

A NARRATIVE INQUIRY INTO IRANIAN EFL TEACHER EDUCATORS' VOICE ABOUT CHALLENGES OF CALL TEACHER EDUCATION

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Abstract

The rapid integration of technology in EFL learning and teaching requires competent EFL teachers to use Computer-Assisted Language Learning (CALL) in their classes. Hence, the role of CALL teacher education in preparing competent EFL teachers is significant. However, conducting CALL teacher education is not without challenges. Given the importance of examining these challenges, the purpose of the current study was to investigate Iranian EFL teacher educators' voice about the challenges of conducting CALL teacher education programs. To that end, eight Iranian EFL teacher educators' biographical narratives were analyzed to obtain challenges concerning CALL teacher education. The thematic analysis of the narratives, based on the principles of ethnography semantics, indicated that challenges such as inertia, ignorance of training CALL educators, insufficient time to address CALL compared to other topics, insufficient infrastructure, insufficient standards, and lack of established methodology to administrate CALL teacher education were among the main obstacles of conducting CALL teacher education in the Iranian context. Moreover, the findings revealed that lack of EFL teachers' motivation to participate in such programs, insufficient CALL infrastructure in schools and institutes, and EFL teachers' inertia were other challenges in CALL teacher education. The findings suggest that the stability of CALL can be reached by removing the challenges of CALL teacher education if policy-makers address issues such as the required budgets, CALL infrastructures, and teacher motivation in CALL teacher education.

Keywords: CALL teacher education; EFL teacher educators; biographical narratives

1. Introduction

Computer-Assisted Language Learning (CALL) has recently turned into a significant vehicle for language teachers to facilitate the process of language learning and teaching. This is because of the fundamental relationship between technology and language teaching and learning. The relationship provides a venue for the integration of technology into language pedagogy (Stockwell, 2007). However, it should be noted that this relationship is not a linear one (Torsani,

2016) since many influential factors are involved in such a relationship. L2 teachers who are competent and able to integrate technology into language pedagogy play a critical role in L2 teaching. Hence, the role of CALL teacher education in preparing L2 teachers to use and integrate CALL in their L2 classes is crucial. It is due to this reason that CALL teacher education can be regarded as a venue in which the *symbiosis* between linguistics and technology can be transmitted to L2 teachers (Torsani, 2016).

CALL teacher education is one of the primary subfields of CALL, originating from the fact that teachers have a “pivotal” role in CALL (Hubbard, 2008). CALL teacher education aims to enhance the quality of L2 teaching by developing the competencies of L2 teachers to integrate technology and language pedagogy (Guichon & Hauck, 2011; Kessler, 2006). According to Torsani (2016), CALL teacher education has three main characteristics: effectiveness, integration, and volatile nature. CALL teacher education should train L2 teachers effectively to make them competent to teach learners with different levels of digital literacy: from high digitally literate learners to low digitally literate ones. Integration is another characteristic of CALL teacher education, which has different types in different settings; if implemented appropriately, L2 teachers can obtain technical and pedagogical knowledge from the CALL teacher education programs (Egbert, 2006). Finally, CALL teacher education needs to have a volatile nature to help L2 teachers develop and update their ability and competence to keep up with the rapid changes in technology (Hanson-Smith, 2006).

CALL teacher education can have different benefits for L2 language teachers. As Masood (2010) noted, the skills and the technical knowledge achieved during CALL teacher education programs can create L2 teachers’ real teaching profession in the future. As a result, L2 teachers will feel more comfortable with integrating technology into their L2 classrooms. Moreover, L2 teachers who participate in CALL teacher education programs have a higher level of self-efficacy to use CALL materials in their classes compared to those who do not (Chai & Lim, 2011; Kitade, 2015). Furthermore, CALL teacher education programs can develop a positive attitude in L2 teachers to implement CALL materials in their classrooms (Jeong, 2017). As a whole, CALL teacher education can help L2 teachers become “digital natives” (Prensky, 2001) in that they can understand and use digital technology (Dudeny & Hockly, 2016). As Jeong (2017) points out, L2 teachers who become digital natives will develop new learning styles, strategies, and cognitive learning experiences.

Although CALL teacher education has different benefits for L2 teachers, it has not been paid due attention to (Hubbard, 2008) since its implementation and administration are not without challenges. Understanding why CALL teacher education is not addressed in different countries

can help L2 practitioners provoke appropriate reactions about these challenges. In Iran, like many other countries, CALL teacher education is not administrated adequately and appropriately to prepare English as a foreign language (EFL) teachers' CALL profession (Marandi, 2019). Although different reasons have been mentioned for not giving priority to CALL teacher education in preparing CALL-oriented EFL teachers in Iran, studies examining the challenges of CALL teacher education in the Iranian context have been lacking (Hedayati & Marandi, 2014). Given that, investigating the challenges to administrating CALL teacher education can help EFL teachers integrate CALL into their classes with confidence and knowledge (Hong, 2010) and become skilled CALL practitioners (Stockwell, 2009). This would have a facilitative role in EFL teacher educators' decision-making when they want to prepare EFL teachers for a particular situation, such as the COVID-19 pandemic, in which most instruction needs to be delivered through technology. However, if the challenges are not investigated, EFL practitioners cannot prepare an effective CALL teacher education program. Although some studies (e.g., Dehqan et al., 2017; Fathi & Ebadi, 2020; Hedayati & Marandi, 2014) were done to explore the challenges of implementing CALL from the perspectives of Iranian EFL teachers, comparable studies on Iranian EFL teacher educators' perspectives concerning the challenges of CALL teacher education are lacking. Hence, the purpose of the current study, which had an exploratory nature, was to investigate the Iranian EFL teacher educators' voice about the challenges of administrating CALL teacher education in Iran.

2. Literature review

Since the nature of the current study was an exploratory one in that it was an attempt to explore the challenges of CALL teacher education programs in Iran, the researcher needed to scrutinize the theoretical concepts of CALL teacher education. Hence, the researcher divided the literature review into four sections. First, a brief history of CALL teacher education was evoked. Then, the related theories of CALL were addressed. Third, the approaches to CALL teacher education were reviewed. Finally, the already mentioned challenges of CALL teacher education by Hubbard (2008) have been reviewed to provide tentative a priori codes for the thematic analysis. Overall, such a literature review would help the readers obtain a comprehensive picture of CALL teacher education theory and practice, aiding them to conduct a more reliable analysis of EFL teacher educators' challenges to address CALL teacher education.

2.1. A brief history of CALL teacher education

There were not many educational programs related to CALL in which L2 teachers were involved before the 1980s (Kessler & Hubbard, 2017). Gradually, interest in integrating CALL into teacher education programs, such as the programs administrated by Micro Users in the ESL Institution in England, arose in 1983 (Davies, Otto, & Rüschoff, 2012). Micro Users in the ESL Institution tried to use microcomputers to help EFL learners. From 1985 onward, integrating CALL into teacher education programs created interactive CALL-based instructions. This point's logic can be related to the emergence of interactive and communicative L2 teaching approaches from 1980 (Ellis, 2020). This led to the emergence of computational linguistics, which applied computers in research into linguistics and teaching (Kessler & Hubbard, 2017). The rapidly increasing rate of CALL in teacher education programs could be due to the seminal CALL workshops of 1982, pioneered by Tim Johns (Delcloque, 2000). During the 1980s, the Computer Assisted Language Instruction Consortium foundation became the motive for the *CALICO Journal's* launch. In the 1990s, universities tried to use CALL in their courses.

There was very little research about conducting CALL teacher education programs during the 1980s and the 1990s. Some examples can be the guidelines provided by Curtin and Shinall (1985) or the descriptions of CALL-based courses by Koet (1999). However, the description of the methodology of CALL teacher education had been paid more attention since 2000. Various special issues on CALL teacher education were launched in different CALL-related journals, including *CALL*, *Language Teaching and Technology*, and *ReCALL*. Moreover, researchers conducted more investigations on various aspects of CALL teacher education. Some of them showed CALL teacher education effectively develops EFL teachers' ability to integrate CALL in teaching EFL learners (e.g., Egbert et al., 2002). During the 2010s, other researchers such as Lomicka and Cooke-Plagwitz (2004) and Hubbard (2008) focused on different approaches to teach through technology. Since the 2010s, more special issues of the CALL-related journals have been devoted to CALL teacher education. These special issues focused on different aspects of CALL teacher education, such as theories of CALL, pre-service, in-service teacher education, alternatives to CALL education, CALL teacher education approaches and processes, etc. (Kessler & Hubbard, 2017).

2.2. The theories in CALL teacher education

Theories have a significant role in CALL research, teaching, and design (Stockwell, 2014). CALL theories help the practitioners to design research, practice it, and discuss its results. As its acronym suggests, CALL has two main parts, including technology and language learning.

Consequently, theories of CALL gain credibility from the theories of technology and language learning. Given that theories of CALL teacher education are represented in processes such as lecture/demonstration, project-based learning, situated learning, reflective learning, portfolio-based learning, mentor-based, communities of practice, and self-directed learning (Hubbard, 2008), these processes use the theories of language learning through the application of technology.

Distributed cognition (Hutchins, 1995) is among the most critical CALL theories (Stockwell, 2014). The proponents of this theory have argued that learning occurs through the interdependency between individuals' cognitive process and the environment's tools to help them fulfill the process. CALL teacher education benefits from the distributed cognition theory. It helps L2 teachers to execute their L2 instruction 1) by teaching principles and strategies which they have obtained during their pre-services and in-services programs, and 2) by completing the process of L2 teaching through the tools and assisted aids provided by CALL in CALL teacher education programs. Based on this theory, both L2 teachers' cognitive processes and environmental activities are engaged in CALL teacher education.

One more relevant theory is the situated action theory, which means that individuals do the actions whose outcomes they know (Suchman, 2006). By applying this theory to CALL teacher education, the CALL educators need to fulfill L2 teachers' quest about CALL involvement outcomes. By doing so, L2 teachers' awareness about the benefits and potential challenges will develop; hence, they will be more eager to 1) participate in CALL teacher education, and 2) integrate CALL-related materials in their teaching. As a whole, it is not so simple to propose CALL theories because of the lack of literature (Stockwell, 2014) and the unclear effects of CALL on L2 teachers.

2.3. Approaches to CALL teacher education

Different approaches are used to conduct CALL teacher education. Each of the approaches has its methodology to address technology in CALL teacher education. One approach to CALL teacher education, which represents the traditional survey course, is the *breadth first* approach (Hubbard, 2008). This approach provides comprehensive CALL alternatives, as well as language teaching. L2 teachers can explore each of the alternatives in detail (Hubbard & Levy, 2006). On the contrary, the *depth first* approach to CALL teacher education concentrates on a single and specific CALL area to help L2 teachers accrue "much intensive experience" (Hubbard, 2008, p. 181). Accordingly, the latter approach is more appropriate for in-service programs in which

teacher educators want to provide concrete information about a CALL application during a short time.

The *integrated* approach to CALL teacher education is different from the first two approaches outlined in the previous paragraph. Instead, it is addressed during different intervals in teacher education programs when L2 teachers encounter a new teaching situation in which CALL can be conducive (Hegelheimer, 2006). Furthermore, when the L2 teachers cannot physically present in CALL teacher education, they can participate in a program established based on an *online* approach. Through this approach, L2 teachers receive their instructions about CALL via online technology types. L2 teacher educators prepare face-to-face interactions during online instructions in which L2 teachers will discuss their issues. In that case, CALL teacher education will be a *blended* one (Lomicka & Lord, 2004). The blended CALL teacher education can be a venue for collaboration, discussion, and communication about CALL.

2.4. The challenges of CALL teacher education

CALL teacher education is not without its challenges, making it difficult for L2 teacher educators and L2 teachers to design and participate in it, respectively. Hubbard (2008) answers why CALL teacher education has not met with L2 teacher education. The first challenge is to change the assumptions of L2 teacher educators in that they think their current teacher education programs are successful, and there is no need to change. This is called *inertia* (Hubbard, 2008). Inertia can also be a problem for L2 teachers because they think that their current teaching practices are appropriate, and there is no need for use of CALL.

Another challenge in conducting CALL teacher education is lacking qualified CALL educators who are well aware of CALL and its different aspects. This is called *ignorance* (Hubbard, 2008). This challenge can be due to L2 educators' opinions about CALL teacher education in which they believe that they are not responsible for teaching their L2 student-teachers and L2 teachers for CALL.

Insufficient time for adding new materials to teacher education programs is another challenge in conducting CALL teacher education. The field of second language teaching and learning is an active area of research. The findings and results of the research produce new materials that are injected into the teacher education programs. Hence, it is difficult to find new space for CALL in the L2 teacher education programs (Hubbard, 2008). L2 teacher educators also find it time-consuming to keep up with the rapid development rate of CALL.

Hubbard (2008) also mentioned *insufficient infrastructure* as another challenge for conducting CALL teacher education. Appropriate infrastructures can help L2 teacher educators

accept more L2 teachers in their programs. According to Partridge (2006), when the necessary CALL-related materials are not available in a faculty, it is not easy to ask teachers to evaluate and implement CALL. It is so because the lack of the necessary materials in the faculty leads L2 teachers to become demotivated to integrate CALL-related materials in their classrooms (Hedayati & Marandi, 2014).

Insufficient standards, moreover, is another challenge to conduct CALL teacher education. Technology standards are those that specify different aspects of using CALL at different educational levels. Hubbard (2008) believes that technological standards would help avoid challenges such as inertia and ignorance by specifying related certification and recruitment standards.

One more challenge faced while conducting CALL teacher education is the *lack of established methodology* (Hubbard, 2008), referring to methods, techniques, textbooks, etc., which can determine the CALL courses' content and structure.

3. Methodology

This study was a narrative inquiry in which the researcher attempted to address the challenges of CALL teacher education, as a phenomenon, through collecting and analyzing biographical narratives. The researcher adopted Daiute's (2014) practical design in the current study. Thus, the researcher went through the following steps to do this study:

- *Determining if the research problem fits narrative research*: Since the researcher investigated the challenges of conducting CALL teacher education from the perspective of EFL teacher educators, narratives could help us capture the detailed stories concerning their experiences in this regard (Creswell & Poth, 2018).
- *Select individuals who have stories concerning the issue under investigation*: The researcher selected eight EFL teacher educators through purposive sampling. These EFL teacher educators had the experience of conducting CALL teacher education; hence, they could help the researcher obtain the CALL teacher education challenges.
- *Embed information about the context of the stories into data collection and analysis*: When doing a narrative inquiry, the researchers should consider the context in which the participants are involved (Creswell & Poth, 2018). That is because the context-sensitivity is the core of narrative inquiry (Czarniawska, 2004). The researcher took this critical issue by reviewing the context of EFL teacher education in Iran (presented in the following section).

- *Using a framework to analyze the stories:* The researcher used predetermined codes obtained from Hubbard (2008) to analyze the EFL teacher educators' biographical narratives (see Appendix).
- *Embed a collaborative approach in collecting and telling stories:* According to Creswell and Poth (2018, p. 116), "as researchers collect stories, they negotiate relationships, smooth transitions, and provide ways to be useful to the participants." Thus, when the narratives needed to be clarified for some ambiguous points, the researcher collaborated with the participants to obtain a comprehensive understanding of the narratives.
- *Present the narratives in written form:* The researcher adopted the general reporting structure in which an introduction of the challenge was provided to familiarize the readers, then some extracts of the narratives were mentioned to support the claims. These extracts included narrative segments showing a specific challenge.

3.1. The context

Iranian EFL teachers follow almost two alternative ways to find the necessary skills of English teaching. The first groups are accepted in Teaching English as a Foreign Language (TEFL) across the state-run universities. During their courses, they learn both content and pedagogical knowledge during their B.A. curriculum. Based on the Ministry of Science, Research, and Technology syllabus released in 2015, there is an optional course on CALL, which the TEFL departments can address if they have the infrastructures. However, based on the basic observations, several universities in Iran provide this course for their B.A. students, and others do not.

Consequently, the students are not competent in CALL when they obtain a B.A. degree. This group of EFL teachers needs to participate in an exam given by the Ministry of Education and pass it to teach English at schools. The second group is the TEFL students who study TEFL at Farhangian universities, specialized universities responsible for training teachers in different subjects, including English and other languages. The syllabus of this group is very similar to the first group. Hence, the second group will not obtain much about CALL during their B.A. level. The second group does not need to participate in the exam given by the Ministry of Education. They can start their teaching at schools when they are in the second year of their B.A. As a whole, both groups have not many experiences in CALL and may not know how to integrate it into their classes when they start their teaching. The two groups will have different in-service teacher education during their teaching. By scrutinizing the overall syllabus of these in-service teacher

education programs, it can be stated that CALL does not have a special space in these programs. However, some minimal theoretical and practical CALL issues are covered in these programs.

3.2. Participants

The study had an exploratory purpose of obtaining Iranian EFL teacher educators' voice about the challenges of conducting CALL teacher education. Consequently, the participants were eight Iranian EFL teacher educators, including two female and six male teacher educators teaching TEFL at different universities and across different educational levels. The researcher used purposive sampling to select those EFL teacher educators who had the experiences of designing and teaching in different pre-service and in-service teacher education programs. All of the participants held a Ph.D. in applied linguistics and had different academic titles, including assistant professor, associate professor, and professor. Their age range was between 35 and 55. Moreover, they had between 10 to 27 years of teaching experience. The participants knew what CALL is, what CALL teacher education is, and how to implement CALL in the L2 classroom. Table 1 indicates the information about the participants.

Table 1. Information about the participants

Pseudonym	Gender	Academic title	Year of teaching experiences	Teaching academic levels
Reza	Male	Professor	27	B.A., M.A., Ph.D.
Naser	Male	Professor	24	B.A., M.A., Ph.D.
Sajad	Male	Associate Professor	19	B.A., M.A., Ph.D.
Ahmad	Male	Associate Professor	14	B.A., M.A., Ph.D.
Mobin	Male	Associate Professor	11	B.A., M.A.
Amin	Male	Assistant Professor	10	B.A., M.A.
Negin	Female	Associate Professor	17	B.A., M.A.
Neda	Female	Assistant Professor.	7	B.A., M.A.

3.3. Data collection

To obtain the voice of EFL teacher educators about the challenges of conducting CALL teacher education in Iranian contexts, the researcher asked the participants to produce a biographical narrative. The researcher asked them to state their experiences, their ideologies, their future directions, or anything else about CALL teacher education that happened during their teaching experiences. The EFL teacher educators were supposed to produce their biographical narratives following Riessman's (2008) narrative model in which each narrative includes an abstract, introduction, evaluation, resolution, and coda. It is worth noting that the researcher sent a narrative sample to the participants, including an abstract, introduction, evaluation, resolution, and coda. The narrators tell their stories about a specific topic that can be analyzed based on the

indexicality approach (De Fina & Georgakopoulou, 2019). In de Fina's (2015, p. 353) words, "[t]hrough indexicality, associations are created between specific sounds, words, discourse constructions or styles, and social characteristics or identities." Thus, by collecting the biographical narratives from the participants and analyzing them, the researcher could obtain the challenges based on the EFL teacher educators' actual experiences. The participants were asked to mention in their narratives as many challenges they faced while conducting CALL teacher education as possible. The shortest narratives had about 450 words (delivered by Sajad), and the most extended narrative had about 980 words (delivered by Amin). It should be stated that seven out of eight participants recorded their narratives orally and sent them to the researcher. Moreover, the oral narratives also followed Riessman's (2008) narrative model.

3.4. Data analysis and rigor of the study

To analyze the narratives authored by the EFL teacher educators and uncover the patterns of the themes in these narratives concerning the challenges of administering CALL teacher education, the researcher conducted a thematic analysis (Boyatzis, 1998) using the predetermined codes. These predetermined codes were selected from the challenges of CALL teacher education, as stated by Hubbard (2008). As reviewed above (see Literature review section), these challenges were inertia, ignorance, insufficient time, insufficient infrastructure, insufficient standards, and lack of established methodology. Moreover, if each of the participants referred to other challenges, the researcher documented them. The researcher used ethnography semantics, which helped him analyze the narratives' core meaning (Spradley, 1979). The researcher read the narratives and linked them to the codes. The ethnography semantics helped the researcher extract the words, phrases, and sentences that semantically revealed the challenges of conducting CALL teacher education. Example 1 shows how the analysis of the narratives was addressed.

(1) ... I think *we do not need to* have a CALL teacher education program at the current time since our programs, including EFL teacher education programs, *concentrated on other issues*...

This short example shows that this EFL teacher educator did not think that they needed to start CALL teacher education programs. Semantically speaking, "*we do not need*" shows this EFL teacher educator concentrated on other issues in EFL teacher education: "*concentrated on other issues*."

The rigor of a study in qualitative research needs to be addressed to assure reliable and valid data analysis (Ary et al., 2014). In the current study, the researcher read the narratives and coded them based on the predetermined criteria to assure inter-coder reliability. Moreover, to ensure the credibility of the data analysis, the researcher conducted member checking,

negotiating those parts of the vague narratives, and asking the EFL teacher educators to explain more about those parts.

4. Findings and discussion

It was revealed through narrative analysis that Iranian EFL teacher educators had different opinions about the challenges of conducting CALL teacher education in the Iranian context. Table 2 summarizes the challenges of conducting CALL teacher education from Iranian EFL teacher educators' perspectives.

Table 2. Summary of the challenges mentioned by Iranian EFL teacher educators

Pseudonym	Inertia	Ignorance	Insufficient time	Insufficient infrastructure	Insufficient standards	Lack of established methodology	Other challenges
Reza	√	-	√	√	√	-	Lack of EFL teachers' motivation
Naser	√	√	√	√	-	√	-
Sajad	√	√	√	√	√	√	-
Ahmad	-	√	√	√	√	-	Insufficient infrastructure in L2 schools and institutes
Mobin	√	√	-	√	√	√	The inertia of EFL teachers
Amin	√	√	√	-	√	√	-
Negin	-	√	√	√	-	√	-
Neda	-	-	√	√	√	√	-

√ means the EFL teacher educator has a challenge.

As shown in Table 2, insufficient time and infrastructures were the challenges most frequently mentioned by EFL teacher educators. These two challenges were extracted from the EFL teachers' narratives across different academic titles (full professors, associate professors, and assistant professors). Furthermore, ignorance, insufficient standards, and lack of established methodology were the challenges referred to by most EFL teachers. Finally, the less frequent challenge was inertia. The EFL teachers (Reza, Ahmad, and Mobin) pointed out other challenges, such as lack of EFL teachers' motivation to participate in CALL teacher education, insufficient infrastructure in L2 schools and institutes for the EFL teachers to practice CALL, and inertia of EFL teachers.

4.1. Inertia: "We know what our needs are"

The analysis of the narratives authored by the EFL teacher educators about the challenges of CALL teacher education showed that all of them, except for Ahmad, Negin, and Neda, believed

that inertia is a challenge in conducting CALL teacher education. Here, inertia referred to EFL teacher educators' belief that they did not need to change their current EFL teacher education to a CALL-oriented one. Extract 2 is a part of Reza's narrative who thought CALL teacher education is not a need for the current EFL teacher education.

(2) ... I think that **it [CALL teacher education] is not the need of our EFL teachers** ... we know **our needs** in preparing EFL teachers for classrooms. However, **it is not CALL teacher education** ... it is the **opinion of many of my colleagues** who are working as teacher educators ... however, if a CALL teacher education is to be administrated, I think challenges such as ...

There are different reasons for the inertia of EFL teacher educators about conducting CALL teacher education. The first reason is that there is no CALL discourse in EFL communities, including the Iranian context. Since such a discourse has not received the attention it deserves, EFL teacher educators do not see CALL teacher education to address L2 teaching and learning problems. Consequently, it is difficult for EFL teacher educators to lend themselves to change. The second reason is that EFL teacher educators do not participate in intensive training, which leads them to remain in their traditional practices. Participation of teacher educators in intensive training is indispensable (Lortie, 1975) to change their opinions about the design and implementation of their teacher education programs. Hence, EFL teacher educators' participation in CALL intensive training can change their opinions about CALL teacher education. The third reason may be due to the inexistence of insufficient standards (Hubbard, 2008). When EFL teacher educators do not have the necessary standards to conduct CALL teacher education programs, they prefer not to change, resisting abandoning traditional EFL teacher education programs.

4.2. Ignorance: "No trained faculty member, no responsibility"

By analyzing the narratives authored by EFL teacher educators, the researcher recognized that faculty members tended to ignore training qualified CALL teacher educators. Extract 3, written by Sajad, shows how he stated that the lack of qualified CALL educators would be a challenge to conduct CALL teacher education.

(3) ... there was an **ignorance of training EFL teacher educators** who will address CALL teacher education in our context ... this is **a very critical challenge** for us since **we do not have EFL teacher educators** who can instruct EFL teachers to use CALL in their classes ...

Ignoring CALL by EFL teacher educators will cause them to be unaware of the options which can be provided (Hubbard, 2008) in EFL contexts. When they are unaware of CALL options, they will not try to make CALL the focus of their teacher education programs. This will lead to another aspect of ignorance, based on which the EFL teacher educators believe CALL

teacher education is not the responsibility of every EFL teacher educator. However, it is the responsibility of some specialized institutes. As Hubbard (2008, p. 177) stated, there is “an assumption that learning to use technological tools is the task of the teaching institution rather than the one that trains the students.” Negin, one of the EFL teacher educators, narrated that she was hindered by other faculty members that CALL teacher education was not their responsibility. She pointed out this as a challenge for running CALL teacher education. Extract 4 is a part of her narrative.

(4) ... during different meetings I had with my colleagues in our department, **I raised the need** to have **special CALL preparation** for the EFL teachers, yet **most of them were ignorant** of this **responsibility** ... they believed that the EFL teachers **should participate in the programs** of other universities which are **specialized in CALL** ...

The need for EFL teachers who are competent in using CALL in their classes is now a requirement because of the rapid development of CALL (Kessler & Hubbard, 2017). That said, CALL teacher education is a need to be fulfilled in universities and other educational institutes. Consequently, the curriculum developers need to ask the faculty members to prepare themselves for running CALL teacher education programs in their contexts. Providing new certifications may encourage them not to ignore CALL teacher education and call it the universities' responsibilities.

4.3. Insufficient time: "Many topics, new pop-ups, and limited time"

In this study, the EFL teacher educators also mentioned insufficient time as one of the challenges in conducting CALL teacher education. It was revealed by analyzing the narratives that almost all of the EFL teacher educators believed that the field of second/foreign language learning and teaching is very vast, and new topics are emerging now and then. The EFL teacher educators stated that they had time limitations to address CALL teacher education since they needed to work upon other issues. Extract 5 is a part of Amin's narrative. Amin stated that EFL teacher educators' insufficient time is a challenge for conducting CALL teacher education among EFL teachers.

(5) ... I think that **time limitation** is among the **main challenges** to conduct CALL teacher education since our **field is full of topics and still new topics pop up** every day, which makes **CALL secondary** compared to other topics ...

When the EFL teacher educators do not have time to allot to CALL, they resist changing their educational policy (inertia) and ignore the responsibility of addressing CALL in L2 teaching (ignorance). Insufficient time to conduct CALL teacher education has two aspects. The first aspect is related to the growing body of topics in second/foreign language teaching and learning

due to numerous topics. The EFL teacher educators pay attention to topics other than CALL. Moreover, preparing new instruction models for CALL will be time-consuming for EFL teachers (Johnson, 1999) and EFL teacher educators, which can be mentioned as a challenge for conducting CALL teacher education.

4.4. Insufficient infrastructure: "*The huge obstacle to CALL*"

Almost all of the EFL teacher educators mentioned insufficient infrastructures as one of the challenges to conducting CALL teacher education in their narratives. By scrutinizing the EFL teacher educators' narratives, it was revealed that EFL teacher educators believed that insufficient infrastructure is an obstacle for conducting CALL teacher education and EFL teachers' use of CALL in classrooms. Extract 6 is a part of Mobin's narrative in which he remarked the two aspects of insufficient infrastructures about CALL teacher education.

(6) ... to me, the **inadequate infrastructures**, including technological tools, is the main challenge to conduct CALL teacher education ... since when we **do not have the necessary tools and applications, how to run CALL teacher education** ... [moreover] **our schools and institutes do not have the necessary technological tools**, so how our EFL teachers use CALL in their classes ...

Insufficient infrastructures include many problems. According to Torsani (2016, p. 72), "the potential problems relating to infrastructures are numerous: among these a lack of or inappropriate hardware (e.g., headphones), obsolescence of software, excessively high-security standards and the impossibility for the teacher to manage the technology autonomously." In other words, insufficient infrastructures can be either pedagogical or institutional. While the former is related to the community of practice and policy-makers' contributions to help EFL teacher educators pay more attention to CALL teacher education, the latter is related to technical support availability.

4.5. Insufficient standards: "*Confusion due to no guidelines*"

Through meticulous analysis of the narratives authored by EFL teacher educators, a lack of CALL standards in the form of recommendation for those who wanted to administrate CALL teacher education can be seen. It can also be inferred from their narratives that the inexistence of CALL standards encompasses the EFL learners and EFL teachers, so it would not be easy for them to use CALL in their L2 learning and teaching. The following extract is part of Amin's narrative in which he described the inexistence of standards as a challenge for conducting CALL teacher education.

(7) ... there are **no well-established guidelines** and standards about CALL teacher education, so teacher educators do not know about the programs' goals and objectives of the programs ... [moreover] I think we need to localized CALL standards that are in line with our educational system, culture, and infrastructures ...

The insufficient standards can have detrimental effects on using CALL in general and CALL teacher education. These standards take a constructivist approach to focus on the role of technology in L2 learning rather than technology use (Healey, 2018). Although different internationally-made standards are available for CALL teacher education (e.g., TESOL, 2008a, 2008b), the imbalance of access to technology across the globe asks for localized standards that consider the differences in infrastructures. Moreover, the standards need to take into account both EFL teachers and students. For students, the technology standards need to help learners "use technology productively, safely, appropriately, and legally; and how learners can think critically about their use of technology" (Healey, 2018, p. 3). This is very important for the practice of CALL by EFL learners. EFL teacher educators need to address the general and expert levels when setting CALL teacher education goals to help EFL teachers use CALL in different contexts. As a whole, making and adapting technology standards can help EFL teachers in low- and high-resource contexts integrate CALL in their classes. This, however, needs that the EFL teacher educators include the related goals and standards in their CALL teacher educations.

4.6. Lack of established methodology: "*Show me the way, leave me alone*"

Finally, the analysis of the narratives authored by the EFL teacher educators showed that some believed in a lack of established methodology to conduct CALL teacher education. They believed that there were many options for them to conduct CALL, leaving them in confusion. However, like the technology standards, the researcher believed that the problem is that the EFL teacher educators' literacy about CALL methodology is low since different empirical studies show how to conduct CALL teacher education. Excerpt 8 is a part of Naser's narratives in which he pointed out the lack of established methodology as a challenge for conducting CALL teacher education in the Iranian context.

(8) ... **there are many options, methodologies,** and approaches to conduct CALL teacher education that **leaves us in a challenging situation** to decide what to choose ...

According to Hubbard (2008), the lack of experience and CALL textbooks lead to teacher educators' confusion to select the appropriate methodology to conduct their CALL teacher education. However, it should not be ignored that the high number of options can be beneficial if the EFL teacher educators have the necessary literacy to select among them. Given that, CALL teacher education can be regarded as an arena for the EFL teachers to practice different options

to integrate technology in their classes (Hong, 2010). In recent years, there have many approaches and methodologies to conduct CALL teacher education programs (Jeong, 2017). That said, the point is that if the literacy of CALL teacher educators develops, they can use different options to run their programs. One more point is that EFL teacher educators need to develop their literacy about technology-related standards to use the high and sometimes confusing number of CALL options in their CALL teacher education programs.

4.7. Other challenges: Lack of EFL teachers' motivation, insufficient infrastructure in L2 schools and institutes, inertia of EFL teachers

Three of the EFL teacher educators (Reza, Ahmad, and Mobin) mentioned three other challenges for conducting CALL teacher education, including lack of EFL teachers' motivation to participate in such programs (Reza), insufficient CALL infrastructures in L2 schools and institutes (Ahmad), and inertia of EFL teachers (Mobin). Extracts 9, 10 and 11 show how they asserted these challenges in their narratives.

(9) ... whenever I have talked about CALL teacher training programs with EFL teachers, I see their demotivation for those programs... (Reza)

(10) ... what can be the use of CALL teacher education when **we do not have the necessary CALL facilities** in our schools ... (Ahmad)

(11) ... one of the challenges is to change teachers' ideology about using and integrating CALL in their classes by participating in CALL teacher education programs ... (Mobin)

The dominant reason for integrating CALL in EFL classes can be the motivational tools that can help the EFL teachers to develop communication among students (Kim, 2008). EFL teachers in Iran do not become aware of such tools, so they are not motivated to participate in CALL teacher education. It should be the case that some pre-service CALL-related programs help these teachers be familiar with what CALL can offer to motivate them in a step-wise manner to participate in CALL teacher education programs. Moreover, one of the reasons why EFL teachers are not motivated to participate in CALL teacher education is insufficient infrastructure. The policy-makers need to have this in mind when trying to provide new budgets for CALL. If EFL teachers see the required infrastructures, they will become motivated to participate in CALL teacher education programs. The inertia of EFL teachers is another challenge of CALL teacher education. Changing CALL ideology in EFL teachers can be done through new certifications required to continue their teaching profession. Given that, the CALL teacher education programs can be in the form of in-service programs that the EFL teachers should participate in to receive a certificate for continuing their teaching profession.

5. Conclusion and implications

This study was an attempt to investigate Iranian EFL teacher educators' voice about the challenges of conducting CALL teacher education. Through the course of narrative analysis, it was revealed that such challenges as inertia (both concerning EFL teacher educators and EFL teachers), ignorance of training CALL educators, insufficient time to address CALL compared with other topics, insufficient infrastructures, insufficient standards, and lack of established methodology to administer CALL teacher programs were the challenges of CALL teacher education. Moreover, the findings indicated that lack of EFL teachers' motivation to participate in such programs, insufficient CALL infrastructures in L2 schools and institutes, and EFL teachers' inertia were other challenges of conducting CALL teacher education.

It is believed that EFL teacher education programs in general and CALL teacher education in particular have a significant role in helping EFL teacher educators and EFL teachers to overcome the challenges. Since CALL is going to be so typical in EFL teaching and learning that it will be invisible in the future (Kessler & Hubbard, 2017) and become normalized in language pedagogy (Bax, 2003), the policy-makers in the realm of second/foreign language learning and teaching do their best to help teacher educators focus on CALL teacher education as one of the main aspects of teachers' professional development. The policy-makers need to address the required budgets, infrastructures, motivation, etc., to remove the challenges of conducting CALL teacher education.

CALL teacher education needs to be conducted based on an identity-oriented teacher education program to develop EFL teachers' identity concerning CALL. Identity-oriented teacher education helps EFL teacher educators to internalize the necessary CALL-related ideology and practices in EFL teachers. By so doing, the EFL teachers will follow the processes in which they continuously construct and reconstruct their professional identity to integrate CALL into their classes. Consequently, they try to develop their practices based on what CALL has brought to them.

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Appendix

Predetermined codes used to analyze the biographical narratives (extracted from Hubbard's (2008) study)

Codes	Description
Inertia	This challenge is to change the assumptions of L2 teacher educators in that they think their current teacher education programs are successful, and there is no need to change.
Ignorance	This challenge is lacking qualified CALL educators who are well aware of CALL and its different aspects.
Insufficient time	This refers to <i>insufficient time</i> for adding new materials to teacher education programs. Hence, it is difficult to find new space for CALL in the L2 teacher education programs.
Insufficient infrastructure	This refers to the lack of infrastructures to conduct CALL teacher education. Accordingly, one of the main problems in administrating CALL teacher education is the lack of technological equipment access.
Insufficient standards	Technology standards are those standards that specify different aspects of using CALL at different educational levels. Lack of such standards will hinder conducting CALL teacher education.
Lack of established methodology	This challenge refers to the lack of methods, techniques, textbooks, etc., which can determine the CALL courses' content and structure.