

# **EFL TEACHERS' KNOWLEDGE OF THE USE AND DEVELOPMENT OF COMPUTER-ASSISTED LANGUAGE LEARNING (CALL) MATERIALS**

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## **Abstract**

Even though there are a plethora of CALL materials available to EFL teachers nowadays, very limited attention has been directed toward the issue that most EFL teachers are merely the consumers of CALL materials. The main challenge is to equip EFL teachers with the required CALL materials development skills to enable them to be contributors to CALL materials development (Motteram, 2011).

Accordingly, this research was carried out to unravel the current challenges and difficulties in enabling EFL teachers to acquire CALL materials development and implementation skills. Three groups of EFL stakeholders, i.e. EFL teachers (n=208) who taught English at universities, schools, and language teaching institutions, teacher educators (n=15) who were university instructors and educated MA and PhD students of TEFL, and teacher trainers (n=32) who mainly prepared EFL teachers for teaching at private language teaching institutions, were identified and participated in this study.

The findings of in-depth interviews and questionnaires confirmed that the three groups of participants had positive attitudes toward the use of CALL materials and development of CALL materials by EFL teachers while teacher educators had slightly more positive attitudes. It was further illustrated that the EFL teachers did not have the required basic skills to develop or use CALL materials. In addition, there are some impediments to the development of CALL materials by EFL teachers. Moreover, the findings of observations and interviews indicated that CALL materials development is not a part of teacher education/training programs in Iran and the EFL teachers do not use CALL materials in their EFL courses. Finally, the participants proposed some strategies based on which EFL teachers would be able to obtain the necessary skills to develop and use CALL materials.

**Keywords:** CALL materials; EFL teachers; attitudes; challenges; teacher education

## **1. Introduction**

EFL materials producers and curriculum developers have taken interest in the inclusion of computer-based and electronic materials in their syllabi since technology has revolutionized the

ways materials are produced and employed in EFL classrooms. Reinders and White (2010) argue that CALL materials can include “tasks, websites, software, courseware, online courses, and virtual environments” (p. 59). In general, the use of electronic materials will provide EFL practitioners with various types of affordances, including interactivity, easiness of access and storage, authenticity, collaboration, instant feedback, control and empowerment, and facilitation of learning (Kervin & Derewianka, 2011; Motteram, 2011; Tomlinson, 2012). Perhaps, the most important merit of using electronic materials is that they give teachers and students a myriad of choices and introduce flexibility to both teaching and learning (Tomlinson, 2012). More importantly, what makes electronic materials more beneficial and popular in language teaching is that they are more accessible than materials used in face-to-face language teaching courses.

Similarly, Godwin-Jones (2005) points out the benefits that CALL materials might have for language teaching. Specifically, CALL materials are a facilitator for improving students’ digital literacy, fostering communication, collaboration and sense of community among students, and helping students to create their identities. Accordingly, Zhao (2005) stresses several facilitative roles of CALL materials, including the provision of accurate and comprehensive feedback to students, grammar and spelling checkers, authenticity, interactivity, and accessibility. Most of these affordances are not easily available in traditional EFL materials and some of them are exclusively relevant to CALL materials. It is worth mentioning that technology might not make the change itself, but what is important is the way practitioners implement CALL in their teaching practices (Reinders & White, 2010). Consequently, it seems that EFL teachers who are the implementers of CALL materials should be trained in how to make use of technology and CALL materials efficiently.

Chapelle (2010) believes that EFL materials developers should be aware of the spread of CALL and strive to take it into consideration when producing EFL materials. She further argues that there is a need to adopt a research-based and critical approach to developing CALL materials in EFL contexts. Tomlinson (2012) criticizes the view that CALL materials are sometimes regarded as panaceas and he believes the mere use of technology cannot guarantee learners’ learning. He suggests that CALL materials be evaluated critically and used appropriately.

## **2. Background**

### **2.1. Teachers as materials developers**

One of the most significant factors which might lead to teacher development is to develop the EFL teachers' expertise to produce materials (Tomlinson, 2003). Therefore, it is essential for teacher educators and trainers to guide teachers through adopting new and innovative approaches to materials development. Through developing materials, EFL teachers can be empowered and made more autonomous. Tomlinson (2003) believes that helping EFL teachers to produce materials would enhance their positive attitudes and confidence levels.

Masuhara (2006) supports the notion that materials production can remarkably contribute to teacher development. The process of materials development would help teachers to develop efficiency, criticality, awareness, and teaching expertise. There are several studies which have shown that engaging teachers in materials development activities had many advantages both for the very teachers and the institutions in which they are employed (Al-Busaidi & Tindle, 2010; Canniveng & Martinez, 2003).

Motteram (2011) names several types of CALL materials which can be used in EFL courses, including blogs, virtual learning environments, and interactive whiteboards. It has been suggested that EFL teachers should have the necessary skills to use these types of technological tools and they should have basic materials development skills when they are supposed to use technology and electronic materials in their EFL courses. Motteram (2011) further argues that with the advent of technology and electronic materials, EFL teachers should not remain the consumers of these materials, but they should also be able to be contributors. This implies that EFL teachers are supposed to develop specific materials development expertise when they use technology and computers in their EFL teaching. Each type of technology and electronic material will pose certain challenges for EFL teachers and EFL teachers should be able to develop, adapt, revise and sometimes localize various types of CALL materials.

### **2.2. The use of EFL materials in the Iranian EFL context**

Currently, there are three main EFL activities in Iran. Different EFL materials are used in these different contexts. First, there are a plethora of language teaching institutions in the Iranian EFL context. These private institutions include English language teaching departments and

departments related to teaching other languages. In particular, English is taught from beginning levels to advanced levels in these institutions and learners are supposed to attend EFL classes for some years to receive certificates on their English language proficiency. Teachers who are employed at these institutions are usually university students or graduates of English-related majors who should meet different requirements to be employed in these institutions. One of the requirements for employment is that the teachers attend teacher preparation programs which are held by the educational directors of these institutes or independent teacher trainers who are invited to educate newly-recruited teachers for a certain institution. The time length of these teacher preparation courses depends on the educational purposes of each institution.

The teaching materials which are used in these institutions are mainly international textbooks and no localization or adaptation takes place regarding the content or language of these textbooks. The teaching syllabi are mainly designed by educational directors of these institutions, and they follow a rigid structure in which materials play an important role. The main aim of these EFL courses is to improve students' communicative and speaking skills while different skills are claimed to be practiced. Conducting observations, Dashtestani (2012) reported that there is a serious lack of the use of CALL materials and technology in Iranian language teaching institutions. The main teaching materials used in these EFL courses are printed textbooks.

Universities are the other contexts in which EFL plays an important role. Both non-governmental and governmental universities should follow a similar syllabus. Regarding the materials used in these EFL/EAP courses, local textbooks are developed and published by SAMT, which is related to Iran's Ministry of Science, Research and Technology (MSRT). The EFL teachers who work at universities are PhD or MA graduates/students of TEFL or English literature who teach general or English for academic purposes courses for students of different majors and disciplines. Students of different majors are supposed to attend one or two general or specific English courses based on the national curriculum. There are not any computer-based or web-based activities in the EFL textbooks and the focus is on reading comprehension, vocabulary and grammar.

There has been much criticism regarding ELT textbooks in Iran recently. The university EFL/EAP courses in Iran are strictly based on printed textbooks and summative examinations (Mazdayasna & Tahririan, 2008). Moreover, it has been suggested that no systematic approaches

are adopted to develop EFL/EAP materials based on students' needs and skills (Eslami, Eslami-Rasekh, & Quiroz, 2007; Eslami, 2010; Mazdayasna & Tahririan, 2008)

Finally, EFL also plays an important role at Iranian high schools. The EFL teachers who work at high schools are mainly M.A./B.A. holders of TEFL or English-related majors. All students are supposed to attend one or two general English courses each school year/grade. The ministry of education is responsible to develop and publish localized EFL books for different grades.

Soori, Kafipour, and Soury (2011) assert that there is not a systematic balance in the presentations of skills in the Iranian school EFL textbooks. Speaking and listening are both completely overlooked and they have not been included in EFL textbooks. Also, the exercises and activities are not logically developed. The textbooks are not based on Iranian students' needs and situations. Additionally, the textbooks are not supplemented with any type of CALL materials such as CD-ROMs.

In the Iranian EFL context, EFL teachers are not involved in materials development. They have to follow rigid syllabi and materials which are dictated to them by their educational authorities and institutions. EFL materials are traditional ones while several studies have shown that Iranian EFL teachers and students had positive attitudes toward CALL implementation and CALL materials and both teachers and students believe that technology should be integrated in their EFL teaching and learning activities (Dashtestani, 2012).

### **3. The present study**

#### **3.1. The aim of the research**

Considering the important role of EFL teachers in the process of curriculum and materials change (Richards, 2001), this study aims to analyze the perceptions of teacher trainers/educators and EFL teachers about the use and development of CALL materials by EFL teachers. The following specific research questions informed this study:

1. What are the attitudes of EFL teachers, teacher trainers, and teacher educators toward the use of CALL materials in the Iranian EFL courses?
2. What are the attitudes of EFL teachers, teacher trainers, and teacher educators toward the development of CALL materials by EFL teachers?

3. What are the perceptions of EFL teachers, teacher trainers, and teacher educators about the possible challenges to developing CALL materials by EFL teachers?
4. What are the perceptions of EFL teachers, teacher trainers, and teacher educators about their CALL materials development skills?
5. What types of EFL materials are used/developed by Iranian EFL teachers in their EFL courses?
6. What types of teacher training/education activities regarding CALL materials production/use are provided in teacher training/education programs?
7. What are the perceptions of EFL teachers, teacher trainers, and teacher educators about the possible strategies to enable EFL teachers to develop CALL materials?

### **3.2. Participants**

The first sample group of this study comprised 208 EFL teachers. In particular, three strata of EFL teachers were identified and included in this study. The first stratum comprised EFL teachers who were university instructors. A total of 51 EFL university instructors took part in this study. These university instructors were M.A. or Ph.D. graduates of TEFL and Applied Linguistics who taught English to university students of different majors. These instructors had taught English for an average of 6.7 years and their average age was 41.3 years. The EFL instructors were selected from Azad, Payame Noor, and public universities in Iran.

The second group of EFL teachers who participated in the study included 39 EFL teachers who worked at several Iranian high schools. These teachers were B.A. or M.A. graduates of TEFL or English-related majors with an average of 10.6 years of teaching experience. The average age of these participants was 39.8 years. These teachers were selected from both private and public high schools.

The last group of EFL teachers included those who worked at language teaching institutions. A total of 118 EFL teachers completed and returned the questionnaires. All these EFL teachers had attended teacher training courses as a requirement for their employment. These teacher training courses were held by the institutions which were to employ EFL teachers. Specifically, 63 teachers were B.A./B.Sc. graduates, and 55 EFL teachers were M.A./M.Sc. graduates. The sample comprised 94 teachers who studied majors unrelated to TEFL and 24

teachers who studied TEFL at university. Moreover, the average age of these participants was 34.1 years with an average of 8.3 years of teaching experience.

The EFL teachers who took part in the questionnaire phase of the study were invited to participate in interviews too. Out of 208 EFL teachers, 184 teachers agreed to take part in the interview phase of the study.

In addition to the EFL teachers, 15 EFL teacher educators who educate EFL teachers at universities were included in the study. The teacher educators participated in the study voluntarily after the purposes of the study were explained to them. These EFL teacher educators were Ph.D. holders of TEFL and Applied Linguistics who had an average of 10.4 years of EFL teacher education experience at M.A. and Ph.D. levels. All of these teacher educators had an experience of teaching materials developed for M.A. and Ph.D. students of TEFL. They were selected from Azad, Payame Noor, and public universities in Iran. Their age average was 53.5 years. After administering the questionnaires, the teacher educators were invited to participate in the interview phase of the study. All 15 teacher educators took part in the interviews.

A sample of 32 EFL teacher trainers was also incorporated in the total sample of the study. All these teacher trainers were M.A. graduates of TEFL with an average of 5.2 years of teacher training experience and an average age of 35.9 years. These teacher trainers had the experience of running various teacher preparation programs for different language teaching institutions. The EFL teacher trainers were further invited to take part in the interviews and all of them accepted to participate in the interview phase of the study.

### **3.3. Research design**

The research was based on a mixed-methods survey with interviews, questionnaires and non-participant observations as the instruments of the study. The rationale behind the use of these three instruments was to conduct a methodological triangulation. Methodological triangulation has been considered as an effective and significant procedure to collect validated data (Best & Kahn, 2006). As for the construction of the instruments, several interviews were conducted with EFL teachers, teacher trainers, and teacher educators prior to the conduction of the study to provide input for the development of the questionnaire. In addition, the review of the recent literature on CALL materials development, principles of CALL materials development, the challenges of developing CALL materials (e.g., Al-Busaidi & Tindle, 2010; Canniveng &

Martinez, 2003; Kervin & Derewianka, 2011; Motteram, 2011; Reinders & White, 2010; Tomlinson, 2012; Zhao, 2005) provided insights into the construction of the questionnaire. The list of items of the questionnaire was sent to 10 EFL teachers, two instructors of educational technology, five EFL teacher trainers, and five EFL teacher educators. After receiving their feedback on the items, revisions and improvements were made to the items of the questionnaire.

Following the section for demographic information regarding the participants, the first section of the questionnaire ( $\alpha=0.91$ ) was an investigation into participants' attitudes toward the use of CALL materials which included 10 four-point Likert scale items, ranging from 'strongly disagree' to 'strongly agree'. The second section ( $\alpha=0.87$ ) elicited participants' perceptions of the challenges of developing CALL materials by EFL teachers. In this section, seven Likert scale items were included. The last section ( $\alpha=0.81$ ) consisted of seven five-point Likert scale items ranging from 'not proficient' to 'very proficient' and aiming at self-assessment of the ability to produce CALL materials. The total number of items for EFL teachers' questionnaire was 24 and the total number of items for teacher educators/trainers' questionnaire was 23 (Appendix 2).

Follow-up interviews were included after the conduction of the survey. The development of the questions of the interview came from critical analysis and perusal of the literature on CALL materials development. The questions of the interview were checked by the same panel who validated the content of the questionnaires. Specifically, two versions of questions were developed. The first version of questions was developed for EFL teachers while the second version was developed for EFL teacher trainers/educators. Open-ended questions with a semi-structured format were used for both EFL teachers and teacher educators/trainers (Appendix 1).

To identify the current situation of CALL materials development and use by Iranian EFL teachers, five EFL classes at high schools, five EFL classes at language teaching institutions, and five EFL classes at universities were observed. The main purpose of the non-participant observations was to explore whether any type of CALL materials was used in these EFL courses. The second purpose of conducting observations was to investigate the quality or existence of CALL facilities at different EFL contexts in Iran. Checklists and observation notes were used to conduct the observations. To ensure ethical aspects of the research, permission from EFL teachers was requested prior to the conduction of the observations.

The mean and standard deviation for each item of the questionnaire were used to analyze the data. In addition, for the first and second sections of the questionnaire, the test of Kruskal



Wallis was used to identify the differences among participants' perceptions. The non-parametric test of Kruskal-Wallis was employed since there were three sample groups and the test is suitable for identifying differences of more than two groups. SPSS 16 was used to analyze the quantitative data. The interview data were also analyzed and coded with regard to the questions of the interview. Specifically, the questions were read and then the emerging themes for each question were presented and described.

### **3.4. Findings**

#### **3.4.1. Attitudes toward the use of CALL materials and CALL materials development**

##### *Survey findings*

The total mean scores of responses of teacher educators (3.17), EFL teachers (3.14), teacher trainers (3.05), are illustrative of the fact that the three groups adopted positive attitudes toward CALL materials and the use of CALL materials in EFL courses. The three groups of participants believed that developing CALL materials is not an easy activity. The results of the Kruskal-Wallis test showed different areas about which the three groups of participants did not have consensus. The three groups unanimously agreed upon the importance of developing CALL materials by EFL teachers and authenticity of CALL materials. While there were differences between participants' perceptions, the three groups generally had positive perceptions about interactivity, accessibility, students' autonomy, the facilitating role of CALL materials in TEFL and teacher development. It seems that the teacher educators had more positive perceptions. While there was no consensus about the item about immediate feedback, the participants did not have positive perceptions of item 7, i.e. 'CALL materials can be developed easily' (Table 1).

In addition, the analysis of the perceptions of the participants about items 1 and items 10 depicts that the three groups of participants held positive attitudes toward the development of CALL materials by EFL teachers. Specifically, the EFL teachers, teacher educators and trainers agreed that EFL teachers should produce CALL materials and this activity will facilitate their professional development.

Table 1. Participants' attitudes toward the use of CALL materials and CALL materials development by EFL teachers.

		Mean	SD	P
EFL teachers should be able to develop CALL materials for their teaching	EFL Teachers	3.17	0.70	<b>P= 0.110</b>
	Teacher Trainers	2.99	0.67	
	Teacher Educators	3.13	0.51	
CALL materials are more authentic than traditional EFL materials	EFL Teachers	3.54	0.64	<b>P=0.238</b>
	Teacher Trainers	3.69	0.50	
	Teacher Educators	3.67	0.42	
The use of CALL materials encourages interaction in EFL classrooms	EFL Teachers	3.32	0.68	<b>P=0.000*</b>
	Teacher Trainers	3.55	0.6	
	Teacher Educators	3.70	0.52	
CALL materials are more accessible than traditional materials	EFL Teachers	3.12	0.79	<b>P=0.025*</b>
	Teacher Trainers	2.89	0.87	
	Teacher Educators	3.14	0.61	
Producing CALL materials requires spending low costs	EFL Teachers	2.75	0.88	<b>P=0.434</b>
	Teacher Trainers	2.86	1	
	Teacher Educators	2.72	0.83	
Immediate feedback can be provided using CALL materials	EFL Teachers	2.97	0.79	<b>P=0.000*</b>
	Teacher Trainers	2.62	0.9	
	Teacher Educators	3.12	0.62	
CALL materials can be easily developed	EFL Teachers	2.39	0.92	<b>P=0.000*</b>
	Teacher Trainers	2.03	1.1	
	Teacher Educators	1.66	0.7	
Using CALL materials will empower learners to be more autonomous	EFL Teachers	3.16	0.59	<b>P=0.000*</b>
	Teacher Trainers	3.36	0.75	
	Teacher Educators	3.20	0.4	
The use of CALL materials facilitates language teaching	EFL Teachers	3.42	0.51	<b>P=0.009*</b>
	Teacher Trainers	3.21	0.89	
	Teacher Educators	3.53	0.5	
Producing CALL materials by EFL teachers facilitates the process of teacher development	EFL Teachers	3.58	0.53	<b>P=0.000*</b>
	Teacher Trainers	3.31	0.65	
	Teacher Educators	3.80	0.4	
<b>Total Means</b>	EFL teachers	3.14		
	Teacher Trainers	3.17		
	Teacher Educators	3.05		

$P \leq 0.05$ .

Note: In this section of the questionnaire four-point Likert scale items, including 1. *Strongly disagree*, 2. *Disagree*, 3. *Agree*, 4. *Strongly agree*, were included.

### *Interview findings*

In summary, most EFL teachers and teacher educators/trainers perceived the use of CALL materials as useful and effective for language teaching. The majority of EFL teachers (80%) were of the opinion that using CALL materials can contribute to the quality of their teaching. Easy access, high quality, interactivity, attractiveness, and authenticity were the most important merits of CALL materials reported by most participants. Some EFL teachers (54.6%) stated that CALL materials will enhance both EFL teachers' and students' motivation and confidence to teach and learn more effectively and positively. The teacher educators (87%) asserted that it is ideal for EFL teachers to develop and use CALL materials. If EFL teachers are not able to produce CALL materials, they must participate in CALL materials development activities. This participation will help them learn how to implement changes in the syllabus. The teacher trainers (82.9%) had positive perceptions of the use and development of CALL materials by EFL teachers in EFL courses accordingly.

Moreover, the three groups of participants were positive about the development of CALL materials by EFL teachers. Most participants (87.8 %) believed that developing CALL materials by EFL teachers would improve their teaching quality, professional development, computer literacy, and involvement in decision-making processes. Some EFL teachers (57.4%) reported that they should take part in practical workshops and training sessions regarding the use and development of CALL materials. They believed that their participation in these CALL materials development workshops will contribute to their professional development and language teaching efficiency remarkably.

### **3.4.2. Challenges to developing CALL materials by EFL teachers**

#### *Survey findings*

Based on the findings (see Table 2), the majority of participants believed that lack of EFL teachers' expertise, lack of funding, cultural resistances, lack of training/education, lack of obligation to use CALL materials, and lack of computer facilities are the important barriers to the use and development of CALL materials by Iranian EFL teachers. However, lack of time to develop CALL materials was an item that teacher trainers and educators did not perceive as important while the EFL teachers agreed on the importance of it.

Table 2. Participants' perceptions of challenges to developing CALL materials by EFL teachers.

		Mean	SD	P
EFL teachers do not have the expertise to develop CALL materials	EFL Teachers	3.4	0.74	<b>P= 0.345</b>
	Teacher Trainers	3.35	0.59	
	Teacher Educators	3.47	0.5	
EFL teachers do not have time to produce CALL materials	EFL Teachers	2.92	0.66	<b>P= 0.000*</b>
	Teacher Trainers	2.18	0.98	
	Teacher Educators	2.14	0.89	
There is not enough funding for EFL teachers to develop CALL materials	EFL Teachers	3.62	0.63	<b>P= 0.000*</b>
	Teacher Trainers	2.91	0.88	
	Teacher Educators	2.80	0.52	
There are cultural resistances to the use of CALL materials in the Iranian EFL context	EFL Teachers	3.38	0.85	<b>P= 0.000*</b>
	Teacher Trainers	3.04	0.63	
	Teacher Educators	2.86	0.72	
There is not enough training / education on CALL materials development for EFL teachers	EFL Teachers	3.75	0.58	<b>P= 0.000*</b>
	Teacher Trainers	2.89	0.64	
	Teacher Educators	2.99	0.36	
EFL teachers are not required to use CALL materials by their educational supervisors and institutions	EFL Teachers	3.23	0.73	<b>P=0.91</b>
	Teacher Trainers	3.2	0.61	
	Teacher Educators	3.13	0.89	
There is not enough computer-based facilities for teachers to use/produce CALL materials in Iranian EFL courses	EFL Teachers	3.69	0.56	<b>P= 0.002*</b>
	Teacher Trainers	3.6	0.71	
	Teacher Educator	3.47	0.5	

$P \leq 0.05$

Note: In this section of the questionnaire four-point Likert scale items, including 1. *Strongly disagree*, 2. *Disagree*, 3. *Agree*, 4. *Strongly agree*, were included.

### *Interview findings*

The participants (92%) pointed out that there are not enough technological facilities to use different types of CALL materials. The EFL teachers stated that they were interested in the use and development of CALL materials, but their interest reduces when they observe that there are very limited facilities for using electronic materials. Lack of facilities was also reported by some teacher educators and trainers. Almost a half of participants (47.6%) believed that they should have access to up-to-date software tools and hardware facilities which are produced regularly. The other challenge which was reported by the majority of participants was that EFL teachers require training on how to make use of CALL materials. Currently, it seems that most EFL teachers do not have the pedagogical and technological skills to use CALL materials. Some EFL

teacher educators (53.3%) believed that teaching methods and approaches need to be reconsidered. They believe that the use and development of CALL materials by EFL teachers is not possible at present since traditional approaches to language teaching are dominant in the Iranian EFL context. There is a need to adapt instructional approaches if CALL materials are supposed to be included in the EFL curriculum.

### 3.4.3. Participants' perceptions of their CALL materials development skills

#### *Survey findings*

The total mean of EFL teachers' materials development skills is 2.44, which shows that the EFL teachers had limited proficiency and skills to produce CALL materials. The EFL teachers were perceived to be a little proficient in online language teaching materials development, development of CALL materials, knowledge of CALL materials development principles and theories. The EFL teachers were also fairly proficient in the adaptation of CALL materials to their teaching plans, computer literacy, knowledge of new CALL materials, and CALL materials evaluation (Table 3).

Table 3. EFL teachers' perceptions of their CALL materials development skills.

	Mean	SD
<b><i>How do you rate your yourself regarding</i></b>		
Developing/adapting CALL materials for an online course	1.83	0.89
Developing CALL materials for your EFL courses	2.32	1.09
Knowing the principles and theories of CALL materials development	2.25	1.06
Your ability to adapt the use of CALL materials to your teaching plans and styles	2.66	1.35
Your computer literacy to develop CALL materials	2.57	1.02
Your knowledge about new CALL materials/software	2.83	1.13
Your ability to evaluate the usefulness of CALL materials	2.64	1.03
<b>Total mean</b>	<b>2.44</b>	

Note: In this section of the questionnaire four-point Likert scale items, including 1. *Not proficient*, 2. *A little proficient*, 3. *Fairly proficient*, 4. *Proficient*, 5. *Very Proficient*, were used.

The total mean of this section for teacher educators (2.85) and teacher trainers (2.28) shows that while the teacher educators perceived themselves as fairly proficient regarding materials development skills required for teacher preparation, the teacher trainers perceived themselves as a little proficient regarding these skills (Table 4).

Table 4. Teacher educators' and teacher trainers' perceptions of their CALL materials development skills

		Mean	SD
<b><i>How do you rate your yourself regarding</i></b>			
Your ability to hold workshops on CALL materials development	Teacher Educators	2.93	0.94
	Teacher Trainers	2.43	1
Your ability to develop CALL materials	Teacher Educators	2.47	0.72
	Teacher Trainers	1.97	0.8
Your ability to prepare EFL teachers to develop/ adapt CALL materials	Teacher Educators	3.28	0.77
	Teacher Trainers	2.46	0.63
Your knowledge of principles and theories of CALL materials development	Teacher Educators	3	0.97
	Teacher Trainers	2.12	0.85
Your computer literacy to develop CALL materials	Teacher Educators	3.26	1.19
	Teacher Trainers	2.86	1.02
Your ability to prepare EFL teachers for teaching online language courses	Teacher Educators	2.14	1.15
	Teacher Trainers	1.81	0.92
<b>Total means</b>	Teacher Educators	2.85	
	Teacher Trainers	2.28	

Note: In this section of the questionnaire four-point Likert scale items, including 1. *Not proficient*, 2. *A little proficient*, 3. *Fairly proficient*, 4. *Proficient*, 5. *Very Proficient*, were used.

### *Interview findings*

The results of interviews showed that most EFL teachers (90.7%) have limited knowledge regarding the use and creation of CALL materials in EFL courses. Some EFL teachers (39.8%) asserted that they were not sure whether they possessed the necessary skills to develop CALL materials. A certain number of other EFL teachers mentioned that they did not know how to develop CALL materials. A quarter (26.8%) also asserted that they did not have the required knowledge and skills on how to produce EFL materials in general.

An overwhelming majority of the teacher educators and trainers (94.8%) believed that most EFL teachers are not able to produce and even use some CALL materials. They stated that the EFL teachers require different types of training and preparation to be able to use and develop various CALL materials.

#### **3.4.4. The current situation of CALL materials development, use, and training/education in Iran**

##### *Interview findings*

All EFL teachers asserted that they have not received any training on how produce or use CALL materials. They also reported that they have not been involved in any CALL materials production projects yet. The EFL teachers asserted that the institutions, schools, and universities did not hold any workshops or practical projects for EFL teachers on how to develop or use CALL materials. The majority of EFL teachers (87.03%) mentioned they do not use or develop CALL materials for their EFL classes.

Three quarters of the teacher trainers and teacher educators (78.6%) stated that they did not train EFL teachers to use/develop CALL materials. However, two teacher educators asserted that they lacked time to train teachers to use or produce CALL materials. Around a third of teacher trainers (37.1%) further asserted that their training syllabus is very compact and they do not have sufficient time to hold workshops or training sessions on CALL materials development/use.

##### *Observation findings*

The results of non-participant observations showed that no type of CALL materials was used in EFL classes. No CALL materials were used in any of the Iranian EFL contexts, i.e. high schools, language teaching institutions, and universities. EFL classes were not equipped with computers. In some university classes there were projectors to work with PowerPoint, but most of these PowerPoint facilities were out of order or old-fashioned.

The EFL classes of language teaching institutions were not equipped with computers. However, if there was a computer (while it was rare) it was on teacher's desks and most teachers used them to play audio files for listening activities of their textbooks. Some classes were also

equipped with TVs through which the teachers were able to show video clips or movies for students.

In EFL classes at schools, no kind of CALL materials was used. No listening activities or video files were played. Textbooks were the only materials which were used to teach English to students. Classes were not equipped with any kind of CALL facilities.

### **3.4.5. Strategies to enable EFL teachers to develop CALL materials**

#### *Interview findings*

A great majority of the EFL teachers (85.2%) mentioned that they need to find out more about both theoretical and practical aspects of CALL materials development. However, most of them (83.3%) preferred to be told about the practical aspects of CALL materials development. A great number of EFL teachers (92.6 %) suggested that training how to develop CALL materials should be included in EFL teacher education/training programs while more than a half of EFL teachers (60.2%) suggested adding specific and separate teacher preparation courses on CALL materials development for EFL teachers.

A half of EFL teachers (49.1%) stated that there should be periodic workshops and meetings on how to produce CALL materials in which EFL teachers share their experiences and skills in CALL materials development. EFL teachers also deemed that providing access to some CALL materials and software tools should be increased so that the teachers become able to adapt the use of these materials during their courses.

A demand for improvement of technological facilities and equipment was also obvious in most EFL teachers' statements. The EFL teachers were disappointed at the issue that if they acquire the ability to develop CALL materials, there may not be enough computer-based facilities to use and test those CALL materials.

The EFL teacher trainers and educators were of the opinion that we need to reconsider our EFL curriculum and enhance its flexibility to make it compatible with the use of technology and CALL materials. Most teacher educators (80%) believed that there are not enough facilities to the use and develop CALL materials. It was suggested that revisions and amendments should be implemented in EFL curricula in Iran in the near future. Most of teacher educators and trainers (84.2%) called for including practical training modules and workshops in teacher training/education programs regarding CALL materials development. Most EFL teacher



educators/trainers (73.8%) also complained about low-quality technological facilities which are available for EFL teachers to use or develop CALL materials.

Some EFL teacher educators (40%) believed that EFL teachers do not have the necessary skills to develop EFL materials in general. It was suggested that the first priority is to enable EFL teachers to acquire the required skills for EFL materials development. They claimed that only after acquiring EFL materials development skills will teachers be able to produce CALL materials.

### **3.4. Discussion**

The findings of the descriptive statistics and qualitative data clearly show that the EFL teachers, teacher trainers, and teacher educators have positive attitudes toward the use of CALL materials. Since EFL teachers play a pivotal role in the EFL curriculum, their attitudes can facilitate the implementation of changes in the curriculum (Richards, 2001). In the case of this study, the positive attitudes of the EFL teachers would have an impact on the transition from using traditional resources to CALL materials in the future.

Furthermore, regarding the importance of teacher training and teacher education in enabling EFL teachers to produce and use CALL materials effectively (Tomlinson, 2003), it can be concluded that EFL teacher educators' and trainers' positive attitudes toward the use of CALL materials might help them motivate and prepare EFL teachers to produce and make use of CALL materials. Taking into account EFL teachers' positive perceptions of CALL materials, the use and development of CALL materials will enhance their creativity, self-esteem, confidence and flexibility (Tomlinson, 2003). However, EFL teachers' positive attitude toward the use of CALL does not guarantee that the teachers will use and develop CALL materials for their teaching (Dashtestani, 2012).

These positive attitudes should be considered by educational authorities, who should take appropriate measures to enhance teachers' positive attitudes and beliefs regarding the use of CALL materials. Effective implementation of CALL is not possible when EFL teachers show negative attitudes toward the use of technology and CALL (Jones, 2001). The findings are compatible with the previous studies which reported on the positive attitudes of EFL teachers toward different aspects of CALL (Aydin, 2013; Mathews-li & Elaziz, 2010; Murday, Ushida &

Chenoweth, 2008). Therefore, the use and development of CALL materials will be promising in Iran since Iranian EFL teachers perceive the role of CALL materials as important and useful.

The findings also prove that the three groups of participants had positive perceptions about development of CALL materials by EFL teachers. Encouraging EFL teachers to develop materials, including CALL materials, is an important measure to facilitate the process of teacher development (Tomlinson, 2003). Concerning CALL materials production in the Iranian EFL context, Dashtestani (2012) argues that Iranian EFL teachers show positive attitudes toward participating in CALL materials development activities. The findings are commensurate with the findings of other studies which have pointed out the connection between the merits of EFL teachers' CALL materials development and the positive impacts on EFL teacher development (Al-Busaidi & Tindle, 2010; Canniveng & Martinez, 2003; Masuhara, 2006). As Tomlinson (2003) suggests, when EFL teachers develop materials they will improve their teaching expertise, confidence, positive attitudes, and teaching efficiency. Accordingly, teacher educators and trainers can play important roles in equipping EFL teachers with necessary CALL materials development skills to facilitate EFL teachers' process of teacher development.

Additionally, it seems that there are several obstacles to developing CALL materials by Iranian EFL teachers. One of the most important challenges is lack of technological facilities and resources to develop or use CALL materials by EFL teachers. Chapelle (2001) suggests that one of the criteria for CALL materials appropriateness is practicality, which is defined as the sufficiency of computer-based facilities and resources to use a specific type of CALL material. Therefore, EFL authorities and providers should improve practicality regarding the use of CALL materials as this would facilitate the integration of CALL materials to the EFL curricula. Several researchers have identified the problem of inadequacy of CALL facilities and stressed that these problems should be recognized and accommodated prior to the implementation of CALL and the use of CALL materials (Lam, 2000; Shin & Son, 2007; Toprakci, 2002).

The second problem is lack of teacher education/training on CALL materials development and lack of EFL teachers' expertise to produce CALL materials. It has been suggested that EFL teachers should be educated regarding how to make use of technology in their courses (Hubbard, 2008; Kessler & Plakans, 2008; Son, Robb, & Charismiadji, 2011). It is recommended that the skills necessary for CALL materials development be included in EFL teacher preparation programs in the Iranian EFL contexts.

Yet another important barrier to CALL materials production is that Iranian EFL teachers are not funded to gain access to new software tools and technological resources in language teaching. One of the most significant issues in CALL materials development is the cost of different technologies that are about to be used or developed by EFL teachers (Motteram, 2011; Reinders & White, 2010). Cultural resistances to the use of CALL materials were also other types of impediments to CALL materials development and use. The same cultural problems were reported by Dashtestani (2012) about the use of technology in Iranian EFL courses. Certain awareness-raising activities to remove these cultural problems might eliminate this obstacle. Iranian EFL teachers should be provided with sufficient and required financial supports to be able to use or develop CALL materials for their EFL courses. EFL authorities and course designers should adopt appropriate strategies to make decisions on how to provide teachers with new software tools and CALL resources.

It is equally important that the EFL teachers should not lack many basic and necessary skills to develop CALL materials. This finding confirms the assertion made by Dubin and Olshtain (1992) that EFL teachers who are accustomed to the use of traditional materials and resources are often incompetent in the use and development of modern and technology-based materials. The Iranian EFL context seems to be a case in which sticking to traditional approaches to materials development and use has obviated the need for inclusion of more interactive and modern materials such as CALL materials. The problem is more complicated since teacher trainers and educators reported that they did not have the required skills to develop CALL materials and prepare EFL teachers to develop CALL materials. It can be suggested that some CALL materials development workshops or sessions be held for EFL teacher educators and trainers in which they can achieve the practical skills to develop CALL materials. Alternatively, some separate CALL materials development teacher preparation courses and workshops can be held by experts of educational technology and EFL materials developers in which different practical and theoretical skills linked to CALL materials development can be taught to EFL teachers. The emphasis on preparing EFL teachers for the use and development of CALL materials has been pointed out by different CALL and materials development scholars (Graves, 2000; Masuhara 2006; Richards, 2001; Tomlinson, 2003).

#### 4. Conclusions

As arises from questionnaires, observations and interviews, the EFL teachers did not use or develop any specific CALL materials. It was further revealed that CALL materials production has not been included EFL teacher training and education programs. This lack of CALL materials development activities might be related to many other factors, including lack of computer-based facilities, lack of knowledge on how to develop CALL materials, and adoption of traditional approaches to EFL. If EFL authorities remove these challenges to CALL materials development, EFL teachers may take interest in changing their traditional approaches and adopt technology-enhanced approaches to language teaching.

The participants offered different suggestions for enabling EFL teachers to develop CALL materials. Most of these strategies require the EFL authorities to remove the challenges that the participants had reported earlier. Preparing EFL teachers to develop CALL materials in teacher training/education courses is one of those important strategies proposed by the majority of participants. Different studies have emphasized the inclusion of technology training in teacher education programs (Hubbard, 2008; Kessler & Plakans, 2008). The EFL authorities can pave the way for creating flexibility in the Iranian EFL curriculum so that the inclusion of CALL materials and technology becomes feasible.

Finally, there is a need to gain insight into the preferences for and attitudes toward various types of CALL materials from the perspectives of EFL teachers and learners in the Iranian EFL context. More research is also required to identify the specific types of skills that EFL teachers need to be able to make use of and produce CALL materials. The use of any kind of CALL material should be compatible with the demands of the particular context and the needs of different EFL stakeholders. Obviously, any kind of CALL material should be critically and thoroughly evaluated and analyzed prior and after its use.

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## **Appendix 1**

### ***Interview questions for EFL teachers***

1. How do you perceive the role of CALL materials in EFL teaching?
2. What is the role of developing CALL materials by EFL teachers in their professional development?
3. What are the challenges to developing CALL materials by EFL teachers?
4. How do you evaluate your ability to produce CALL materials?
5. What types of CALL materials do you use/develop in your EFL courses?
6. What types of training/education have you received regarding CALL materials development in your teacher education/training courses?
7. In your opinion, what sorts of strategies should be considered to enable EFL teachers to develop CALL materials?

### ***Interview questions for EFL teacher educators/trainers***

1. How do you perceive the role of CALL materials in EFL teaching?
2. What is the role of developing CALL materials by EFL teachers in their professional development?
3. What are the challenges to developing CALL materials by EFL teachers?
4. How do you evaluate EFL teachers' ability to produce CALL materials?

5. What types of training/education do you provide regarding CALL materials development in your teacher education/training courses?
6. In your opinion, what sorts of strategies should be considered to enable EFL teachers to develop CALL materials?

## Appendix 2

### EFL teachers' questionnaire on CALL materials development

Dear Participants,

The following questionnaire is part of a research project that investigates English as a foreign language (EFL) teachers' knowledge of the use and development of computer-assisted language learning (CALL) materials. Your responses will be treated in strict confidence and individual teachers/schools will not be identified in any report or publication. Please answer all questions as accurately as you can.

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### Demographic information

Name of institution/university/school:

University major:

Educational degree:

Position: EFL teacher ..... Teacher trainer ..... Teacher educator .....

Age:

Years of job experience:

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### *Section 1: attitudes toward the use of CALL materials and CALL materials development by EFL teachers*

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1. Strongly disagree, 2. Disagree, 3. Agree, 4. Strongly agree

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**Item 1:** EFL teachers should be able to develop CALL materials for their teaching.

**Item 2:** CALL materials are more authentic than traditional EFL materials.

**Item 3:** The use of CALL materials encourages interaction in EFL classrooms.

**Item 4:** CALL materials are more accessible than traditional materials.

**Item 5:** Producing CALL materials requires spending low costs.

**Item 6:** Immediate feedback can be provided using CALL materials.

**Item 7:** CALL materials can be easily developed.

**Item 8:** Using CALL materials will empower learners to be more autonomous.

**Item 9:** The use of CALL materials facilitates language teaching.

**Item 10:** Producing CALL materials by EFL teachers facilitates the process of teacher development.

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**Section 2: Perceptions of the challenges to developing CALL materials by EFL teachers**

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1. Strongly disagree, 2. Disagree, 3. Agree, 4. Strongly agree

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**Item 1:** EFL teachers do not have the expertise to develop CALL materials.

**Item 2:** EFL teachers do not have time to produce CALL materials.

**Item 3:** There is not enough funding for EFL teachers to develop CALL materials.

**Item 4:** There are cultural resistances to the use of CALL materials in the Iranian EFL context.

**Item 5:** There is not enough training /education on CALL materials development for EFL teachers.

**Item 6:** EFL teachers are not required to use CALL materials by their educational supervisors and institutions.

**Item 7:** There are not enough computer-based facilities for teachers to use/produce CALL materials in Iranian EFL courses.

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**Section 3: EFL teachers' perceptions of their CALL materials development skills**

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1. Not proficient, 2. A little proficient, 3. Fairly proficient, 4. Proficient, 5. Very Proficient

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**How do you rate your yourself regarding:**

**Item 1:** Developing/adapting CALL materials for an online course

**Item 2:** Developing CALL materials for your EFL courses

**Item 3:** Knowing the principles and theories of CALL materials development

**Item 4:** Your ability to adapt the use of CALL materials to your teaching plans and styles

**Item 5:** Your computer literacy to develop CALL materials

**Item 6:** Your knowledge about new CALL materials/software

**Item 7:** Your ability to evaluate the usefulness of CALL materials

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