 1: *"In her feedback, one of my peers stated that I should seem more enthusiastic. As a teacher, I will never forget this and I will be more energetic while teaching."*

TEG 2: *"I learned from the feedback that was given to my teaching experience that I should give clear instructions, for example, I could use body language or show it with an example."*

TEG 3: *"My friends' feedback taught me that I should involve my students as I tell stories in the classroom."*

For giving feedback, TEG also stated positive comments. They stated that giving feedback helped them notice the steps of teaching the skill, they were more attentive to teaching points and teacher behavior. It was evident that collaborative work through both getting and giving feedback served as an effective tool to stimulate learning how to teach.

According to interview results, TEG was positive about reflections as well. They stated that while focusing on what was good and what was not so good and needed improvement, they had the chance to examine their teaching experience intensely. Such a deep thinking of the teaching experience played an important role in their learning process of how to teach.

Moreover, the analysis of reflections and the interview results revealed that student teachers thought that the feedback they received from their peers and the course instructor throughout the process was supportive. They stated that they read all of the feedback before coming to class to use in their reflection session to justify what they did in the teaching experience and to improve their teaching.

5. Discussion

The current study set out to explore the effectiveness of a technology-enhanced, reflective, and collaborative model of teaching when teaching how to teach young learners. Moreover, it investigated the perceptions of the model as learners were learning how to teach young learners. Technology enhancement in the study took the form of blended learning as participants video-recorded their teaching practices and afterward, all of the participants watched video-recorded teaching experiences outside of the classroom. In support of integrating technology into teacher education, Dziuban *et al.* (2018) noted that blended learning provides opportunities by interacting with almost every aspect of higher education, and because of its flexibility, it allows for maximizing positive education functions. Several studies investigated the effectiveness of blended learning situations in teacher education (Fuchs, 2010; Mouzakis *et al.*, 2012; Zagouras *et al.*, 2022).

Huhn (2012) noted that one of the characteristics of a successful and encouraging foreign language teacher education program is giving teacher candidates the chance to participate in technology-enhanced instruction. Research also showed that to influence future teaching practices, technology learning opportunities should be relevantly incorporated into preservice education (Egbert, 2006; Hong, 2010; Sert & Li, 2017). Similarly, the findings of the current study revealed that video-recording their teaching experience helped student teachers in different ways. First, they stated that watching themselves with the perspective of how they stand as teachers, which steps they follow in teaching, and how they react to student behavior, enabled them to notice, self-monitor, self-evaluate, and learn the ways to become more effective teachers. Second, observing other student teachers' teaching experiences which resulted in collaboration and reflection, helped them to critically think about the teaching process and notice how theory is put into practice.

Reflection, which is an important component in teacher education programs, was implemented in the current study. Previous research concerning reflection stated that reflective feedback sessions were beneficial for teacher education and there is a need to prepare and support student teachers' reflective practice continually in the process of learning to teach (Gadsby, 2022; Harford *et al.*, 2010). Regarding reflection, Fuertes-Camacho *et al.* (2021) provided quantifiable evidence on the beneficial effects of reflective practice on future teachers and they concluded that participatory teaching strategies that inspire and enable students to alter their behavior are necessary for sustainable development education. As in the previous studies, the reflections in the current study revealed that reflection contributed to the depth and quality of learning how to teach. Student teachers identified and noticed important aspects of the teaching process. Reflections on teaching experiences enabled student teachers' basic skills such as self-monitoring, and self-evaluating to critically analyze their teaching as well as the other student teachers' teaching experiences which helped them develop autonomy in their educational process of learning how to teach.

Collaborative learning was the other implementation in the current study which was obtained through feedback and reflection. Previous research about collaboration in teacher education suggested that it results in positive effects on cognitive performance (Lopata *et al.*, 2003; Slavin, 2004; Veenman *et al.* 2002). According to Stoller (1996), teachers ought to take an active role in the process of observation and be provided with constructive feedback while exchanging ideas with the observer, in an operative teacher education program. Bush and Grothjohann (2020) investigated perceptions of collaboration among student teachers during their teacher education. Their findings suggested that student teachers' collaboration can benefit from the adoption of collaborative habits in teacher education; learners ought to learn how to engage in co-construction and practice working with their peers. The current study provided similar results; peer observation, peer feedback, and reflections, which were implemented in the offered model to teach how to teach, resulted in achievements in putting the theory into practice. Student teachers noticed the aspects of teaching the skills to young learners with the help of their peers and the instructor.

6. Conclusion

In conclusion, the analysis of feedback provided by watching the video-recorded teaching experiences, reflections, and post-course interviews revealed that the technology-enhanced, reflective, and collaborative model of how to teach young learners, helped the participants to notice and learn the ways to put the theory into practice. The learners in the technology-enhanced, reflective, and collaborative model of teaching group were more attentive to the points that were introduced in the theoretical part of the course than the learners in the traditional teaching group.

The technology-enhanced, reflective, and collaborative model proved to be effective in the learning processes of student teachers when they were putting theory into practice. The model incorporates technology which is a demand in the 21st Century education; reflection, which also develops higher-order thinking processes, is beneficial in learning to learn autonomously, and in self-regulation processes involved in learning; collaboration, which is associated with social-constructivist theory, makes learning an active, constructive process. Technology enhancement, reflection, and collaboration were used to identify and organize a comprehensive model in teacher education to help the learning process of future teachers learn from teaching. In language teacher education programs, it is critical to search for ways to help learners learn the theory and also to prepare future teachers for their actual classroom experience. Designing a comprehensive language teacher education program requires learners to put theory into practice by allowing them to have proper teaching experiences during their education. In teacher education programs, it is important to help learners feel less anxious about starting to teach by giving them a better understanding of real-world classroom contexts and their teaching abilities. The context of the current study was limited to the "Teaching English to Young Learners" course, but since it was found to be effective and student teachers

were positive about it, the model can be suggested for other methodology courses that present theory and need to put theory into practice.

Conflict of Interest Statement

The author declares no conflicts of interest.

About the Author

Selma Kara is an assistant professor and teacher trainer at Anadolu University, Faculty of Education, English Language Teaching Department. She has been teaching methodology, teaching English to young learners, materials development, materials design, and teaching practice courses. Her research interests include teacher education, materials evaluation and adaptation, online learning, teaching English to young learners, teaching reading, and teaching writing.

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