9 Materials design in CALL: a case study of two teachers of English as creators of digital materials

Ferit Kılıçkaya[1]

Abstract

The importance of providing pre-service and in-service teachers with sufficient training and practice in integrating technology into their classrooms has led several studies to investigate the possible effects of pre-determined training and practice provided to teachers. However, most of these studies seem to have focussed on teachers' beliefs and perceptions during the courses offered in the departments without considering their needs and requests. Noticing this gap, the current study aimed to investigate two in-service language teachers' views and experiences on the training which was designed and provided based on their needs and requests. This research was designed as a qualitative case study, focussing on the experience of two male teachers of English who were exposed to a series of workshops that focussed on creating digital materials using several web-based tools. The findings of the study indicated that, although the participants learned how to utilise the technological tools and were willing to infuse these tools into classrooms, their intentions, in some cases, were not realised in their classroom practices for various reasons, most of which were directly related to the context of teaching.

Keywords: materials design, CALL, English teachers, creating digital materials.

1. Burdur Mehmet Akif Ersoy University, Burdur, Turkey; ferit.kilickaya@gmail.com

1.   Introduction

As a response to opportunities provided by new technological developments, language teachers are eager to benefit from these new developments in their classrooms to support their students (e.g. Egbert, Paulus, & Nakamichi, 2002; Göktürk Sağlam & Sert, 2012). However, teachers familiar with the basic uses of technology, such as word-processing and publishing comments on blogs, sometimes find it difficult to create digital materials using the tools available on the Internet. Several factors affect the teachers' attitudes, as well as their practices regarding their uses of Computer Assisted Language Learning (CALL), such as lack of training in addition to lack of support provided by their institution (e.g. Aslan & Zhu, 2015; Garrett, 2009; Kessler & Plakans, 2008; Merç, 2015). Moreover, as indicated by Bates (2015), CALL benefits should enable teachers to deal with their workload. In other words, creating digital materials or using CALL applications should not require much time, and it could lead them to produce useful materials and to contribute to high-quality teaching.

Teacher education programmes play an important role in enabling teachers to better infuse technology into their classrooms as they can be provided with enough theoretical knowledge and practice. Without providing efficient training, equipping schools with computers and an Internet connection, in addition to other devices, and expecting teachers to use technology to improve their students' performance will result in failure and disappointment (Garrett, 2009; Son, 2018). Noticing the importance of providing necessary training and practice, several studies investigated the effects of providing training to language teachers (e.g. Egbert et al., 2002; Kılıçkaya & Seferoğlu, 2013), their perceptions and attitudes (e.g. Akayoğlu, 2017; Aslan & Zhu, 2015; Göktürk Sağlam & Sert, 2012), and preferences (e.g. Akayoğlu & Cirit, 2017; Merç, 2015; Uzun, 2016).

The study conducted by Egbert et al. (2002), for example, investigated how English as a second language and foreign language teachers used CALL activities after completing the graduate-level CALL course. The findings

revealed that, when provided with training, teachers were more eager to benefit from CALL activities. The findings also indicated that for training and supporting teachers, the contexts and schools where teachers work should be considered. Another study conducted by Kılıçkaya and Seferoğlu (2013) aimed at determining the effects of CALL training on in-service language teachers' use of CALL-based activities. The findings indicated that the training on use of computer technologies which provided a link between second language theories and language learning principles led the participants to better infuse CALL materials into their classrooms. However, it was also noted that knowing how to use a computer or a tool did not result in its use in the language classroom.

Regarding language teachers' perceptions and attitudes, Göktürk Sağlam and Sert's (2012) study revealed that, despite the challenges and difficulties involved in integrating technology into their classrooms, in-service language teachers viewed technology-enhanced language learning and teaching positively and tried to benefit from technology in various ways in their classrooms. Similarly, Aslan and Zhu (2015) revealed the teachers' positive perceptions, although several participants expressed that they felt anxious regarding technology usage due to several issues, such as difficulty in learning the tools. Investigating the perceptions of 69 pre-service teachers of English towards an introductory CALL course at a state university in Turkey, Akayoğlu (2017) indicated that, although the participants were anxious about the course in the beginning, after the training the participants began to feel more confident about this course and suggested taking this course in the earlier stages of their programme.

Merç (2015), on the other hand, investigated pre-service language teachers' use of technology in their practice at schools during the last year of their programme and found that the participants complained about the lack of technology tools available in the schools. Moreover, there was a mismatch between the training provided in teacher training programmes and the real conditions in the classrooms as to technology integration. Similarly, Uzun (2016) underscored this mismatch by indicating that there was an inconsistency

between the pedagogical knowledge and the technical knowledge required to benefit from technology in the language classrooms. Akayoğlu and Cirit (2017) investigated the preferences of pre-service language teachers regarding the tools integrated into their lesson plans and found that the participants mostly opted for tools that would support their teaching and learning practices through audio-visual materials.

The studies briefly reviewed indicate that pre-service and in-service language teachers adopt positive attitudes towards the use of technology in their language classrooms. However, there are also several factors that affect their attitudes and perceptions, such as the lack of training depending on their context, the technological resources available at schools, and the mismatch between what is included in the courses in teacher education programmes and the real-life situations at schools.

Many of these studies reviewed focussed on the beliefs and perceptions of pre-service language teachers mostly during their teaching practice or during the courses offered in their teacher training programmes. This study, on the other hand, attempts to investigate two in-service language teachers' views on the training provided based on their needs and requests, their willingness to create and use digital materials in their classrooms, and the factors that would affect their decisions. It is also important to note that this study concentrates on the participants' self-perceptions and self-reporting of their willingness and explanations of the factors involved. In line with this aim, the following research questions were proposed:

- What are the participants' views and suggestions on the training provided?

- Were the participants willing to create and use digital materials for their classrooms? Why? Why not?

- What are the factors that might affect the participants' use of the materials in the classroom?

2. Method

2.1. Setting

This research was designed as a qualitative case study exploring two in-service English teachers' views and experiences on the training designed based on their own requests and needs. The study was conducted following a one-hour seminar, which was held on the benefits of using technology in the classroom for fifteen teachers of English in Burdur, Turkey. The teachers were teaching English at middle and high schools, and several of them expressed their interest in learning more about the possible ways of infusing technology into the classroom. Based on the researcher's availability and the teachers' schedules, two teachers of English agreed to attend a series of workshops that would focus on creating digital materials using several web-based tools available on the Internet, such as English as a Second Language (ESL) videos.

2.2. Participants

Two male teachers of English, Yavuz and Ahmet (both pseudonyms) participated in the study. Yavuz was an experienced teacher with basic knowledge of technology such as word-processing and surfing the Internet. Yavuz had fifteen years of experience in teaching English at various state schools. Ahmet, on the other hand, was a novice teacher with three years of experience. However, his knowledge of technology was beyond Yavuz' skills, such as using several online applications to create digital materials for teaching and learning English. Both teachers were graduates of the Department of Foreign Language Education and were working at two different secondary schools. They were teaching different classes, which included sixth and seventh graders, whose levels of English ranged from beginner to pre-intermediate. In these classes, the aim was to improve learners' English by integrating four skills. However, the major focus was on grammar, vocabulary, and reading. Both teachers were also teaching the eighth graders, who were going to take a language test in which grammar and vocabulary knowledge played an important role in determining students' success through multiple-choice questions.

2.3.   Data collection instruments

Data included the participants' journal for each session during the workshops and a semi-structured interview. For each session, the participants kept a journal in which they discussed the tool they learned about, the possible uses and challenges of using this tool, and how they could integrate it into their own classroom. The semi-structured interview was used to obtain information about these two teachers' views towards the workshops and the process in which they created digital materials.

2.4.   Procedure

The training lasted for five weeks, each of which consisted of three-hour hands-on experiences on the use of creating CALL-based materials, with a total of 15 hours of lectures and tutorials. The following topics and tools were included in the training, as indicated in Table 1. It is worth mentioning that, even though there were numerous activities that could be created using numerous tools available, the topics were selected based on the mini-interview conducted with the participants to better meet their needs.

Table 1.   The topics and tools introduced during the training based on the participants' needs

Week	Topic / Skill	Tools / Websites
I	Creating online classrooms and sharing materials	Edmodo https://www.edmodo.com/
II	Video quizzes/listening	ESL video https://www.eslvideo.com
III	Creating stories/writing	Cartoon Story https://www.education.vic.gov.au/languagesonline/ Make Beliefs Comix https://www.makebeliefscomix.com/Comix/
IV	Online quizzes/assessment	Kahoot! https://kahoot.com/

V	Creating worksheets/ grammar and vocabulary	The teacher's pet http://www.teachers-pet.org/index.php
		Reading worksheet generator https://www.education.com/ worksheet-generator/reading/

After each session, the participants were asked to keep a journal and briefly discuss the basic features of the tool they had learned, the possible uses, and challenges, with a focus on how they could infuse it into their classrooms. If possible, they were also asked to integrate it in their class and to discuss their experience in the following session. The semi-structured interviews were held with both participants after the training. During the interviews, the participants were asked questions on their views on the training they had received and their own experience with integrating the tools in their classes, and they were asked to share their comments and suggestions. In lieu of taking notes during the interviews, which would make it difficult to focus on the details, the participants' responses were audio-recorded, and the recordings lasted for 25 minutes on average. The interviews were then transcribed in full and coded using Nvivo.

2.5.   Data analysis

The data collected through the journals and interviews were subject to inductive content analysis. The journals and the transcripts of the interviews were re-read repeatedly in order to determine the common themes and sub-codes. These themes and sub-codes were hierarchically ranked. The emerging themes and sub-categories were checked against consistency by another expert in the field, with ample knowledge of inductive content analysis.

3.   Results and discussion

The results of the study are summarised below. The brief statements of the participants are provided and categorised in relation to the research questions, and they are reported for each participant.

3.1.   What are the participants' views and suggestions on the training provided?

Both Yavuz and Ahmet expressed the view that they considered the training rather short while acknowledging that they were aware of this before the training started. However, Yavuz said he believed that the content and the efficiency of the materials are more important than the duration of training. He stated the following:

> "Although the training was short, the content was very efficient as our needs and expectations were taken into consideration" (Yavuz).

Both participants expressed a more positive view regarding the efficiency of the activities and tasks in the training. For example, Ahmet, the novice but more knowledgeable on issues of technology, said:

> "The tasks and the activities were geared towards our needs. I, for example, needed interactive games for my end-of-the-lesson activities so that my students can recycle what they learned, and I learned a lot during the training" (Ahmet).

This finding is consistent with that of the studies conducted by Göktürk Sağlam and Sert (2012), and Akayoğlu (2017), indicating that language teachers have positive attitudes towards the use of technology, as well as the training regarding the integration of technology.

Additionally, both Yavuz and Ahmet expressed the importance of making the content of produced materials interesting and relevant to students. Yavuz, the experienced teacher, correlated the quality of the produced materials with the learners' success as he thought that this is the most important aspect of infusing technology into language teaching and learning. He stated that he focussed on the features of the tools provided in the training. He explained that he tried to make sure the content or the tool he prepared had the potential to help his students to retain the content longer than the printed materials,

which helped them build confidence. In addition to what Yavuz proposed, Ahmet underscored the importance of the training from a teacher development perspective. Ahmet expressed the need for such training from time to time as technology is developing rapidly, and teachers also need to remain closely informed about the current developments in technology and appropriate pedagogy.

The participants' views clearly indicated the need to reconsider teacher education programmes and the courses offered to students regarding the integration of technology in language learning and teaching activities. As related research (e.g. Sharifi, AbuSaeedi, Jafarigohar, & Zandi, 2017) has revealed, computer-assisted instruction or using technology in the classroom has an overall medium effect on learners' development in English language; therefore, it is not possible to avoid the use of technology in the classroom. Being well aware of this, the participants stressed that teacher training courses should include the topics and tools that would be expected to be effective and applicable to the contexts or schools where prospective teachers are supposed to work in their future career. The participants also noted the importance of making the digital materials interesting and relevant to learning goals, which is among the basic language learning and teaching principles. These findings are consistent with those of the studies conducted by Egbert et al. (2002), Kılıçkaya and Seferoğlu (2013), and Uzun (2016). Moreover, the current study also stresses the importance of planning and conducting training considering the pre-service and in-service teachers' needs in different contexts.

3.2. Were the participants willing to create and use digital materials for their classrooms? Why? Why not?

Both participants were willing to create and use digital materials for their classrooms. However, they expressed different reasons for participating in the training. Yavuz, the experienced teacher, expressed that he needed the training more than Ahmet as during his undergraduate studies he was not adequately introduced to the use of technology for language learning and teaching, apart from the basic introductory courses to computers. More specifically, the

courses covered the use of word processing skills and the use of presentation software such as Microsoft PowerPoint, which has also been confirmed by previous research (Uzun, 2016), and the use of the Internet. Therefore, during the training, he was more eager to learn how other tools could be used in his classrooms. Yavuz also noted that the use of computers for language learning and teaching was not common in the schools where he worked due to the lack of hardware and related software. Ahmet was also eager to create and use digital materials for his classrooms. Compared to Yavuz, he had more knowledge of tools available to create digital materials and knew how to deal with technical problems while using computers. Therefore, Ahmet benefited from training to refresh and update his knowledge of new and different tools in language learning and teaching.

3.3. What are the factors that might affect the participants' use of the materials in the classroom?

Both teachers raised concerns about the use of the produced materials with eighth graders in secondary schools. They both expressed the view that these students were going to take a language test in which grammar and vocabulary knowledge was vital and that they preferred to do activities such as answering multiple-choice questions on paper. Their students did not like the idea of reading and answering the questions which were prepared as online quizzes (Krajka, 2003) on the smart board, even if they were created to revise the previously learned items. Yavuz said that doing an activity on a computer appears like a game to language learners. He stated:

> "My students consider the activities that we did through the smart board entertaining and interesting. However, when it comes to a high-stakes exam, I mean, the language exam, I think the activities done on screen do not appear serious enough to them" (Yavuz).

Almost the same views were expressed by Ahmet, who said the following: "We are forced to follow an approach, teach-test-teach", which is one of the results of harmful washback due to the high-stakes exams (Kılıçkaya, 2016).

Unlike what happened in the eighth graders' classroom, both teachers expressed that when they used their digital materials with other students, especially with the ones at lower levels, they obtained more positive results not only in achieving the goals of the programmes but also in appealing to student desires. This might be because students do not worry about exams or grades at lower levels, they try to enjoy game-like activities without being aware of revising the topics or items they practised in previous classes. Both teachers also noted the importance of the decision regarding the use of technology in the classroom. Yavuz, for example, explained that he would not be using technology if he could achieve the same result or success by using the board or paper. Regarding this, during the interview, Ahmet explained:

> "It sometimes takes a lot of time to create an activity on a computer, and you realise that you can do the same thing by using several pieces of paper with no difference in terms of making the content interesting and obtaining the same results".

Both teachers believed that teachers should spend time on creating digital materials using the tools on the internet only if they believe and foresee that they will be able to produce digital materials that will lead learners to retain what they learn longer, in comparison with the paper-based materials or just the use of the board.

Ahmet also stressed the importance of reliability of the technological tools available in the classroom. Acknowledging that the Internet connection was not always reliable, he explained that he focussed on creating digital materials that did not require an Internet connection, as he did not want to spend time on the slow connection or lack of connection during the activity. Yavuz, similarly, said that he tended to create materials that would not require much in terms of the technology available. Although he explained that they had smart boards with speakers and projectors available in their classrooms, he tried to deal with materials that did not require an Internet connection.

The reasons or the factors provided by both participants are among those expressed in the findings of several studies (Aslan & Zhu, 2015; Garrett, 2009;

Merç, 2015). However, unlike the finding of the study by Merç (2015), which indicated the lack of the technological tools available in the schools, the participants in this study had sufficient technological tools. The concern was more related to the reliability of the devices and services available as they did not want to spend time dealing with technical issues.

4.   Conclusions

The current study focussed on two English teachers' views and experiences in creating digital materials based on various tools and websites. The findings of the study indicated that the participants had positive attitudes towards infusing technology into their teaching practices and found the training efficient. The participants underscored the importance of making the digital materials interesting and efficient, which would help students both enjoy and learn the content and noted that teachers need to be updated through regular meetings and training in benefiting from technology in their classrooms. However, in a few contexts, although they were willing to benefit from technology, they could not realise their intentions for various reasons, generally related to the context of teaching. Since the findings of the study are only based on two teachers' experiences and responses, these findings might not be generalisable to all contexts. Moreover, it is also well acknowledged that the findings might not be generalisable to larger in-service English teacher populations. However, the findings can be transferable to other similar situations. In addition, the findings are believed to further contribute to the literature on participants' views on CALL training (e.g. Akayoğlu, 2017; Aslan & Zhu, 2015), specifically on creating digital materials and understanding the factors affecting their experience. Further research can be conducted with a large number of participants working with students at different levels and different needs and, can focus on the contents or syllabuses for training programmes considering the different learning and teaching environments where teachers are expected to work. Moreover, further research can also include the observation of the participants' classroom practices to determine to what extent they could put the theoretical knowledge into practice.

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