

Teaching EFL with Interactive Whiteboards: Do the Benefits Outweigh the Drawbacks?¹

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Abstract

Interactive whiteboards (IWBs) have been used in the educational context of Iran since 2009 and formally introduced to the educational context of Iran by the Iranian Ministry of Education in 2011. This study sets out to investigate how Iranian EFL teachers use IWBs in the classroom and what difficulties and challenges they may encounter when they use this technology. To this end, a total of 71 Iranian EFL teachers who taught EFL at secondary schools participated in the study. A questionnaire and interviews were developed as the instruments. The findings revealed the positive views and perspectives of teachers about the use of IWBs, while several curricular, training, pragmatic, and infrastructural obstacles and challenges were also reported. The results also showed that the teachers used IWBs in a limited way and mostly underused them. The IWBs were mainly utilized as a means to connecting to the Internet or showing videos and pictures occasionally. The teachers believed that the IWBs can be employed to teach different language skills and sub-skills. The teachers deemed some measures such as continuous training, the change of the traditional and rigid curricula, and support from educational directors and planners as important and necessary. The study has implications for

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the proper use of IWBs and the implementation of IWB-based teacher training in EFL instruction in different parts of the world.

Keywords: Interactive whiteboard, Schools, EFL, Training, Challenges, Language skills

Introduction

Technology has been playing a constructive role in the field of education and pedagogical practices, and a great number of teachers and practitioners have considered technology as a support for teaching and learning activities (Antonietti & Colombo, 2008; Duran, Runvand, & Fossum, 2009; Friedman & Hicks, 2006; Heba & Nouby, 2008; Manfra & Hammond, 2008). At the same time, a wide spectrum of online and technological tools and equipment, such as wikis (Cole, 2009), blogs (Kuo, Belland, & Kuo, 2017), e-portfolios (Fuglík, 2013), social network sites (Weerasinghe & Hindagolla, 2018), and mobile devices (Dashtestani, 2016) have paved the way for a more interactive and authentic approach to developing learning resources and teaching practices. As a result, teachers and students' expectations and perspectives of technology use and integration have become an important research strand in educational contexts, and a wide range of studies have been implemented to scrutinize attitudes towards technology and its specific uses in educational settings (Al-Emran, Elsherif, & Shaalan, 2016; Ankiewicz, 2019; Frantom, Green, & Hoffman, 2002; Proctor & Marks, 2013; Rohaan, Taconis, & Jochems, 2010; Wright, Washer, Watkins, & Scott, 2008).

In English as a foreign language (EFL) contexts, computer-assisted language learning (CALL) has facilitated the application of technology for teaching and learning foreign languages and created considerable pedagogical and learning opportunities for both EFL students and teachers (Beatty, 2013; Celik, 2013; Kim & Rissel 2008; Lai, Shum, & Tian, 2016; Solano, Cabrera, Ulehlova, & Espinoza, 2017; Timucin, 2009). Similarly, delving into teachers and students' attitudes and beliefs about the use of modern technologies in EFL contexts has attracted the attention of a plethora of researchers and language teaching experts (Ayres, 2002; Baz, 2016; Hismanoglu & Hismanoglu, 2011; Stepp-Greany, 2002; Vandewaetere, & Desmet, 2009; Wiebe, & Kabata, 2010).

Manny-Ikan, Dagan, Tikochinski, and Zorman, (2011, p. 250) define the interactive whiteboard (IWB) as:

a technology made up of a computer connected to both a projector and a touch-sensitive board that presents the pictures projected from the computer, allows for changes, and receives input electronically or by touch. The software for the IWBs allows a range of activities, including those that can be used without the use of the IWB (e.g., projecting presentations and short films, writing, and erasing the board) as well as activities unique to this technology.

ers' technical confidence in the use of IWBs is a determining factor in designing and structuring lessons and engaging students in class activities and practices. They also recommended the extensive use of IWBs in the class discourse by students and teachers in order to maximize their positive effects. In another IWB-based study, Korkmaz and Cakil (2013) strove to find out the difficulties and challenges teachers face when using IWBs. More specifically, they tried to uncover factors or reasons which demotivated teachers from using IWBs in the class. Interviews were the main instrument of this qualitative study. Document analysis was also conducted to enrich the results of the study. It was shown that the teachers have an overall positive attitude towards using IWBs, but they do not make adequate use of them in the class. The most important impeding factor was teachers' lack of knowledge of and familiarity with the proper use of IWBs in education. The perceived benefits of the use of IWBs included time efficiency, the provision of visual aids, and contribution to student learning. The occurrence of technical problems during the use of IWBs and the lack of teachers' preparation for fixing these technical problems were the major limitations of the use of IWBs in educational contexts. In Saudi Arabia, Bakadam and Asiri (2012) implemented a mixed-methods study using questionnaires and interviews to explore teachers' perspectives on the use of IWBs. The teachers were of the opinion that using IWBs was an efficacious way to present the learning content and thus create an interactive atmosphere in the classroom. The findings also revealed that the majority of teachers under-used IWBs and used them only as a searching tool or as an overhead projector. It was reported that teachers' under-use of IWBs was mainly due to their lack of training and knowledge of using IWBs. The authors recommended that more training be provided for teachers on how to use IWBs. Also, the number of students in an IWB-based class was shown to be a determining factor for exploiting the advantages of IWBs in the classroom.

Regarding the use of IWBs in language learning and EFL contexts, Yang and Teng (2014) assessed students' and teachers' attitudes towards the use of IWBs for learning English. The results of the interview study indicated that one important factor in the effective use of IWBs in EFL contexts was teachers' adequate technical skills and professional knowledge of the teaching goals and objectives. The study showed the positive perceptions of the teachers and students regarding the use of IWBs. The occurrence of technical issues and problems and the lack of access to IWBs were two important challenges for the use of IWBs in language learning contexts. Mathews-Aydinli and Elaziz (2010) reported on Turkish EFL students' and teachers' perspectives of using IWBs for learning English. They reported that the teachers were aware of the benefits of the use of IWBs in the class and adopted a generally positive attitude towards IWBs. It was further suggested that the more frequent use of IWBs can foster teachers' attitudes towards them as beneficial teaching tools. Alshaikhi (2017) investigated EFL teachers' views about the use of IWBs in Jeddah. The technology acceptance model (TAM) was used in the study. The findings of the questionnaires and interviews were indicative of the positive views of the EFL teachers about the ease and benefits of using IWBs in EFL teaching. The teach-

ers believed that the use of IWBs would motivate their students and engage them in cooperative learning activities. The teachers viewed the use of IWBs to be generally easy, but they required training for using some functions of IWBs in the classroom.

In the context of Iran, Amiri and Sharifi (2014) evaluated the effect of IWBs on Iranian students' writing proficiency. Having conducted a mixed-methods study, they argued that the use of IWB helped EFL students promote their accuracy in using adverbs. Ghaniabadi, Amirian, Khalilabad, and Nafchi (2016) investigated the influence of using IWBs on Iranian high-school students' reading comprehension proficiency. The results of the experimental study indicated that IWBs can be influential tools for fostering Iranian students' performance on reading comprehension tasks. Shams and Dabaghi (2014) carried out a study on the effect of the use of online annotation through IWBs on Iranian EFL learners' reading comprehension performance. The findings of this study illustrated that the use of video annotation through the IWB had a significant effect on the learners' reading comprehension ability. Moreover, Bidaki and Mobasheri (2013) examined teachers' beliefs about the application of IWBs. The study was designed based on questionnaires and interviews. The results indicated the positive effects of IWBs on pedagogical practices, student attraction, and time efficiency. It was also depicted that student involvement was increased through the use of IWBs and students were more interested in cooperating to learn and participating in discussions. The other facilitative role of IWBs was that they motivated students and teachers to use a wider range of technologies and digital tools in the classroom. On the contrary, there existed some challenges for the use of IWBs in educational contexts, including the lack of appropriate and required IWB-based training for teachers, the high cost of IWBs, and the provision of required software tools for using IWBs.

The Purpose of the Study

Recently, there has been tremendous emphasis on the incorporation of learning technologies in the language learning context of Iran (Dashtestani, 2016). Several studies have shown the positive response and attitudes of Iranian learners and teachers towards the use of technological devices and innovations in the context of English language learning. In recent years, the Ministry of Education of Iran has encouraged and, at times, obliged schools to use IWBs for teaching different school subjects. However, the required pragmatic infrastructures and human resources are important prerequisites for the successful inclusion of IWBs in the context of Iran. Nowadays, many Iranian private schools and a few public ones have integrated IWBs into their classes in an attempt to pave the way for the development of smart schools. However, Iranian teachers will face several challenges, including promoting their digital literacy, adapting their teaching techniques to learning technologies, and motivating students to accept new technologies such as IWBs.

Although a significant body of research has been carried out on the efficiency of the use of IWBs in general educational contexts (e.g., Bakadam & Asiri, 2012; Bidaki & Mobasheri, 2013; Emeagwali & Naghdipour, 2013; Korkmaz & Cakil, 2013), fewer studies have been conducted in the field of language learning. More importantly, while few studies have focused on students' attitudes towards and use of IWBs in the context of Iran (e.g., Amiri & Sharifi, 2014; Shams & Dabaghi, 2014), limited research has examined the perspectives of Iranian EFL teachers regarding the possible and potential challenges and limitations of using IWBs in EFL teaching. As previously mentioned, the context of Iran is also a specific one because considerable attempts are being made in it for integrating technology in the educational contexts of schools, and it seems that more research and attention should be directed to the human resource factor in this regard. Therefore, the present study set out to fill in this gap and provide insights into EFL teachers' challenges, difficulties, and perspectives of the use of IWBs in the EFL teaching context of Iranian schools. The findings of this study will provide educational decision-makers and directors with concrete challenges of the integration of IWBs and will help them find more practical and realistic solutions for removing these obstacles. The study can also encourage further research on the appropriateness of the use of IWBs for the EFL context of Iran. Therefore, the following research questions were posed in this study:

1. What are Iranian EFL teachers' attitudes towards the use of IWBs in Iranian EFL courses?
2. What are Iranian EFL teachers' perspectives on the challenges of using IWBs in Iranian EFL courses?
3. What are Iranian EFL teachers' perspectives on the features of IWBs they use in Iranian EFL courses?
4. What are Iranian EFL teachers' perspectives on the skills that should be taught by IWBs in Iranian EFL courses?
5. What are Iranian EFL teachers' perspectives of the measures for optimizing the use of IWBs in Iranian EFL courses?

Method

Participants

The participants were 71 EFL teachers who taught at 16 secondary schools in Iran. The teachers were selected from schools in Tehran and Alborz Provinces. All teachers had the experience of using IWBs (3.2 years) and perceived to have an intermediate level of digital literacy. All the teachers perceived their level of English proficiency as advanced. The average age of the teachers was 37.8 years. The sample included 48 female teachers and 23 male teachers. The teachers reported to have an upper-intermediate to advanced level of English proficiency. They also had an average 8.2 years of EFL teaching experience at Iranian secondary schools, and taught EFL at schools which were equipped with IWBs.

Instruments

The study benefited from both quantitative and qualitative data sources required for a more comprehensive delineation of the teachers' attitudes. First, a questionnaire was developed based on the findings, theoretical frameworks, and concepts appearing in previous research on teachers' attitudes towards using IWBs in educational and EFL settings (e.g., Alshaikhi, 2017; Korkmaz & Cakil, 2013; Mathews-Aydinli & Elaziz, 2010; Tertemiz et al., 2015; Yang & Teng, 2014). Five teachers who used IWBs were further interviewed, and some items of the questionnaire were developed based on their comments and beliefs. The questionnaire included five sections. The first section comprised 20 items and investigated EFL teachers' attitudes towards the use of IWBs. The second section consisted of 10 items and explored EFL teachers' perspectives on the challenges of the use of IWBs. The third section was an investigation into EFL teachers' perspectives of the features of IWBs they used (12 items). The fourth section surveyed EFL teachers' perspectives on the skills that should be taught by IWBs (seven items). The last section examined EFL teachers' perspectives of the measures to optimize the use of IWBs in EFL courses and included six items. In general, the questionnaire included 55 items. A five-point Likert scale was employed for scoring the items. A panel of six professors of Applied Linguistics checked the items of the questionnaire. The questionnaire was also piloted before use. The reliability of the questionnaire was checked by estimating Cronbach's alpha and a high range was achieved (0.80-0.92).

The interview questions were designed based on the aims of the questionnaire, i.e. investigating EFL teachers' attitudes towards the use of IWBs and their perspectives of the challenges facing the use of IWBs, the features of IWBs they used, the skills that should be taught by IWBs, the measures to optimize the use of IWBs in EFL courses. A panel of six professors of Applied Linguistics checked the questions of the interview.

Data Analysis

For each item of the questionnaire, the mean and standard deviation were estimated and presented in tables. The interview data were analyzed and, after content analysis, the common emerging themes were detected and reported. Two raters coded the data (inter-rater agreement of 94%) and the common themes mentioned by both raters were reported.

Results

Attitudes towards the Use of IWBs

Questionnaire Findings

Table 1 shows the attitudes of Iranian EFL teachers towards the use of IWBs. The teachers expressed their agreement on some benefits of the use of IWBs such as improving students' motivation, ease of use, helping with lesson plan-

ning, increasing teacher' and students' interaction, possibility of reviewing lessons, time efficiency, considering different learning styles, collaborative learning, fostering students' digital literacy, the use of multimedia, providing comprehensible input, more access to information, and possibility of data preservation.

Table 1.
Questionnaire Results of EFL Teachers' Attitudes towards the Use of IWBs

Items	Mean	Standard deviation
1. Using IWBs improves students' English learning.	4.52	0.89
2. IWBs are easy to use.	3.99	1.05
3. Using IWBs provides flexibility in the classroom.	2.91	0.82
4. Using IWBs facilitates lesson planning.	4.22	0.97
5. Using IWBs increases the interaction level between teachers and students.	4.45	0.92
6. Reviewing lessons can be easier by using IWBs.	4.33	0.9
7. Using IWBs is cost-effective.	3.22	1.01
8. Using IWBs is time-efficient.	4.59	0.74
9. Using IWBs promotes students' motivation to learn EFL.	4.25	0.84
10. Using IWBs can foster EFL teachers' digital literacy.	3.40	0.92
11. By using IWBs, different learning styles are taken into account.	4.12	0.93
12. Using IWBs encourages collaborative learning.	4.27	0.88
13. Using IWBs promotes negotiation of meaning among students.	3.32	1.2
14. Using IWBs can foster EFL students' digital literacy.	4.05	0.96
15. Using IWBs enables teachers to use multimedia in the classroom.	4.18	0.83
16. Personalized content can be provided via IWBs.	3.25	1.03
17. Comprehensible input can be provided via IWBs.	4.01	0.91
18. Using IWBs makes students responsible for learning.	2.88	0.94
19. IWBs help data preservation of lessons.	4.16	0.91
20. IWBs make information more accessible for teachers and students.	4.14	0.63

Scales: 1. Strongly disagree; 2. Disagree; 3. Uncertain; 4. Agree; 5. Strongly agree

Interview Findings

The participants pointed out several benefits of the use of IWBs for EFL teaching such as increasing students' motivation, facilitating EFL teaching, making the EFL class interactive, providing access to the Internet, enabling teachers to record lessons and review them later, promoting students' ability to memories the content, and encouraging teachers to use more effective teaching techniques/practices (Table 2).

Table 2.
Interview Results of EFL Teachers' Attitudes towards the Use of IWBs

Themes	Excerpts
Theme 1: The use of IWBs increases students' motivation	<i>Teacher 21: "I believe IWBs are very interesting for many students. They increase students' motivation to learn new content and use it."</i>

Themes	Excerpts
Theme 2: The use of IWBs facilitates EFL teaching	<i>Teacher 6: "My understanding of the IWB tells me that it is something that can make my teaching much easier. The teacher does not have to speak a lot or be the focus of all classroom activities and processes."</i>
Theme 3: The use of IWBs makes the EFL class interactive	<i>Teacher 19: "Generally speaking, I am in support of technology use in the class. IWBs in particular are interesting to me since they can increase the level of interaction in the class. Cooperative learning can be more obvious using IWBs I suppose."</i>
Theme 4: The use of IWBs provides access to the Internet	<i>Teacher 57: "Connecting to the Internet is an important need for us. I think IWBs can help us connect to the Internet more easily."</i>
Theme 5: The use of IWBs enables teachers to record lessons and review them later	<i>Teacher 18: "To be honest, the use of IWBs makes our work easier since all lessons can be recorded and saved. We do not need to repeat the teaching content all the time and waste our energy."</i>
Theme 6: The use of IWBs promotes students' ability to memorize the content	<i>Teacher 66: "One major problem of our learners is that they cannot learn vocabulary items and other things by heart. I think the use of video and audio is a tool to strengthen our students' memorization skills and abilities."</i>
Theme 7: The use of IWBs encourages teachers to use more effective teaching techniques/practices	<i>Teacher 30: "My opinion is that digital tools can improve our teaching practices. When you use learning technologies, you need to learn how to include them in your teaching and this is not an easy undertaking."</i>

Challenges of the Use of IWBs

Questionnaire Findings

Based on the figures shown in Table 3, the EFL teachers perceived several limitations for the use of IWBs in EFL courses. The perceived challenges comprised technical problems when using IWBs, lack of access to IWB-based software tools, lack of technical support when using IWBs, lack of knowledge of how to use IWBs for language teaching purposes, EFL teachers' low digital literacy levels for using IWBs, lack of support from educational supervisors/ directors, and little time available for using IWBs in the EFL class.

Table 3.

Questionnaire Results of EFL teachers' Perspectives of the Challenges of the Use of IWBs

Items	Mean	Standard deviation
1. Technical problems when using IWBs	4.16	0.87
2. Lack of access to IWB-based software tools	4.07	0.85
3. Lack of training for EFL teachers regarding the use of IWBs	4.35	0.94
4. The high costs of using IWBs	3.36	0.77
5. Lack of technical support when using IWBs	4.35	0.86
6. Lack of knowledge of how to use IWBs for language teaching purposes	4.21	0.96
7. EFL teachers' low digital literacy levels to use IWBs	4.02	0.92
8. Students' lack of interest in the use of IWBs for EFL leaning	3.47	1.18
9. Lack of support from educational supervisors/directors	4.32	0.48
10. Lack of time to use IWBs in the EFL class	3.59	0.92

Scales: 1. Strongly disagree; 2. Disagree; 3. Uncertain; 4. Agree; 5. Strongly agree

Interview Findings

Table 4 indicates some challenges of IWB use in EFL teaching, including insufficient training for IWB use, restrictions of the rigid EFL curriculum, the low digital literacy of older teachers, the emphasis on using traditional approaches/methods, and the lack of attention of educational directors/planners to IWB use.

Table 4.
Interview Results of EFL Teachers' Perspectives on the Challenges of the Use of IWBs

Themes	Excerpts
Theme 1: Insufficient training for IWB use	<i>Teacher 16: "As far as I am concerned, IWBs are useful provided that teachers receive some training for their proper use. At present, we do not receive appropriate training for using these technologies."</i>
Theme 2: Restrictions of the rigid EFL curriculum	<i>Teacher 48: "We are very restricted by the inflexible curriculum. Sometimes, the inclusion of technology is not possible due to the lack of time, our busy schedule, etc."</i>
Theme 3: The low digital literacy of older teachers	<i>Teacher 7: "Digital literacy is a necessity for all teachers. Many of my colleagues cannot work even with some common and simple technologies. Of course, younger colleagues are more skilled in the use of technologies, but I really doubt the older ones have such a literacy."</i>
Theme 4: Emphasis on using traditional approaches/methods	<i>Teacher 19: "Our language teaching system is old and dysfunctional. How do you expect that we use IWBs in our classes when our teaching methods and techniques are not efficient enough?"</i>
Theme 5: The lack of attention of educational directors/planners to IWB use	<i>Teacher 27: "I think nobody takes care whether we use IWBs or not. More attention is needed on the part of our educational authorities to include technology in our teaching."</i>

The Use of IWB Features by EFL Teachers

Questionnaire Findings

The results of the questionnaire for EFL teachers' perspectives of the features of IWBs they use revealed the limited use of IWBs and their features by the EFL teacher. The teachers reported that they sometimes used the Internet and rarely showed images/videos or played audio files using the IWB (Table 5).

Table 5.
Questionnaire Results of EFL Teachers' Perspectives of the Features of IWBs they Use

Items	Mean	Standard Deviation
1. Recording lessons/lectures	1.34	0.98
2. Using handwriting recognition features	1.25	1.01
3. Using the Internet	3.12	0.92
4. Using drawing recognition features	1.18	0.8
5. Importing images and videos	1.65	0.86
6. IWB sharing	1.2	0.9
7. Making annotations	1.31	0.93
8. Showing images/videos	2.34	0.85
9. Using audio features	2.11	0.81

Items	Mean	Standard Deviation
10. Drawing	1.19	0.79
11. Using different fonts	1.9	0.93
12. Using different font colors	1.76	0.9

Scales: 1. Never; 2. Rarely; 3. Sometimes; 4. Often; 5. Always

Interview findings

The interview data supported the questionnaire data. The teacher reported that they did not use or rarely used the IWB and that the IWB was used as a searching tool or a means for connecting to the Internet (Table 6).

Table 6.

Interview Results of EFL Teachers' Perspectives of the Features of IWBs they Use

Themes	Excerpts
Theme 1: The majority of teachers do not use IWBs or rarely use them	<i>Teacher 14: "Unfortunately, my use of the IWBs in the class is very limited and, to be honest, I rarely use them."</i>
Theme 2: They occasionally use the IWB as a searching tool	<i>Teacher 40: "We really use them in a limited way. I usually use IWBs for searching the net and finding something useful if we have fair Internet services."</i>
Theme 3: They occasionally use the Internet	<i>Teacher 39: "Well, I suppose the Internet is my choice for use of IWBs."</i>

Skills that Should be Taught by IWBs

Questionnaire Findings

The participants believed that the IWB is suitable for teaching writing, listening comprehension, pronunciation, grammar, and vocabulary. However, they were undecided about the use of IWBs for teaching reading comprehension and speaking (Table 7).

Table 7.

Questionnaire results for EFL teachers' perspectives of the skills that should be taught by IWBs

Items	Mean	Standard deviation
1. Use of IWBs for teaching reading comprehension	3.5	0.88
2. Use of IWBs for teaching writing	4.23	0.81
3. Use of IWBs for teaching listening comprehension	4.16	0.78
4. Use of IWBs for teaching speaking	3.1	0.94
5. Use of IWBs for teaching pronunciation	3.97	0.91
6. Use of IWBs for teaching grammar	4.26	0.9
7. Use of IWBs for teaching vocabulary	4.3	0.84

Scales: 1. Strongly disagree; 2. Disagree; 3. Uncertain; 4. Agree; 5. Strongly agree

Interview Findings

The interview results showed that the teachers perceived that IWBs are suitable for teaching all skills and are effective for improving students' skill learning (Table 8).

Table 8.*Interview results for EFL teachers' perspectives of the skills that should be taught by IWBs*

Themes	Excerpts
Theme 1: IWBs can be used for teaching all skills	<i>Teacher 45: "IWBs are very good technologies which can be used for teaching all language skills and concepts. I personally believe they are like books which can teach learners all the skills."</i>
Theme 2: IWB can help students learn language skills more effectively	<i>Teacher 50: "All skills, especially listening and reading, can be improved via IWBs. They will improve the learning of skills in general."</i>

Measures to Optimize the Use of IWBs in EFL Courses

Questionnaire Findings

According to the teachers, "training teachers for using IWBs", "providing IWB-based software tools", "providing technical assistance for teachers", "fostering teachers' digital literacy levels", and "allocating more time to the use of IWBs" were important measures to be taken to facilitate the use of IWBs in EFL courses (Table 9).

Table 9.*Questionnaire Results of EFL Teachers' Perspectives of the Measures to Optimize the Use of IWBs in EFL Courses*

Items	Mean	Standard deviation
1. Training teachers to use IWBs	4.67	0.76
2. Providing IWB-based software tools	4.12	0.84
3. Providing technical assistance for teachers	4.15	0.92
4. Fostering teachers' digital literacy levels	3.96	1
5. Allocating more time to the use of IWBs	4.01	0.87

Scales: 1. Strongly disagree; 2. Disagree; 3. Uncertain; 4. Agree; 5. Strongly agree

Interview Findings

The participants regarded some measures such as "providing training for teachers", "holding periodic workshops", "encouraging teachers to use IWBs", and "decreasing unexpected technical problems" as important (Table 10).

Table 10.*Interview Results of EFL Teachers' Perspectives of the Measures to Optimize the Use of IWBs in EFL Courses*

Themes	Excerpts
Theme 1: Providing training for teachers	<i>Teacher 1: "It is a good idea to train and instruct teachers on how to use IWBs more effectively. I am interested in learning more about its use."</i>
Theme 2: Holding periodic workshops	<i>Teacher 12: "I think having courses on using IWBs is a bit time-consuming and hard for teachers. I guess some workshops can help us get acquainted with the use of IWBs more effectively."</i>
Theme 3: Encouraging teachers to use IWBs	<i>Teacher 53: "We are not motivated to use IWBs. When we can teach without them why bothering ourselves with using them? We</i>

Themes	Excerpts
	<i>must be motivated and persuaded to use IWBs. Without such motivation, teachers will not use them."</i>
Theme 4: Decreasing unexpected technical problems	<i>Teacher 24: "I am always afraid of the unexpected problem which might occur while I am using the IWB. You know, it's a bit hard to manage the class with teenage students and find a way to solve the technical problems of IWBs."</i>

Discussion

The overall results of the study provided substantial evidence that Iranian EFL teachers have positive attitudes towards the use of IWBs for teaching EFL. This finding is in accordance with that of previous research studies which illustrated the positive responses of teachers to IWB use in educational contexts (Mathews-Aydinli & Elaziz, 2010, Tertemiz et al., 2015; Yang & Teng, 2014). One important perceived benefit of the use of IWBs for EFL teaching was the increase in the level of interaction. This finding was also reported by Bidaki and Mobasheri (2013) in that the use of IWBs increased the rate of student involvement in the class. Bakadam and Asiri (2012) also pointed out that the use of IWBs can increase the interaction rate in the classroom. Alshaikhi (2017) found the same benefit for the use of IWBs and reported that IWB use can encourage students to participate in cooperative learning activities. While the majority of previous studies focusing on the use of IWBs were about universities or other educational contexts, this study provided insights into the positive attitudes of Iranian teachers at the secondary school level. Thus, the context of the secondary school was a new perspective that was not previously reflected in the literature. It can be claimed that IWBs are effective and beneficial teaching and learning tools from the viewpoint of Iranian EFL teachers of the secondary school level. This positive view can have direct effects on the actual use of IWBs in EFL courses if more support and attention is paid by educational planners and directors.

Interestingly, the use of IWBs in EFL courses is perceived to be influenced by several challenges and impeding factors. These challenges and limitations were also reported in previous research studies. For instance, the lack of training on how to use IWBs was a challenge echoed in this study and previous studies as well (Alshaikhi, 2017; Bakadam & Asiri, 2012; Lopez & Krockover, 2014). Another serious challenge in the context of Iran is adherence to some traditional approaches and techniques of teaching based on the perspective of the teachers. This is a point which needs to be taken into account seriously and meticulously. Curricular restrictions are the other factor which can stop teachers from using technologies, including IWBs, in the EFL classroom. In the long run, the presence of these obstacles lowers teachers' confidence to use IWBs in the EFL class. Technical problems occurring during IWB use can be frustrating and at times challenging for many EFL teachers. Teachers should be able to fix some common and basic technical problems and for more complicated problems, technical assistance can be provided by professional experts of IWBs. The issue of limitations and shortcomings of IWBs has not been dealt with in the previous

literature. For example, the lack of access to IWB-based software tools was a finding not echoed in previous research. Even though many countries may have proper access to IWB-based software and hardware tools, such access is not possible for all teachers in Iran. The other unique finding of this study is linked to the negligence of Iranian educational policy-makers and directors about providing support for teachers to use IWBs. Teachers should be motivated and encouraged in order to implement change in their teaching practices and approaches.

In terms of using different functions and features of IWBs, the findings suggested most Iranian teachers underuse IWBs in the EFL context of Iran. Besides, Iranian EFL teachers make use of IWBs scarcely. This is a fact which is in contrast to their positive attitudes towards the use of IWBs in EFL instruction. This finding is commensurate with previous research which showed the limited use of IWBs by teachers (i.e. using IWBs as searching tools) (Bakadam & Asiri, 2012). Many useful features of IWBs such as the possibility of recording lessons and other audio-visual properties are not used by many Iranian EFL teachers. The lack of the use of IWB features and functions might be directly linked to teachers' inability and lack of knowledge about how to use IWBs. Continuous and periodic on-the-job training can gradually solve this challenge. This study did not limit itself to the general use of IWBs and delved into the specific use of IWBs by EFL teachers. The previous research mainly focused on the general use of IWBs. This study more purposefully showed that many aspects and functions of IWBs are not used and sometimes underused by Iranian EFL teachers.

The participants further agreed that IWBs can be used for teaching different language skills and sub-skills. This finding confirms the positive attitudes of EFL teachers towards using IWBs for EFL teaching. At the same time, the finding raises the question of whether Iranian EFL teachers are able to teach different language skills through using IWBs or not. It is paramount that specific and skills-based training be provided for Iranian EFL teachers in order for them to make optimum use of IWBs in their teaching practices. The awareness of Iranian EFL teachers of the benefits of using IWBs for teaching different language skills is important. In previous studies, the general acceptance of teachers and students was reported, while in this study, the awareness of the benefits of using IWBs for each language skill was investigated and reported. Awareness and attitudes are different issues which have been regarded as similar concepts in previous studies.

Finally, the teachers believed that some measures should be taken in order to facilitate the use of IWBs in the teaching context. Training is a very important measure mentioned both in the questionnaires and interviews. Providing the necessary IWB-based software tools is another strategy which should be directed towards educational supervisors and decision-makers. More importantly, Iranian EFL teachers need to be encouraged and motivated to use different technologies, including IWBs, in their teaching practices. The study clearly depicted that in the Iranian EFL context, tremendous support and attention should be directed towards teachers' use of IWBs.

Conclusion and Implications

The study revealed some important challenges and difficulties with regard to the use of IWBs in the Iranian EFL context. The optimum use of IWBs in the EFL context of Iran requires the provision of appropriate levels of digital literacy, pedagogical and technological infrastructures, and facilitation of altitudinal and psychological milieu of IWB use. Digital literacies of teachers are one determining factor in incorporating and normalizing any type of technology in language learning contexts (Dashtetani, 2014). In addition to digital literacy promotion, proper pedagogical and technological use of IWBs should be delineated and conveyed to Iranian EFL teachers on a regular basis. The positive responses of teachers cannot guarantee the continuous and effective use of technology in EFL teaching contexts (Dashtetani, 2012). Therefore, teachers should be guided and trained on how to experience and use the positive effects of technology in the reality of the classroom.

One prominent issue might be the acceptance of the IWB technology by students. Teachers and students as the main players of the educational context and as the major human resources, they need to accept the IWB technology first and then be encouraged and motivated to use the technology as a normalized one. Educational planners and supervisors should provide encouragement and awareness-raising measures in addition to training sessions and courses both for teachers and students.

More importantly, the findings suggested that Iranian EFL teachers underuse IWBs for educational purposes. Unfortunately, the IWB technology is commonly used as a searching tool and for connecting to the Internet only. This is the most basic function or feature of the IWB. IWB is a staunch presentation and teaching tool which can make the atmosphere of the classroom interactive and cooperative. Training is one of the options which can facilitate and encourage teachers to use all the features of an IWB for EFL teaching. The other problem may be linked to teachers' low levels of digital literacy. Thus, future research should investigate factors which demotivate teachers from using the majority of useful functions of IWBs.

The study has implications for educational directors and decision-makers at the secondary school level. The findings of the study can depict the various technology-based needs of Iranian EFL teachers and thus pave the way for a more realistic development of EFL courses based on the requirements of technology-enhanced environments. In addition, the Ministry of Education can use the findings of this study in order to detect the possible curricular, administrative, and financial restrictions of Iranian EFL courses at the secondary school level. The study may also have implications for EFL materials developers and software designers and providers. If the IWB is to be used in the EFL context of Iran, some specific software tools and applications are required to be developed or provided. More specifically, both hardware and software infrastructures are required for the successful integration of IWBs in Iranian EFL courses.

One delimitation of this study was that students were not included so that the authors could conduct a more in-depth investigation into teachers' attitudes and views. As a result, further research is required to examine Iranian EFL students' use of and attitudes towards IWBs. One limitation of the study was that the participants' English proficiency and technological and pedagogical knowledge were not evaluated and controlled. The reason was that the school principals restricted data collection due to the regulations of conducting research at schools. Moreover, the participants were busy teachers who could not participate in a multi-phased study and there was a concern for subject mortality. However, extreme care and caution were taken to include teachers who were appropriate cases for the study. The questionnaire's construct was not validated since the number of participants was not adequate to run factor analysis or other similar statistical tests. The other issue is that, in a top-down curriculum, teachers will not have much freedom to choose what to teach and what technology to implement. Based on the findings of this study, curricular restrictions and rigidity play an important role in EFL teachers' lack of technology use. In order to include modern technologies in the EFL curriculum of Iran, it is paramount that a more interactive type of curriculum be considered and implemented.

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