



Received: 24 April 2017
Accepted: 31 May 2017
First Published: 18 July 2017

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Reviewing editor:
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INFORMATION & COMMUNICATIONS TECHNOLOGY IN EDUCATION | RESEARCH ARTICLE

Impact of CALL in-house professional development training on teachers' pedagogy: An evaluative study

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Abstract: This study examines the impact of computer-assisted language learning (CALL) in-house professional development trainings based on Technological Pedagogical Content Knowledge in-Action (TPACK-In-Action) model on female teachers' pedagogy at a Saudi Arabian university. Data were collected using survey questionnaires to gather participants' pre-workshops and post-workshops responses followed by semi-structured interviews to understand aspects that determined the effect of the training workshops on teachers' pedagogy. The findings show that despite having sound pedagogy and teaching qualifications, participants could not successfully utilize their skills to incorporate technology effectively in their teaching. Institutional policies regarding technology integration and complex pacing guide which directed learning objectives and course materials could not give teachers the freedom to integrate learned skills in class, thus, the trainings provided to them became ineffective. The findings of the study suggest arranging training workshops according to the needs of the teachers who want to integrate technology in teaching. The study also recommends that an informed institutional policy regarding the use of technology is important which will ultimately result in effectiveness of the training workshops. Such decisions should be taken in accordance with the teaching

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PUBLIC INTEREST STATEMENT

Technology plays a pivotal role in this digital era. Using technology in educational institutions upgrades the standards of teaching and learning process. This study examines how technology integration model called TPACK-in-Action (technology, pedagogy, and content knowledge-TPACK) helps teachers to use technological tools effectively. TPACK-in-Action model, spread over a year of training workshops, was applied on the English language instructors in a Preparatory Year Programme at a public university in Saudi Arabia. Despite being highly qualified and experienced, most instructors failed to integrate technology effectively in teaching. Two major factors were discovered of the failure; the administrative policies regarding technology use, and tightly scheduled pacing guide to cover the teaching material which utilized most of their prescribed time. The findings of the study suggest that successful technology use depends on two important factors; the training workshops should be arranged according to the needs of the teachers, and technology integration should be prescribed as a part of syllabus.

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Subjects: Teacher Education & Training; Teachers & Teacher Education; Continuing Professional Development

Keywords: TPACK; professional development; educational technology; teacher education; CALL

1. Introduction

Technology integration has been greatly emphasized by educators in the English as a Foreign Language (EFL) classrooms. Educational institutes throughout the world are encouraging the use of integrated educational technologies in the curriculum (Culp, Honey, & Mandinach, 2005). Similarly, the effort to implement educational technology in Saudi Arabia has always been a number one priority. Yet despite the magnitude of funds on technology integration, the question of how technology is integrated into the Saudi EFL classrooms remains unanswered (Alqarni, 2015; Alshahrani & Al-Shehri, 2012). There is a wide agreement that it is often the teachers who make decisions as to whether and how to integrate technology in their teaching (Haydn & Barton, 2008; Sang, Valcke, Braak, & Tondeur, 2010), and that when they do, teachers can act as the agents of change for technology integration. This emphasizes the fact that teachers need to learn how to integrate technology in the classrooms, and they should be willing to adopt the pedagogies that are necessary for these technologies. Following this perspective, educational institutions provide in-service professional development computer-assisted language learning (CALL) workshops for teachers. The present study investigates the impact of in-house CALL professional development workshops based on Technological Pedagogical Content Knowledge (TPACK)-in-Action model on the EFL instructors at an English language institute in a Saudi university. The study investigates it from two different viewpoints: whether the in-house CALL workshops covered participants' professional development goals; and if these trainings meet participants' expectations in helping them integrate technology in their classrooms.

1.1. Literature review

Technology integration has gained much influence with the emergence of technological tools in educational areas. The vast resources and opportunities that computers and the internet provide have brought about new approaches, strategies and tools in language teaching and learning process. Teachers have a wide range of computer/mobile device applications, and learning management systems available to them. According to Cowan (2008), technology integration is not a choice but a must for the teachers, so having low level of desire to use technology just makes the condition worse. Today, being digital natives (Prensky, 2008) students want to learn through technology (Ahmed, 2012), rather than through conventional methods of language teaching because technology is more convenient, more enjoyable and allows greater freedom to manipulate the learning material.

Several researchers (e.g. Hubbard, 2008; Kozma, 2003) observe that CALL is unavoidable in the current educational settings, hence its integration in teacher education is inevitable to meet the needs of the digital era (Mishra & Koehler, 2006). Reinders (2009) maintains that successful integration of technology depends on teacher's ability to incorporate it for the delivery of content to improve learners' skills in a language classroom. Similarly, the success of any initiatives to implement technology in an educational program depends strongly upon the support and the training offered to teachers. Moreover, with the effective trainings, teachers' knowledge and perception of CALL integration may play a crucial role in their technology integration and the degree of success (Atkins & Vasu, 2000; Lam, 2000; Liu, Theodore, & Lavelle, 2004; Milbrath & Kinzie, 2000).

A number of studies (e.g. Galvis, 2012; Gilakjani, 2013) have focused on teachers' beliefs, attitudes, and efficacy about CALL, but there are a few studies that have focused on the impact of CALL teacher education programs (Hegelheimer, 2006; Kessler, 2007; Kılıçkaya, 2009; Tai, 2015). Liu and Kleinsasser (2015) investigated six EFL teachers' CALL knowledge during a yearlong in-service teacher training program in a high school in Taiwan. The researchers designed an in-service CALL program to enhance teachers' digital literacy and to promote the integration of online (project-based) instructions into English education. The study used both quantitative and qualitative methods with the theoretical lenses of TPACK and self-efficacy. Surveys were employed to assess teachers' CALL knowledge after the program. Also, teachers were interviewed at the beginning, middle, and at the end of the program to gain participants' insights into the process of infusing technology into instructional practices. The quantitative findings reveal that the six EFL teachers perceived professional growth in technology integration after participating in the CALL training program. They reported great improvement in building their TPACK skills as a whole, with a gain scores of (Technological Content Knowledge (TCK) = 1.67, Technological Pedagogical Knowledge (TPK) = 1.54, TPACK = 1.60). The qualitative data revealed improvements in the teachers' technology integration in-class practices. The teachers highlighted their achievement in raising students' learning motivation when implementing technology. In contrast, the findings of Sarhandi, Khan, Buledi, and Asghar (2016) contradict the previous study. The researchers examined the impact of in-house CALL professional development workshops based on TPACK-in-Action model on male EFL instructors at the male campus of an English language institute in a Saudi university. The study employed quantitative and qualitative methods; survey questionnaires to gather feedback on the participants' pre-workshops and post-workshops in CALL training, coupled by semi-structured interviews to highlight factors that determined the outcome of the training workshops. The findings showed that despite the instructors being qualified in pedagogy, they were unable to use their expertise successfully to integrate technology in their teaching. The failure partly occurred due to apparent misunderstanding of confusing the knowledge of an application with the pedagogical skills of using that application, and partly due to the lack of concrete guidance by the administration on what and how to integrate technology in regular teaching.

With an aim to fill the gap of exploring the impact of CALL oriented teacher training plans, this study extends on Sarhandi et al. (2016) by focusing on female EFL teachers. The study investigates whether the in-house professional development workshops have any impact on the female EFL teachers' integration of CALL in the classrooms at the female campus of the English Language Institute (ELI) in a Saudi Arabian public university.

1.2. CALL in teacher education

Teacher Professional Development (TPD) receives attention and promotes improvement in general and second language education (Avalos, 2011; Kleinsasser, 2013), including professional development in CALL (Hong, 2010) in particular. Research on CALL in the field of English language teaching shows the positive impact on teacher professional development (Guichon & Hauck, 2011; Hubbard & Levy, 2006; Thang & Gobel, 2012). However, practice in CALL is exceedingly complex, and is constantly affected by the context in which it occurs, be this at an individual level, an institutional level, or at a societal level (Stockwell, 2012). The way in which learners use technologies in their everyday lives will, influence how they apply these technologies in/for other usages as well (Levy & Stockwell, 2006). Thus, teachers should know how technology integration works to support language learning through related courses and seminars: CALL course series, CALL certificates, and CALL graduate degrees (Hubbard & Levy, 2006). TPD should not be merely learning novel tools and skills; rather, it should meet the needs of the actual classroom needs to achieve maximum benefits. Kessler (as cited in Hubbard & Levy, 2006) states that CALL requires right amount of knowledge of technology and its integration in pedagogy. In other words, the use of technology merely for technology sake is not beneficial unless it is effectively directed by pedagogical perspectives.

Hubbard and Levy (2006) highlight that language teachers are not technologically well trained to meet the future needs. Hubbard (2008) further illustrates that teachers generally feel more comfortable with the teaching methods they have acquired during their experiences as students or teachers, and in-service trainings do not change such fixture.

This means if language teachers have a variety of positive teaching and learning experiences in using computers, they are likely to be more confident and skillful in implementing CALL in their own classrooms (Park & Son, 2009). Therefore, teacher development programs should be provided for language teachers who deal with issues of using computers (Jung, 2001; Lee & Son, 2006; Son, 2002; Suh, 2004) and gain competent skills in managing computer-based tasks and activities in the classroom (Oh & French, 2007). Several researchers (such as; Egbert, Paulus, & Nakamichi, 2002; Park & Son, 2009; Oh & French, 2007) believe that teachers do not supplement their use of technology with the newly acquired knowledge even they are adequately proficient to do so due to certain limits such as scheduled deadlines, curricula, organizational restraints, and lack of resources.

1.3. TPACK (Technology pedagogy content knowledge)

The TPACK framework is designed on Shuman's (1986, 1987) concept of Pedagogy Content Knowledge (PCK), which has been further stretched by adding another domain that is technology; to make an acronym, "A" was added to call it TPACK. It gives enhanced understanding to the teachers to provide better learning environment. The TPACK core consists of dynamic relationships between content, pedagogy, and technology for teachers to develop (Koehler, Mishra, & Yahya, 2007; Mishra & Koehler, 2006). Koehler and Mishra (2009) state that technology, pedagogy, and content are interwoven and form an ideal learning environment. Many teachers assume that using technology only could suffice, disregarding content and pedagogy. Researchers (such as; Archambault & Barnett, 2010; Benson & Ward, 2013; Jang & Tsai, 2012; Lin, Tsai, Chai, & Lee, 2013; Matherson, Wilson & Wright 2014) also supplement this idea that technological skills alone cannot guarantee the effective integration of technology into the classroom. Some researchers (Mishra & Koehler, 2006) assert that knowledge of technology, content, and pedagogy are pivotal to integrate technology. Several studies investigated in-service practitioners' TPACK, Doering, Veletsianos, Scharber, and Miller (2009) and Jang (2010) found that it was a challenge for in-service teachers to develop and employ appropriate teaching content and pedagogical approaches, while TCK and TPK were not sufficiently developed for real classroom instructions. This suggests that technology should be supported by content and pedagogy for effective learning and teaching process.

1.3.1. TPACK-in-Action model

The TPACK-in-Action model proposes that a workshop entails: (a) Modeling; (b) Analyzing; (c) Demonstrating; (d) Application; and (e) Reflection to achieve the goal of helping English teachers' competency required to inculcate CALL into their classrooms.

Tai's (2013) TPACK-in-Action Model (as cited in Sarhandi et al., 2016) was used in this study to investigate the impact of TPACK-in Action CALL workshops offered by the PDU on the female EFL instructors teaching English at a Saudi Arabian university, and investigates to what extent the series of workshops has helped the teachers to implement technology in their classrooms.

2. Methodology

This study adopted Sarhandi et al. (2016) methodology to investigate the impact of TPACK in-house professional development workshops on teachers' practices of technology integration. The study adopted convergence model of mixed-methods design (Creswell & Clark, 2011). Quantitative data were collected through survey questionnaires before and after the given workshops, triangulated by the qualitative data developed from semi-structured interviews and document analyses at pre-workshops and post-workshops training stages.

2.1. Settings and Participants

Due to the gender segregation policy in Saudi Arabian education system, the study tried to extend on Sarhandi et al. (2016) by selecting female participants for this study. Thus, this study was conducted at the female campus of an English Language Institute (ELI) at a public university in Saudi Arabia. The participants of this study were thirty female EFL instructors teaching English in a Preparatory Year Programme (PYP). The participants attended in-house professional development program consisting of four workshops on the technology integration spread over a whole academic year (2015–2016). Eleven participants were aged 43 or more and 4 were between 37 and 42, whereas the rest were under 37 years of age. Eighteen out of 30 participants had a master’s level qualification in English Language Teaching (ELT)/ Teaching English to the Speakers of Other Languages (TESOL), five participants had 3 years’ Bachelor’s degree, and five participants had a doctorate-level qualification in linguistics. Their qualifications suggest that they had sufficient content knowledge and linguistic competence, but it does not mean that they have teaching expertise also as these degrees do not necessarily improve pedagogical skills.

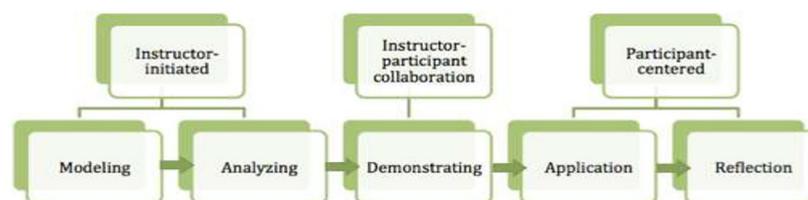
2.2. In-house CALL professional development workshops at the English Language Institute (ELI)

A series of workshops on technology was organized by the Professional Development Unit (PDU) over the period of one academic year (2015–2016). The program was shaped on the expectations that the trainees would use the learned knowledge of technology integration in their classrooms and they would share their experiences for further improvement of such training courses. The whole program was executed in one hour training workshops in four sessions: *Blended Learning Made Easy, Blogging, Lessonpaths, and MLearning*. Apart from providing the foundation to properly understand the integration of all components of TPACK (technology, pedagogy, and content knowledge), every in-house CALL PD workshop focused on the TPACK-in-Action model (Tai, 2013) and followed the five proposed steps while training; (1) Modeling; (2) Analyzing; (3) Demonstrating; (4) Application; and (5) Reflection (Figure 1).

2.3. Data collection procedures

Data were collected over a period of one academic year. The participants attended a series of workshops spread over that period. After attending each workshop, participants were asked their feedback on that particular training by completing a post-workshop training survey. In the beginning of this study, the participants were given a survey at the to investigate their perceived knowledge about the pedagogical content knowledge (PCK), technological pedagogical knowledge (TPK), technological content knowledge (TCK), and technology pedagogy and content knowledge (TPACK) combined. The survey was a five-point Likert-type scale on TPACK (adapted from Schmidt et al., 2009). The survey questionnaire was divided into four parts with 12 questions; PCK, TPK, TCK, and TPACK. The adapted version of the survey was carefully reviewed to ensure the context specifications. The survey was piloted by five EFL teachers at the ELI to confirm its validity and internal reliability. The questionnaire was sent to the participants on Google Forms (www.google.com/forms). After the survey, individual face-to-face semi-structured interviews were conducted with five randomly selected participants who responded to the survey questionnaire and used one or all of the skills taught in the training in their classrooms. These teachers were selected to find out whether they integrated technology or not in their respective classes. With the written consent of the participants, all the

Figure 1. TPACK-in-Action Model (taken from Tai, 2013).



interviews were recorded and transcribed for data analyses. The transcribed data were sent to the relevant participants via emails to confirm and validate the data and edit if anything was missing.

2.4. Data analysis

The findings of the collected data are presented in this section. The section is divided into three Subsections; (2.4.1) pre-workshop survey, (2.4.2) post-workshop feedback, and (2.4.3) semi-structured interviews after the training workshops

2.4.1. Pre-workshop training survey on TPACK

Responding to the question in pre-workshop survey whether the participants could learn technology easily, 25 out of 30 (83%) participants agreed to the statement, while only 5 out 30 remained neutral (Figure 2). It is vivid that a considerable number of respondents perceived themselves updated with the cutting-edge technological advances.

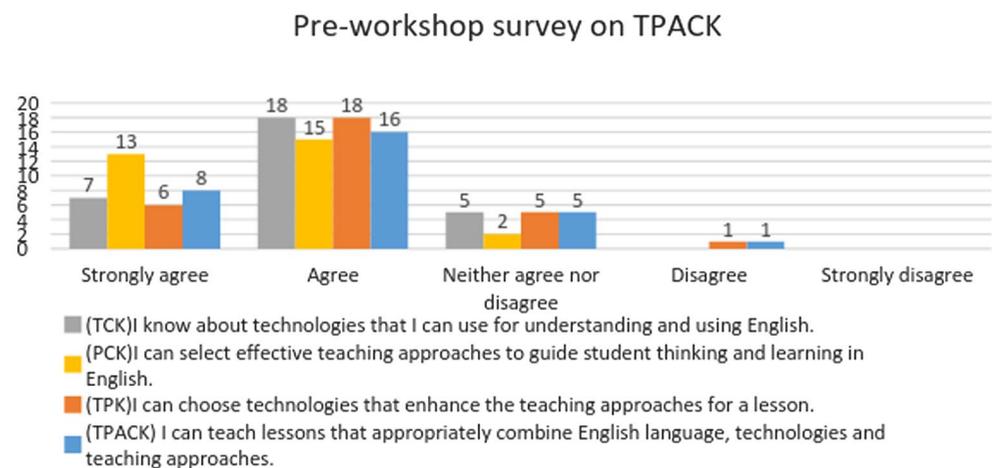
In response to the question regarding their knowledge about teaching skills, 28 out of 30 (93%) respondents affirmed that they were pedagogically sound and conversant with the various teaching approaches, methods, and techniques. Only two respondents could not decide about their pedagogical competence. This pedagogical confidence in majority of the respondents was due to their qualification and experience in the related field. It can be concluded that most respondents were capable of analyzing learners' needs, and their learning styles in numerous ways. Apart from their pedagogical skills, most of them seemed to be familiar with the technology integration techniques in their teaching, as 24 out of 30 stated that they could choose the technologies for their lesson contents to improve the teaching approaches and accomplish the lesson objectives. And, five respondents were neutral, and only one respondent stated that she could not choose technologies that enhanced the teaching approaches for her lesson due to unawareness of technology tools and its use.

Regarding the knowledge of TPACK, 24 out of 30 respondents were positive about using techniques that combine content, technologies and pedagogy in their classrooms. Only one respondent negated the idea and four remained neutral. It was assumed that the perceived knowledge of TPACK framework seemed to have greatly impacted on their perceptions about the integration of technology in their teaching practices and approaches.

2.4.2. Post-workshops training feedback

Considering the impact of in-house CALL professional development workshops, almost all the respondents believed the effectiveness or usefulness of these trainings in their teaching at the ELI after attending the workshops. The findings of the post-workshop feedback revealed that the participants had high expectation of the impact of these trainings in their workplace (Figure 3).

Figure 2. Responses on TPACK survey.



The findings of the post-workshops feedback reflect the feedback of all the participating (20) teachers on each of the workshop. In the feedback on “Blended Learning” workshop, 18 participants found it useful in their workplace while two decided to be neutral. In response to the question regarding training objectives, 17 participants were positive and 3 participants strongly disagreed.

About the workshop on “Blogging”, the same questions were asked in the feedback survey. Answering question one, 19 out of 20 participants agreed that the skills gained in workshop training would be useful and assist them in teaching. Eighteen participants stated that the workshop covered the objectives, and they also confirmed the relevance of covered topics in their teaching practices. Only two participants chose to remain neutral on the questions.

The third workshop “Lessonpaths” also got almost the similar kind of feedback on all three questions, 17 out of 20 participants found this workshop useful in their work. They also stated that the objectives of the training were met. Almost all the participants confirmed that covered topics were relevant to them.

Regarding the workshop on “Mlearning”, 13 participants strongly agreed that the training would be useful and 6 participants supported this view by agreeing only. Replying to the second question about the training objectives, all the participants stated that they were met. Question 3 got the similar feedback where 19 participants were positive about the topics in the workshop were relevant to their teaching situation and quite useful too.

Overall, the results show that majority of the participants were positive about the received trainings at the ELI. They considered these workshops useful, effective, and relevant in their workplace. Figures 3–5 show that the workshop training called Lessonpath was highly regarded among all the four workshops in relevance and usefulness, and Mlearning workshop was considered less useful and relevant.

2.4.3. Thematic analysis of semi-structured interviews

Semi-structure interviews were conducted to gain a deeper insight regarding the effectiveness of these in-house CALL professional development workshop trainings on teachers’ pedagogical skills at the ELI. The findings of the interview data (Figure 6) show that out of five participants, four utilized one or all more than one of the given trainings in their classes. The frequency of integrating these technologies scale was filtered as once a week, more than once a week, once or twice a module and never. As the Figure 6 illustrates that only two teachers used these learned skills more than once a week and the same number of participants stated that they utilized these skills once or twice a module in their classes, while one respondent never used any of the taught skills. When the interviewees were asked about the barriers of integrating the learned skills in their classes, five interesting themes emerged. Two participants stated that the training did not meet their current requirement, while one participant found scheduled pacing guide a hurdle as she had to cover her pacing guide on time, and failing to cover that could cause her much stress and worry, and integrating technology was an extra work to focus on which could stop her to cover required teaching material on time.

Figure 3. Teachers’ responses on the usefulness of the workshops.

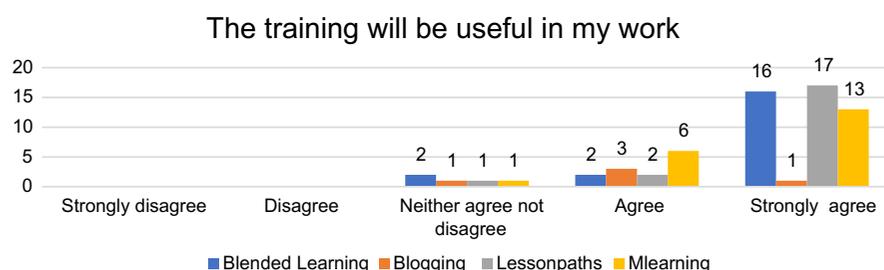


Figure 4. Teachers' responses on the objectives of the training.

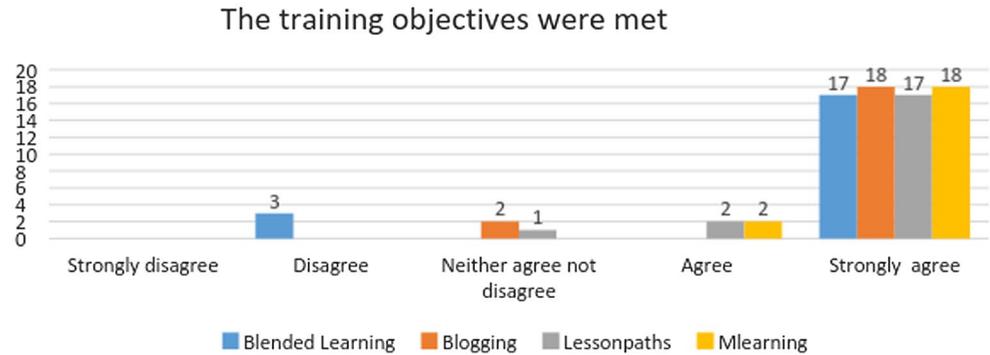


Figure 5. Teachers' responses on the relevance of covered topics.

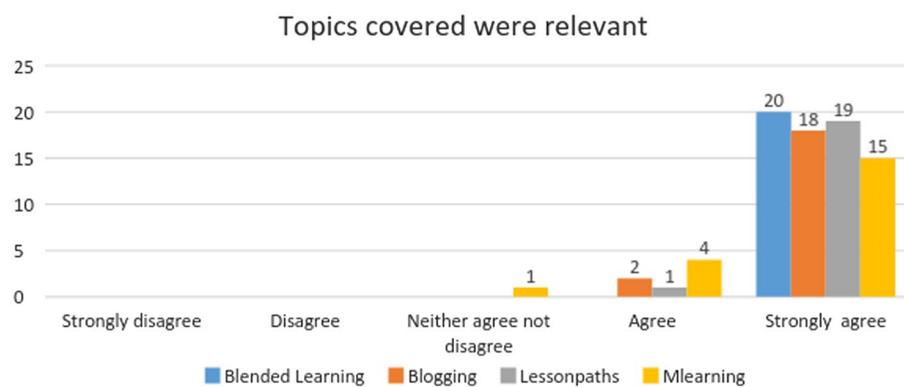


Figure 6. Thematic analysis of semi-structured interviews.

	Blogging	Lessonpaths	Blended Learning	M-Learning	
Which applications have you used and how frequently?	1	1	1	1	
	<i>Once a week</i>	<i>More than once a week</i>	<i>Once or twice a module</i>	<i>Never</i>	
		2	2	1	
Why have the applications not been used?	<i>Do not meet required needs</i>	<i>Pacing guide</i>	<i>Technical problems</i>	<i>Students' comfort</i>	<i>No Administration support</i>
	2	1	1	2	1
Level of satisfaction	<i>Extremely satisfied</i>	<i>Satisfied</i>	<i>Somewhat satisfied</i>	<i>Not satisfied at all</i>	
	1	1	3		
Reasons of satisfaction/dissatisfaction level	Satisfaction		Dissatisfaction		
	<i>New ideas about technology integration</i>	<i>Engaging and motivating</i>	<i>Not enough focused training</i>	<i>Not enough time due to pacing guide</i>	<i>Context of ELI</i>
	2	1	2	2	2

One participant reported that there were some technical problems such as the availability of the internet and overhead projector hindered her to integrate technology in her classes, and she also mentioned that she did not get any administrative support in this regard. Two of the participants

also assumed that their students were not comfortable using any extra technology apart from the software (Presentation Plus) they used to display the interactive book over the projector. However, most of the participants acknowledged the use of technology in the classroom such as PowerPoint presentations, Socrative and Kahoot which are online learning software supporting instant feedback and gamification, but keeping up with the scheduled pacing guide was considered a problem.

Findings also reveal that two out of five participants were extremely satisfied, while the rest stated that they were somewhat satisfied. None of the participants showed their dissatisfaction with the given training workshops. When asked about the reasons of satisfaction, the participants replied that the trainings provided them with the new idea about technology integration and the training workshops were engaging and motivating. The participants also showed their concern regarding these trainings by stating that some of the trainings were not focused and did not fit in the ELI context, also it was very difficult for them to merge those newly taught skills in their prescribed pacing guide.

3. Discussion and recommendations

The aim of this study was to explore if the in-house CALL professional development workshops were effective and whether they had any kind of impact on female teachers' current pedagogy regarding the implementation of technology in teaching. The above data analyses construct the view that at the pre-workshop phase, majority of the teachers declared to be convinced about their knowledge being updated on technological advances, pedagogical skills in assessing learners' needs and recognizing various learning techniques inclusive of technological learning resources. Similarly, the post-workshop feedback also reflected that most of the participants found every workshop useful and relevant to their teaching situation. On the contrary, when the same respondents were interviewed at the end of the academic year, surprisingly they did not establish a great level of technology integration in their classes. It was anticipated that after attending these workshops the participants could try to utilize the newly acquired skills or techniques in their classes, which was proven vice versa. This confirms Kessler's (2007) statement that teachers usually are inclined to rely upon the skills and knowledge related to technology that they had gained for personal use. Regardless of being confident and capable with technologies, they are less expected to apply newly learned skills.

As shown in Figure 6, out of five only four teachers utilized the given trainings at various occasions, while one teacher never used any of these skills. However, these four teachers do not represent the entire group who attended the training. Even if it is assumed that 90% of the training recipients applied one of these workshop skills in their classrooms, the frequency of integration of these new technological skills cannot be in true sense considered technology integration in daily teaching practice. This seems like using technology for the sake of using technology only, but it does not have any impact on pedagogy. Only the reflections of the teachers on the integration of technology does not validate that they incorporated technology in their classrooms effectively. Remarkably, none of the interviewees had any concrete evidence of how far the use of these newly acquired skills was successful and whether they should continue using them or not. According to Kessler (2007), this issue probably occurs due to teachers' inability to recognize when to integrate technology and when to depend methodologies that do not require digital technologies.

A decade ago, Hegelheimer (2006) also identified the same problem that teachers do not incorporate technology in their classes as it is time consuming and they have very limited time due to a tight pacing guide to cover. Since incorporating technology in the regular syllabus is considered as an extra task, most of the teachers avoid taking a chance. Moreover, it is also perceived by most of the teachers that taking a risk of including technology might affect students' results as technology has not yet got the status of a pedagogical tool in the context under discussion. Apart from this issue, some of the respondents mentioned that they could not utilize these skills in their classrooms as those skills did not meet the required needs of their classrooms. Although in the post-workshop survey, majority of the teachers predicted that the trainings would help them in their classrooms, but in the interviews, they showed least level of satisfaction. Contrary to their post-workshops

training feedback, interviewees viewed these workshops irrelevant in the context of the ELI at the end of the academic year.

Mentioning their overall satisfaction level with the workshops, many teachers informed in the interviews that these workshops were motivating, engaging, and they also offered new ideas to integrate their current syllabus with technology to make teaching more effective. However, majority of the respondents did not reach to the level of satisfaction relatively due to the timed pacing guide and partly due to unfocused trainings offered on the integration of technology. This conveys a serious message on the contents of the workshops, which were perceived helpful in the immediate post-workshop feedback but ultimately emerged as less beneficial in terms of focused training on technology integration. This response from the participants suggests that the trainings should not only focus on the operational aspects of technology, but also on pedagogical sides contemplating the teaching and learning contexts, considering syllabus, pacing guide, and the assessment of learning conducted through technological means. It is worth mentioning that in the pre-workshop survey, almost all the teachers maintained to have sound knowledge of pedagogy and technological developments in the field of education, however it is apparent that it was a frivolous and too general self-assessment. By the end of the academic year, most of the teachers realized that incorporating technology does not mean simply knowing how a specific technology works, rather how it involves the knowledge of adapting and contextualizing skillfully the current course material to suit the needs of their learners. Despite the training workshops clearly followed the TPACK-in-Action model (Figure 1), they were not successful to tackle the context specific factors due to which the participants were momentarily amazed with excitement to explore something novel and advantageous for their students, but finally were disillusioned when they tried to use the skills in their classroom settings.

The results of this study are similar to the study conducted by Sarhandi et.al (2016) on Men campus at the ELI in the same locale. The results of both studies share the same problems of not integrating technology effectively even after getting enough CALL in-house professional trainings. Irrelevant trainings, uninformed technology integration policy, and squeezed prescribed pacing guide were highlighted as some hurdles in incorporating technology skills taught in the given trainings.

The findings offer the following recommendations to the administration to incorporate technology effectively:

- professional development unit should structure the workshops focusing on the needs of the teachers considering pedagogical aspects in the ELI context
- a follow-up plan should be devised to assess the impact of trainings on teachers' pedagogy with a proper assessment system
- management should develop a clear policy of when, what, and how to integrate technology in the current syllabus
- curriculum unit should include technology-based activities in the pacing guide with clear instructions so that teachers do not find technology integration as an extra task.

4. Conclusion

This paper looks at the practice of implementing in-house CALL professional development workshops based on TPACK-in-Action model in a women campus at a Saudi university. The study also aimed to explore if these workshops have any impact on teachers' teaching practices. The data show that though initially participants showed the worth and importance of these workshops and were confident about their knowledge of TPACK, but later they found these trainings irrelevant and decontextualized. Due to lack of focused training and administrative limitations, they were unable to incorporate technology effectively in their teaching. The study also highlights that perceiving the use of a specific application or technology does not necessarily mean technology integration, effective use of technology involves the amalgamation of technological, pedagogical, and content knowledge for a contextualized purpose.

Funding

The author received no direct funding for this research.

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Citation information

Cite this article as: Impact of CALL in-house professional development training on teachers' pedagogy: An evaluative study, Amjjad Osama Sulaimani, Pir Suhail Ahmed Sarhandi & Majid Hussain Buledi, *Cogent Education* (2017), 4: 1355646.

References

- Ahmed, P. S. (2012). The way we teach, the way they learn. *Procedia - Social and Behavioral Sciences*, 47, 1554–1557. doi:10.1016/j.sbspro.2012.06.860
- Alqarni, A. A. (2015). Educational technology in Saudi Arabia: A historical overview. *International Journal of Education, Learning and Development*, 3, 62–69.
- Alshahrani, K., & Al-Shehri, S. (2012). Conceptions and responses to e-learning: The case of EFL teachers and students in a Saudi Arabian university. *Monash University Linguistics Papers*, 8, 21.
- Archambault, L., & Barnett, J. H. (2010). Revisiting technological pedagogical content knowledge: Exploring the TPACK framework. *Computers and Education*, 55, 1656–1662. doi:10.1016/j.compedu.2010.07.009
- Atkins, E., & Vasu, S. (2000). Measuring knowledge of technology usage and stages of concern about computing: A study of middle school teachers. *Journal of Technology and Teacher Education*, 8, 279–302.
- Avalos, B. (2011). Teacher professional development in teaching and teacher education over ten years. *Teaching and Teacher Education*, 27, 10–20. <https://doi.org/10.1016/j.tate.2010.08.007>
- Benson, S. N. K., & Ward, C. L. (2013). Teaching with technology: Using TPACK to understand teaching expertise in online higher education. *Journal of Educational Computing Research*, 48, 153–172. <https://doi.org/10.2190/EC.48.2.c>
- Cowan, J. E. (2008). Strategies for planning technology-enhanced learning experiences. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, 82, 55–59. doi:10.3200/TCHS.82.2.55-59
- Creswell, W., & Clark, P. (2011). *Designing and conducting mixed methods research*. London: SAGE.
- Culp, K. M., Honey, M., & Mandinach, E. (2005). A retrospective on twenty years of education technology policy. *Journal of Educational Computing Research*, 32, 279–307. doi:10.2190/7W71-QVT2-PAP2-UDX7
- Doering, A., Veletsianos, G., Scharber, C., & Miller, C. (2009). Using the technological, pedagogical, and content knowledge framework to design online learning environments and professional development. *Journal of Educational Computing Research*, 41, 319–346. doi:10.2190/EC.41.3.d
- Egbert, J., Paulus, T. M., & Nakamichi, Y. (2002). The impact of CALL instruction on classroom computer use: A foundation for rethinking technology in teacher education. *Language Learning & Technology*, 6, 108–126.
- Galvis, H. A. (2012). Understanding beliefs, teachers' beliefs and their impact on the use of computer technology. *Profile*, 14, 95–112.
- Gilakjani, A. P. (2013). Factors contributing to teachers' use of computer technology in the classroom. *Universal Journal of Educational Research*, 1, 262–267.
- Guichon, N., & Hauck, M. (2011). Editorial: Teacher education research in CALL and CMC: More in demand than ever. *ReCALL*, 23, 187–199. <https://doi.org/10.1017/S0958344011000139>
- Haydn, T., & Barton, R. (2008). "First do no harm": Factors influencing teachers' ability and willingness to use ICT in their subject teaching. *Computers & Education*, 51, 439–447. doi:10.1016/j.compedu.2007.06.001
- Hegelheimer, V. (2006). *When the technology course is required*. In P. Hubbard & M. Levy (Eds.), *Teacher education in CALL* (pp. 116–133). Philadelphia, PA: John Benjamins.
- Hong, K. H. (2010). CALL teacher education as an impetus for L2 teachers in integrating technology. *ReCALL*, 22, 53–69. doi:10.1017/S095834400999019X
- Hubbard, P. (2008). CALL and the future of language teacher education. *CALICO Journal*, 25, 175–188.
- Hubbard, P., & Levy, M. (2006). The scope of CALL education. In P. Hubbard, & M. Levy (Eds.), *Teacher education in CALL* (pp. 3–20). Amsterdam: John Benjamins. <https://doi.org/10.1075/llt>
- Jang, S.-J. (2010). Integrating the interactive whiteboard and peer coaching to develop the TPACK of secondary science teachers. *Computers & Education*, 55, 1744–1751. doi:10.1016/j.compedu.2010.07.020
- Jang, S.-J., & Tsai, M.-F. (2012). Exploring the TPACK of Taiwanese elementary mathematics and science teachers with respect to use of interactive whiteboards. *Computers & Education*, 59, 327–338. doi:10.1016/j.compedu.2012.02.003
- Jung, I. S. (2001). Singapore's approach to preparing new teachers to use technology in the classroom. In J. Capper (Ed.), *Case studies of innovations in teacher training and technology*. Washington, DC. Retrieved from <http://www.the3tconnection.org/SingaporePrintingVersion.pdf>
- Kessler, G. (2007). Formal and informal CALL preparation and teacher attitude toward technology. *Computer Assisted Language Learning*, 20, 173–188. <https://doi.org/10.1080/09588220701331394>
- Kılıçkaya, F. (2009). The effect of a computer-assisted language learning course on pre-service English teachers' practice teaching. *Educational Studies*, 35, 437–448. <https://doi.org/10.1080/03055690902876545>
- Kleinsasser, R. (2013). Language teachers: Research and studies in language(s) education, teaching, and learning in teaching and teacher education, 1985–2012. *Teaching and Teacher Education*, 29, 86–96. doi:10.1016/j.tate.2012.08.011
- Koehler, J., Mishra, P., & Yahya, K. (2007). Tracing the development of teacher knowledge in a design seminar: Integrating content, pedagogy and technology. *Computers & Education*, 49, 740–762. <https://doi.org/10.1016/j.compedu.2005.11.012>
- Kozma, B. (2003). Technology and classroom practices: An international study. *Journal of Research on Technology in Education (International Society for Technology in Education)*, 36(1), 1–14.
- Lam, Y. (2000). Technophilia vs. technophobia: A preliminary look at why second-language teachers do or do not use technology in their classrooms. *Canadian Modern Language Review*, 56, 390–420.
- Lee, S. & Son, J.-M. (2006). The use of ICT in Korean middle school English classrooms: Practices and challenges. *English Language Teaching*, 18, 49–73.

- Levy, M., & Stockwell, G. (2006). *Call dimensions: Options and issues in computer assisted language learning* (1st ed.). Mahwah, NJ: Routledge.
- Lin, T.-C., Tsai, C.-C., Chai, C. S., & Lee, M.-H. (2013). Identifying science teachers' perceptions of technological pedagogical and content knowledge (TPACK). *Journal of Science Education and Technology*, 22, 325–336. doi:10.1007/s10956-012-9396-6
- Liu, M.-H., & Kleinsasser, R. C. (2015). Exploring EFL teachers' CALL knowledge and competencies: In-service program perspectives. *Language Learning & Technology*, 19, 119–138.
- Liu, Y., Theodore, P., & Lavelle, E. (2004). Experimental effects of online instruction on teachers' concerns about technology integration. *International Journal of Instructional Technology and Distance Learning*, 1. Retrieved from https://www.itdl.org/journal/Jan_04/article03.htm
- Matherson, L. H., Wilson, E. K., & Wright, V. H. (2014). Need TPACK? Embrace sustained professional development. *The Delta Kappa Gamma Bulletin*, 81, 45–52.
- Milbrath, Y. C. L., & Kinzie, B. (2000). Computer technology training for prospective teachers: Computer attitudes and perceived self-efficacy. *Journal of Technology and Teacher Education*, 8, 373–396.
- Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record*, 108, 1017–1054. doi:10.1111/j.1467-9620.2006.00684.x
- Mishra, P., & Koehler, M. J. (2009). Too cool for school? No way! Using the TPACK framework: You can have your hot tools and teach with them, too. *Learning & Leading with Technology*, 36, 14–18.
- Oh, E., & French, R. (2007). Preservice teachers' perceptions of an introductory instructional technology course. *CALICO Journal*, 24, 253–267.
- Park, C. N., & Son, J.-B. (2009). Implementing computer-assisted language learning in the EFL classroom: Teachers' perceptions and perspectives. *International Journal of Pedagogies and Learning*, 5, 80–101. doi:10.5172/ijpl.5.2.80
- Prensky, M. (2008). The role of technology in teaching and the classroom. *Educational Technology*. Retrieved from https://www.marcprensky.com/writing/Prensky-The_Role_of_Technology-ET-11-12-08.pdf
- Reinders, H. (2009). Technology and second language teacher education. In A. Burns, & J. C. Richards (Eds.), *The Cambridge guide to second language teacher education* (Vols. 1–vii, 1–325, pp. 230–237). New York, NY: Cambridge UP.
- Sang, G., Valcke, M., Braak, J., & Tondeur, J. (2010). Student teachers' thinking processes and ICT integration: Predictors of prospective teaching behaviors with educational technology. *Computers & Education*, 54, 103–112. doi:10.1016/j.compedu.2009.07.010
- Sarhandi, P. S., Khan, I. F., Buledi, M. H., & Asghar, J. (2016). Integration of technology with pedagogical perspectives: An evaluative study of in-house CALL professional development. *Arab World English Journal (AWEJ), Special Issue on CALL(3)*, 23–35.
- Schmidt, D. A., Baran, E., Thompson, A. D., Mishra, P., Koehler, M. J., & Shin, T. S. (2009). Technological pedagogical content knowledge (Track): The development and validation of an assessment instrument for preservice teachers. *Journal of Research on Technology in Education*, 42, 123–149.
- Stockwell, D. G. (Ed.). (2012). *Computer-assisted language learning: Diversity in research and practice* (1st ed.). Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9781139060981>
- Shulman, L. S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher*, 15, 4–14.
- Shulman, L. S. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review*, 57, 1–22.
- Son, J.-B. (2002). Computers, learners and teachers: Teamwork in the CALL classroom. *English Language Teaching*, 14, 239–252.
- Suh, S. (2004). Technology training and English language teacher education in Korea. *Proceedings of CLASIC 2004, Singapore*, 1040–1048.
- Tai, J. (2013). *From TPACK-in-Action workshops to English classrooms: CALL competencies developed and adopted into classroom teaching* (Ph.D.). Iowa State University, Ames, IA. Retrieved from <https://o-search.proquest.com.wagtail.ufs.ac.za/docview/1450065611/abstract/BE6487C EFE534D39PQ/1?accountid=17207>
- Tai, J. (2015). From TPACK-in-Action workshops to classrooms: CALL competency developed and integrated. *Language Learning & Technology*, 19, 139–164.
- Thang, M., & Gobel, P. (2012). Selected Glocall 2010 conference papers: Specific applications of technology in second/foreign language educational settings [Special issue]. *Computer Assisted Language Learning*, 25, 277–293.



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