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An Analysis of Teachers' and Students' Perceptions on the Use of Smart Boards in Foreign Language Classrooms

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Abstract: This study aims to explore the effectiveness of smart board use in language learning and teaching at the School of Foreign Languages (AUSFL), Anadolu University, Turkey. The study was conducted with teachers and students chosen by convenience sampling method in AUSFL in the 2016-2017 academic year. The participants were six volunteer teachers and 266 students who were taught English by using smart boards. The teachers carried out at least 4 hours of their classes in the classrooms which are equipped with smart boards. The data were gathered by using both qualitative and quantitative methods including surveys,

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questionnaires and semi-structured interviews. The data analysis revealed that both teachers and students found the use of smart boards effective in terms of bringing fun and variety along with better learning to the class.

Keywords: Foreign Language Education, Improving Classroom Teaching, Interactive Learning Environments, Educational Technology, Smart Boards.

Introduction

The place and importance of technological devices in the field of education has become incontrovertible and this has led to the increase of the use of digital learning environments in foreign language learning. Especially in recent years, interactive smart boards which make learning more effective, enjoyable and permanent by supporting interactive and cooperative learning have come first among these digital learning environment technologies (Bulut & Koçoğlu, 2012; Gürol, Donmuş, & Arslan, 2012; Elaziz, 2008; Mathews-Aydınlı & Elaziz, 2010) Smart boards give students an opportunity to share their questions and answers without revealing their names or identities with additional tools such as interactive student response systems, which are remotely controlled tools. With the help of this feature, smart boards help overcome students' shyness and lack of self-confidence which are among the most important problems in foreign language learning. Moreover, the use of smart boards contributes to students' success by supporting students with different learning styles and personalities and facilitating their language learning process. (Momani, Alshaikhi & Al-Inizi, 2016). Several studies (Balta & Duran, 2015; Campbell & Martin, 2010; Elaziz, 2008; Mathews-Aydınlı & Elaziz, 2010) proved that the use of technology in class motivates students and increases their attention to the lesson.

Anadolu University School of Foreign Languages (AUSFL), which offers mandatory and elective intensive English preparatory courses to help about 3000 students each year to cope with their departmental studies aims to make classroom-learning environment more effective by applying contemporary methods. Taking advantage of the benefits of technology in full measure in AUSFL is believed to contribute to increasing the quality of education. Provision of smart boards, which reinforces students' interactive and cooperative learning and makes learning more effective and enjoyable, may help the realization of this aim. It was anticipated that with the use of smart boards in class, our students who are digital natives would participate in classes more

enthusiastically. To this end, the study primarily targeted to determine the teachers' and students' perceptions on the effectiveness of using smart boards in language classes.

Review of Literature

Smart boards

Over the past several decades, technology has come to play an important role in many areas of education, including second and foreign language instruction (Mathews-Aydınlı & Elaziz, 2010). One of the technological tools is smart board which is also named as Interactive Whiteboard (IWB) and it can be defined as a new generation board that has been regarded as a helpful technology that enhances students' learning and motivation, and facilitates instruction for teachers (Türel & Demirli, 2011). By virtue of the supported features of IWB software, IWBs allow users to design and use their own course materials in any file format such as IWB software files, PowerPoint presentations, and Flash animations. By touching on the board with a finger or an IWB stylus, teachers and/or students can control any application running on the computer. Thus, users can manipulate and interact with the course content on the computer from the board by making use of various facilities including highlighting, annotating, drag-and-drop activities, screen shade, zooming, screen-sharing over the Internet, and connection to web-based applications (Türel & Demirli, 2010). Due to the use of different terminology for the same device, in this article, the terms smart board and interactive white board (IWB) are used interchangibly in this paper.

Studies on smart boards

Studies on smart boards have looked at different aspects of them by focusing on both teachers and learners. Some of these studies have been related to the perceptions and attitudes of learners and teachers on the use of smart boards revealing that learners felt positive about the lessons in which smart boards were used, and teachers observed that their lessons were more effective and productive in spite of the difficulties in preparing lessons (Gursul & Tozmaz, 2010; Manny-Ikan, Dagan, Berger-Tikochinski, & Zorman, 2011; Mathews-Aydınlı & Elaziz, 2010). Some recent ones have also been related to student success and the learning process including

gradual learning, and these studies have asserted that integrating smarts boards makes it easy to remember the information and interactive learning which has reinforced effective learning (Miller & Glover, 2009), by increasing the cooperation among students (Schmidt, 2008) and by creating an environment in which students can participate in class activities without revealing their identities and compare their answers with other students, thus, scaffolding language learning (Schmidt, 2007).

As the studies have revealed, compared to other technologies smart boards provide flexibility for teachers (Slay, Siebörger, & Hodgkinson-Williams, 2008), and with more flexible materials, new instructional situations may be designed (Gashan & Alshumaimeri, 2015). However, smart boards themselves cannot be more than a teaching tool so training teachers on how to use smart boards is highly important (Mercer, Hennessy & Warwick, 2010). Getting the most efficient benefits from smart boards is related to how, for what purpose, with which pedagogical beliefs teachers use them (Mercer, Hennessy & Warwick, 2010; Toscu, 2010). Smart boards provide opportunities to design suitable materials including various activities related to different learning styles to ensure students' active participation (Schmidt, 2010). In order to improve learning with smart boards, it is crucial to support and train teachers to be qualified educators (Schmidt, 2009). Otherwise, lack of sufficient training will pose a problem for the teacher during teaching process (Al-Faki & Khamis, 2014; Gashan & Alshumaimeri, 2015).

Apart from these, some studies (Guerrero & Velasteguie, 2017; Soroor, Omid & Afsaneh, 2014; Swan, Kratcoski, Schenker & Hooft; 2010; Toscu, 2013) have examined the relationship between the use of smart boards and its effect on different skills. Controversial findings were reported showing positive influence of smart boards, e.g. on students' reading comprehension ability (Soroor et. al, 2014). On the other hand, Swan et. al's (2010) study revealed no significant relationship between smart board use and reading skill. Guerrero and Velasteguie (2017) and Toscu (2013) looked into the relationship between smart board use and speaking skills and interaction patterns respectively by reaching the conclusion that there was no negative or significantly positive contribution of smart board use in speaking skill.

Lastly, on using smart boards in education, a number of studies focused on teachers' and students' views on their use (Balta & Duran, 2015; Bulut & Koçoğlu, 2012; Gürol, Donmuş,

& Arslan, 2012; Kahyaoğlu, 2011), and especially analyzed the effectiveness and contributions of smart boards in language education (Elaziz, 2008; Gerard & Widener; 1999; Mathews-Aydınlı & Elaziz, 2010). According to Gerard and Widener (1999), smart boards are effective in language education in terms of three main points which are supporting classroom interaction, improving cultural knowledge of the target language and maintaining classroom discipline. Apart from these three points, it was suggested that smart boards affect students' motivation, classroom interaction, creativity and class participation positively (Campbell & Martin, 2010; Elaziz, 2008; Mathews-Aydınlı & Elaziz, 2010; Schmidt, 2008).

As a result, it can be said that smart boards are efficient and modern tools that encourage the use of computers without interrupting the flow of the lesson and improve different learning processes (Gerard, Widener & Greene, 1999). To the best of our knowledge, studies up to date have generally focused on speaking and reading skills (Elaziz, 2008; Toscu, 2013). Thus, investigating the effect of smart boards on other skills in addition to speaking and reading might be necessary.

Research questions

This study focused on investigating the effectiveness of smart boards by finding out about the perceptions and ideas of teachers and students on smart board use at the School of Foreign Languages, Anadolu University. With this purpose in mind, the research questions posed for this study are as follows:

1. What are the perceptions of the students at AUSFL on their use of smart boards in their language classes?

2. What are the perceptions of the teachers at AUSFL on their use of smart boards in their language classes?

3. What are the suggestions of both students and teachers on the use of smart boards in language classes at AUSFL?

Methodology

This research, which aimed at exploring students' and teachers' perceptions on the effectiveness of smart board use in language learning and teaching, was designed using a mixed-method approach.

Research Design

The data for the study were collected through quantitative and qualitative research methods. The quantitative data consisted of Likert-type items in two sets of questionnaires, while the qualitative data comprised the answers to open-ended questions in the questionnaires and the semi-structured interview responses.

Participants

The study was conducted in the 2016-2017 academic year at Anadolu University, School of Foreign Languages (AUSFL). The programme is delivered in four language levels ranging from Beginner to Intermediate. These levels are determined according to the Global Scale of English (GSL). The students are placed into these levels by means of standardized tests prepared by AUSFL. With class hours ranging from 22-24 per week, AUSFL aims at efficient language teaching utilizing modern methods and latest technology, e.g. by using 13 computer laboratories, computer equipped classes, continuous teacher training on technology and carrying out research. Hence, this research study was designed to explore the use of smart boards specifically in language learning and to foster interactive and cooperative learning among students through smart boards. The participants of the study were six volunteering instructors and their students in their intact classes that were selected through convenience sampling in the Fall Term.

In order to find participants, e-mails were posted to all 150 instructors at AUSFL informing them briefly about the study. The instructors willing to take part were invited to the trainings provided by Smart Board® personnel to equip them with technical and practical skills. A total of a 20-hour training was provided in two sessions. 21 teachers participated in the first training, and

the number of participants was 10 in the second round. Six of these teachers (two male, four female teachers) and their students (*n*=266 students) agreed to participate in the research study signing consent forms. The information about the participants is presented in Table I. with the pseudonyms of the teachers to ensure confidentiality.

Teacher	♯ Classes	Class Level	♯ Students	Duration
T1	2	Intermediate	43	4 hours
T2	2	Starter	44	4 hours
T3	2	Starter	45	4 hours
T4	2	Elementary	49	8 hours
T5	2	Starter	44	11 hours
T6	2	Elementary	41	8 hours

Table 1. Information on participant teachers

All teachers visited the smart board labs with more than one class. There were two classes in intermediate level, four classes in elementary level, and six classes in beginner levels with the exception of pre-Intermediate level due to lack of the volunteering instructors from that level.

These students in Table 1 above were required to attend the lessons prepared by their teachers, fill out lesson evaluation surveys after each session, and answer an end-of-year evaluation questionnaire. All teachers and 23 volunteering students from these classes also underwent a semi-structured interview.

3.3. Materials

The materials used in the study were three smart boards with their facilities and equipment, and the data collection instruments were two sets of questionnaires and a semi-structured interview protocol.

The type interactive white boards used in the study were Smart Board® installed in three different classes. The hardware consisted of a touch-screen with four cameras mounted in the corners that enable the touching facility, a projector, special pens, a mouse and Internet connection. The board had its own software that required an account password. Students were required to login

to use some facilities such as surveys of the software. The board also had a website where teachers all over the world shared lesson plans free of charge.

The instruments used to collect data in the study, i.e. two sets of evaluation questionnaires and a set of semi-structured interview questions, had all a student and an instructor version, which were designed by the research team. Both the lesson evaluation questionnaire and the end-of-term questionnaire consisted of three parts, a demographic information part at the beginning, a Likert-type questions part and an open-ended questions part. There were nine five-point Likert-type questions and five open ended questions in student version of lesson evaluation questionnaire and 13 five-point Likert-type questions and seven open ended questions in teacher version lesson evaluation questionnaire. There were 22 five-point Likert-type questions in both student and teacher version of the end-of-term questionnaires. Both questionnaires were designed to elicit the perceived strengths and weaknesses as well as application areas and suggestions.

To probe further about the perceptions of participants regarding the use of smart boards and possibilities of their uses in language learning, semi-structured interviews were carried out with 29 volunteers (*n*=6 teachers, *n*=23 students). Before using the pre-agreed semi-structured interview protocols, consents to participate and record the interviews were obtained from the instructors as well as the students. These interviews, which were conducted in the participants' native language, were recorded and transcribed for content analysis by the research team. The duration of the interviews ranged from five to 15 minutes, and recording time was 5.2 hours of length in total. The questions focused on usefulness of the lessons, the strengths and weaknesses of (lessons with) smart board, their possible applications in language learning, and the reflections and observations about learning English with a smart board from the students' and instructors' perspectives.

Procedure and Data Collection

Prior to the class visits to smart board labs, the volunteer instructors had received a total of a 20-hour certificate training about the technical and pedagogical aspects of the boards provided by an expert from Smart Board® company. These trainings were video-recorded for future consultation and shared with the participants.

The instructors were asked to conduct at least four lessons in one term with each of the participating classes, in which case a class hour is equivalent to 45 minutes. The teachers were not assigned any skill or subject so that they could cover a broad variety of skills and activities. While some teachers used the smart boards to support the textbooks used in AUSFL, some intended to use it as an independent material to add variety. Therefore, classroom activities varied from vocabulary, grammar, reading activities to mixed ones.

After each class session, the instructor and the students filled in the lesson evaluation questionnaire. When the term finished, the students and teachers completed a retrospective end-of-term questionnaire to reflect upon their impressions about lessons with smart boards. In addition, volunteering students were interviewed at the end of the term while the instructors were interviewed shortly after the term ended. 12 male and 11 female student participants were interviewed, five of whom were from Intermediate level, eight from Elementary level, and 10 from beginner level.

Data Analysis

After the implementation of the lesson plans with smart boards, a total of 260 lesson evaluation questionnaires and 213 end-of-term questionnaires were collected from students, while the instructors answered only end-of-term questionnaires. The students who completed lesson evaluation questionnaire but didn't fill out end-of-term questionnaire were eliminated from the analysis part. The end-of-lesson questionnaires could not be completed thoroughly by the teachers due to their workload. Therefore, they were excluded from the data analysis part.

The Likert-type questions in the questionnaires were analyzed by means of descriptive statistics via SPSS. The content analysis of the open-ended part in the questionnaires and semi-structured interviews were carried out by two separate researchers to determine the emerging themes regarding students' and teachers' perceptions on the use of smart boards in their language classes. Following the first analysis, the emerging themes identified by both researchers were co-referenced to detect the shared ones.

Results

In this section, the results are presented based on the research questions, and each question is analysed in detail based on the data obtained.

Perceptions of students

In order to answer the first research question (*What are the perceptions of the students at AUSFL on their use of smart board in their language classes?),* the open-ended questions in the students' end-of-class questionnaire, the Likert-type responses from students' end-of-term questionnaire and the interview results were examined. The results gathered from the data were classified into two broad categories: positive comments and negative comments.

The positive comments revealed three broad categories about the use of interactive boards in language learning classrooms, which are fun and variety in the lessons, informative lessons, and participation and motivation in the lessons. The first and most favourable comment was the smart boards' being fun and bringing variety in the lessons. The participant students appreciated both the fun element of interactive boards and their variety in instruction. The participants stated that they not only learned but also had enjoyable time during the lessons. These tools are interactive and allow high student participation, so they increased students' motivation and created an enjoyable learning context. The audio and visual features of interactive boards were also perceived to be interesting by the students. In short, the fun element of interactive boards was the most frequently stated feature of what student participants liked most with the interactive boards. Below are some extracts indicating the students' responses to the interview questions and questionnaires regarding the "fun and variety" theme:

"It was very effective and enjoyable. We did the lesson faster." (Student 7)

"For me, what I learned in that lesson was more lasting; there was competition like in a race since there were games, so it was more ambitious, enjoyable and lasting for me." (Student 11)

"I think it increases participation. I didn't normally participate in classes, but I started to participate in that lesson since it was fun." (Student 21)

In addition, Figure 1 below also represents the participant students' perceptions on the use of smart boards based on studied skills. As can be observed from the table, vocabulary received the highest amount of approval among other skills, which means that implementing vocabulary activities with the use of interactive boards was seen more enjoyable. This is followed by speaking, grammar and listening, all of which were also regarded to be fun, and this finding as mentioned above can also be detected in the qualitative data. However, writing and reading were found to be less favourable among student participants.

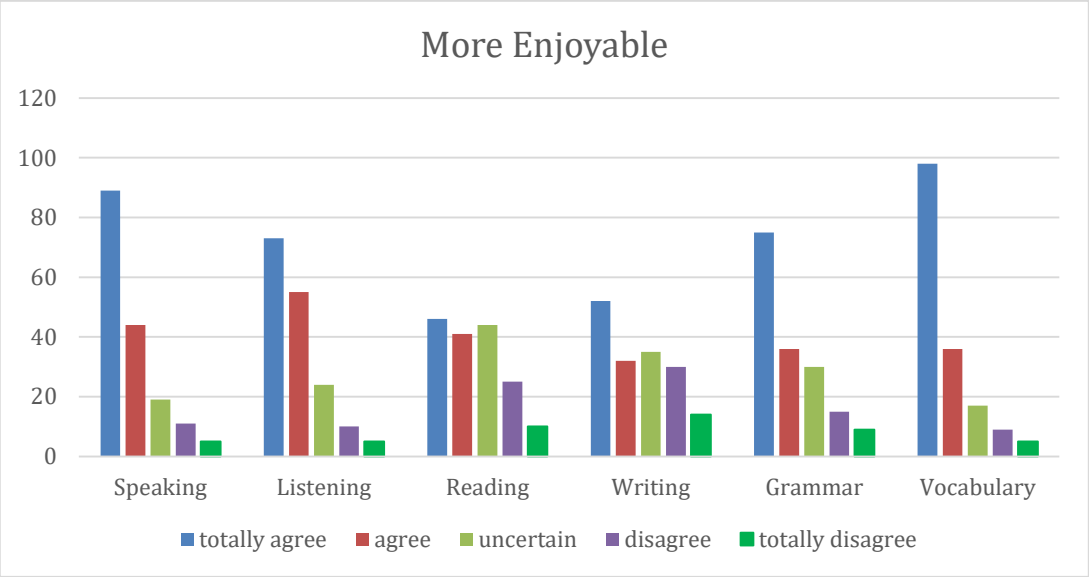


Figure 1. Students' responses on six different skills in terms of being enjoyable

The second prevalent emerging theme was the lessons' being informative thanks to interactive boards as the learners considered the use of this innovative technology as an enhancement of learning and retention. The sample responses of participant students below show their opinions:

"Yes, it was enjoyable and informative at the same time. It was fast; going through the screen instead of writing on board was nice. I like it." (Student 13)

"Not everyone can understand from the book but it is easier to understand in this way." (Student 5)

"For example, if we learn 10 words on smart board but we learn 15 in our regular classes, there is a difference in timing but it is more lasting on the smart board." (Student 16)

Figure 2 below indicates the students' responses regarding the efficiency of smart board use in different skills, which was parallel with the responses to the relationship between smart board use and lesson's being enjoyable. It can be said that there is a positive correlation between the students' perceptions of the effectiveness of the lesson and its being fun. That is, vocabulary remained as the utmost effective skill, which was followed by listening, grammar and speaking while reading and writing were the least effective ones.

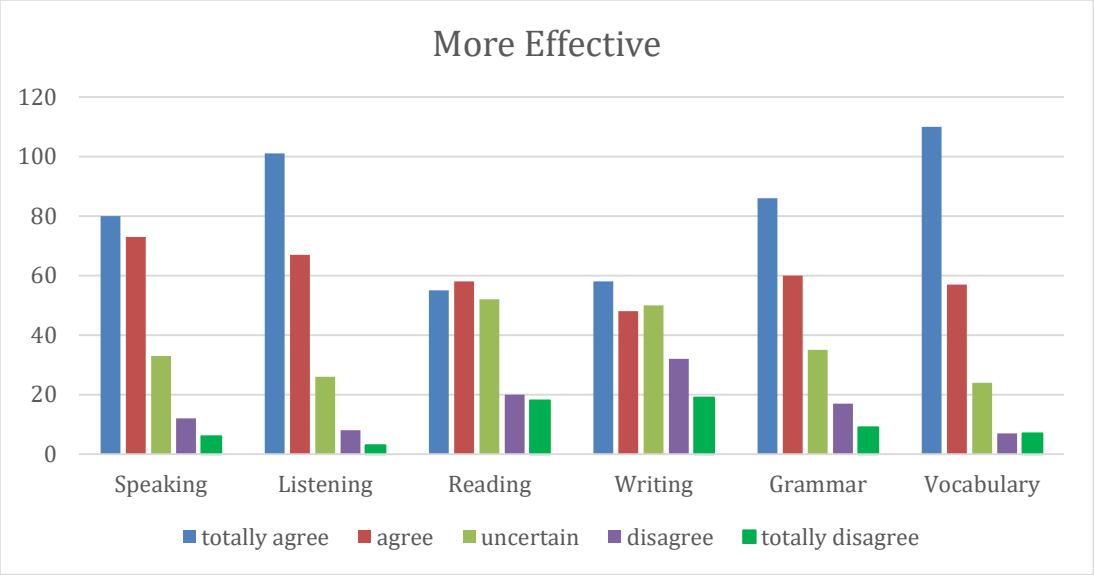


Figure 2. Students' responses on six different skills in terms of effectiveness

Third, the participants pointed out that because of the features of the interactive boards appealing to the different senses of students and the nature of activities requiring group work and competition, the students were more active during the lessons than they were in the mainstream classes. The tools and applications utilized in the classes also helped them to become motivated on the lesson and created an encouraging learning environment for students. Here are some responses concerning participation and motivation:

"More people participated in the lesson, we were more active." (Student 7)

"For example, when the teacher asks a question, instead of asking students come to the board and write the answer one by one, if there is a game with blanks and right answers on board and students come and match them one by one, it will be more enjoyable for a student and class participation will increase" (Student 3)

"For example, we can learn the lesson interacting with mobiles; it is good from this aspect. For example, coming to the board makes students nervous; instead of this, being able to do something while sitting relieves students. It is good from this aspect…" (Student 14)

The negative comments that emerged from the student participants' comments, on the other hand, can be categorized into two main groups: technical and time related issues. Some of the participants indicated that using this technology might have a variety of drawbacks because they might face some technical problems during the implementation of the lessons. Besides, a number of participants thought that lessons conducted in this way were time consuming and they preferred the conventional lessons to the lessons with interactive boards. As can be seen in the following extracts, they stated that those problems led to waste of time and boredom:

"Electricity, when there is a cut off, it causes trouble; you start over." (Student 8)

"I think smart boards might cause problems with time management. For example, we have three smart boards in our school and we have to change the classroom to use smart board, or even if we are in the classroom equipped with smart board, some of our teachers might not be competent enough to open the necessary application for that lesson…." (Student 3)

Perceptions of teachers

The second research question "*What are the perceptions of the teachers at AUSFL on their use of smart boards in their language classes?*" aimed to find out the participant teachers' opinions on the use of these technological devices in their language classes. To be able to answer this question the Likert-type responses from teachers' end-of-term questionnaire and the interview results were examined. Similar to the results derived from the students' interview and

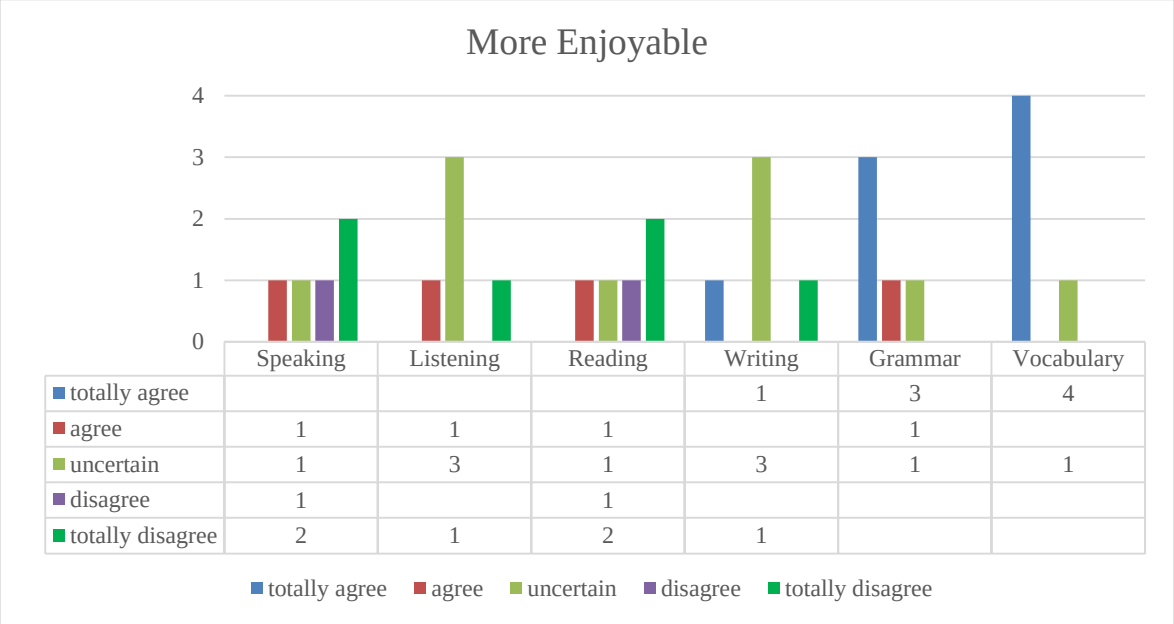
questionnaires, the results gathered from the teachers' data were categorized into two as positive comments and negative comments.

As for the positive comments, two broad categories about the use of interactive boards in language teaching classrooms, which are fun and variety in the lessons and participation and motivation in the lessons, were manifested. The first and the most frequent comment was the smart boards' being fun and bringing variety in the lessons. Like the participant students, the teachers valued not only the fun element of interactive boards but also their bringing diversity into the instruction. The participant teachers affirmed that their learners both learned and enjoyed the course during the lessons with smart boards. In addition, since interactive boards allowed students to use their cell phones in the classroom and the use of language games employed by the teachers created a competitive environment, they are thought as beneficial pieces of equipment for language classrooms. The participants also expressed that one of the mostly favored aspects of interactive boards was their feature to provide a wide range of instructional opportunities resulting in a more effective teaching and learning environment integrating the technology into teaching as a source of variety and richness. The participant teachers recognized this while teaching with interactive boards. Below are some extracts indicating the participant teachers' responses to the interview questions and questionnaires:

"…I have observed that when we meet students with *interactive environments*, they are much more *motivated* in the lesson." (Teacher 3)

"…when you integrate technology and their [students'] cell phones into teaching *interactively*, it always appeals to students." (Teacher 2)

"…just as you don't use the same methods in order to *add novelty to the lessons*, the interactive boards are also the tool you need to incorporate in the lesson." (Teacher 1)



	Speaking	Listening	Reading	Writing	Grammar	Vocabulary
totally agree				1	3	4
agree	1	1	1		1	
uncertain	1	3	1	3	1	1
disagree	1		1			
totally disagree	2	1	2	1		

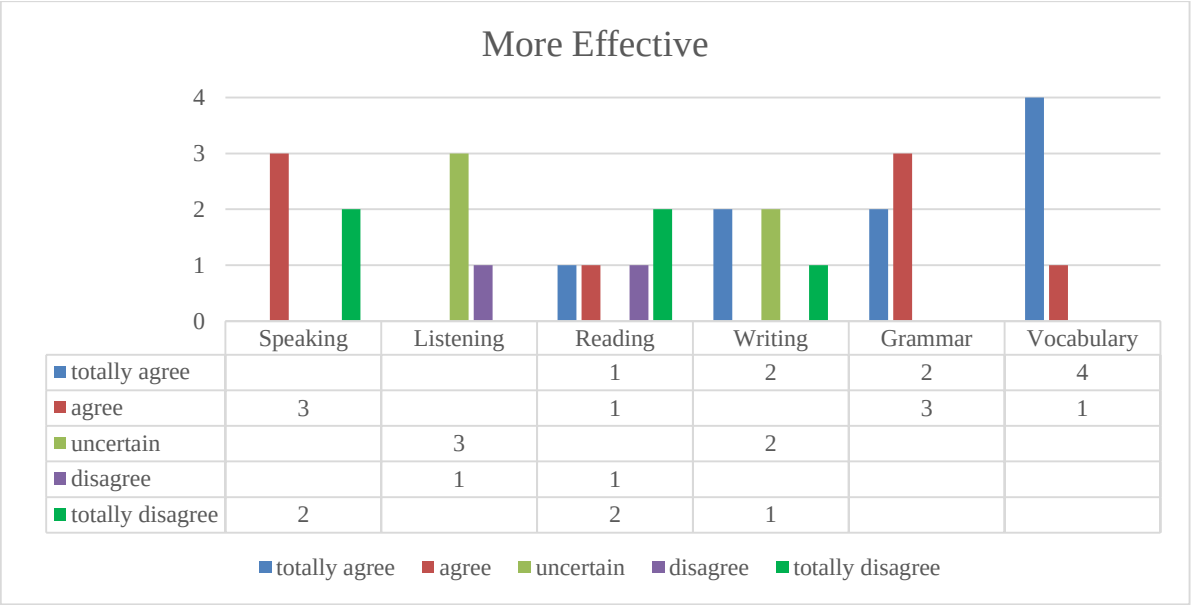
Figure 3. Teachers' responses on six different skills in terms of being enjoyable

Figure 3 demonstrates the teachers' opinions on whether using smart boards was enjoyable or not, and the results showed a similarity with the opinions of students' regarding the most enjoyable skill, which was vocabulary, followed by grammar. Although reading was still regarded as the least joyous skill as indicated by students similarly, the same number of teachers specified that speaking as well as reading was assessed as the least fun skill.

The second emerging theme that the participants pointed out was the positive effects of using smart boards on the high participation and motivation in foreign language classrooms. In like manner to the student participants, the teachers specified that since these devices appealed to different senses and the nature of the various and engaging activities motivated and led them to participate in the lessons, the learners were more motivated than they were in the mainstream classes. The teachers remarked that the use of the smart boards increased the retention of the previously taught subjects and, thus, boosted the student participation and stimulated them better. The following responses display the teachers' opinions:

"…a different classroom, a different environment and a different learning way appeal to students and it motivated them to learn." (Teacher 5)

"…when you make students study with interactive boards with a partner, they participate in the lesson more interactively, both mentally and physically." (Teacher 3)



	Speaking	Listening	Reading	Writing	Grammar	Vocabulary
totally agree			1	2	2	4
agree	3		1		3	1
uncertain		3		2		
disagree		1	1			
totally disagree	2		2	1		

Figure 4. Teachers' responses on six different skills in terms of effectiveness

When Figure 4 was examined, the results of the teachers' perceptions on the use of these interactive boards in teaching various skills were similar to the students' perceptions. That is, teaching vocabulary was regarded as the most effective skill among others. Yet, reading was graded as the least effective skill, which may be a result of the number of courses taught by teachers. Namely, the number of reading classes carried out during the term might be less than the other skills, and this might have had a negative impact on the responses of the participants.

On the other hand, the technical problems faced by the teachers during the use of smart boards were the biggest and the only problem they experienced. These problems derived from two reasons. Firstly, the participant teachers thought that interactive boards were complicated tools and needed delicate maintenance and tuning. They expressed that whenever they used the interactive boards, they had to do fine tuning which resulted in loss of time. Secondly, the participants also mentioned that they were not competent enough to do these tunings and adjustments and they did not know what to do because the interactive boards are complicated devices. Below are some of

the negative comments of the participant teachers about the technical problems in using interactive boards:

"…interactive boards are *overly technological* tools…I would spend the first 20 minutes of the lesson for tuning. I would even go to those classrooms during the breaks to do the arrangements." (Teacher 5)

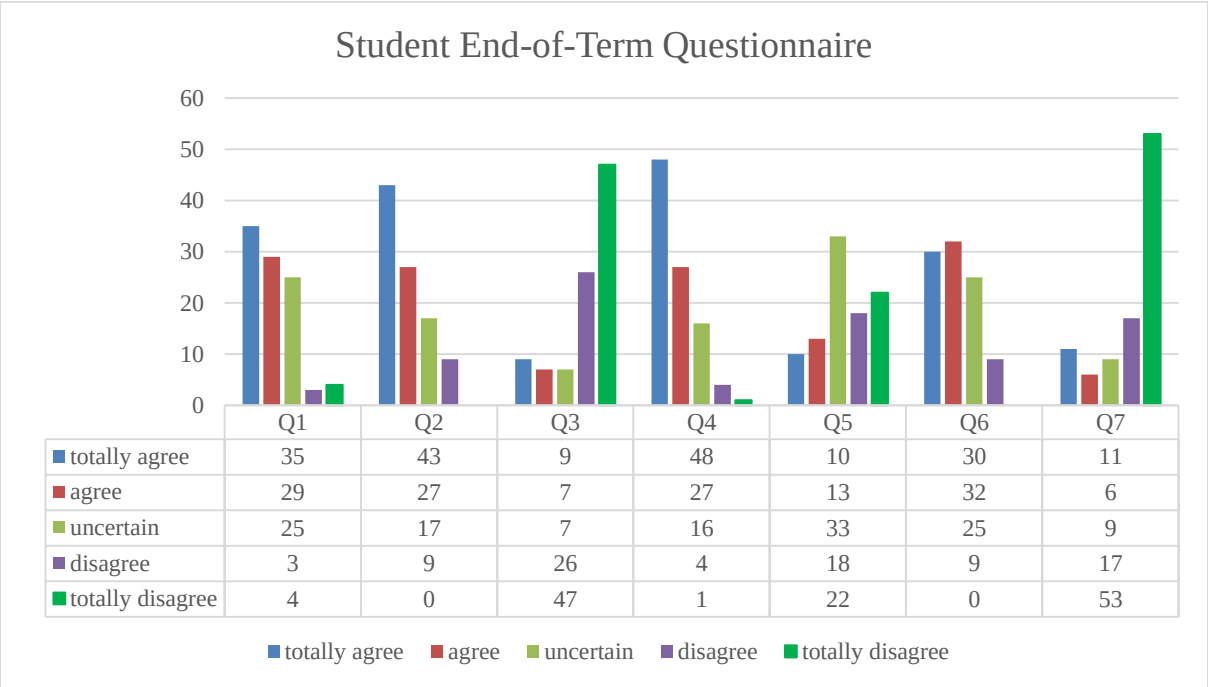
"…You need to *plan your lessons very carefully*…because the use of interactive boards doesn't allow you to improvise. In case of an unexpected technical problem, you have to have a plan B." (Teacher 3)

"…if an effective *training* is not given, I think most of our colleagues will have *technical difficulties*…the reason why I personally did not have serious technical problems is that I am very interested in these tools and I had used them and watched videos about using these tools prior to this project." (Teacher 1)

Suggestions of students and teachers

In order to better understand the suggestions of both students and teachers on the use of smart boards in language classes, the third research question *(What are the suggestions of both the students and the teachers on the further use of smart boards in language classes at AUSFL?)* was inquired. The responses of 213 participants to the end-of-term questionnaires and the semi-structured interviews conducted with 23 students and six teachers were analyzed.

As for the students' suggestions, the first data tool the questionnaire, displayed that overall the participants were happy with the use of interactive boards in their classes, and had a positive attitude towards it, thus suggested using these smart boards in language classes (See Figure 5).



	Q1	Q2	Q3	Q4	Q5	Q6	Q7
totally agree	35	43	9	48	10	30	11
agree	29	27	7	27	13	32	6
uncertain	25	17	7	16	33	25	9
disagree	3	9	26	4	18	9	17
totally disagree	4	0	47	1	22	0	53

Figure 5. Student end-of-term questionnaire

For the first questionnaire item, which inquired whether the students wanted to be taught all the classes using smart board technology, most of the students chose the responses either *totally agree* or *agree* though some participants were uncertain. The second question investigated whether classes taught using smart boards were more effective than the classes with projections, and a greater number of students agreed with the idea. The third question, which stated "Using smart board in classes is not necessary", supported the responses to the first question as the results showed that majority of the participants totally disagreed. As for the fourth and the seventh questions examining the effects of using interactive boards in language classes on the participants' motivation, the results displayed a very positive attitude towards the use of these smart boards. The fifth and the sixth questions asked about the technical problems and their effects on language learning.

As can be seen in Figure 5, the responses vary. Some students were uncertain with the idea of using smart boards since it hindered language teaching due to technical problems. On the other hand, the majority agreed with the sixth question and taught that despite technical problems, using smart board is beneficial.

The analysis of the interviews with the students revealed two primary suggestions, which were related to the results of the questionnaire to a certain extent. The first and the most common suggestion was to use smart boards to integrate alternative teaching and learning activities such as watching videos and films in the class as well as doing speaking practice. In this way, they claimed that they would have the chance for more oral production in the follow-up activities such as presentation tasks, etc. The following excerpts reflect their opinions:

"We can watch videos although we have DVD parts [meaning DVD units in speak out series] but different ones…." (Student 13)

"... for example, we could have watched films in some lessons…" (Student 22)

"… short English TV series at our level, students can watch, short TV series lasting ten minutes etc. For speaking, for listening, students can record their voice and listen to themselves" (Student 20)

"Maybe, we sometimes present our homework in class, we can do this on smart board in a better way or we can do our presentation on smart board in a more enjoyable way like teachers did." (Student 11)

"Actually, there are speaking applications in smart devices, and that kind of a speaking activity could be done with students, like we do on our phones" (Student 16)

"For example, in a speaking activity, I think we could have talked to different people in another class via smart board, or when two groups are in different classrooms, in a game played on smart board, a competitive environment can be created." (Student 3)

Since the participants were content with the use of smart boards in their classes and mainly displayed a positive attitude towards it, the second suggestion coming from the students was to extend the system of using interactive boards in language classes to the whole school by equipping the classes with smart boards.

"I suggest that other classes should use it to prevent inequity." (Student 15)

"Of course it is possible, it is not difficult to use smart boards. People like it and especially students are enthusiastic about these topics; they want to use it and participate actively when they see it." (Student 18)

"It should be extended, it is good that other students benefit from it and their opinions are taken into consideration." (Student 19)

"As I already said, this system could be extended to the whole classes. For both teachers and students, it can be a better system; it can be more beneficial." (Student 22)

"My suggestion is to install it in all classes." (Student 7)

"As a further suggestion, we should keep up with the new age, so we should use smart boards. When we use smart boards, we can adapt to upcoming technology better" (Student 8)

"I think it should be extended, really, to universities, even to high schools." (Student 9)

Moreover, some students focused on the need for more information on the use of smart boards, which was in line with the teachers' opinions of receiving extended training on the use of these boards. Sample responses are presented below:

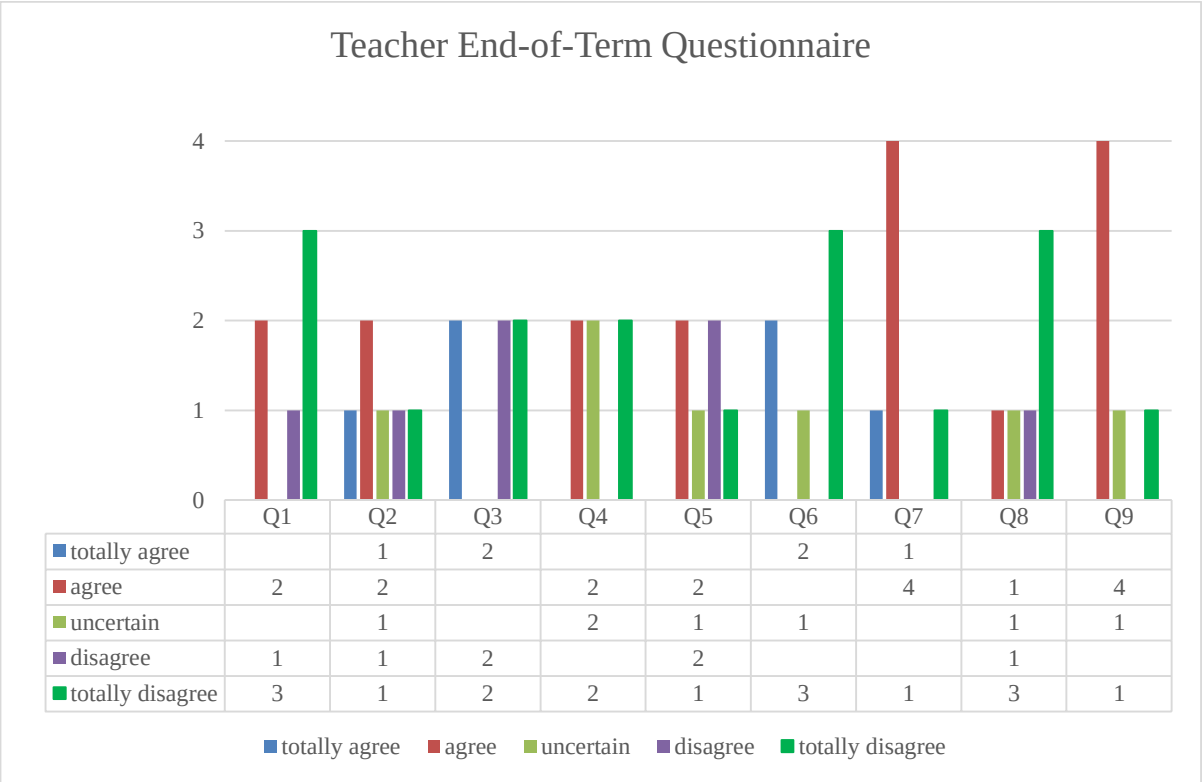
"I think teachers should be given a training; teachers' knowing how to use smart board is good and prevents waste of time in lessons." (Student 3)

"I don't know what else could be done using smart board but teachers can search about this… and I'd like to know more about it as a student." (Student 17)

In brief, as can be interpreted from the results of both questionnaire and the interviews, the student participants displayed a very positive attitude towards these technological devices and believed they facilitated language learning and increased the learners' motivation. In a similar vein, extending this system to the whole school by equipping each class with a smart board was suggested by the participants.

As for the teachers' suggestions, the answers to the questionnaire were slightly different from the students' replies. To begin with, the first question, which examined whether the teachers wanted all the classes to be taught using smart board or not, half of the teachers disagreed with the

idea whereas two of them agreed and one was uncertain. Only two teachers agreed, and the other four participant teachers replied disparately from each other to the second question, which asked whether the classes taught using smart board were more effective than the classes with projections. The responses to the third question, which was closely related to the first one, showed that more than half of the teachers believed that using smart boards in classes was necessary. As can be understood from the answers of the fourth question in Figure 6, the teacher participants had different opinions on the training on smart board use. While two of them thought that the training on the use of smart boards was enough, half of the rest were uncertain, and the other half totally disagreed. Similarly, the responses to the fifth question varied, and teacher participants chose mostly either disagree or agree in the questionnaire with the idea to receive more training. The focus of the sixth and eighth questions was on the technical problems while using interactive boards. Overall, fewer teachers showed positive remarks on the use of these interactive boards in language classes owing to technical problems. Although half of the participants totally disagreed with the possibility of facing problems while teaching by using smart boards, two teachers agreed with the idea and one remained uncertain. In addition, half of the teachers totally disagreed with the eighth question, which inquired whether using smart boards was beneficial in spite of technical problems. The rest of the teachers' answers changed disparately, yet the majority was not content with the use of smart boards because of the technical problems they faced. For the seventh and ninth questions, enquiring the effects of the use of these interactive boards on learners' motivation level, reverse answers were observed. Specifically, the answers revealed a positive attitude to the seventh question and a negative attitude to the ninth question. For the seventh one, all participants selected the alternatives either *totally agree* or *agree*. On the contrary, the answers to the ninth question displayed that four teachers believed using smart boards affected the attitude towards foreign language learning negatively whereas one participant was uncertain and another one totally disagreed.



	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9
totally agree		1	2			2	1		
agree	2	2		2	2		4	1	4
uncertain		1		2	1	1		1	1
disagree	1	1	2		2			1	
totally disagree	3	1	2	2	1	3	1	3	1

Figure 6. Teacher end-of-term questionnaire

The data driven from the interviews with the teachers revealed that the teachers came up with two main suggestions, namely, having training on smart boards and preparing a material bank, the first of which is closely related to the results gathered from the questionnaires. All participants appreciated the training prior to the implementation of the project. Although the time allocated for the training seemed to be enough and the trainer from the responsible company was competent, they stated that they need a different type of training tailored for language teachers teaching to young adults at tertiary level. In other words, they expressed a need for a more contextualized training. The following responses reflect their ideas:

"If this type of education is to be disseminated, we need a more comprehensive training than we had; a training specific to us…even if the trainer was competent." (Teacher 1)

"We need a language teaching training at the tertiary level…the examples from mathematics teaching were not appropriate. Therefore, I had to a search on [how to teach English with interactive boards]." (Teacher 1)

"Program setting is a big deal. I don't know the delicacy and details of it. I don't know the timing." (Teacher 1)

"We had training but it is difficult to become practical in using these tools…" (Teacher 5)

"They [interactive boards] have a lot of technical features. They may be useful for mathematics or science lessons but they have nothing to do with us." (Teacher 5)

"Installing interactive boards is not enough. Maintenance is also an issue. Apart from it, [you need to know] what to do in case of a power cut, virus ware or a software problem…" (Teacher 3)

In addition to the first suggestion, having training on the use of smart boards, the second suggestion offered by the participant teachers was to create a material bank for the other teachers. The teachers stated that preparing a lesson plan for each lesson to be conducted with interactive boards took a lot of time and effort. This was one of the main concerns of the teachers regarding the use of interactive boards. The participant teachers thought that neither the applications existing in the activity bank of the interactive boards were specifically applicable for language teaching, nor did the training they took prior to the implementation of the project prepared them to do the lessons for language teaching. Therefore, they mentioned that if this piloting implementation was to be disseminated to the whole school, it is imperative that an activity bank or material bank be prepared in advance. This might help eliminate the problems they faced, and the other teachers will not have to spend a lot of time preparing the activities. They also pointed out that if teachers share the activities that go well with language teaching, it might be a good implementation to make the most of these tools. The following excerpts show their responses:

"If we could go on [using interactive boards] as a specific group and could organize those activities, we could have had an activity bank. Then we could have had a good collection [of activities]." (Teacher 1)

"Unfortunately, most of the language activities in the bank of the interactive boards were for the primary school students…different activity types could have been prepared for each lesson; the activities to achieve our own outcomes." (Teacher 1)

"We could have prepared *a* material pack for interactive boards just as we have our own supplementary packs for our lessons…Using interactive boards is really good, but preparing a three-minute activity may take two hours even if it is so enjoyable..." (Teacher 5)

"It is easy for teachers to teach verbally, but when you plan the lesson with the interactive boards, this is really a cumbersome job. For this reason, a group of people may prepare a technological pack for interactive boards… We could have a software pack…" (Teacher 5)

"We could have feedback from the people [about the activities]; they [teachers using interactive boards] could explain us how to use them." (Teacher 3)

In sum, the responses given to the questionnaire and the interviews above indicated that the teachers believed that using smart boards in classes was necessary although they had concerns on the use of these interactive white boards in language classes owing to technical problems. The participants expressed that they had difficulties either with the technical problems or with how to adjust the software for language teaching since it is mainly designed for other disciplines such as science and mathematics. They needed further training on making necessary adaptations on the settings of the interactive boards to make them more applicable for language teaching. Moreover, even if the lessons conducted with interactive boards were joyous for both the teachers and students, it took great time of teachers to prepare them. Therefore, in order to lessen the workload, the teachers proposed to prepare a material bank for the use of interactive boards if they are to be used by the whole school.

Discussion and Conclusion

This study tried to explore the perceptions of the students and teachers in AUSFL on using smart boards in learning English. The results suggested that both teachers and students enjoyed using interactive boards in the class and these lessons were fun. They also stated that students' participation and motivation increased in the classes where smart boards were used. This finding is parallel with the findings of Troff and Tirotta (2009) who discovered that not only did they increase the level of attention paid by students but also teachers were eager to employ them. Most of the teachers and students felt positive about smart boards in English teaching. They specified

some drawbacks as well such as technical problems and time management issues, which is akin to the findings of Somyurek, Atasoy and Ozdemir (2009) in their studies on the use of smart boards in Turkey, in which technical problems lowered the level of efficiency of smart boards.

As mentioned earlier, the attitudes and views of students are among the widely-investigated areas of study. This study looked into the perceptions of the students on the use of smart boards in their English classes. The results showed that almost all students mentioned their positive views in the interviews, open-ended questionnaire parts and Likert-type questions focusing on the inclusion of smart board into their different skill-focused classes by commenting on the effectiveness and joy criteria. These results were in line with the previous ones (Gursul &Tozmaz, 2010; Manny-Ikan, Dagan, Berger-Tikochinski, & Zorman, 2011; Mathews-Aydınlı & Elaziz, 2010) which mention that learners feel positive about the lessons in which smart boards are used, and teachers observed that their lessons were more effective. However, when each language skill area is considered individually, it is not rational to reach a clear-cut conclusion due to the time allocated for each session. Although the teachers were informed that they were expected to have a certain skill focus in each class such as reading, listening, etc., they were still not able to carry out similar number of classes for each skill; thus, generalizing the results is not possible. Nevertheless, results on the relationship between speaking and reading skills and smart board use are comparable with the previous studies in terms of learners' positive perceptions.

The final point related to the suggestions of students' and teachers' present that the suggestions of the students showed their positive views on smart board use by advocating the implementation on their use in the whole school system to integrate various teaching and learning activities. This can promote their oral language productions, which can also be linked to the increase in cooperation among learners (Schmidt, 2008). The teachers' suggestions revealed their concerns on time constraints and training as they suggested receiving a more need tailored and contextually appropriate training for language teaching and creating a material pack. Both of these suggestions can help the teachers to lower the time allocated for material preparation and to deal with the technological problems more effectively. This conclusion was also indicated by Erduran and Tataroğlu (2009), Momani et. al. (2016) and Guerrero and Velastegui (2017), who argued that

lack of enough technical training discourages teachers and deters them from using smart boards by switching to traditional teaching methods.

Despite the concerns about technical issues and time constraints for lesson preparation, it can be concluded from this study that both teachers and students believe that using smart boards might make language learning more enjoyable and effective, primarily during vocabulary and grammar teaching and also in the teaching of listening and speaking skills.

The use of smart boards attracts an inceasing interest in the field of educational technology. Further studies can employ a longitudinal approach by including more participants for empowered results. Studies can also focus on classroom observations to pinpoint strengths, weaknesses, opportunities and good practices while teachers are using IWBs in their classes. Moreover, action research designs can be utilized modifiying and adapting the teaching conditions and activities in foreign language classes in a cyclical manner. Further studies might also consider experimental designs to assess the effectiveness of IWBs in teaching.

In this study the teachers received 20 hours of training. For more effective and full use of these technological devices, teachers might need longer hours of training which is accompanied with technical and material-based support as well as guided hands-on practice. Therefore, further research can investigate the effects of providing more in-depth training of using smart boards. Finally, this study was carried out with EFL learners and teachers. Further studies can be conducted with teachers and learners of other languages.

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