



## Perceptions of Pre-service English Teachers Towards Computer Assisted Language Learning Course

### İngilizce Öğretmen Adaylarının Bilgisayar Destekli Dil Öğretimi Dersi Üzerine Görüşleri

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**ABSTRACT.** Recently, classrooms have been equipped with highly developed technological tools; however, the training of teachers, who have the main role in teaching process, on Computer Assisted Language Learning (CALL) is ignored dramatically. Thus, the purpose of this qualitative study was to examine the pre-service English language teachers' perspectives towards CALL course after taking a 14-week CALL course. The participants of the study were 69 pre-service teachers of English studying at Abant İzzet Baysal University, Department of Foreign Language Education. The ages of the participants ranged from 21 to 28. The data of the study is composed of blog posts written by the participants at the beginning and at the end of the semester and these blog posts were analyzed by means of content analysis method. As a result, it was found that the participants were anxious before the course; however, this anxiety changed at the end of the course and they felt more confident about CALL tools. Moreover, the participants believed that this course should have been offered at an earlier grade of the undergraduate program. Finally, it is recommended that CALL course should be integrated into the teacher training programs if future teachers are expected to teach 21<sup>st</sup> century students.  
**Keywords:** English as a Foreign Language, Pre-service Teachers, Perceptions, Computer assisted Language Learning (Call)

**ÖZ.** Son yıllarda gelişen teknolojilere paralel olarak yabancı dil sınıfları teknolojik cihazlarla donatılmaktadır. Ancak çoğu zaman öğretimde asıl rolü üstlenen İngilizce öğretmenlerinin ve öğretmen adaylarının Bilgisayar Destekli Dil Öğretimi (BDDÖ) konusunda donanımları ihmal edilmektedir. Bu kapsamda yürütülen bu nitel çalışma ile İngilizce öğretmen adaylarının 14 haftalık BDDÖ dersi öncesindeki ve sonrasındaki dersle ilgili görüşlerinin incelenmesi amaçlanmaktadır. Çalışmaya, Abant İzzet Baysal Üniversitesi Yabancı Diller Eğitimi Bölümünde son sınıfta öğrenim gören yaşları 21 ile 28 arasında değişen 69 İngilizce öğretmen adayı katılmıştır. Çalışmanın verilerini, öğrencilerin dönem başında ve dönem sonunda yazdıkları blog kayıtları oluşturmaktadır. Toplanan veriler içerik çözümlemesi yöntemiyle çözümlenmiştir. Çalışmanın sonucunda, öğretmen adaylarının dersin başında dersin içeriğinden çekindikleri; ancak dersin sonuna doğru bu çekingenliklerinin ortadan kaybolup teknoloji konusunda kendilerine daha çok güvendikleri bulunmuştur. Buna ek olarak, dersin son sınıfta bahar döneminde verilmesini eleştirerek dersin programda daha önceki yıllarda yer alması gerektiğini vurgulamışlardır. Bu sonuçlara dayanarak öğretmenlerin 21. yüzyıl öğrencilerini yetiştirmeleri beklentisine karşılık BDDÖ dersinin Yabancı Dil Eğitimi Bölümlerinde zorunlu ders statüsü kazanması ve daha erken sınıflarda verilmesi önerilmektedir.

**Anahtar Sözcükler:** Yabancı Dil olarak İngilizce, İngilizce Öğretmen Adayları, Bilgisayar Destekli Dil Öğretimi

#### ÖZET

**Amaç ve Önem:** Bilgisayar Destekli Dil Öğretimi (BDDÖ) araçlarının dil öğretiminde etkililiği üzerine tartışmalar (Dunkel, 1991; Felix, 2005; Hubbard, 2003; Kern, 2006; Phipps & Merisotis, 1999) devam etse de, birçok çalışma teknolojinin öğrencilerin motivasyonunu, öğretim ve öğrenme süreçlerini olumlu yönde etkilediğini göstermektedir (Barak, Watted & Haick, 2016. Hung, 2015; Martín-SanJosé, Juan, Seguí & García-García, 2015). Öğrenmeyi ve öğretim ortamlarını nasıl etkilediği sorusuna cevap olarak, teknolojinin eğitimdeki etkililiğinin nasıl ve kim tarafından kullanıldığına göre değiştiğini söyleyebiliriz. Bu durumda, BDDÖ araçlarını sınıf-içi ve sınıf-dışı etkinliklere entegre etmeleri beklenen öğretmenler ve öğretmen adaylarının BDDÖ konusunda eğitimleri de büyük önem kazanmaktadır. Bu duruma ek olarak, birçok ülkede hükümetler ve özel sektör bu konuda oldukça ciddi yatırımlar yapmakta ve sınıfların teknoloji anlamında donatılmasına destek olmaktadır. Bu bağlamda, ülkemizde FATİH Projesi, Güney Kore'de SMART Eğitim Planı, Avustralya'da Akıllı Sınıf Projesi ve Singapur'da Geleceğin Okulları gibi projeler yürütülmektedir. Bu projelerde temel alınan genellikle sınıfları teknolojik cihazlarla donatmak olurken öğretmen eğitimi maalesef göz ardı edilmektedir. Bu gelişmeler yaşanırken, Yabancı Dil Eğitimi Bölümlerinde de BDDÖ dersi yer almamakta; ancak bazı üniversitelerde seçmeli ders olarak son sınıfta açılmaktadır. Öğretim

Teknolojileri ve Materyal Tasarımı dersi ise genel olarak teknoloji kullanımına yönelik olup İngilizce öğretiminde kullanılabilir araçları malesef kapsamamaktadır.

Bu durum dikkate alındığında, öğretmen adayları BDDÖ konusunda eğitim almadan göreve başladıklarında sınıflarına yerleştirilen teknolojik araçları etkili bir şekilde kullanamayacaklar ve böylece yapılan teknolojik yatırım da boşa çıkacaktır. Bu açıdan bakıldığında İngilizce öğretmen adaylarının BDDÖ konusundaki görüşlerinin belirlenmesi ve BDDÖ dersini aldıktan sonra görüşlerinin ne yönde değiştiğini belirlemek önem kazanmaktadır. Bu amaç doğrultusunda, aşağıdaki araştırma soruları sorulmuştur.

1. İngilizce öğretmen adaylarının BDDÖ dersinin başında derse ve eğitimde teknoloji kullanımına yönelik görüşleri nelerdir?
2. İngilizce öğretmen adaylarının BDDÖ dersinin sonunda derse ve eğitimde teknoloji kullanımına yönelik görüşleri nelerdir?
3. İngilizce öğretmen adaylarının BDDÖ dersini aldıktan sonra değişen görüşleri nelerdir?

**Yöntem:** Bu çalışma nitel araştırma türünde bir durum çalışmasıdır. Çalışma Türkiye’de yabancı dil olarak İngilizce öğretimi bağlamında, Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Yabancı Diller Eğitimi Bölümünde son sınıf öğrencileri ile yürütülmüştür. Çalışmaya, 2013-2014 akademik yılında seçmeli ders olarak açılan Bilgisayar Destekli Dil Öğretimi (BDDÖ) dersine kayıt olan ve yaşları 21 ile 28 arasında değişen 69 aday öğretmen katılmıştır. Çalışmanın verilerini toplamak amacıyla katılımcılara dersin başında dersle ilgili ve teknolojinin eğitimde kullanımı ile ilgili görüşlerini içeren bir blog kaydı yazmaları istenmiştir. 14 haftalık ders tamamlandığında ise katılımcılara aynı konu ile ilgili başka bir blog kaydı yazmaları istenmiş ve görüşlerinde benzerlikler ve farklılıklar belirlenmeye çalışılmıştır. Araştırma sonucunda, elde edilen veriler içerik çözümlemesi yöntemiyle çözümlenmiştir.

**Bulgular:** Dersin başında en çok gözlemlenen, öğrencilerin teknolojiden ve dersten çekindikleri; yine de teknolojiye karşı olumlu görüşlerinin olduğu; teknolojinin yabancı dil eğitiminde kullanılması gerektiği; dersin zorluğu ve son olarak dersin döneminin çok geç olduğu ve daha erken verilmesi gerektiğidir. Ders sonrasında toplanan verilerde ise en çok gözlemlenen öğrencilerin çekindikleri konuların ortadan kalkması olmuştur. Öğrenciler dersin başında çok çekirken, dersin sonunda boşuna korktuklarını belirtmişlerdir. Daha sonrasında ise BDDÖ araçlarını öğretmenlik yaparken mutlaka kullanacaklarını, BDDÖ araçlarını çok iyi öğrendiklerini, dersin daha erken dönemde verilmesi gerektiğini ve şu anda görev yapan tüm öğretmenlerin de BDDÖ konusunda eğitim alıp bu araçları kullanmaları gerektiğini belirtmişlerdir.

**Tartışma, Sonuç ve Öneriler:** Çalışmanın sonucunda dersin İngilizce öğretmen adaylarında BDDÖ konusunda bir farkındalık yarattığı görülmüştür. Dersin başında, teknolojiyi derslerinde kullanmakta çekinen öğrenciler dersi aldıklarında kendilerine güvendiklerini ve mutlaka kullanacaklarını belirtmişlerdir. Alan yazına bakıldığında, öğretmenlerin BDDÖ araçlarını kullanabilmelerinin ve bunları eleştirel olarak değerlendirebilmelerinin beklendiği görülmektedir (Chapelle, 2006; Kessler, 2006; Volman, 2005). Bu amaç doğrultusunda, öğretmen adaylarının BDDÖ dersini almaları önemlidir. Buna ek olarak, diğer önemli bir bulgu ise dersin verildiği dönemin son sınıfta bahar dönemi olması nedeniyle öğretmen adaylarının bu dersi daha erken yıllarda almalarının daha etkili olacağını belirtmeleridir. Bu konuda da, araştırmacılar (Hegelheimer, 2006; Kılıçkaya, 2012) bu dersin öğretmen eğitimi programlarının ilk yıllarında verilir, öğretmen adaylarının bu BDDÖ araçlarını diğer derslerinde kullanarak pratik yapmalarının uygun olacağını belirtmektedirler. Çalışmalardan elde edilen sonuçlar ışığında, BDDÖ dersinin Yabancı Dil Eğitimi Bölümlerinde seçmeli bir ders olarak değil, zorunlu bir ders olarak programın ilk yıllarına yerleştirilmesi öğretmen adaylarının BDDÖ konusunda daha yetkin olmaları açısından önem taşımaktadır. Buna ek olarak, bu dersin içeriği hizmet-içi eğitimlerle görevde olan öğretmenlere de sunularak, öğretmenlerin de bu konuda bilinçlendirilmesi önemlidir.

## INTRODUCTION

Although the effectiveness of computer assisted language learning (CALL) tools in language teaching is still debated (Dunkel, 1991; Felix, 2005; Hubbard, 2003; Kern, 2006; Phipps & Merisotis, 1999) there is a huge number of studies which claim that the use of technology positively affects learners' motivation, teaching and learning process (Barak, Watted & Haick, 2016. Hung, 2015; Martín-SanJosé, Juan, Seguí & García-García, 2015). Almost a decade ago, Kern (2006) discussed the question of effectiveness of CALL tools and concluded that their effectiveness in language classes mostly depends on how technology is used in the classroom:

the complexity of the issues involved in technology and language learning is pushing us to look beyond gross decontextualized measures of effectiveness to understand effectiveness in terms of the specifics of what people do with computers, how they do it, and what it means to them. (p. 189)

Because of this reason, the prospective teachers, who are expected to integrate CALL tools in their classroom activities, should be trained on how to integrate and utilize these tools in their classes effectively.

On the other hand, there are some private and governmental to integrate technology into the classroom settings in Turkish educational system, such as FATİH Project (Movement of Enhancing Opportunities and Improving Technology) that started in 2010. The purpose of this project was determined as "With this project, 42.000 schools and 570.000 classes will be equipped with the latest information technologies and will be transformed into computerized classes" (<http://fatihprojesi.meb.gov.tr/tr/english.php>).

There are similar programs all over the world like SMART Education Plan in South Korea, Smart Classroom Project in Australia, Future Schools in Singapore and The National Education Technology Plan in the United States (Keskin, Sarsar & Gallagher, 2014). However, the implementations in the field of CALL have mostly remained at the hardware level (Pelgrum & Anderson, 2001) expecting that the classrooms equipped with technological tools will improve the quality of learning and teaching. However, without training both in-service and pre-service teachers and observing their classroom practices, it is not possible to detect the effectiveness of any innovation. The pre-service teachers are expected to use CALL tools in their technologically equipped classrooms in their future career. However, they do not receive any CALL course during the pre-service teacher education period (Rakıcıoğlu-Söylemez & Akayoğlu, 2015). Only a limited number of universities offer elective courses aiming at training pre-service teachers on the use of technology in language classes.

In the centralized ELT curriculum designed by Council of Higher Education, there is a course entitled as Instructional Technologies and Material Design in Turkish educational system; however, the course was determined as basic principles of teaching, the use of technological devices in the classroom, like overhead projector or smartboards. The use Web 2.0 tools which allow interaction among the students or the use the Internet for designing materials were completely ignored. The reason for this fact might be that the course description was written in 2006, when Web 2.0 tools were not very popular. Moreover, the content of the course is not specifically designed for language teachers but for all branches of education. From this point of view, that course is far away from meeting the needs of pre-service teachers.

It can be concluded that the investments on technological devices would be worthless without efficient training of pre-service teachers. This study might be helpful to give insights about how a CALL course could change pre-service teachers' perceptions towards CALL tools. The possible acceptance of technology integration in language classes would be considered as an indicator of their technology use in their future teaching career.

As for the research studies carried out on training pre-service teachers and teachers of English on CALL, it was mentioned by Kessler (2006) that there had been very few studies on this issue. Besides, recent research studies revealed that the teacher education programs were inefficient in training teachers on CALL and there is a need for CALL training in teacher education programs (Aydin, 2013; Chapelle, 2006; Drent & Meelissen, 2008; Egbert, Paulus & Nakamichi, 2002; Kessler,

2006; Kılıçkaya & Seferoğlu, 2013; Rakıcioğlu-Söylemez & Akayoğlu, 2015; Robb, 2006; Stockwell, 2009; Volman, 2005).

Pre-service teachers graduate from teacher training programs without knowing how to use CALL tools in language classrooms and they have difficulties in integrating technology into their classrooms. Egbert, Paulus and Nakamichi (2002) studied with 20 English as a second language and foreign language teachers in a graduate-level CALL course at a large midwestern university in the United States. They focused on how language teachers applied practical experiences from CALL course in their teaching environment and found out that "technology coursework can change teachers' attitudes toward and confidence with technology and can also provide them with skills that they did not previously have" (p. 113). Volman (2005) carried out a study with 13 experts and stakeholders in educational technology and asked to discuss upon some predetermined themes varying from the expected competencies of the teachers to the new roles of the teachers in teaching profession. After the discussions were transcribed and analyzed, the changing role of teachers was also mentioned and summarized as

the role of teachers, however, will become more complex rather than simpler. Teachers must know what programs are available that are suitable for their students' individual needs and keep abreast of this. They are the 'arrangers' of students' learning processes: they bring together the educational tools and set them up in a particular way. In addition, they fulfil the role of instructor, trainer, coach, advisor, consultant and assessor (p. 22).

As stated in this study, the teacher of our digital age should know what kinds of programs are available and beneficial for their students. The teachers are expected to be trained in terms of evaluating CALL tools on the Internet and design activities and materials using these tools. This can be managed through a training in pre-service teacher education programs.

In addition to the training of teachers on CALL, the competency of teachers about the evaluation and the selection of the CALL tools was also touched upon in literature. Chapelle (2006) stated that "second-language teachers today need to be able to choose, use, and in some cases, refuse technology for their students" (p. vii). In order to refuse a technology, a teacher should be aware of the potential tools that could be used in teaching a foreign language, so that they could provide an alternative tool, or an alternative activity if the tool does not work in the classroom, or there are some technical problems about the related tool. In similar vein, Kessler (2006) conducted a study with 240 graduates of master's program and collected data through a survey, interviews and focus groups. At the end of the study, he went beyond selecting or refusing the tool and mentioned the appropriate methodology and practices. According to him, teachers should be aware of the CALL methodology and even its history and stated that "CALL use is becoming more prevalent within language programs, particularly as programs gravitate toward the web. Teachers need to become more proficient in their understanding of CALL methodology, practices, history and possibilities." (p. 35). While using the CALL tools in language classrooms, teachers should know which tool is appropriate for the context of the classroom and which tool serve the objectives of the course.

Finally, a group of researchers especially focused on pre-service teachers and suggested that pre-service teachers should receive a training on CALL before they start their teaching career. Robb (2006) specifically mentioned the provision of CALL training at the pre-service level rather than for the in-service training. He claimed that teachers should autonomously improve themselves and teacher preparation programs should provide pre-service teachers with some opportunities of autonomous learning. He pointed out that "teacher preparation programs must thus look beyond the mere teaching of today's software and skills to ensure that teachers can act autonomously to upgrade their knowledge and be able to apply new technologies to their teaching in a timely manner" (p. 335). Stockwell (2009) provided a professional development workshop for the part-time teachers working at a private university in Tokyo. He found out that there was a need for autonomous teachers who could choose their tools for their classes and, educate themselves continuously. Moreover, he claimed that the success in CALL was mostly dependent on the age of the participants and the available resources for the teachers. If the teacher could not find enough resources, s/he could easily abandon CALL tools. The institutions and teacher training programs should guide teachers in the field of CALL. The necessity of CALL course for the pre-service teachers of English was also mentioned by Aydin (2013) who proposed that "pre- and in-service teaching programs should include educating teachers

about the pedagogical use of web pages, multimedia, micro-worlds/simulations, and programming" (p.230), and added that "EFL [English as a Foreign Language] teaching programs and curricula should be reorganized in terms of the new developments in computer-assisted language learning" (p. 230). Finally, the importance of CALL integration was touched upon by Kılıçkaya and Seferoğlu (2013) and, as mentioned in the study, some teacher education programs started to offer some courses related to CALL tools for the future teacher; but the number of these programs is very limited. They stated that "recognition of the importance of Information and communication technologies (ICT) curriculum integration has already occurred, and most teacher education programs have introduced courses in ICT for future teachers" (p.22-23).

Based on the perceived need for a CALL course at the undergraduate level, a course entitled Computer Assisted Language Learning (Appendix A) was offered as an elective course by the English Language Teaching (ELT) Department at a state-run university in Turkey. Within its framework, it was attempted to find out the perceptions of prospective English teachers towards the CALL course before and after taking the aforementioned course. The findings of the study might give clear ideas about how the perceptions of the pre-service teachers of English change after taking the course and they might provide data for the curriculum designers of teacher preparation programs. For this purpose, the following research questions were asked:

1. What are the perceptions of pre-service teachers of English towards CALL course before taking the course?
2. What are the perceptions of pre-service teachers of English towards CALL course after taking the course?
3. What are the changes in the perceptions of pre-service teachers of English towards CALL course after taking the course?

## METHODS

### Theoretical Framework

A theoretical framework for determining the perceptions of pre-service teachers of English is provided by Rogers' (2003) theory of the diffusion of innovations, which is considered among the behavioral change models. According to this theory, the stages by which a person adopts an innovation, or the acceptance of the innovation is accomplished, include *knowledge* in which person becomes aware of an innovation, *persuasion* in which person forms a favorable or unfavorable attitude toward the innovation, *decision* in which person engages in activities that lead to a choice to adopt or reject the innovation, *implementation* in which person puts an innovation into use, and *confirmation* in which person evaluates the results of an innovation and continue to use it. Briefly, a person should follow the aforementioned steps in order to fully adopt an innovation. This adoption might be helpful to predict to what extent the pre-service teachers could use these technologies in their future teaching career. The participants of this study accomplished all these stages and expected to implement CALL tools in the future.

### Research Design

The study is designed as a qualitative study with a case study, which was defined by Creswell (2007) as "the study of an issue explored through one or more cases within a bounded system (i.e., a setting, a context)". The research in this study was carried out in a Turkish EFL context and with pre-service teachers of English at Department of Foreign Language Education at a state-run university in Turkey. The issue explored in this context is prospective English teachers' perceptions towards CALL and the study is aimed at providing in-depth understanding of pre-service teachers' reflections written on blog pages.

### Participants

The study was conducted with 69 pre-service teachers of English enrolled in the Computer Assisted Language Learning course at a state-run university in Turkey in 2013-2014 academic year. All students participated voluntarily in the study and their blog posts were used as the data of this study. Four of the participants were male and 65 were female; their mean age was 24 ranging from 21 to 28, and they were all fourth-year students at the Department of Foreign Language Education.

There were two different classes as a day group and an evening group, and the course content and the instructor were the same for both groups. They participated in this course in the Spring term of 2013-2014 academic year.

### **Data Collection Procedure**

The data was collected at the beginning and end of a fourteen-week period through blog posts of the students. The students were asked to write a blog post at the beginning of the term about the course in general, their expectations from the course, the syllabus of the course and how competent they felt in terms of computer literacy. They were informed that they were not going to be graded in terms of the content of their blog posts in order to make them write without any pressure. At the end of the term, they were asked to write another blog post after reading their first blog post. Thus, the participants had the chance to see the changes in their perceptions related to the course. Throughout the course, the participants had their own blog pages and they also wrote reflection papers related to the topic of the week; however, these weekly reflection posts were not analyzed as they were beyond the scope of the study.

### **Data Analysis**

After all students completed writing their reflection about the course on their blog pages, these written reflections (N=138; two blog posts for each participant) were copied and pasted onto a word processor software and they were imported into a qualitative research tool, HyperResearch Qualitative Analysis Tool. The codes were driven from the data and categories were formed. The codes were presented from the most frequently observed to the least frequently observed with their percentages and frequencies. This process was carried out both for the blog posts written before the course and for the ones written after the course. At the end of the data analysis, it was found out that there are different codes for the blog posts written before the course and the ones written after the course. The data was also coded by two experts in the field for maintaining intercoder reliability.

### **Intercoder Reliability**

As for the reliability of the coding procedure two experts were asked to code 25 percent of the data according to the given codes. Besides, they were asked if they could find a different code during the analysis. As a result of their coding procedure, Cohen's Kappa value was calculated. At the end of the calculation, it was found that Cohen's Kappa value is .83; and according to the Landis and Kappa (1977), values greater than .75 indicate excellent agreement.

## **FINDINGS**

During the data analysis procedure, 138 blog posts were analyzed in total (N=69 before the course & N=69 after the course). The total number of sentences in the blog posts was 1993 (917 before the course and 1076 after the course). The number of words was 29513 (14371 words before the course and 15142 words after the course); however, the data analysis was made based on sentences, not the words. The details of the data are presented in the following table.

**Table 1.** *Descriptive Analysis of the Data*

	<b>Number of Blog Posts</b>	<b>Number of Sentences</b>	<b>Mean</b>	<b>Number of Words</b>	<b>Mean</b>
<b>First Blog Posts</b>	69	917	13.3	14371	208,3
<b>Final Blog Posts</b>	69	1076	15.6	15142	219,4
<b>TOTAL</b>	138	1993	14.4	29513	213,8

The findings of the study are presented in accordance with the research questions. The first question is about the perceptions of the students towards CALL course before taking the course. In order to collect data, the participants were asked to write their opinions about the course and reflection on the syllabus at the beginning of semester. They wrote their ideas on syllabus and expectations about the course on their blog pages. At the end of the data analysis, 7 coding categories

were determined by the researcher. Table 2 presents the frequency of the codes and a sample quotation for each code.

**Table 2.** *Perceptions of Pre-service Teachers of English towards CALL Course before the CALL Course*

Observed Code	f	%	Sample Data
Anxiety	192	32.27	"Although I am a never-lazy person, the course intimidated me in the beginning because of all the work and effort I have to accomplish."
Positive Expectations	153	25.71	"Everything that we gained in this lesson will be very beneficial for us."
Awareness of CALL	101	16.97	"Technology and teaching, nowadays, go hand and hand."
Awareness of the new technologies	68	11.43	"Computers are integrated to our lifestyle somehow, they might be even capture us."
Complexity of the Course	51	8.57	"When we have a look at the syllabus last week, first I was afraid; because there were lots of things to learn and I started to think how and at what timespan I am going to learn all of this staff."
Traditional (out-of-date) methods	16	2.69	"Old methods and technologies aren't enough to teach something to new learners and will not."
Timing of the Course	14	2.35	"I think for the next classes, this course should be given before the last semester, so in the presentations the students can see different techniques."
<b>TOTAL</b>	<b>595</b>	<b>100%</b>	

As presented in Table 2, 595 sentences were coded as the perceptions of the pre-service teachers of English towards CALL course before taking this course. These perceptions were listed according to their frequency; and the most commonly coded perception was *anxiety*, which means that the participants were anxious before the course. Since they did not have any idea about the use of technology in language classes, they were hesitant about taking this course. Almost one third of the participants stated that they had some fears about computers and technology. The second most frequently observed code was *positive expectations*. Although, the participants had some fears and were anxious about the course, they also had some positive expectations. They believed that they would be able to learn new tools and they would use these tools while teaching English in the future. The participants were aware of the fact that technology played an important role both in teaching and in their daily life. Thus, the third and the fourth most frequently observed codes were *awareness of CALL* and *awareness of new technologies*. It is important that they realized that the technology could not only be used for personal purposes, but also for teaching a language. The participants wrote their first blog posts after the first week, in which the syllabus of the course was delivered and the tasks for the course were explained. Because of this reason, some students mentioned the complexity of the course as they had never heard the names of the tools. They found the course content too demanding and complex. As for the 6<sup>th</sup> most frequently observed code, the requirement of the integration of CALL tools in instruction was mentioned and the participants stated that many teachers were using old and traditional methods while teaching 21<sup>st</sup> century students. According to the participants, teachers were resistant to new ideas and new tools. However, they should embrace technology in their language classes. Finally, 14 sentences were about the semester of the course, which was quite an important finding for this study. The participants took this course in the Spring term of their final academic year; and they could not find an opportunity to implement these tools while they were taking other courses. They believed that that would have been much better if they could take this course before the final year.

After they wrote about their first reflections about the course, they followed the course for 14 weeks; and after they completed all the tasks, they were asked to write their reflections as the evaluation of the course. All participants wrote about their reflections about the course on their blog pages. These blog posts were copied and analyzed and the codes were driven out of the data. At the end of the analysis of these blog posts, the data was coded with the 7 categories below.

**Table 3.** *The Perceptions of Pre-service teachers of English after the CALL Course*

Observed Code	f	%	Sample Data
Changing anxiety level	163	37.21	"At the beginning I thought the course was difficult and we had so much work but when the time passed by I started to enjoy it."
The use of CALL tools in the future	97	22.15	"Because in future I'm planning on working in a private school and what I have learned here can be used later on in my life."
Feeling competent in terms of CALL tools	90	20.55	"By the help of this course, I have learnt how to use technology in education."
CALL helps learning	41	9.36	"So, they will develop their writing skills and their creativity."
Timing of the course	19	4.34	"If we had this course in year 2 I think it would be better and we would have more time to spend on it."
The necessity of CALL tools for all teachers	17	3.88	"Most of the teachers don't know them or they don't use but I believe that the students will like them."
The necessity of CALL tools for all	11	2.51	"If you don't want to be a standard English teacher you should know these tasks, you should take this course."
<b>TOTAL</b>	<b>438</b>		

The most frequently observed code was about the changed perceptions about their anxiety. After learning how to use and integrate these tools in their language classes, they noticed that they were anxious because they did not have any idea about the tools included in this course. This code was named as *changing anxiety level* and more than one third of the participants claimed that they were not anxious as much as they had been at the beginning of the course. This is an important point for this study and this showed that the course helped the participants to feel less anxious. The second most frequently coded category was about their future teaching career. Of the participants, 22.15% of them mentioned that they were planning to use CALL tools in their future career as a teacher. This point had not been mentioned before the course and this is crucial for the objectives of the course as the pre-service teachers were willing to use CALL tools while teaching English. As the data was collected at the end of the course, some participants intended to show that they learned these tools and explained them in detail. While exemplifying the uses of CALL tools in teaching English, they wanted to support their views with the names of the tools. The participants believed that *CALL helps learning*. According to the participants, these tools would be very beneficial while learning four skills of language as writing, reading, speaking and listening. They specifically refer to the language skills in their reflections. A code named *timing of the course*, which was observed before the course as well, was found in the data collected after the course. Moreover, the percentage of this code increased from 2.35% to 4.34 after the course as some participants realized the necessity of this course. This finding indicated that CALL course, which is an elective course at some ELT Departments in Turkey, should



be taught in earlier grades and most students indicated that they would have preferred to take this course in the 2<sup>nd</sup> year of their education. The last two codes observed in the data was about the necessity of the CALL in language teaching. In the 6<sup>th</sup> row, pre-service teachers believed that *all teachers should use CALL tools* as they help learning, make teaching easier and help to create a motivating class environment. The last code is about the necessity of the CALL and they expressed that *all teachers should take this course* so that they would be teachers of the 21<sup>st</sup> century. They believed that teachers should be aware of the tools mentioned in this course.

## DISCUSSION AND CONCLUSIONS

The findings of the study revealed that the CALL course helped to create awareness of pre-service teachers of English about the CALL tools and to change their perspectives towards CALL in a positive way. At the end of the study, it could be suggested that this course should be offered at all ELT Departments and the teacher trainers and educators should work in collaboration to improve the content of this course. The curriculum designers should take the findings of this study into consideration while designing the curriculum for teacher education programs and they should add CALL course as a compulsory course for ELT Departments. Thus, pre-service teachers could be aware of the CALL tools that could be used in language classes. This course should be offered for all pre-service teachers of English to create an awareness about the use of ICT tools in language classes although it was mentioned in literature that only a single course was not adequate for developing future teaching competencies.

Before the course, the students were mostly hesitant about taking this course as they believed that they were not competent enough to use technological tools while teaching English. The reason for this fact is mostly about the lack of awareness in CALL tools and they were afraid when they first saw the names of the tools in the syllabus. The syllabus and the requirements of the course were described in detail in the first classes of the course and they were hesitant to take this course as they felt the lack of skills. Interestingly, they had positive attitudes and expectations about the future according to the findings of the study although they were anxious. They believed that they would have some difficulties but they would be able to manage to succeed in the course requirements. However, there is a huge amount of studies indicating that the attitudes of students at all levels of education were found to be positive (Aydin, 2013; Çelik, 2013; Hao and Lee, 2015; Lee & Lee, 2014; Rakıcioğlu & Akayoğlu, 2015; Sağın Şimşek, 2008, Şad & Göktaş, 2014). The results of the study showed that majority of the participants had positive attitudes towards the CALL course and they believed that they would learn new tools and develop themselves in terms of integrating technology in their classes in the future.

The participants were aware that technology was an inevitable part of their personal life and their teaching career. It was found that they perceived that technology should be used in language teaching; however, they did not feel competent enough in selecting and evaluating the ICT tools for teaching purposes. Being critical about CALL tools is considered as one of the requirements for a teacher as mentioned in literature (Chapelle, 2006; Kessler, 2006; Volman, 2005). These researchers claimed that teachers should be trained to evaluate CALL tools for teaching purposes and they should eliminate a tool if it does not fit into their objectives. The findings of the data analysis revealed that the participants were aware of this fact.

Another important issue was about the complexity of the course. This was mainly the result of the fact that the course syllabus was described in detail and there were many new tools for the participants. As they were not familiar with these tools, they found the course too complex to handle and succeed in. This also affected the anxiety level of the participants, which was the most frequently observed code in data analysis.

Finally, the timing of the course was also criticized by the participants of the study. This course was offered as an elective course in the last semester of the undergraduate program. Thus, pre-service teachers could not find enough opportunity to practice these tools in practicum course, in which they visited the schools and carried out some micro teaching practices in real teaching environments. They stated that they should have taken this course in the second or the third year of their education so that they could practice using these tools in real settings and see the results of using CALL tools. This fact was also pointed out in literature (Hegelheimer, 2006; Kılıçkaya, 2012).

Hegelheimer (2006) argued that CALL course should be placed at the beginning of a teacher education program to serve as a foundation for other courses and to link technology related skills acquired via CALL course to language teaching practices. In a similar vein, Kılıçkaya (2012) noted that a CALL course in a teacher education program should be built on previous methodology courses and the link between CALL, SLA (Second Language Acquisition) and English language teaching should be explained lucidly to teacher candidates.

At the end of the course, the participants were asked to write another blog post about their perceptions towards CALL course and evaluate the course so that it was attempted to find out the changes in their perceptions. It was observed that the most frequently mentioned issue was about the change in their anxiety level. They stated that they had had fears about the course at the beginning but these fears disappeared in time. They noticed that there were many CALL tools that they could utilize while teaching and they were so user-friendly that even a novice user of technology could also design activities by using these tools. This was an important finding for the study as the main obstacle in the integration of technology was about the beliefs of teachers towards using technology for teaching purposes (Belland, 2009; Ertmer, 1999; Hew & Brush, 2007). In other words, if teachers believe in the importance of technology integration and they do not feel anxious about using it in classroom settings, then technology integration is accomplished. As a result, this course helped pre-service teachers to overcome their anxiety and changed their perceptions in positive ways towards the use of CALL tools in language classes.

The second important perception observed in the reflections of pre-service teachers of English after the course was about their commitment to use technology in their future career. They believed that technology would help learning and improve their teaching practices in their future career, and thus, they claimed that it would be inevitable to use CALL tools in their classes in order to enrich the content of their courses and to become a better teacher.

Timing of the CALL course was also mentioned at the beginning of the CALL course; however, it was the least frequently observed perception before the course. After the course, the number of participants claiming that CALL course should have been offered in the second or the third year of their undergraduate program increased and they felt the need to practice these tools before they graduated. This finding was in parallel with the findings of the studies in literature (Hegelheimer, 2006; Kılıçkaya, 2012).

The final perceptions after the course were about the necessity of the CALL course for both pre-service teachers and in-service teachers. The participants stated that CALL course should have been offered for both undergraduate students and in-service teachers, who are currently teaching in technologically equipped language classrooms. While Reed, Anderson, Ervin and Oughton (1995) claimed that even one computer course could positively affect teachers' attitudes towards computers as it helped to gain confidence, several researchers (Desjardings & Peters, 2007; Peters, 2006) emphasized that a single CALL course was not enough to equip pre-service language teachers with the competency and confidence to integrate technology. This was mainly due to the difficulty of incorporating technical and pedagogical skills in a one-course:

“We observed that the students were frustrated by trying to learn technical and pedagogical competencies in a single course because they had a lack of preparation in the former. This divergence also became frustrating for students and professors alike because too much time was spent on technical skills development rather than learning how to integrate these skills in one's teaching” (p. 156).

As a result, the findings were in parallel with the related studies in literature and these findings might help curriculum developers, educators and teacher trainers while designing curriculum for pre-service teachers of English and training teachers of digital age.

### **RECOMMENDATIONS**

This study revealed that the CALL course offered at undergraduate levels of ELT programs helped to change the perceptions of pre-service teachers of English towards the integration of technology in language teaching. In the light of the findings, some recommendations can be suggested for curriculum designers, teacher trainers, educators and teachers. CALL course should be a compulsory course for pre-service teachers of English and they should be trained to evaluate CALL tools,

implement CALL tools and continue professional development in terms of technology integration through online communities of practice. In the training process of pre-service language teachers, teacher trainers and educators should also be trained and they should be a model for their students in their own courses. They should integrate technology in methodology courses at undergraduate level and they should try online tools and platforms for their courses. If they prefer to use CALL tools, the pre-service teachers will have the opportunity to practice these tools as learners and will be able to better understand their effectiveness for their learning process, pros and cons of these tools from the view point of learners.

The syllabus of the course includes online tools in its content and all of them are appropriate to practice online for a learning management system. An online platform can be designed for this course and teacher trainers, pre-service teachers and researchers might sign up for this platform and share their experiences with their friends and colleagues. Thus, they will learn more by interacting and communicating about real problems.

Finally, the teachers working at different levels of education might have graduated from the universities years ago, and they could not find enough opportunities to develop themselves in the use and application of technology. The trainings, including the tools in the CALL syllabus, can be implemented for in-service training sessions and some online communities and groups could be created for the purpose of professional development. They might benefit from the interactions in these communities and groups.

As for the recommendations for further studies, pre-service teachers who enrolled in the CALL course and those with no CALL training might be compared when they started their teaching career. As a result of this study, pre-service teachers were found to be willing to use CALL tools while teaching; however, it is questionable whether they will really utilize them or not.

Moreover, the experiences of in-service teachers can be collected and the problems related to the facilities at schools can be explored so that some solutions for these problems can be suggested. It is for sure that all teachers experience the common problems to some extent and it is urgent to offer some recommendations for these problems.

Finally, the same syllabus can be implemented in some different countries and the codes categories that were observed in this study can be explored in these contexts as well. The groups and teacher trainers might work in collaboration and design some projects for training both in-service and pre-service teachers of English.

## LIMITATIONS

This study was conducted with pre-service teachers of English at a single university. The number of participants was 69 and 138 blog posts were analyzed in detail, which can be considered as adequate data source for a case study. However, this study might also be carried out at different institutions in order to make a generalization. The researcher was also the instructor during the data collection procedure so that the participants might be affected from this situation. Thus, in the future a researcher who is completely outside the classroom could collect data by means of several data collection procedures, such as questionnaires or observations and the results might be compared. As for another limitation of the study, the participants' general views on technology were collected through blog posts. The focus of the participants could be changed based on each Web 2.0 tool. This might provide researchers with more detailed perspectives. Finally, the data was collected in English, which was a foreign language for pre-service teachers of English. Although they were senior students and they were expected to have good command of English, the language of blog posts, that is English, might have limited the participants while expressing their real feelings. If the data was collected in the native language, they might have written in more detail.

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## Appendix A – CALL Course Content

### Description of the Course:

This course introduces pre-service teachers of English to Computer-Assisted Language Learning (CALL) tools. In addition to giving an overview of the uses of CALL tools in teaching/learning, the course will cover a review of interactive instructional technologies in language teaching/learning, the Internet in English language teaching, and evaluation of English language teaching software and use of Web 2.0 tools in the language classroom. Implications of CALL in language classrooms will also be discussed. Students will be provided with hands-on experience, and they will also develop their own multimedia CALL materials (e.g. podcasts, wikis, blogs, etc.). Students will also review and evaluate current research in CALL.

### Objectives:

Students will be able to

- Review interactive instructional technologies in language teaching/learning.
- Learn terminology related to computer-assisted foreign language learning.
- Experiment with and evaluate current computer applications in foreign language learning.
- Learn how to design and integrate computers into foreign language courses.
- Review and evaluate selected current research in CALL.
- Develop their own multimedia CALL materials.

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### Course Outline

<u>WEEK</u>	<u>TOPIC</u>	<u>READING MATERIAL OR RELATED WEB PAGE</u>
Week 1	<input type="checkbox"/> Introduction to the History of CALL - Behaviouristic CALL, Communicative CALL, Integrated CALL	Warschauer, M. (1996). Computer-assisted language learning: An introduction. In S. Fotos (Ed.), <i>Multimedia language teaching</i> (pp. 3-20). Tokyo: Logos International. <a href="http://www.ict4lt.org/en/warschauer.htm">http://www.ict4lt.org/en/warschauer.htm</a>
Week 2	<input type="checkbox"/> Creating and Using Blogs in Teaching <ul style="list-style-type: none"> <li>○ Blogger</li> <li>○ Wordpress</li> </ul> <input type="checkbox"/> Using RSS Reader <input type="checkbox"/> Using Twitter for Language Activities and Professional Development	<a href="http://www.blogger.com">http://www.blogger.com</a> <a href="http://www.wordpress.com">http://www.wordpress.com</a> <a href="http://www.feedly.com">http://www.feedly.com</a> <a href="http://www.twitter.com">http://www.twitter.com</a>

Week 3	<input type="checkbox"/> The use of wikis in English Language Classrooms <ul style="list-style-type: none"> <li><input type="radio"/> PBworks</li> <li><input type="radio"/> Wetpaint</li> <li><input type="radio"/> Google Documents</li> </ul>	<a href="http://www.pbworks.com">http://www.pbworks.com</a> <a href="http://www.wetpaint.com">http://www.wetpaint.com</a> <a href="http://docs.google.com">http://docs.google.com</a>
Week 4	<input type="checkbox"/> Mobile Learning	<a href="http://play.google.com">http://play.google.com</a>
Week 5	<input type="checkbox"/> Online Communities of Practice - Creating and Joining Online Groups (Webheads, APACALL) <ul style="list-style-type: none"> <li><input type="radio"/> Facebook Groups</li> <li><input type="radio"/> Google Groups</li> <li><input type="radio"/> Yahoo Groups</li> </ul> <input type="checkbox"/> Online Bookmarking <input type="checkbox"/> Dropbox	<a href="http://groups.yahoo.com">http://groups.yahoo.com</a> <a href="http://groups.google.com">http://groups.google.com</a> <a href="http://delicious.com">http://delicious.com</a> <a href="http://www.dropbox.com">http://www.dropbox.com</a>
Week 6	<input type="checkbox"/> Creating Quizzes with Hot Potatoes	<a href="http://hotpot.uvic.ca/">http://hotpot.uvic.ca/</a>
Week 7	<input type="checkbox"/> Creating an online classroom using LMS <ul style="list-style-type: none"> <li><input type="radio"/> Nicenet</li> <li><input type="radio"/> Moodle</li> <li><input type="radio"/> Edmodo</li> </ul>	<a href="http://www.nicenet.org">http://www.nicenet.org</a> <a href="http://campus.dokeos.com">http://campus.dokeos.com</a> <a href="https://edmodo.com">https://edmodo.com</a>
Week 8	<input type="checkbox"/> Online Conference Tools <ul style="list-style-type: none"> <li><input type="radio"/> WiZiQ</li> <li><input type="radio"/> Google Hangout</li> </ul>	<a href="http://www.wiziq.com">http://www.wiziq.com</a> <a href="http://www.google.com/hangouts/">http://www.google.com/hangouts/</a>
Week 9	<input type="checkbox"/> Computer Mediated Communication (CMC) (Synchronous and Asynchronous) - Message Boards , Forums, Instant Messaging Services <ul style="list-style-type: none"> <li><input type="radio"/> Yahoo Messenger</li> <li><input type="radio"/> Google Talk</li> <li><input type="radio"/> Skype</li> <li><input type="radio"/> Facebook</li> <li><input type="radio"/> Viber</li> </ul> <input type="checkbox"/> Designing online presentations using Prezi	<a href="http://www.prezi.com">http://www.prezi.com</a>
Week 10	<input type="checkbox"/> Digital Storytelling	<a href="http://animoto.com">http://animoto.com</a> <a href="http://edu.glogster.com">http://edu.glogster.com</a> <a href="http://www.storyjumper.com">http://www.storyjumper.com</a>
Week 11	<input type="checkbox"/> Podcasts	<a href="http://www.podomatic.com">http://www.podomatic.com</a> <a href="http://audioboom.com">http://audioboom.com</a>

