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Empowering EFL Student Teachers through Pedagogical Engagements within an Elective CALL Course

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ABSTRACT

In Turkey, most English as a Foreign Language (EFL) student teachers graduate from teacher education institutions largely without receiving training on educational technology. The latest developments in educational technology however have urged the need for teacher candidates to have certain theoretical and practical knowledge so that they will not suffer from some technology-related intimidation in their future teaching. Considering this lack in EFL teacher education curriculum, and our students' observed needs and challenges in using technology for education, we decided to design an elective Computer-Assisted Language Learning (CALL) course for a group of EFL student teachers. This article reports on a small-scale action research study aiming to empower future EFL teachers in terms of technology-enhanced language teaching and learning. Thus, throughout the course, we provided them with theoretical knowledge and hands-on experiences on using Web 2.0 tools. To collect data, we used interviews and reflective journals. The findings showed EFL student teachers were well-aware of their indispensable need for technology use. Although they found themselves inadequate in terms of integrating technology into language teaching in the beginning, they felt more confident following the course. To conclude, both theoretical knowledge and the practices on Web 2.0 tools during such courses are of great help and deeply needed practices for EFL student teachers whose technological competence might then better professionally develop.

The use of technology for language teaching and learning has been widely accepted as an inevitable practice in today's digital age. Therefore, it is crucial to equip English as a Foreign Language (EFL) practitioners and student teachers with the necessary competencies for the effective use of technology in and out of the EFL classes (Aldukhayel, 2021; Aşık et al., 2020; Hong, 2010; Nami et al., 2015; Yunus, 2007). To achieve this, the role of teacher educators and teacher education programs cannot be overlooked as they are one of the most important stakeholders to provide student teachers with necessary practices for integrating technology into language classes.

TESOL Technology Standards Project Team, just like some other organizations and councils in the world such as the International Society for Technology in Education and the American Council on the Teaching of Foreign Languages, has recently published a comprehensive document presenting the technology standards for both language learners and teachers to give guidance on effective practice (Aşık et al., 2019; Healey et al., 2008). However, despite this burgeoning need for technology integration as proffered by these councils and organizations and a large array of research studies emphasizing the teacher competencies in technology use (Akayoğlu, 2017; Dooly, 2009; Dooly & Sadler, 2020; Guichon, 2009; Sarıçoban, 2013), current English Language Teacher Education (ELTE) programs in Turkey fall short to offer "any standardized courses on technology integration into language teaching" (Ekmekçi, 2021, p.3).

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To get to the bottom of the problem, we need to examine the stakeholders and their roles in foreign language teacher education. In Turkey, all undergraduate programs including ELTE programs are affiliated with the administrative and academic decisions made by the Higher Education Council (HEC); and thus, teacher educators in these programs are required to teach courses determined and shaped by HEC. With the latest update in 2018, the current ELTE programs include two courses related to instructional technologies in education from a general perspective: "Information Technologies" for the freshman and "Instructional Technologies" for the sophomore. The content of these courses includes computing concepts and systems, basic concepts of software and hardware, bases of operating systems, word processing programs and so on. However, the foreign language teacher education curriculum does not offer any specific courses to equip EFL student teachers with the theoretical knowledge or hands-on experiences on the latest technological applications or Web 2.0 tools that can be specifically applied for language teaching. Put it succinctly, courses such as Computer Assisted Language Learning (CALL), Technology Enhanced Language Learning (TELL) or Web Enhanced Language Learning (WELL) are not provided as compulsory courses for EFL student teachers. Considering the realities in our ELTE contexts and the warning of TESOL Technology Standards Project Team which asserts that technology still remains intimidating to many teachers, we felt that it would be intriguing to design an elective technology oriented course for our students within an action research plan and find out what these EFL student teachers think of technology integration in general and of their own competencies in using technology for language teaching since most of them are regarded as digital natives both at the beginning and end of this action research plan.

1. Literature Review

While conventional language teaching methods were accepted sufficient for language learners in the past, this is not the case as more and more language teachers are required to teach online effectively (Comas-Quinn, 2011; Skura & Steinhagen, 2023). Evidently the research on CALL or TELL has shifted from whether to use technology for language teaching to how and for what purposes technological tools can be used (Hong, 2010). In line with this change, EFL teachers' readiness is emphasized by many studies as they are seen as a keystone in successful implementation of instructional technologies in language teaching (Bax, 2003; Hong, 2010; Hubbard, 2008; Hubbard & Levy, 2006; Kessler, 2006; Schmid & Hegelheimer, 2014). That readiness of EFL teachers is closely tied to the quality training in ELTE programs. It can be alleged that student teachers with necessary training and their competencies will highly likely determine the quality use of these tools in actual classes of the future.

In Turkish educational contexts, much research has been carried out on EFL teachers' attitudes and perceptions towards technology use, and these studies indicate that EFL student teachers hold positive perceptions regarding the necessity of using technology in teaching (Akayoğlu, 2017; Aydın, 2013; Başöz & Çubukçu, 2014). Despite these favoring opinions, ELTE programs in Turkey fall short to offer technology use related courses, and this may lead to teachers' feelings of incompetency. Kessler (2006, p. 25) indicates this worldwide problem stating that there is a "lack of technology training within language teacher preparation and technology courses may not be sufficiently integrated into the programmes". By administering a survey, focus group and individual interviews with 240 graduates of a TESOL master's degree program, Kessler highlighted the importance of formalized CALL training both for pre- and in-service teachers. In the same vein, Uzun (2016) investigated the contribution of educational and technical courses in an ELTE program in Turkey to conclude that these courses did not satisfactorily support the EFL student teachers' competencies. The findings suggested a need for more technology related courses and content for ELTE programs. In terms of this emphasized need for courses and content in teacher education curriculums, Peters (2006) for instance, suggests that a single course at a teacher education curriculum is not sufficient and effective enough to equip pre-service teachers with both the technical and pedagogical knowledge on technology. In that study (Peters, 2006) conducted at a language teaching department in Quebec, the pre-service teachers took a compulsory course on technology integration to develop competencies both for computer integration in the

language classroom and technological competency development. Yet, it was found the pre-service teachers had many concerns about technology integration and did not feel confident and ready to integrate technology because of the lacking nature of the courses. In sum, all these studies highlight a need for well-designed technology-oriented courses in teacher education programs so that student teachers may increase their necessary technology competencies and self-awareness in technology integration. In line with all these unpromising study findings and calls for new courses on technology, we first decided to design an elective course content for our students who were EFL student teachers in an ELTE program. Since the need for formalized CALL training is frequently underlined in the literature (Chai & Lim, 2011; Egbert et al., 2002; Ekmekçi, 2021; Kessler, 2006; Mei, 2019; Robb, 2006, Yang & Kuo, 2020), we decided to design our course content by following the goals and performance indicators in the TESOL Technology Standards Framework (TSF) (Healey et. al., 2008).

TESOL TSF indicates standards and indicators for both language learners and teachers and asserts that all teachers should be able to meet the indicators in the framework to have a certain level of "technological ability, experience and pedagogical knowledge" (p.4). The purpose of the framework is to ensure that pre-service teachers understand the student standards so that they can implement them for their future students. These suggested standards for language teachers are listed under 4 goals (Healey et. al., 2008, p.28):

- Language teachers acquire and maintain foundational knowledge and skills in technology for professional purposes.
- Language teachers integrate pedagogical knowledge and skills with technology to enhance language teaching and learning.
- Language teachers apply technology in record-keeping, feedback, and assessment.
- Language teachers use technology to improve communication, collaboration, and efficiency.

By taking these as a baseline, we formed the course content for our elective CALL course. A group of EFL student teachers enrolled in this elective CALL course, and this course was instructed by the first author in the 2020-2021 spring term. Our purpose was to investigate the views of a group of student teachers regarding technology integration into EFL teaching and their own competencies about integrating technology into teaching both at the beginning and end of the action research plan. As there seems to be an urgent need to use technology and web for language teaching and learning due to the pandemic period experienced, our study aimed at understanding whether our senior student teachers felt ready and competent enough to use these technology-enhanced applications in their future classes prior to and following a CALL course which was designed to offer both theoretical and hands-on experiences for them. Thus, the research questions for the study were as follows:

1. What do a group of EFL student teachers think of technology integration into foreign language teaching in general at the beginning and at the end of the elective CALL course?

2. What do these EFL student teachers think of their own competencies about technology integration into foreign language teaching at the beginning and at the end of and this CALL course?

3. What do these EFL student teachers think of the CALL course they have taken?

3.a. What do EFL student teachers think of the pedagogical knowledge they have received on TELL during the CALL course and its effect on their competency of technology integration?

3.b. What do these participants think of the hands-on experience on technological applications they have gained during the CALL course and its effect on their competency of technology integration?

2. Methodology

This research project aimed to enhance EFL student teachers' pedagogical practices though action, observation, and reflection designed according to action research principles (Clark et al., 2020). We were both instructors (i.e., teacher educators in the same ELTE program) and worked collaboratively while designing the course content, data collection and analyses.

2.1. Research Procedure

Planning and Preparing for Action: The CALL course in the ELTE curriculum was included as an elective course, and only the senior EFL student teachers were allowed to choose the course. To provide a clear rationale for the course content and fine-tune the research questions, the current study had an in-depth literature review process. While designing the content of the syllabus for this course, as said earlier, we scrutinized the performance indicators in teacher standards of TESOL TSF (2008) and gathered opinions on the content from two colleagues giving similar courses at ELTE programs at different universities. The first author initially employed the first version of the syllabus in 2018-2019 academic year, made some revisions based on the student teachers' opinions and administered the revised version in the 2019-2020 academic year. The reflective journals the participating EFL student teachers kept during the piloting year gave us an opportunity to revise and enhance the content of the course. Based on this feedback, we for instance excluded some articles which EFL student teachers found hard to understand and added some new ones. Also, in the previous syllabus, student teachers were supposed to prepare hands-on activities for one or two of the Web 2.0 tools such as Screencast, Blogspot, Kahoot or YouTube. Yet, we changed this in the last version of the CALL course and the participating EFL student teachers were supposed to design activities for five or six of Web 2.0 tools. Thus, we finalized the content of the course and decided to collect qualitative data from the participating student teachers during the delivery of this revised version of the course. This initial plan and act for the change gave us the opportunity to observe the process and consequences of the change (Kemmis & McTaggart, 2000).

Revised Plan for Action: The main purpose of this latest CALL course was to familiarize EFL student teachers with theory, practice, and pedagogical applications of a variety of issues related to CALL. The course lasted for 14 weeks. As universities in Turkey decided not to provide face-to-face instruction because of the pandemic, it was an online course. Even this situation itself (i.e., mandatory online education because of Covid 19 at all levels of education in Turkey) has emphasized the need for more technology education courses with practice possibilities within ELTE programs. This elective CALL course was divided into two parts. The first four weeks were devoted to theories and question provoked discussions and the remaining 10 weeks were allocated to student teachers' hands-on experiences with technology integration.

As for the acting part of the research, in the first four weeks, the EFL student teachers were responsible for reading the required sources on CALL resources, CALL and language skills before attending the class. They were also required to post a thought-provoking and practice-based question on the topic. They had to post these questions on Edmodo class group before the actual class time and student teachers could see one another's questions. The instructor first presented the theoretical issues such as development of CALL, teacher roles in CALL, finding and evaluating CALL resources, teachers' barriers to the use of CALL, the strategies to use CALL in low-tech contexts, CALL and language skills. After the discussions on theoretical knowledge bases, the whole class were engaged in discussing the questions they had posted on the theoretical topics of the week earlier. Thus, the instructor aimed to encourage student teachers to build bridges between theories and the possible practices in the local teaching contexts. This way the whole class had prolific and engaging discussion sessions with the help of the questions written by the student teachers. This practice both demystified the theoretical content and enhanced their creativity for real teaching practices with technology. Finally, following the class, the student teachers wrote a response paper about their reflections on that day's class, sent it to the instructor via Edmodo, and the instructor gave feedback to these reflections in the following class by addressing the statements from their response papers. Those response papers heavily contributed to the research cycle as they yielded important findings to observe and reflect on the participating student teachers' feedbacks.

The remaining 10 weeks were allocated to the Web 2.0 tools and applications. Each week, the instructor herself recorded a brief tutorial video on how to use these tools and shared it with the student teachers. Benefiting from these tutorials, the participating EFL student teachers prepared technology-

enhanced activities for English language teaching. The Web 2.0 tools chosen for the course focused on video recording and editing for ELT materials, creating blogs for language teaching, creating online quizzes, creating QR codes, using social media for language teaching and learning, digital storytelling and designing animations. In essence, these EFL student teachers designed a technology-enhanced activity each week for one of these purposes mentioned earlier, sent it to the instructor with an activity plan to be able to receive feedback from the instructor, and then these EFL student teachers shared their activities during their online CALL classes with their classmates. The participating student teachers sometimes did screen-recording to present their activities or gave links or QR codes to the instructor and classmates. In the online classes, they all together examined whether these activities were appropriate for language teaching in general and/or for the suggested EFL learners specifically and shared their opinions on their classmates' designed activities. In sum, this action research aimed to empower EFL student teachers in terms of their pedagogical and practical knowledge in technology use for teaching English.

2.2. Participants

The sampling included 70 senior students of an ELTE department at one of the state universities in Turkey. The ELTE program had 118 senior students out of 521 students in total. 70 students, participating in the study based on convenience sampling method, chose to attend this CALL course on a voluntarily basis as it was an elective course. Most of the participants were female (n=51, 73 %). The mean age was 22.1 ranging between 21 and 27. The students did not take any field-specific courses on integrating technology into language teaching prior to this CALL course. They only took a course called Computer Skills in the first year focusing on general computer operating systems and basic concepts related to the computers, as discussed earlier.

2.3. Instruments

The model for action research we followed was based upon observation, research, planning, action, and observation cycle (Clark et al., 2020). As our purpose was to empower our students in terms of their technology use in teaching English, we provided both pedagogical and practical content. As action research is an iterative process and is employed to analyze and eventually enhance teaching and practice (Clark et al., 2020), we shaped both instruction and data collection in a progressive and ongoing way. As pre-, during and post-study data collection activities, we used qualitative data collection tools. Firstly, we prepared a set of interview questions by considering the goals for teachers in the TESOL TSF, the premises put forward in the related research and taking our colleagues' opinions. The interview questions had both initial and final versions to be able to collect views at the beginning and end of the course. To gather richer and more revealing information for planning, acting and reflecting on the research, the use of interviews contributed to our action research cycle (Koshy, 2010).

Parallel to the syllabus design, the piloting of both the initial and final interview questions took place in the previous year of the actual study. We sent the finalized version of the initial interview questions to the participating EFL student teachers through Google Forms at the beginning of the semester and collected their initial views in a written form due to pandemic situations. The initial interview questions centered around the issues: (1) integrating technology into teaching, (2) their perceived competencies for technology use, (3) their readiness for teaching through online tools, and (4) their prior experiences on using technological tools.

Following the course, we sent the final structured interview question set to the participating student teachers to capture their final views and see if there were any changes in views at the end of the CALL course. These questions aimed at capturing the participants' final views on (1) integrating technology into teaching, (2) their perceived competencies for technology use, (3) their readiness for teaching through online tools, and (4) their lived experiences with using technological tools during this elective CALL course. Again, the final interview questions were answered in a written form, and after

this we chose eight student teachers purposefully and invited them for an oral interview. In other words, semi-structured interviews with the same questions were carried out this time with eight student teachers orally after the course on a digital communication tool, Zoom. Each interview took approximately 12 minutes, and all the interviews were transcribed for the analysis. The purpose for these oral interviews was to delve into details which might have been missed in the written interviews. These participants were chosen among the most talkative and enthusiastic ones in class. The second author who did not instruct this elective CALL course did the oral interviews.

As for the third data collection instrument (i.e., for during the study data collection), these EFL student teachers were also required to write down reflective journals each week. Clark et al. (2020) claims that action researchers need to consider their educational contexts as socially constructed. Therefore, the participants in an action research study are expected to interact in a social system by reflecting and interpreting on the behaviors of the teacher and others. To support the ontological stance of the research process and reflect on the findings,13 reflective reports were collected in total from each participant during the action process. In those personalized think-pieces, they shared their experiences and feelings about the course content and their lived experiences and challenges in the digital language learning practices each week. Our purpose was to aim at finding out some possible changes in their perceived competencies. Each week, the instructor read all the reflective papers and gave feedback and made comments on the papers.

2.4. Data Coding

Content analysis which can be defined as the systematic coding of the data on specific themes and categories was used for the qualitative data analysis (Strauss & Corbin, 1990). The type of content analysis we did was a conventional one as we aimed to describe views. The data were collected and analyzed without preconceived categories and theories (inductive content analysis) and it was an iterative process undertaken by each researcher several times to increase the validity of the data coding process. Initially, we transferred all the data from the structured written interviews, reflective journals and semi-structured oral interviews into a word processor program, then we read and coded the data to be able to generate categories. To develop the internal validity of the research and increase the reliability of our findings, each researcher analyzed the data independently. Finally, we came together to compare our themes and categories to ensure the validity and reliability of the findings and reached a consensus on the categories of the analyzed data. Table 1 shows the set of categories emerging from the data along with the examples from each category.

Table 1
Themes, Categories and Example Quotations from Inductive Content Analysis

Theme	Category	Example quotation
initial and final views on technology integration	technology is a must	It is needed because technology is everywhere around us in this century. We need to keep up with what is new and make use of it in the best way.
	enjoyable	Because technology makes lessons more enjoyable and captivating for students. Also, we, as teachers, can appeal to more than one sense with technology.
	useful	Technology is of great use for the teachers as we can find any materials by just searching on the web.
	motivating	The use of technology can be motivating both for the teachers and their students as they can easily do sth interesting in and out of the classroom.
perceived readiness and competencies about technology integration	poor	I think I am a beginner as I don't really know how to use technology in classes.
	aware but inexperienced	I know that there are some applications or tools used for teaching English, but I do not consider myself competent.

	familiar	I think I am familiar with some technological tools, yet I believe I need to develop my skills on this issue.
	confident/more confident	Thanks to the Web 2.0 tools we learnt in the course, I feel myself more confident about integrating technology into my classes.
	skillful and knowledgeable	I learned a lot about Web 2.0 tools this term. I cannot wait to use them in my actual teaching. I knew almost nothing about Web 2.0 tools at first but now I feel very equipped.
	more aware	I think I am more aware of Web 2.0 tools and of how to use them appropriately. Before the CALL course, I mentioned some Web 2.0 tools in my lesson plans for some other courses but this time during the CALL course I used these tools in an actual class in my internship.
views on the CALL course experiences	benefited from the theoretical part of the course	I really liked pedagogical knowledge before starting our applications. It positively helped me to prepare my weekly applications as well as to get used to technology.
	benefited from the hands-on experiences	This course has been more productive for me than I expected. Frankly, I thought that when the word "computer" is on the carpet, I supposed we would focus on Office programs (Word, PPT etc.) again. Who would have said that we would create a story with our own voice, create a QR code and direct students to the video!
	criticism on using some Web 2.0 tools	I think the blog has lost its popularity now. I don't see it as a tool that can attract students' attention.

3. Results

Following the research questions, the results of this study are presented under three themes: (1) student teachers' initial and final views on technology integration into foreign language teaching in general, (2) their perceived readiness and competencies about technology integration into foreign language teaching at the beginning and at the end of the CALL course and (3) their views on the CALL course experiences (i.e., pedagogical knowledge and hands-on experiences they received on TELL during the CALL course). The excerpts used in the results are from the three main sources of data collected: (1) their both initial and final written interview statements, (2) oral interviews (they were done at the end of the CALL course) and (3) their reflective journal entries they kept during the CALL course and shared with the instructor weekly.

3.1. EFL Student Teachers' Initial and Final Views on Technology Integration into Foreign Language Teaching

As a starter question, we asked whether they supported the importance and necessity of using technological tools in language teaching, and whether they were willing to use these technological applications in their near-future teaching practices. All the student teachers responded as "yes" to this question.

Prior to the course, when they were asked about their opinions on using technology, they told us they held positive feelings about integrating technology into their teaching. As a result of the data analysis, there emerged some categories, and "technology is a must" has been the most frequently stated one. The EFL student teachers expressed that technology is a part of our lives since it is everywhere. Here is a direct excerpt from their responses without any modifications:

> *S5: I think it is necessary because technology has become an inevitable part of our lives. In the earlier years, technology was not a must for us, and we did not use it very much however as technology developed, our dependency upon the internet and network related devices also increased.*

While the participants' both initial and final responses for this issue were positive and similar in nature, their final responses foregrounded some other related categories. In the initial responses "technology is a must" category was dominant but final data showed that EFL students teachers thought integrating technology into their teaching practice is something "enjoyable" for learners. They believed the use of technology makes their classes more effective as their students will take pleasure from learning a foreign language. Some of them even told that they observed some students in their

practicum schools who got bored and were indifferent in the classes when no technological tools were used. A direct excerpt on the issue is as follows:

> *S13: I think that using technological devices in language classes makes teaching and learning more effective for learners with different needs. Thanks to technology, classes become funnier. And as I observe during my School Experience practice in a secondary school, I can say that students feel more interested in classes when my cooperating teacher uses activities with technology.*

Another category observed in the final responses of the student teachers about technology integration was that it was "useful". They thought that they can use it for all age groups, different personality types and educational levels. For this reason, they stated that they found technology integration both flexible and effective for in and out of class activities. They shared their opinions with the following statements:

> *S18: We can apply four skills more easily in the class thanks to it. Teachers can find many reading, listening, writing and speaking activities and materials appropriate to their students' ages, proficiency levels and interests. This saves time and offers more qualified education for especially language teaching.*

The last category emerged in the final data was that technology integration was "motivating". EFL student teachers were observed to start thinking that the use of technology for teaching languages can be motivating for all students and eventually their students will be more eager to interact. They believed especially when students lose their interest in the classroom, technology can be a good tool to re-motivate students and make them feel enthusiastic about language learning. An excerpt from the EFL student teachers' responses is as follows:

> *S52: I think with technology, language classes are more effective, active, and fun. We can use songs, games, videos and online tests and thus we can motivate students to learn English. Thanks to group work option in some activities; for instance, we can increase the interaction among students.*

Although initially in their statements student teachers did not go much further than stating the necessity of technology integration into language education, their final statements and reflective journal entries during the CALL course provided more details of this necessity. Their hands-on practice in the CALL course and their observations in School Experience course they took at the same time probably enabled them to see technology use in classes from a better and pedagogically more appropriate perspective. In other words, their views started to sound more realistic, experience-driven and positive. Even some EFL student teachers who initially believed that technology can be used just for some specific purposes such as teaching culture or young learners finally expressed a broader view stating that technology should be a part of any activity since it provides lots of opportunities for both language teachers and students.

3.2. EFL Student Teachers' Perceived Competencies about Technology Integration into Foreign Language Teaching

At the beginning of the course, 70 EFL student teachers were asked to assess their own competencies about using technological applications for teaching a foreign language. The salient point here was that we made it clear we did not ask them to assess their own computer skills. That is, they can be experts in using word processing programs, preparing presentations, or writing codes for the computers. Yet, this was not the competency this study sought for. Essentially, we aimed to see whether they were competent enough to use Web 2.0 tools or technology in general effectively for language teaching purposes. The most common perceived competency in their responses to the initial interview questions was "poor". Most of the participants (n=52, 72.3%) described their competencies about using technology for language teaching as inadequate and at beginners' level. An excerpt from their initial responses is as follows:

> *S14: I have not used technology for teaching so I can say that that my competency about using technological applications for teaching English is very poor.*

In addition to the "poor" category, some other EFL student teachers (n=12, 17.1%) described themselves as "aware but inexperienced". They told us they knew some Web 2.0 tools, but they did not have a chance to apply these tools for language teaching. They stated that they took this elective CALL

course hoping to find some opportunities for real practice. Here is a sample excerpt from their responses:

S43: Because of my lack of experience and the theoretical intensity of our language learning programs, I did not have a chance to use different kinds of technological tools.

A small number of participants on the other hand (n=6, 8.5%) stated that they found themselves "familiar" with technological devices used for language teaching and learning since they stated they actually used some of these tools for teaching their students (i.e., they were private tutors doing paid teaching to some young learners and therefore had some experience with Web 2.0 tools). Yet, they stated they wanted to gain more knowledge and experience on technology integration with the help of this course:

S17: I am familiar with some technological applications in language teaching. During my private tutoring, I use some of the Web 2.0 tools as some of my students and their parents ask me to do so. However, I would like to gain more knowledge regarding this topic.

Following the course, we again asked about their perceived competencies to see whether there were any changes between their initial and final perceptions about their own competencies with the use of technological tools. At the beginning and at the end of the course, we wanted them to rate their competency on technology use for language teaching. They had to choose between 1 (very poor) to 5 (very competent). Their choices for their initially and finally perceived competencies are given in Table 2 below.

Table 2
EFL Student Teachers' Rating for Their Competencies Prior to and Following the CALL Course

	1 (very poor)	2 (poor)	3 (average)	4 (competent)	5 (very competent)	Total
Prior to the course	6	18	30	14	2	70
Following the course	0	0	6	49	15	70

As it is clear in Table 2, while 42.8% of the student teachers described their competency as "average" prior to the course, that rating was 8.5% after the course. 25.7% of the student teachers chose 2 "poor", 20% of them chose 4 "competent", 8.5% chose 1 (very poor) and lastly 2.8% of them chose 5 "very competent" at the beginning of the course. However, these perceived competency levels changed dramatically at the end of the course. It can be concluded that prior to the implementation most of the participating student teachers defined themselves inadequate. However, this was not the case after the CALL course experience. 70% of the students chose 4 "competent" for their competency, while 21.4 % said 5 "very competent" and 8.5% chose 3 (average).

Furthermore, the results obtained from the final interviews and reflective journals evidenced that "confident" or "more confident" was the most common category in the student teachers' responses (n=48, 68.5%). Specifically, they expressed that they felt more confident about the use of technology. Some students even expressed that at the beginning they were anxious and suspicious about designing activities by using technology, but this course helped them much to overcome this anxiety. Here is an example from their final statements:

S15: At the beginning of the class, I had worries as I knew very few things about technology and nothing about Web 2.0 tools. However, now, I feel myself confident as I have learnt many ways of using technology in classes.

The second most frequently observed category was "skillful and knowledgeable". 27 student teachers (38.5%) felt themselves more knowledgeable and experienced about the use of technology. They stated that they learnt about the underlying principles of CALL and could make sense of it during 14-week period. An excerpt is as follows:

S33: As someone who hated technology, now I feel that I love it. I never knew that there were so many Web tools for teaching. My knowledge of these tools developed a lot. I now know how to create games, stories, animations I even know how to upload a video on YouTube with the help of this class.

The last most common category in their perceived competencies finally captured was "more aware" (n=5, 7.1%). Some for instance expressed that they never thought about technology integration into language teaching prior to the elective course. Yet, the same participants were observed to state that they were exposed to educational use of computers in the best way during this elective CALL course. They also said they at first thought having a good level of computer skills would be enough for using it in teaching English. However, this course taught them that the computer knowledge on its own would not be enough unless it is practiced in pedagogically enriched ways for language teaching. A direct quotation from their responses is as follows:

> *S41: After completing my homework and watching the lectures, I learned a lot of new things. I knew myself as Generation Z, but I realized that I had no idea about technology and its use in language teaching. I look forward to using these newly learned concepts with my future students when I am appointed as a teacher.*

3.3. EFL Student Teachers' Views on the Elective CALL Course Experience

Through reflective journals and interviews, we gathered EFL student teacher's views on the last concern of the study; their views on the experience they gained during the elective CALL course. As said earlier, we divided the CALL course content into two parts. In the first 4 four weeks, student teachers were equipped with the theoretical knowledge on CALL and TELL. In the second part, for 10 weeks, they found the opportunity for hands-on experiences.

The analysis of the findings showed that nearly all the EFL student teachers expressed they benefited from the theoretical part of the course. They told us that reading on why they should use CALL in detail, how it works and whether it appeals to today's education system had a positive impact on their technology integration competence. They raised their awareness of how and where to find the tool which is the most appropriate for their specific teaching purpose. According to their collected views, thanks to these theoretical discussions, they said that they got a better understanding on these issues. An excerpt is as follows:

> *S3: I loved the first four weeks because I learned so much about different teaching styles by using Web tools. As I also stated in my reflection papers, I was shocked to learn about teachers who use these tools as a full-time teaching resource. I never thought that the CALL class would give me such interesting pedagogical knowledge, but we talked about such possible uses.*

When we asked their views on the hands-on activities performed in the course, we saw that nearly all the students shared positive views on this, as well. They expressed that they felt happy as they learnt some new Web 2.0 tools, they presented their application skills in the class, and they even used these tools in their practicum school. They also indicated that they got positive feedback from their students and cooperating teachers at the practicum schools about these applications. Thus, it was a kind of hitting two birds with one stone for them. A comment is as follows:

> *S54: I hated online lessons at the beginning of this year but when I took this course my feelings changed just because of you. I learned new ways, apps, sites and perspectives thanks to this course and you. I was not sure about my adequacy of technological issues, and I did not trust myself but I do not think like that anymore, we can be more creative and productive with using technology.*

On the other hand, we received some criticisms on the course content from some EFL student teachers. Some of them believed that the use of blogs and social media was not necessary or useful for actual use in language teaching. Blogs seemed old-fashioned to them. In a conservative line of thinking, these participants expressed that social media with its potential dangers would not be suitable to be used in the real classroom setting. A comment is as follows:

> *S54: I do not think that social media is suitable for use in English education, either. It can be dangerous.*

4. Discussions

The findings of the current study showed that EFL student teachers held highly positive opinions about the use technology for language teaching. In their final comments, they enriched the idea "technology is a must" in pedagogically more appropriate ways. These EFL student teachers may have developed these positive opinions because of the challenging pandemic situations, their mandatory online education at tertiary level and their being digital natives. This finding is in line with the findings of several previous research studies (Akayoğlu, 2017; Aydın, 2013; Başöz & Çubukçu, 2014; Ekmekçi, 2021). Hişmanoğlu's study (2012) was conducted with similar participants (e.g., 85 EFL student teachers) having distance higher education and it was the only one in which prospective teachers were seen to have negative views towards technology use for education. This difference in views between the ones in his study and the ones captured in ours may have stemmed from the changes experienced in education due to the pandemic. There is also a time difference of a decade between these two studies.

The current study also revealed that the participating EFL student teachers at first did not feel confident about their competence of technology integration into language teaching (i.e. their use of digital language learning tools). Prior to the course, they mostly felt themselves poor and inadequate in technology use. They expressed their concerns about this issue since they had just a little time ahead from graduation and they would be actual teachers soon. These concerns are quite apprehensible since they had no earlier courses or trainings on technology integration and were going through an unpredictable online education process because of the pandemic at that time and were suffering at certain points in their own online education (especially during their School Experience course for which they were supposed to do online English language teaching to secondary school students, as a requirement of the ELTE program). Thus, in line with the suggestions in the literature (Akayoğlu, 2017; Aşık et al., 2020; Hong, 2010; Nami et al., 2015), it can be certainly claimed that EFL student teachers need a compulsory TELL course in ELTE programs in today's world, let alone a pandemic. However, a word of caution is due here. ELTE programs in this case must have qualified instructors who can help student teachers gain the necessary competencies regarding technology integration into language teaching.

Following the course, when their perceived competencies were inquired once more, the participating EFL student teachers stated that they felt more confident, knowledgeable and aware after receiving these 14-week long technology-enhanced classes. 70% of the student teachers gave 4 (competent) rating for themselves. This finding might be seen to substantially enhance both the importance of a formalized technology course at ELTE programs, and the effectiveness of the pedagogical and practical content presented. This increase in the participants' perceived competencies may be due to following the goals and standards in TESOL TSF when designing the course content, piloting this teaching content and the content of the data collection tools twice in two semesters in the previous academic year until reaching its finalized form and consulting the experts in the field about the details. With an aim of designing a standardized CALL syllabus, Ekmekçi (2021) developed a syllabus by following the same framework and applied it to the 95 EFL student teachers just a year before our study. Similarly, his study also put forward there was a statistically significant difference in the participants' competencies before and after their engagement with the CALL syllabus. Besides similarities in these two studies, the biggest differences between Ekmekçi's study (2021) and the present one is that we conducted our study in an online CALL course during the pandemic, our study had a purely qualitative design and there were some differences between the CALL syllabi followed. In this study, what we have captured in findings emphasize a drastic change. Put succinctly, through taking just one elective course, 68.5% of the participants indicated they felt more confident about technology integration and 38.5% said they felt more skillful and knowledgeable. Therefore, as Schmid and Hegelheimer (2014) emphasized, the student teachers would find the opportunity to develop their technological competencies if they could take more classes on technology or have school-based field experiences providing professional learning opportunities.

In line with the increase in their perceived competencies, the participating EFL student teachers also expressed highly positive views about the course content, namely, four weeks for theoretical information on technology and ten weeks for hands-on experiences. As the student teachers generally tend to favor hands-on experiences more, the researchers were a little concerned about the implementation of the theoretical issues at first. Contrary to these fears, EFL student teachers in this study expressed they really enjoyed learning about the "foundational knowledge and skills in technology, integrating pedagogical knowledge and skills, how to use technology for assessment and to improve collaboration, communication and efficiency" (Healey et al, 2008, p. 29). As the participants highlighted, finding some practice opportunities for designing and applying language teaching activities through Web 2.0 tools made them more confident and eager especially for another possible online education period in their upcoming teaching careers. Since they had practice opportunities both in the CALL course and in their School Experience teaching practices (i.e., practicum experience), they were double lucky. They stated their cooperating teachers at practicum schools, mentors from the ELT department and the students in their classes provided feedback on their technology-integrated teaching and commented positively. Especially their students in the practicum schools enjoyed these technology-enhanced activities a lot as these activities were different from the activities of the cooperating teachers which were mostly text-book-based. Moreover, we need to recognize that fact that these EFL student teachers took certain responsibilities for their own learning because of the online nature of this elective CALL course. This is in parallel with the Dooly and Sadler (2020) study findings which underline flipped instruction as an important teaching tool to develop pre-service teachers' autonomy levels.

5. Conclusion

Despite the difficulties attached to achieving a formalized and standardized CALL course syllabus, with the current study we designed an elective CALL course for our students; a group of EFL student teachers and collected their views on technology integration into language teaching and on their perceived competencies with technology for teaching before and after this course. We also gathered their views on this CALL course to assess the effectiveness of the course so that we as teacher educators could improve our course design and content knowledge for CALL, as a next cycle in our future action research plans.

Although EFL student teachers had positive perceptions about technology integration and digital language learning tools even before the implementation of the syllabus, they did not feel ready and competent enough to design and apply technological tools or applications for their actual teaching. However, following the CALL course, they felt more confident, knowledgeable, and aware about their competencies. Despite the facts that this study was conducted with a limited number of student teachers at a public university in Turkey, that it lacked the sample size, specificity, and rigorousness to be quantitatively valid, and that the results cannot be extrapolated to the broader population, we still strongly claim that ELTE programs need obligatory courses promoting technology integration into language teaching. The findings prove that adding some elective, one-shot technology-enhanced language teaching courses or trainings to the ELTE curriculum would not be sufficient for these digital native EFL student teachers who are supposed to teach future students who will be more digitally equipped. In a related vein, besides taking mandatory technology-enhanced courses within their teacher education, pre-service EFL teachers' actual performances with technology integration and competencies should be searched in detail quantitatively, as well. As of 2022-2023 academic year, ELTE programs in Turkey have the right to design their own curriculum and this situation allows teacher educators to include technology-related courses in their ELTE curricula. The necessity of having some technology integration related courses should be immediately recognized as a priority for the curriculum stakeholders in teacher education programs.

Statements of Publication Ethics

In this study, the principles of publication ethics were followed, and necessary permissions were obtained with the approval of Ethics Committee of the researchers' institution.

Researchers' Contribution Rate

All authors contributed equally to this work.

Conflict of Interest

The authors report there are no competing interests to declare.

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