NEAR EAST UNIVERSITY

GRADUATE SCHOOL OF EDUCATIONAL SCIENCES

DEPARTMENT OF ENGLISH LANGUAGE TEACHING

TEACHERS' AND STUDENTS' ATTITUDES TOWARD USING SMART BOARDS IN ISHIK SCHOOLS IN NORTHERN IRAQ: A CASE STUDY

MASTER THESIS

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NICOSIA, 2017

Approval of the Graduate School of Educational Sciences

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DECLARATION

I hereby declare that all information in this work is entirely my work with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all materials and results that are not original to this study.

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ACKNOWLEDGMENTS

I would like to express my gratitude to my supervisor Asst. Prof. Dr. Çise Çavuşoğlu for her kind advice, clear guidance and encouragement throughout the process of writing this thesis. Her enlightened thoughts inspired me to start writing my first experience in the academic field. Furthermore, she motivated and encouraged me throughout the process of this study.

Moreover, I am grateful to Prof. Dr. Sabri Koç for his continuous supporting and advice which I learnt from him. I will extend my thanks to all my instructors and lecturers of the Near East University in the ELT department, who have shared their experience and knowledge. I would also like to thank the teachers and the students of the English Language Teaching Department at Ishik University and Ishik Schools for their participation in this study, they helped me to complete this thesis.

I would also like to acknowledge my mother who financially supported and encouraged me to study for a Master's degree, I cannot forget her kindness and favor toward me.

Finally, I would like to dedicate this work to my wife Helen and my son Shko.

ABSTRACT

TEACHERS' AND STUDENTS' ATTITUDES TOWARD USING SMART BOARD IN ISHIK SCHOOLS IN NORTHERN IRAQ: A CASE STUDY

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MA Program in English Language Teaching

Supervisor: Asst. Prof. Dr. Çise Çavuşoğlu

February, 2017, 109 pages

The aim of this study was to examine teachers' and students' attitudes toward using SMART Board (SB) in Ishik schools in Northern Iraq and explore challenges they may be facing during the teaching-learning process. It also aimed to investigate the possible different attitudes among participants based on their gender, level, years of studying at this school, years of teaching experience and first language. Since SMART Board was used by teachers and students at Ishik schools, these schools were selected as the focus of the study. A quantitative approach was used via distributing questionnaires to the participants, who were 207 students and 30 teachers who studied/taught at Ishik schools at the time of the study. Two separate questionnaires were distributed to the teachers and students, focusing on their attitudes toward SB in EFL classrooms as well as how they used it. The data were analyzed by using descriptive statistics, One-Way ANOVA and LSD tests. The results revealed that both teachers' and students' attitudes toward using SB in EFL classrooms were positive, while significant differences were found in the attitudes of teachers and students based on the level they taught/studied. It appeared that teachers in the preparatory and university levels used a relatively more teacher-centered model while teaching with the SB because they did not appear to give opportunities to all students to work on the SB and they employed group work less compared to the primary level teachers. In addition, the teachers' lack of training, technical and electricity problems was pointed out as major challenges that they faced.

Key Words: SMART Board, English as a Foreign Language, challenges, educational technologies.

ÖZET

KUZEY IRAK'TAKI ISHIK OKULLARINDA ÖĞRETMEN VE ÖĞRENCİLERİN AKILLI TAHTA KULLANIMINA KARŞI TUTUMLARI: BİR ÖRNEK DURUM ÇALIŞMASI

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Şubat 2017, 109 sayfa

Bu çalışmanın amacı, öğretmenlerin ve öğrencilerin Kuzey Irak'taki Ishik okullarında Akıllı Tahtanın (AT) kullanımına karşı tutumlarını incelemek ve öğretim-öğrenme süreci sırasında karşı karşıya kaldıkları zorlukları keşfetmektir. Ayrıca, katılımcıların cinsiyet, seviye, bu okulda okudukları yıllar, deneyim ve ilk dille ilgili olası farklı tutumlarını araştırmayı amaçladı. Öğretmenler ve öğrenciler tarafından AT Ishik okullarında kullanıldığından bu okullar çalışma odağı olarak seçilmiştir. Araştırma sırasında Ishik okullarında çalışan/öğrenim gören 207 öğrenci ve 30 öğretmene anketler dağıtarak very toplanmıştır. Öğretmen ve öğrencilere, Yabancı Dil olarak İngilizce (YDİ) sınıflarında kullanılan AT'ya karşı tutumlarına ve nasıl kullanıldıklarına odaklanarak iki ayrı anket dağıtıldı. Veriler betimsel istatistikler, t-testi, tek yönlü ANOVA ve LSD testleri kullanılarak analiz edilmiştir. Sonuçlar, hem öğretmenlerin hem de öğrencilerin YDİ sınıflarında AT kullanmaya yönelik tutumlarının olumlu olduğunu, öğretmenlerin ve öğrencilerin tutumlarında öğrettikleri/okuduları seviye bazında anlamlı farklar bulunduğu ortaya çıkmıştır. Hazırlık ve üniversite düzeyindeki öğretmenlerin, AT ile öğretim yaparken nispeten daha fazla öğretmen-merkezli bir model kullandıkları görülmüştür çünkü tüm öğrencilerin AT üzerinde çalışma fırsatı bulamadığı ve grup çalışmasını ilkokul sevysine göre daha az kullandıkları ortaya çıkmıştır. Buna ek olarak, öğretmenlerin eğitim, teknik ve elektrik ile ilgili sorunlarla başaçıkma becerilerinden yoksun olmaları karşılaştıkları zorluklar olarak dikkati çekmektedır.

Anahtar Kelimeler: Akıllı Tahta, Yabanci Dil olarak İngilizce, eğitim teknolojileri, zorluklar.

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ABBREVIATIONS

EFL: English as a Foreign Language

ESL: English as a Second Language

SPSS: Statistical Package for Social Science

ANOVA: Analysis of Variance

LSD: Least Significant Difference

ELT: English Language Teaching

SB: SMART Board

IWB: Interactive White Board

M: Mean Score

SD: Standard Deviation

LCD: Liquid Crystal Display

BECTA: British Educational Communications and Technology Agency

CHAPTER I

INTRODUCTION

Overview

SMART Board (SB) is an interactive whiteboard that belongs to SMART Technologies. It is also called Interactive White Board (IWB), which is used for education, business purposes, and other fields. It contains a sensitive screen, a computer and a projector that can be manipulated by the teachers and students by using their hands. Participants can also add notations by using specific pens which work with the specific software. In the Northern Iraqi context, Ishik schools were the first educational institution to install this technology into their classrooms. Thus, the current study focuses on the attitudes of teachers and students in Ishik schools in this context and aims to investigate the challenges they may face while employing this technology. This introductory chapter contains the background of the study in which the importance and usage of SBs are explained. The rest of the chapter also discusses the problem statement of the current study and its aim as well as the significance of the study and the limitations.

The Background of the Study

The first SB was introduced by SMART Technologies in 1991, and the first time an active board was used by universities was in the mid-1990s (Lee & Betcher, 2009). SB is connected to a notebook program, which lets users to draw, save, or print any lesson or idea. Inside this program, there are hundreds of graphic sources in the gallery icon. SB is suitable for use with all Microsoft Office Programs, so it is easy to work on Microsoft Word, PowerPoint, and students can interact with it.

Technology has an important role for language learning activities and developing language skills (Beckett & Miller, 2006). Although SB is a general educational technology that can be used in any field of teaching and learning, it is very useful in teaching English as a Foreign Language (EFL) too. Al-Saleem (2013) investigated the ways in which SB could be used in EFL classrooms and supported that the SB is a very innovative and powerful tool for language acquisition. SB provides a bridge that allows the users to use the features of the computer without interrupting communication. In addition, Al-Saleem (2013) argues that it improves the learning process by activating students. Finally, it brings internet into every EFL classroom, which helps to deviate from the traditional context of the textbook-based classrooms.

Bax (2003) argued that technology use needs to be understood in relation to a teacher's intention and role, and where it is used in the curriculum. Lee and Betcher (2009) stated that if technology was used in a proper way, it could develop the teaching process in all levels in engaging ways. Technology will be useless if teachers are not trained and proficient in its use. They also declared that those instructors who think the SB just as an expensive board, are not using it in a proper way. In other words, the SB is much more than just an educational technology where materials are presented. A sound understanding of effective pedagogical principles is necessary to make teachers able to adopt a wider range of digital technologies more quickly and find more creative ways to engage their students with those resources. Nomass (2013) has also pointed out the importance of technology in learning a second language and how, if used properly, technology can improve learners' language skills. In this respect, he stated that the SB (and the IWBs in general) offers many learning benefits for students. Glover et al. (2005) investigated the advantages of SB and found that it had a big effect on learners' motivation. However, they strongly argued that

none of these advantages would add to the effectiveness of the teaching and learning process until they are supported by teachers who aware of the nature of the possible interactivity that SB can offer and who integrate the technology to ensure that lessons are both well-integrated and conceptually stimulating.

Beside the ways in which teachers can integrate the SB into their teaching, Pourciau (2014) stated that teachers faced difficulties when they used the SB. The major problem appeared to be the lack of effective professional development. She declared that the financial spending on installing various technologies including the SB in the classrooms is vain if teacher training is inadequate. Similarly, Smith, Higgins, Miller & Wall (2005) explained that there is an enormous need for training and technical support for teachers of the full potential of the SBs to be utilized and to keep away any possible problems. Teachers must be confident in using this technology, thus special training is vital. Gray, Hagger, Pilkington and Tomkins (2005) argued that many teachers complained that the SB-based lessons were just time-consuming. Other teachers stated that too much use of PowerPoint could turn the lesson into a "show and tell" style. The key issue here is to change the role of the teacher as a presenter of the lessons only.

The Problem Statement

Integrating SB technology into classrooms has many benefits for the teaching environment, but it does not mean that this technology is without challenges and problems. In fact, technology imposes some challenges (Al-Faki & Khamis, 2014). However, integrating technology into the classroom is not as simple as bringing a technological device and automatically engaging students. Technology needs to be chosen and implemented appropriately (Ellis, 2010).

Ishik College is the first educational institution that installed this technology into its classrooms in Northern Iraq. However, this move was made without any needs analysis and since the first time the technology was installed, no research has been carried out in relation to the attitudes of the teachers and students towards the SB as well as possible challenges they may have experienced.

The Context of the Study

The focus of this study was Ishik schools (private) which are owned by Fezalar Educational institution in Northern Iraq. Ishik schools introduced and installed SBs in every classroom as an educational tool; Ishik Private College has been using this technology as a first institution in the North Iraq since 2004.

In 1994, Ishik College was established in Northern Iraq, at first just for boys but after a while, they started admitting girls as well. The study program in Ishik College is in English from kindergarten to high school (Ronaki Hawler Educational Company, 2016). In 2008 Ishik University was opened. Ishik University contains six faculties with fifteen departments. These faculties include the Faculty of Dentistry, Faculty of Engineering, Faculty of Science, Faculty of Education, Faculty of Administration and Economics, and Faculty of Law. Faculty of Education includes four departments. These are Mathematic Education, Biology Education, Physics Education, and English Language Teaching (ELT) Department (English Language Teaching Department, 2016). The ELT Department offers Bachelor's degree in English Language Teaching. The major purpose of the ELT Department is to prepare students to be English language teachers for all levels of education system (English Language Teaching Department, 2016). The ELT Department offers courses including methodological and pedagogical approaches to EFL and language

courses in order to improve students' skills of English language. The ELT department also provides courses related to second language teaching methodology and second language acquisition and practice teaching in selected schools (English Language Teaching Department, 2016).

The Aim of the Study

The aim of this research study is to first investigate the attitudes of teachers and students towards the use of the SB in Ishik schools. In addition, it aims to identify possible problems and challenges that the users may be facing during the teaching/learning process while using SB in their EFL classrooms. The following research questions are posed in order to carry out this study:

1- What are the attitudes of EFL teachers in Ishik Schools towards using SB in their classrooms?

2- Do the teachers' attitudes towards the use of SB in EFL classrooms differ based on:

   a. gender?

   b. level of their students?

   c. years of teaching experience?

   d. their first language?

3- What are the attitudes of EFL students in Ishik Schools towards using SB in their classrooms?

4- Do the students' attitudes towards the use of SB in EFL classrooms differ based on:

   a. gender?

b. level of their study?

c. years of studying at Ishik Schools?

d. their first language?

The Significance of the Study

The relevant literature is full of discussions of the importance of the SB use in the classroom and the significance of the methodologies used while employing it. However, these cannot be achieved before a thorough examination of the attitudes and the ways SB is used by the teachers and students in EFL classrooms is carried out. Thus, this study will help EFL teachers and administrators at Ishik College and Ishik University to improve their teaching practices.

In Northern Iraq, currently very few institutions are using SB for the purpose of language teaching because of its high cost. The findings of the current study will be helpful for educators who are planning to integrate this technology into their teaching to be aware of the issues around its use and possible challenges that may come with it. In addition this study will enable Fezalar Educational Institutions to better understand on the current use of this as well helping them to work on the possible solutions for the challenges that their teachers are facing.

Limitations of the study

This research study is limited to the teachers and the students in primary, preparatory and university levels in Ishik schools in the North of Iraq. In addition, the views of the teachers and students expressed here are limited to the scope of the questionnaire that was prepared by the researcher. All of the items in the questionnaire refer to the attitudes of the participants towards the SB and ways in which SB is used by the

teachers in this context. The next chapter will provide information regarding the relevant studies in the field in order to clarify the scope of the current study.

CHAPTER II

LITERATURE REVIEW

Overview

SMART Boards (SB) have become one of the important innovative tools of today's education. Undoubtedly, these gadgets have taken their place in the English as a Foreign Language (EFL) classroom too. This chapter illustrates the definition of SB in general, followed by an overview of the SB in EFL classes focusing on the advantages and disadvantages of SB for both teachers and students. Finally, relevant studies about employing SB in language teaching and difficulties experienced by teachers and students in different contexts while using the SB are reviewed.

What is a SMART Board?

Many studies have talked about this new technology in different fields of education. The British Educational Communications and Technology Agency (BECTA, 2003) defined the SB as a large sensitive board which is connected to a projector and a computer, where the projector shows the screen from computer on the board, and users can control the board by their finger or by the help of an electronic pen. Users can also utilize web sources such as video clips to explain lessons as well as saving notes for future use. Similarly, Ladislaw (2012) describes SB as a touch-sensitive whiteboard that is connected to a computer and a projector. Lessons or presentations are made on computer programs and then the projector displays the image on the board (Giles & Shaw, 2011; Ladislaw, 2010).

The SB was used in 1991 for the first time. They were connected to LCD panels which worked as a display for the computer screen. This permitted the user to control computer applications and provided a much better learning and teaching experience (GTEACH, 2013). In 1992, SMART Technologies Company introduced the new type of

SMART Board with little changing in appearance and software. In 1998, information management software and the SMART Notebook added to SB. In 1999, the first SMART Board has been produced for plasma displays. In 2001, came the SMART Board software with SMART Recorder, as well as meeting productivity software. The first SMART Board for flat panel displays debuted in 2003. In 2005, SMART unveiled its wireless slate, a tablet PC which allows users manipulate and select on screen objects, create and save notes and launch applications. In 2008, the new product of SMART Board included the SMART document camera (Smarttech, 2013).

Using SMART Board in EFL classes

Many researchers pointed out the effectiveness of the SB in teaching and learning English language. Craig and Patten (2007) noted that digital resources enable learners to develop their verbal interaction, vocabularies and comprehension. In addition, "the integration of technologies in English language classes allows for individualization in large class, facilitate multimodal practice, motivate and improve the fun factor for learners" (Brown, 2001, p.145). According to Al-Saleem (2012) and Bacon (2011) the SB can engage the learners in the process of learning and motivating students. Al- Saleem (2013) also pointed out that the SB can support the process of learning English language in three major ways; first, by supporting interaction and conversation in the class; second, it presents new linguistic elements; and finally SB promotes the learning and practice of the oral skills.

Regarding the first point, by integrating SB, the users do not need to go back to the computer and turn back to the lesson again. So, the interaction is not interrupted. The SB can also facilitate certain types of conversations with all members of the class. For instance,

by using wireless keyboard teachers can add new words or sentences to the board this help teachers to continue their conversation without interruption.

The second way in which SB is useful in language learning is when it supports the presentation of new linguistic elements. When the teacher prepares a lesson in a notebook file, s/he will be able to use the features of the SB to his advantage. The teacher can circle, highlight and underline elements that s/he wants to focus on while presenting the material, which makes it truly interactive. Furthermore, using websites within SB enables teachers to present new language items in different ways without losing the focus of the lesson.

The third way in which SB supports language learning is by enabling the presentation and practice of oral skills; via the SB and using websites, the interaction with the whole classroom can be enhanced orally, ideas and opinions can be exchanged, and/or students can present their work on SB. Thus, it enables students to speak without worrying about the mouse or going back to the computer and so on.

There are many ways that SB can be utilized in the EFL classrooms. Gray et al. (2005) stated that English language teachers can take advantage of different interactive games to practice new words through the SB. Wall et al. (2005) found that students felt very positive when they used games during lessons. Additionally, English language teachers are able to use encyclopedias and dictionaries within SB or bringing pictures, videos from internet to clarify topics. Furthermore, PowerPoint slides are helpful and attract students' attention more compared to the traditional board.

Advantages of SB for teachers

With the invention of the SB, many researchers revealed its usefulness and advantages for the teaching process. As an educational tool, SB can save time in the classroom by printing, saving and using lessons repeatedly for teachers Levy (2002). Additionally, SB can help teachers be flexible by using web resources; it allows teachers to choose materials flexibly in order to find the one that matches the needs of the students in the classroom (Kennewell & Beauchamp, 2007) They can also use SB to integrate different language skills during the teaching and learning process. Additionally, Turel and Demirli (2010) argued that with the use of the SB teachers are able to highlight and color important content to enhance their presentation.

Regarding the interaction between teachers and students, Glover et al. (2005) pointed out the benefits of SBs that increase interaction between teachers and students in the classroom. Momani, Alshaikhi and Al-Inizi (2016) importantly pointed out that the SB can be used to help teachers to adopt a student-centered approach to teaching EFL. Smith et al. (2005) argued that SB offers a more efficient presentation with the use of multimedia such as video clips, text, audio and animation compared to the traditional white board. In this way, it keeps students more engaged in class activities and teachers can satisfy the students' learning style needs (visual, auditory, kinesthetic).

Finally, unlike the blackboards, which required teachers and students to use chalk, and traditional whiteboards, which used a dry erase marker that is accused of containing dangerous chemicals, the SB does not produce chalk dust or any chemical smell. Therefore, it is not only good for environment but also for the teachers' and students' health (Jang & Tsai, 2012).

Disadvantages of SB for teachers

Many of the disadvantages of the SB relate to its use as an instructional tool. While using technology has the potential to enhance teaching and learning, it doesn't mean that technology is without drawbacks. It is clear that technologies are not always used to their full capacity (Firmin & Genesi, 2013), which may turn out to be disadvantageous for the users.

In a study which conducted by Korkmaz and Cakil (2013), the researchers found that technical problems within SB software prevent teachers from teaching effectively and it makes the teaching process slow and interrupted. Chebchoub (2011) also pointed out that teachers' bad handwriting may be a specific disadvantage that may cause the learning and teaching to be impeded as well as the time spent when waiting for the SB to load.

To Lee and Betcher (2009), another disadvantage of IWB is the problem of shadow. This is related to the position of standing of teachers may the projector reflected the shadow to the board then students unable to see the contents on the board clearly, so in this case teachers have to stand into the board sides rather than standing directly in front of the board. Additionally, IWB should be mounted in an appropriate position (not too high or low). Otherwise, it creates problems when pupils are required to use it to present their work or write/draw on it. In addition to these technical issues, Al-Faki and Khamis (2014) also mentioned that SB is vulnerable to software virus issues as well as mismatches between supported file formats and/or programs and the materials prepared by the teachers.

Advantages of SB for students

The major aim of SB is to motivate students and provide an interactive learning environment for them by sharing ideas, web sources, video, audio, andso on. As mentioned earlier, SB supports different learning styles according to students' needs (visual, auditory, kinesthetic) (SMART Technologies, 2014). Beeland (2002) stated that SB can support students' learning through multimedia and different of sources. Moreover, Mohammed, Yaghi and Bataineh (2016) explained some advantages of SB for students as below:

- Brainstorming can be enjoyable with SB; you can assemble content as well as pictures, outlines or features.
- On the board, you can play many games, hide and reveal items/images, which help students to learn vocabularies, concrete and abstract concepts, and so on.
- All types of media, such as photos, diagrams, and maps as well as sounds, can be utilized on the SB.
- By touching a particular item on the SB, the auditory or visual feedback is revealed.

Related studies

In a study which was conducted by Shenton and Pagett (2007) in six British primary classrooms to investigate teachers' and students' perceptions toward using SB in EFL classrooms, the result indicated that teachers recognized that SB had a positive influence on students by motivating them to learn. However, they also recognized that for some students, the SB was distracting. Thus, the teachers had the challenge of finding a proper way to help those students and to fix this problem. In addition, students claimed that another negative aspect of SB was about waiting for SB to start up.

Momani, Alshaikhi and Al-Inizi (2016) carried out a study about the obstacles of using SB in teaching English in a secondary school in Saudi Arabia. A questionnaire was used to collect data among 30 EFL teachers. The results of the study showed that the teachers faced challenges when using the SB. They found that there was a big gap between the teachers' pedagogical framework and practice of SB; they used SB as a presentation tool for teaching English rather than a tool for practice and production. Their lack of knowledge about troubleshooting in SB was another obstacle. In addition, 35% of the teachers did not use web-learning resources in EFL classes according to Momani's, Alshaikhi's and Al-Inizi's study.

To investigate the issue from the students' point of view, Hall and Higgins (2005) conducted a qualitative study about primary school students' perception of SB. In this study 72 students were interviewed. The results of the study showed that most of students enjoyed especially using multi-media through SB and that their attention was triggered more compared to the traditional boards. In addition, most students raised the issue of technical problems with SB such as the need to reorient the SB and freezes or crashes of SB.

Al-Faki and Khamis (2014) their study focused on the difficulties that teachers faced when using SB in their classes. The aim of the study was to identify challenges that teachers faced when using SB. The study was conducted in Jeddah schools where elementary, intermediate and secondary levels in Saudi Arabia were included. Thus, a questionnaire which consisted of 25 statements was distributed to 45 English language teachers. The results of the study showed that most of teachers used the SB as presentation tool only. The participants also reported technical problems; nearly all participants complained about computer programs and anti-virus protection that were not updated.

Similarly, Bakadam and Asiri (2012) carried out a study about the opinions of intermediate level EFL teachers in Saudi Arabia regarding the use of SB. The result showed that most teachers agreed that the SB supported classroom interaction. On the other hand, most teachers used the SB as a projector and for internet searches. The researchers suggested that teachers are in need for more training with the use of the SB. Pourciau (2014) conducted a study about teaching and learning with SB in Berry Middle School where eight teachers have participated via interviews and questionnaires. The aim of the study was to find out the challenges and barriers that teachers faced while using SB. The result of the study was that teachers had major challenges when using SB which included technical problems and lack of sufficient professional development for the use of SB. Turel and Johnson (2012) examined teachers' belief about using the SB in EFL classrooms. In their study, a questionnaire was conducted and 174 Turkish teachers in different educational levels from level 6 to 12. The aim of the study was to evaluate how teachers used the SB. The findings of this study indicated that while most teachers believed that the SB had many advantages in the field of teaching and learning, they used teacher-centered approaches and they did not give opportunities to all students to work on the SB.

Elaziz (2008) investigated factors affecting teachers' and students' attitudes toward the SB as an educational technology. In this study, 458 students and 82 teachers in different institutions across Turkey from primary to university levels participated and their views were collected using questionnaires. The result of the study showed that most students agreed that using audio and visual materials helped them to understand the lesson better while 62% of the students agreed that problems with sunlight and screens prevented them from seeing texts or images on the SB. Regarding teachers' attitudes, the result showed that 59% of teachers disagreed that SB-based lessons took more time than regular lessons. A

great majority of the teachers also agreed that using the SB increased the interaction and participation of the students.

In Levy's (2002) and Hall and Higgins' (2005) studies, students reported that the lack of teachers' competence in using SB caused problems during the lesson. These competences included technical and pedagogical aspects of the SB. Thus, they concluded that the teachers should know how to benefit from SB in terms of teaching techniques and flexibility of using resources according to the students' needs. Schmid (2006) investigated the use of SB in English language classrooms through a qualitative study among a small group of students in Lancaster University. The purpose of the study was to gain an understanding about the SB from the perspective of a critical theory of technology. The result showed that the pedagogical beliefs and students' own understanding affects technology use in a certain context. Aytac (2013) also carried out a study about students' view on using the SB. The aim of the study was to investigate the students' views and problems which they faced while using the SB. Quantitative data were collected through a questionnaire which contained 19 items. In this study, 202 students have participated from primary and high schools in Ankara. In terms of gender there were not any significant difference regarding students' view on the SB, while there was an obvious difference between levels of study. The results of Aytac's study showed that 62.5% of students faced technical problems such as the sensitivity of the board which is hard to touch and lack of a pen. In addition, a great majority of students stated that after continuously looking at the SB, they got pain in their eyes. Additionally, majority of students also claimed that their teachers presented the content using the SB rather than engaging students in the lesson and activating their participation.

Alshaikhi (2016) conducted a study at a male secondary school in Jeddah, Saudi Arabia about improving students' English vocabulary achievement using the SB. The aim of the study was to explore the effect of learning English vocabulary using SB in comparison to traditional boards. The data was collected through distributing questionnaires among 150 students. The results showed that most students agreed that using it improved their vocabulary achievement and they acquired vocabulary easier than those students who had been taught through using traditional boards.

In conclusion, the results of the current review of the literature suggest that there appear to be clear advantages to the use of the SB in language classrooms in general, and EFL classrooms in particular. However, the obvious lack of teachers' methodological background in integrating this technology into their lessons appears to impede the progress of the students. More specifically, the fact that SB is only used for presentation of materials goes against its nature as a student-centered educational technology. It is assumed that similar issues may be faced by teachers in the context which is the focus of this study. Thus, in line with the aims of the current study, which were stated in Chapter I, a specific research methodology was developed. Details of this methodology are presented in the next chapter.

CHAPTER III

METHODOLOGY

Overview

The current study was set to investigate the attitudes of students and teachers towards the use of SMART Board (SB) in Ishik schools at different levels of education in Northern Iraq. More specifically, the challenges faced by these parties were focused on. In order to find out these attitudes, a survey study was designed. This chapter will present the methodological decisions made during data collection and analysis together with their reasons. First, the research design will be explained in detail followed by a description of the selection of participants, data collection procedures, data collection instruments and data analysis procedures. Issues of reliability and validity will be also discussed in a separate section.

Research Design

In order to investigate the problems faced during the teaching-learning process while using SB in EFL classes, the current study was designed as a quantitative case study. It employed questionnaires as a data collection tool for both students and teachers who were present at Ishik University's English Language Teaching Department, as well as Ishik Preparatory School and Ishik Primary School in Erbil in the North of Iraq at the time of the study. The reason behind selecting these schools was that they were the only educational institution using and installing SB in all classes in Northern Iraq.

The Participants

A total of 207 students and 30 teachers participated in the current study. These participants came from three levels of education (primary, preparatory and university) at Ishik Primary School, Ishik Preparatory School and Ishik University which is located in the Erbil city in Northern Iraq. Secondary level school was not included in this study because they do not use SB in their classes at the time of the study as the principal of Ishik Secondary School informed the researcher. About 2,009,367 people live in Erbil city and it is largely populated by Kurds but has minority populations of Turkmens, Assyrians and Arabs. All of Ishik schools in this city are private schools. The total number of students in these schools at the time of the study was 611, and the total number of teachers who taught in these schools was 48. Table 1 shows the distribution of students.

Table 1

Population and the sample of students

Level/No. of Participants	Population (N)	Sample (n)
Primary	266	92
Preparatory	192	64
University	153	51
Total	611	207

As shown above, the total participants of primary level were 92, the preparatory level students were 64 and university level students were 51 in different grades. In addition 30 teachers have participated from each level. Table 2 shows the distribution of teacher participants for this study.

Table 2

Population and the sample of teachers

Level/No. of Participants	Population (N)	Sample (n)
Primary	18	10
Preparatory	13	10
University	17	10
Total	48	30

The majority of students were males in the present study (70%), whereas 30% were females. This is due to the fact that all of the students in the preparatory level were males and therefore, the sample also consisted of all male students. Table 3 shows the distribution of student participants according to their genders. Table 4 shows the distribution of participants based on their level. As indicated on the table, majority participants were primary level students.

Based on years of studying at Ishik schools, the majority student participants were learners who have been studied at Ishik schools between (1-6) years with a total of 79.8% of the participants, while the learners who studied at this current school between (7-12)

years were 20.2%. Table 5 shows the distribution among student participants based on their years of studying at Ishik schools.

Table 3

Distribution of student participants based on gender

Gender	Frequency	Percentage
Male	145	70%
Female	62	30%
Total	207	100%

Table 4

Distribution of student participants according to levels of studying

Level of studying	Frequency	Percentage
Primary	92	44.4%
Preparatory	64	30.9%
University	51	24.6%
Total	207	100%

The majority of the participants were Kurdish native speakers, while 7.7% of the participants were native speakers of Arabic and 12.1% were speakers of other languages (see Table 6).

The variables of teacher participants were regarded for analysis in relation to their attitudes toward using SB. Table 7 shows the distribution of teacher participants based on gender in the current study; the majority of teacher participants were again males.

Table 5

Distribution of student participants based on years of studying

Years of studying	Frequency	Percentage
1	24	11.6%
2	25	12.1%
3	32	15.5%
4	30	14.5%
5	28	13.5%
6	26	12.6%
7	5	2.4%
8	4	1.9%
9	5	2.4%
10	11	5.3%
11	9	4.3%
12	8	3.9%
Total	207	100%

Table 6

Distribution of student participants based on their first language

First language	Frequency	Percentage
Kurdish	166	80.2%
Arabic	16	7.7%
Other	25	12.1%
Total	207	100%

Table 7

Distribution of teacher participants based on gender

Gender	Frequency	Percentage
Male	28	93.3%
Female	2	6.7%
Total	30	100%

Regarding the first language of teacher participants, Table 8 shows the distribution based on their first language. The majority participants were native speakers of Turkish, while the Kurdish native speakers made up the rest of the teachers in the sample. Based on years of teaching experience, the majority of participants were those teachers who had been

teaching between 6-10 years. One third of the sample had been teaching for more than 10 years (see Table 9).

Table 8

Distribution of teacher participants based on their first language

First language	Frequency	Percentage
Turkish	21	70%
Kurdish	9	30%
Total	30	100%

Table 9

Distribution of teacher participants based on years of teaching experience

Experience	Frequency	Percentage
1-5	9	30%
6-10	11	36.7%
10+	10	33.3%
Total	30	100%

Data Collection Instrument

Two different questionnaires were prepared to collect data from the two groups of participants. These questionnaires were prepared by the researcher. The first step of the

development of these questionnaires included informal interviews with five English teachers at Ishik schools and they were asked six open-ended questions related to the usage of SB in their classes. Following semi-structured interview questions were used to gather information from the teachers:

1. Have you ever had any training on how to integrate/use SMART Board in your classes? If yes, can you give details?
2. Do your students interact with SMART Board daily? If yes, can you describe a typical lesson?
3. Do you often plan your lessons incorporating the SMART Board into activities? Can you describe what issues you consider when you do so?
4. Have you ever experienced any problems? If yes, what were they?
5. In what ways are Smart boards useful in teaching English?
6. What is the effect of SMART Board on students' behavior and motivation?

These teachers were contacted via Skype and face to face online interviews were carried out with them individually. Relying on the answers of these teachers, 17 items were pooled for teachers' questionnaire and 16 items for students' questionnaire, and the first draft of questionnaire was prepared (see Appendices A and B). Then these questionnaires have been presented to the supervisor, items have been modified, added and developed. Following three drafts, the final versions of the questionnaires were prepared.

The final version of the teachers' questionnaire consisted of 24 items related to the use of SB in English language classes. The questionnaire had two separate parts; the first part collected data about participants' demographic information such as their gender, years of teaching experience, first language and levels they have taught at the time of the study,

while the second part of questionnaire contained 24 statements about using SB in English classes where the participants would respond using a five-point Likert scale (see Appendix C).

The students' questionnaire consisted of 22 items and focused on the students' views on using SB in English language classes. Similar to the teachers' questionnaire, the students' questionnaire also consisted of two parts; the first part was about the participants' personal information about their gender, first language, level of study and years of studying at this school. The second part of questionnaire consisted of 22 statements about students' views on using SB in English language classes using a five-point Likert scale (see Appendix D).

For the Primary level students, the questionnaire was translated into Kurdish since their level of English would not be adequate to comprehend and respond to the items in English. The Kurdish version was checked and back-translated by five lecturers at Ishik University into English. A comparison of the two English versions appeared to be identical and therefore no changes was made to the translated questionnaire (see Appendix E)

Data Collection Procedures

In order to collect data for this study, the researcher contacted the Rector of Ishik University and the principals of Ishik Primary and Preparatory Schools to get permissions to access the participants and arrange the administration of the questionnaires. Permissions were granted by all relevant parties (see Appendices F and G).

On the day of the data collection, the researcher personally distributed the questionnaires and explained the purpose of the survey to the participants. Furthermore, all necessary information regarding how to fill in the questionnaire was also given to the

participants in order to make sure understanding was clear. The participants were also informed to ask questions if something in the questionnaires was not clear. The students were distributed the questionnaires in their classrooms while the teachers responded to the questionnaire in their offices during the break time. The participants were not given a limited time; they had filled all the items in a comfortable manner. They returned the questionnaires to the researcher on the same day as they completed it.

After all the copies of the questionnaires were collected, the data was entered into the Statistical Program for Social Sciences (SPSS) version 23 and were analyzed. Details of these will be discussed in the Data Analysis section of this chapter.

Reliability and Validity

The questionnaires were checked for validity by the supervisor of the study. In addition, a pilot study was carried out for both teachers' and students' questionnaires. Ten English teachers from Education and Languages College/ Department of English Language at Lebanese French University-Erbil, ten English teachers from Nilufer Secondary School and ten English teachers from Clever Private Primary School participated in the pilot study. In addition, ten students from Education and Languages College/ Department of English Language at Lebanese French University-Erbil, ten students from Nilufer Secondary School and ten students from Clever Private Primary School participated in the pilot study. The reason behind selecting these participants for the pilot study was that they were teaching and learning English language and using SB. However, different from the target participants, these participants did not have SB installed in their classrooms – they accessed it through special language laboratories.

The participants of the pilot study were asked to respond to the items and indicate whether there were any unclear/ambiguous statements. They all confirmed that the statements were comprehensible and suitable for the use of the study. The collected data were also entered into the SPSS program version 23, and the Cronbach's alpha score was calculated to be .704 for the teachers' questionnaire and .705 for the students' questionnaire. Both of these scores indicate that the questionnaire was reliable. Brown (2002) stated that "Chronbach alpha is used to estimate the ratio of variance that is systematic in a set of test scores. For example; if the Cronbach alpha for a set of scores turns out to be .90, you can interpret that the test is 90% reliable and 10% is unreliable" (p.17). In the case of the current study, the Cronbach alpha scores indicate that the results of the study are reliable.

Data Analysis

As mentioned before, the data analysis was carried out quantitatively using SPSS version 23. First, descriptive statistics, i.e. frequencies, percentages, mean scores and standard deviations were calculated. In addition, t-tests, One-way ANOVA and Post Hoc LSD tests were used to compare groups of participants based on the level of study/teaching to see if their attitudes were significantly different or not. The results were tabulated and interpretations were made in relation to the findings of other relevant studies in the field.

Ethical Considerations

An introductory statement of consent was included in both the teachers' and the students' questionnaires to inform them about the aims of the study and to obtain their permission to participate (see Appendices F and G). Additionally, the participants were informed that it was their choice to take part in the current study or not as well as their right

to withdraw at any time. They were also informed that their identity was to be kept confidential and that their opinions would only be used for research purposes.

As explained in the earlier sections of this chapter, every precaution was taken to make the study as reliable and valid. In line with the characteristics of a quantitative survey study, two questionnaires were designed to collect the data to understand the way students and teachers viewed the use of SB in EFL classes at different levels of education in Northern part of Iraq. A specific school selected as it was the first and only school that used SB in classrooms, which allowed for comparisons to be made questionnaires were distributed and collected on the same day and the data were analyzed using SPSS version 23 through descriptive and interpretive statistics. The next chapter will present the results of this analysis.

CHAPTER IV

FINDINGS AND DISCUSSION

Overview

The aim of the current study was to reveal the attitudes of teachers and students towards the use of SMART Boards (SBs) in English as a Foreign Language (EFL) classroom in northern Iraq, with a special focus on the challenges and problems faced during the teaching and learning process. The following research questions lead the study:

1- What are the attitudes of EFL teachers in Ishik Schools towards using SB in their classrooms?

2- Do the teachers' attitudes towards the use of SB in EFL classrooms differ based on:

   a. gender?

   b. level of their students?

   c. years of teaching experience?

   d. their first language?

3- What are the attitudes of EFL students in Ishik Schools towards using SB in their classrooms?

4- Do the students' attitudes towards the use of SB in EFL classrooms differ based on:

   a. gender?

   b. level of their study?

   c. years of studying at Ishik Schools?

   d. their first language?

The data was collected and analyzed through questionnaires. This chapter will present the findings and discussion of this study.

Teachers' Attitudes toward Using SB in EFL Classrooms

Table 10 illustrates the descriptive statistics of English teachers' responses to the questionnaire. There were nine items with a mean score above 3.50, which indicated positive attitudes towards the use of SB. There were also six statements below the mean score of 3.00, which indicated a relatively negative attitude. However, their attitudes appear to be quite positive overall (see Appendix H).

With respect to statement 21 "It is easy to use the SB in class when teaching English," most of participants appeared to agree that it is easy to use the SB when they taught English (M=3.96, SD= 1.07). Similarly, the participating teachers claimed that using SB saved time when teaching in class (statement 23, M=3.96, SD=1.09). They also pointed out that they were happy with the level of engagement of their students when they used the SB; statement 19 had the third highest mean score (M=3.86, SD=1.11). In addition, most of participating teachers stated that by using SB, students understand better than without it, and they believe SB allows students to hear authentic language use (statement 20, M=3.80, SD=.996, statement 18, M=3.76, SD= 1.00). They also declared that before they start using SB teachers need pre-training on how to use SB in class in a proper way (statement 24, M=3.66, SD=1.37). Additionally, teachers claimed that by using SB they can practice language skills (M=3.60, SD=1.19). They also stated that iTool software was suitable with SB and makes SB easier to use (M=3.60, SD=1.16). Finally, teachers believed that using SB technology allowed them to change their approach to teach and learning (M=3.60, SD=1.06).

Regarding the last six statements, which had the lowest mean scores, the participating teachers were asked to state whether they agreed with statement 8 "I use the SB to do production activities." The result showed that they were neutral about this idea (M=2.66, SD=1.34). The participants also were asked whether they experienced any problems with electricity or not. It appeared that they were neutral about this phenomenon. The result indicated that this problem was not experienced by all teachers because the standard deviation is quite high, which means there was a great dispersion among the participants' responses (statement 11, M=2.80, SD=1.49). They also claimed that the issue of students' transfer from traditional classes to classes equipped with SB was not a common issue. Some of them did experience problems when students transferred from traditional classes to SB classes but some others did not see this as a problem (statement 10, M=2.86, SD=1.40). Participating teachers were also neutral about using SB to replace the activities in their regular course book (statement 1, M=2.86, SD=1.40). The teachers were also asked about whether they involve all of students in the process of learning with using SB or not. It seemed that they were neutral about it (M=2.96, SD=1.32). Some of them did this strategy others did not. While most of teachers were neutral about using SB only for presenting a new language point (M=2.96, SD=1.35).

Table 10

Teachers' attitudes towards the use of SB in EFL classrooms: An Overview

Statements	**M**	**SD**
21- It is easy to use the SB in class when teaching English	3.96	1.07
23- Using the SB in class saves time	3.96	1.09
19- I am happy with the level of engagement that my students show when I use the SB.	3.86	1.11
20- Students understand the topics better when I present them using the SB.	3.80	.996
18- SB allows students to hear authentic language use.	3.76	1.00
24- Teachers need training before they start using the SB.	3.66	1.37
5- I use the SB to practice language skills.	3.60	1.19
16- Using i.Tool applications makes it easy to use the SB in class.	3.60	1.16
22- Using SB inspired me to re-think my approach to teaching and learning.	3.60	1.06
7- I use SB only when teaching a new language point.	2.96	1.35
13- I involve all of my students when using the SB in class.	2.96	1.32
1- I use the SB to replace the activities in our regular course book.	2.86	1.40
10- I face problems when students transfer from traditional classes to classes with the SBs.	2.86	1.40
11- I experience problems with electricity.	2.80	1.49
8- I use the SB to do production activities.	2.66	1.34

Teachers' Attitudes toward Using SB in EFL Classrooms Based on Variables

In order to understand whether there was a difference between groups of participating teachers based on their gender, level of their students, years of teaching experience and their first language, One-Way ANOVA and t-tests were conducted . These tests indicated that differences existed only based on the level that the teachers were teaching. No differences were found in the attitudes of teacher participants based on gender, years of teaching experience, and first language (see Appendix I) Table 11 shows the ANOVA results based on levels of students that the participating teachers taught at the time of the study.

Table 11

ANOVA results based on levels of students that the participating teachers taught

Statements	**M**	**SD**	**P value**
6- I use multimedia materials within the SB to explain subjects.	3.10	1.37	0.00
4- I use group-work activities when teaching with the SB.	3.06	1.43	0.01
2- I use web-learning resources in the classroom within SB in order to clarify what I taught.	3.03	1.37	0.03
13- I involve all of my students when using the SB in class.	2.96	1.32	0.04
11- I experience problems with electricity.	2.80	1.49	0.04

These results indicated that there were differences between teachers who taught primary students, preparatory students and university students. In order to identify which groups differed from the others, a Post Hoc LSD test was conducted. The result of this test showed that for statement 6 "I use multimedia materials within the SB to explain subjects", teachers at the primary level differed from teachers at the preparatory level $P< 0.05$, [$F(2,27=12.05)$, $P=0.00$]. The Post Hoc comparison results indicated that the mean score for teachers at the primary level (M=4.40, SD=.699) was significantly different from teachers who taught at the preparatory level (M=2.30, SD=1.33) $P=0.00$ and teachers at the university level (M=2.60, SD=.966) $P=0.01$. However, teachers at the preparatory level did not differ from teachers at the university level regarding this statement. These results suggest that teachers at the primary level used multimedia materials via SB to explain subjects for their students more than teachers at preparatory level and teachers at university level. Figure 1 shows the distribution of the participating teachers' responses for statement 6.

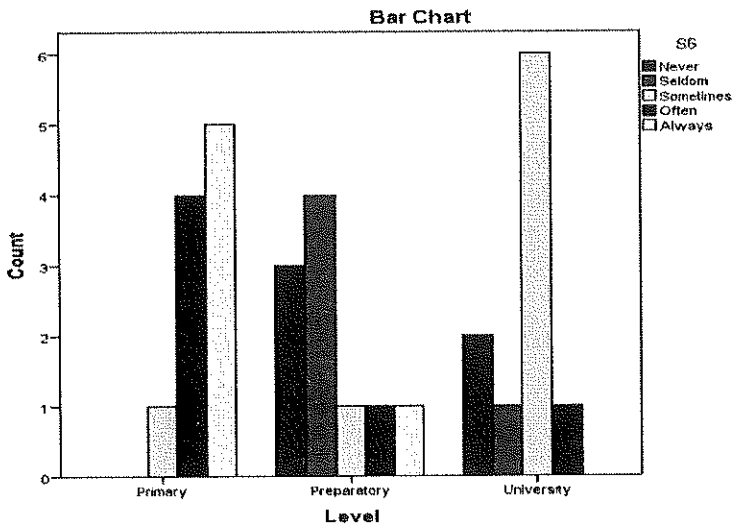

Figure1: Teachers' responses for S6 based on levels taught.

With respect to statement 4 "I use group-work activities when teaching with the SB," the results showed that differences were found based on the levels of participants $P<$ 0.05, [$F(2,27=9.20)$, $P=0.01$] again. Post Hoc LSD test revealed that the attitudes of teachers at the primary level (M=4.20, SD=.788) were significantly differed from teachers at the university (M=2.00, SD=1.05) $P=0.00$ in terms of using group work activities while using SB. No differences were observed between attitudes of teachers at primary level and preparatory level, as well as between the attitudes of teachers at the preparatory and university levels. These results indicate that teachers at the primary level always used group-work activities when they taught with the SB, while the responses of the teachers at preparatory level (M=3.00, SD=1.49) were neutral for this strategy. It was interesting to see that most of teachers at the university level never used this strategy in class. Figure 2 shows the responses of the teachers to this statement.

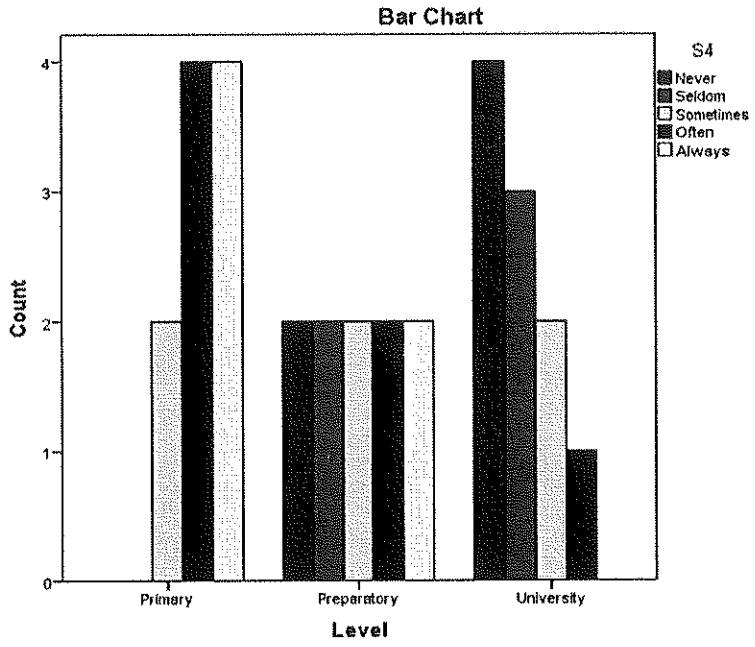

Figure2: Teachers' responses for S4 based on levels taught.

Regarding statement 2 "I use web-learning resources in the classroom within SB in order to clarify what I taught," the results showed that significant differences were found $P< 0.05$, [$F(2,27=7.07)$, $P=0.03$]. The Post Hoc LSD test showed that the mean score of teachers at the primary level (M=4.10, SD=.994) was significantly different from the mean score of the teachers at the preparatory level (2.10, SD=1.19) $P=0.01$, while differences were not found between teachers at the university (M=2.90, SD=1.37) and other levels. This result indicated that teachers at the primary level used web-resources within SB more frequently than teachers at the preparatory and university levels. Figure 3 shows the responses of teachers from each level.

Similarly to statement 4, in statement 13 "I involve all of my students when using the SB in the class," the results indicated that significant differences were found $P< 0.05$, [$F(2,27=6.91)$, $P=0.04$] among groups of teachers. The Post Hoc LSD test revealed that the mean score of teachers at primary level (M=4.00, SD=.942) was significantly different from teachers at the preparatory level (M=2.20, SD=1.03), $P=0.01$, while differences were not found between teachers at university (M=2.70, SD=1.33) and other levels. These results indicate that teachers at the primary level believed that they involved all of their students in the lesson when they used SB in the classes, while teachers at other levels believed that they did this relatively less. Figure 4 shows responses of teachers at each level.

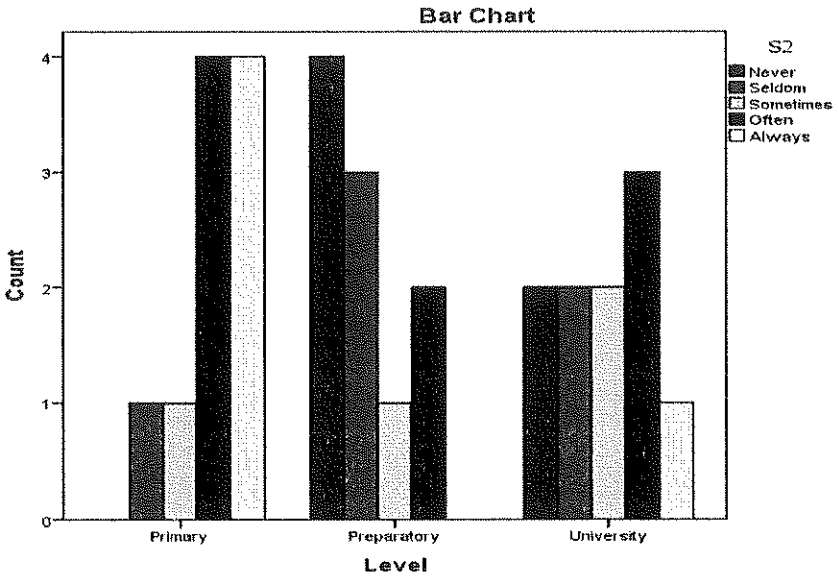

Figure3: Teachers' responses for S2 based on levels taught.

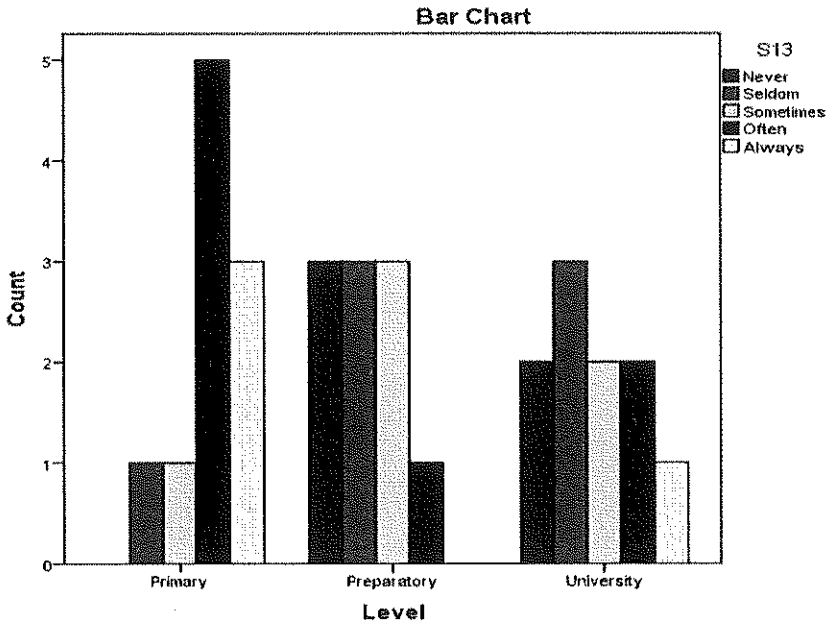

Figure4:Teachers' responses for S13 based on levels taught.

Significant differences were also observed in statement 11 "I experience problems with electricity $P< 0.05$, [$F(2,27=6.91)$, $P=0.04$]. The LSD results indicated that the attitudes of teachers at the university level (M=4.00, SD=1.41) significantly different from

teachers at the preparatory level (M=2.20, SD=1.39) and teachers at the primary level (M=2.20, SD=.918), *P*=0.04. The results indicated that this phenomenon was not experienced by all teachers; teachers at the university level did not face such problems, while teachers at both primary and preparatory levels faced this problem. Figure 5 shows responses of participants according to their levels.

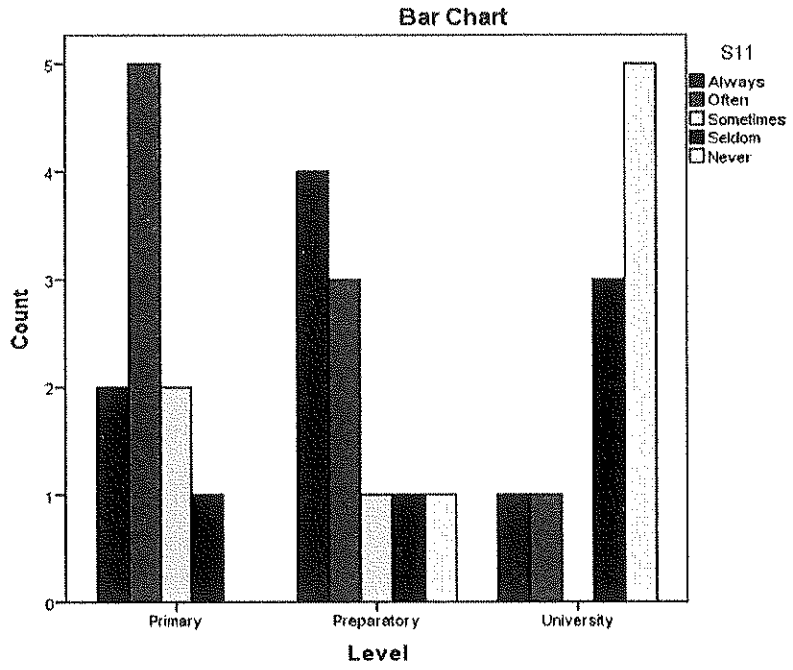

Figure5: Teachers' responses for S11 based on levels taught.

Students' Attitudes towards Using SB in EFL Classrooms

The table 12 illustrates the descriptive statistics for three levels of students. The five statements received the highest mean scores, i.e. above 3.70, while three statements received the lowest mean scores, i.e. below 3.00. However, their overall attitudes appeared to be positive (see Appendix J).

Table 12

Students' attitudes towards the use of SB in EFL classrooms: An Overview

Statements	**M**	**SD**
16- Lessons become enjoyable when SB is used in the teaching-learning process.	3.86	1.09
15- I learn English better when I follow the lesson from the SB compared to the book.	3.84	1.21
20- My English language skills have improved since we started using SB in class.	3.80	1.14
14- I pay attention to what my English teacher says when he/she uses the SB in class.	3.78	1.28
17- Using SB increases my engagement in the lesson.	3.71	1.26
6- My English teacher initiates group-work activities using the SB.	2.97	1.46
4- My English teacher uses web sources through the SB.	2.88	1.41
9- Technical problems prevent me from learning English when using the SB.	2.71	1.44

According to the participating students "Lessons become enjoyable when SB is used in the teaching-learning process" (M=3.86, SD=1.09). It seemed that most of students stated that using SB makes lessons enjoyable, and they claimed that they learnt English

better when they followed lessons from the SB compared to the course book (statement 15, M=3.84, SD=1.21). In addition, students believed that their language skills were improved since they started using SB in English classes (statement 20, M=3.80, SD=1.14). They also paid more attention to their English teachers when he/she used the SB than without SB (statement 14, M=3.78, SD=1.28). The students also stated that using SB increased their engagement in the lesson. These results indicated that students believed that SB has many advantages for them in EFL classes.

With respect to statement 9 which had the lowest mean score, it appeared that most of students were neutral towards the technical problems which happened while using SB (M=2.71, SD=1.44). They were also neutral about statement 4, which asked them whether their teachers used web sources through the SB in order to clarify subjects (M=2.88, SD=1.41). In addition, they were also neutral about whether their teachers initiated group-work activities while using SB, which was a common finding with the teachers' questionnaire (statement 6, M=2.97, SD=1.46).

Students' Attitudes toward Using SB in EFL Classrooms Based on Variables

In order to understand whether there was a difference between groups of participating students based on their gender, level of their study, years of studying at this school and their first language, One-Way ANOVA and t-tests were conducted. Similar to the teachers' attitudes, these tests indicated that differences existed only based on the level that the students were studying. No differences were found in the attitudes of student participants based on gender, years of studying at Ishik schools, and first language (see Appendix K). Table 13 shows the ANOVA results based on levels of students.

Table 13

ANOVA results based on the levels of students that they studied

Statements	**Mean**	**SD**	**P value**
7- My English teacher uses multimedia on SB to explain subjects.	3.38	1.39	0.00
2- If my English teacher is going to use the SB in class, I prepare for the lesson beforehand.	3.18	1.40	0.00
10- We waste a lot of time while waiting for my English teacher to set up the SB.	3.14	1.48	0.00
21- My eyes get tired after continuously looking at the SB.	3.09	1.35	0.01
8- We work on our own when my English teacher uses the SB in class.	3.08	1.51	0.04
13- I interact with my friends in English when we use the SB.	3.07	1.26	0.00
1- My English teacher gives opportunities to all students to work on SB.	3.05	1.42	0.01
6- My English teacher initiates group-work activities using the SB.	2.97	1.46	0.00
4- My English teacher uses web sources through the SB.	2.88	1.41	0.00
9- Technical problems prevent me from learning English when using the SB.	2.71	1.44	0.01

These results indicated that there were differences among students who studied at the primary, preparatory and university levels in 10 statements. In order to identify which groups differed from the others, a Post Hoc LSD test was conducted.

The result of this test showed that for statement 7 "My English teacher uses multimedia on SB to explain subjects," a difference was found between levels of students $P< 0.05$, [$F(2,204=12.93)$, $P=0.00$]. The primary level students (M=3.78, SD=1.21) significantly differed from preparatory level students (M=2.70, SD=1.47) $P=0.00$, and university level students' (M=3.52, SD=1.31) attitudes significantly different from preparatory level students $P=0.01$. However, primary level students did not differ from university level students regarding this statement.

The results also indicate that most primary level students stated that their English teacher used multimedia through SB to explain subjects, while at the preparatory level; students' responses were relatively mixed. According to students, at the university level, teachers used this strategy as well. The Figure 6 shows the differences between student levels for statement 7.

Regarding the statement 2 "If my English teacher is going to use the SB in class, I prepare for the lesson beforehand," primary level students (M= 3.73, SD=1.32) appeared to be significantly different from preparatory level students (M=2.79, SD= 1.29) and university level students (M= 2.66, SD=1.32), $P< 0.05$, [$F(2,204=14.88)$, $P=0.00$]. These results indicate that most primary level students prepared themselves beforehand when their EFL teacher was going to use SB, while both preparatory and university level students did this relatively less. Figure 7 shows the differences between student levels for statement 2.

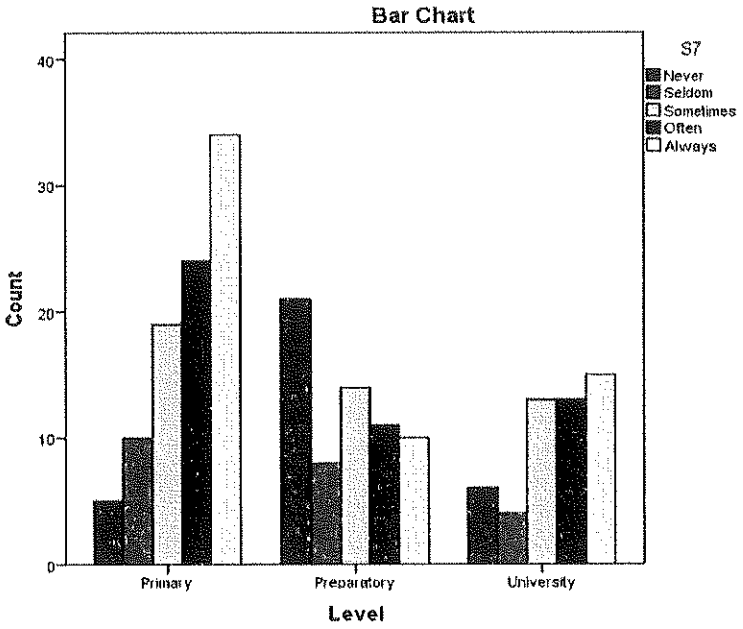

Figure6: Students' responses for S7 based on level studied..

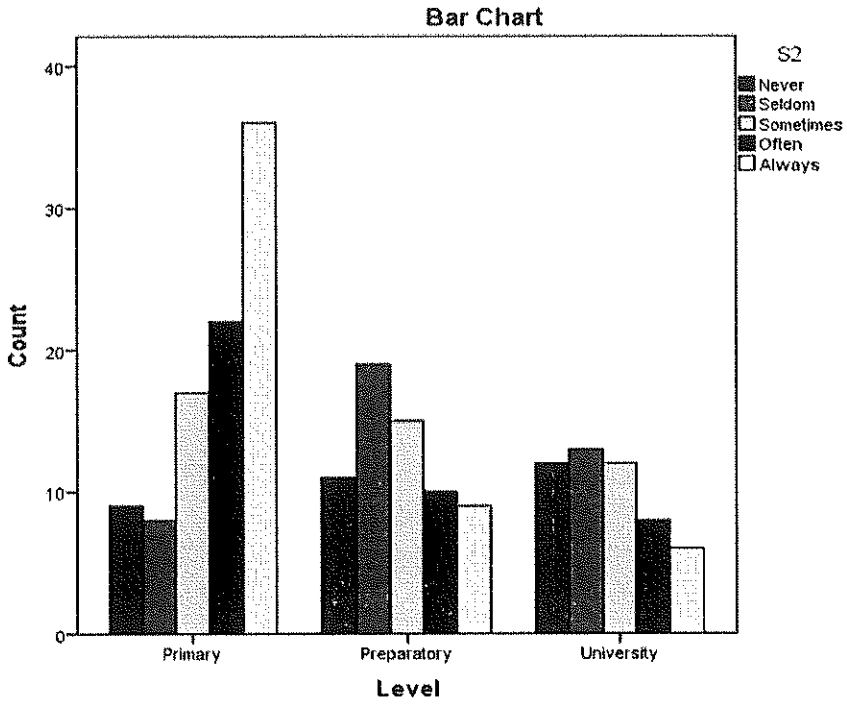

Figure7: Students' responses for S2 based on level studied.

With respect to statement 10 "We waste a lot of time while waiting for my English teacher to set up the SMART Board", the significant differences were found for this statement $P< 0.05$, [$F(2,204=11.08)$, $P=0.00$]. The LSD test revealed that primary level students (M= 2.64, SD= 1.42) was significantly different than preparatory level students (M= 3.67, SD= 1.49) $P=0.00$ and university level students (M= 3.41, SD= 1.31) $P=0.02$. These results indicate that most of Primary level students claimed that to set up SB they waste a lot of time, while for most preparatory level students this situation never happened to them, also university level students were neutral about this issue. Figure 8 shows students' responses according to their levels.

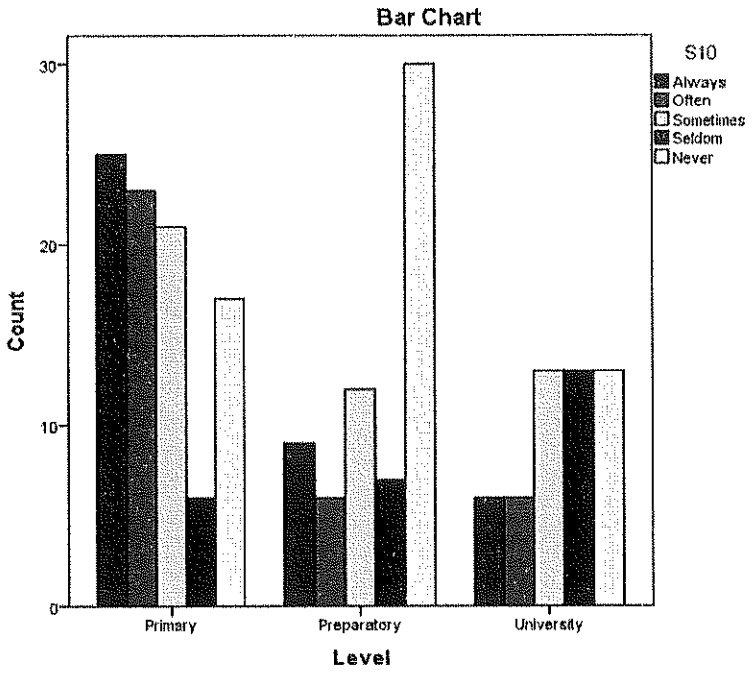

Figure 8: Students' responses for S10 based on levels level studied.

Statement 21 "My eyes get tired after continuously looking at the SB" was another item where significant differences between levels of responders were found $P< 0.05$, [$F(2,204=7.67)$, $P=0.01$]. This difference indicated that primary level students (M= 3.47, SD=1.37) was significantly different from university level students (M=2.62, SD=1.19) $P=$

0.00, while differences were not found between primary and preparatory (M=2.92, SD=1.31). There were also differences not found between university level students and preparatory level students regarding this statement. These results indicated that most of primary level students agreed that by continuously looking at the SB their eyes got tired, while the students at other levels were neutral about this situation. Figure 9 shows students' responses for statement 21.

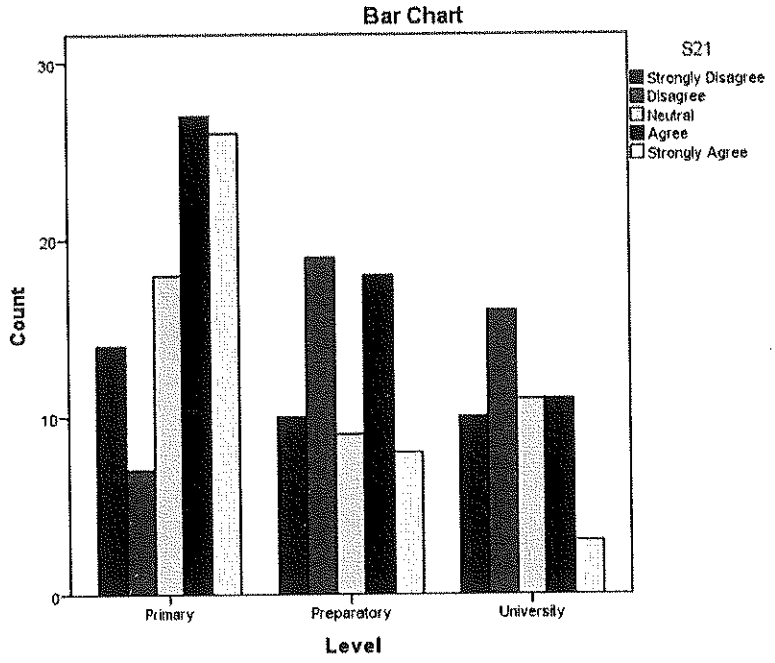

Figure 9: Students' responses for S21 based on level studied.

With respect to statement 8 "We work on our own when my English teacher uses the SB in class," statistically the significant differences were found among levels of students $P< 0.05$, [$F(2,204=5.66)$, $P=0.04$]. The Primary level students' (M= 3.44, SD=1.47) responses were significantly different from preparatory level students (M=2.64, SD=1.56) $P=0.01$. No statistical differences were found between primary and university (M=3.00, SD=1.38) students and university and preparatory students. These results showed

that most of primary level students positively responded for this statement, while most of preparatory level students negatively responded and university level students were neutral. Figure 10 shows statistical differences between levels of participants.

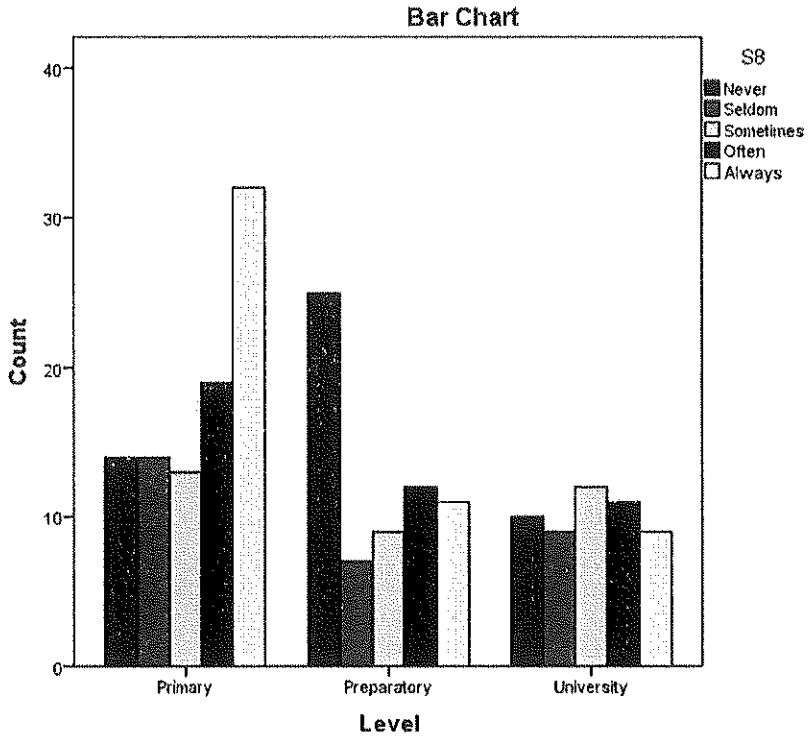

Figure 10: *Students' responses for S8 based on level studied.*

Regarding statement 13 "I interact with my friends in English when we use the SB", the significant differences were found in term of levels only $P< 0.05$, [$F(2,204=7.98)$, $P=0.00$]. For this statement, university level students' attitudes (M=3.66, SD=1.25) were found to be significantly different from primary level responses (M=2.84, SD=1.23) $P=0.00$ and preparatory students' responses (M=2.92, SD=1.19) $P=0.01$, while no differences were observed between primary and preparatory levels. According to the results, it appeared that most of university students believed that they could interact in English amongst themselves when SB was used, while both Primary and Preparatory level students were neutral in this

case. Figure 11 clarifies differences and responses of students based on their levels for this statement.

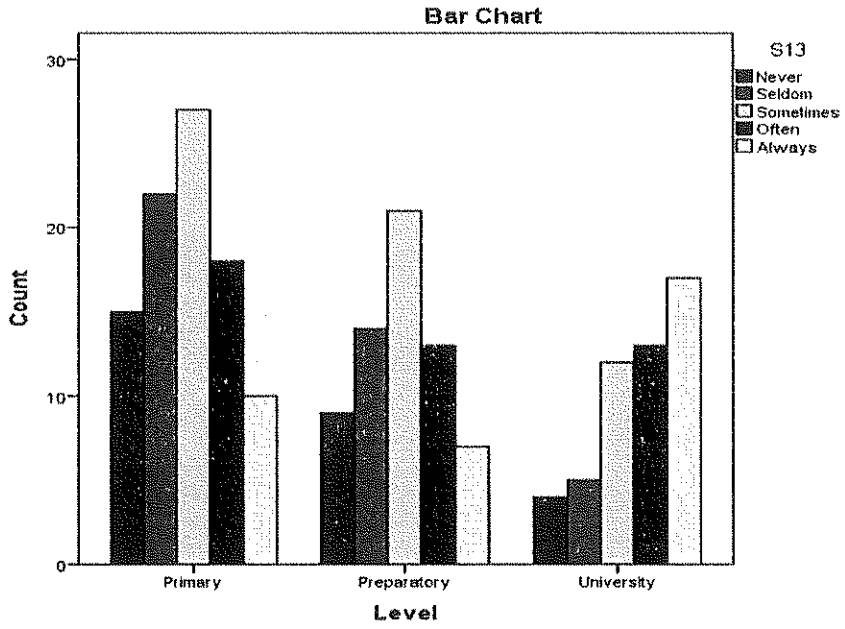

Figure11: Students' responses for S13 based level studied.

According to statement 1 "My English teacher gives opportunities to all students to work on SB", the significant differences were found in term of levels only $P< 0.05$, [$F(2,204=7.08)$, $P=0.01$], thus, the primary level students (M= 3.42, SD= 1.43) was significantly different than preparatory level students (M= 2.57, SD= 1.30) $P=0.00$, and there were not significant differences between primary and university (M=3.00, SD=1.40). With these results, it appeared that according to the primary level students, their English teachers have been giving opportunities to them to work on SB more than preparatory and university levels. Figure 12 clearly shows the differences in students' responses.

Regarding statement 6 "My English teacher initiates group-work activities using the SB," primary level students' attitudes (M= 3.56, SD=1.36) were found to be significantly different from preparatory level students' attitudes (M= 2.50, SD= 1.43) $P=0.00$ and university level students' attitudes (M=2.50, SD=1.28) $P=0.00$, $P< 0.05$, [$F(2,204=15.30)$,

P=0.00]. Primary level students appeared to respond relatively more positively to this item compared to the other two levels of students. Figure 13 explains responses of students at each level for this statement.

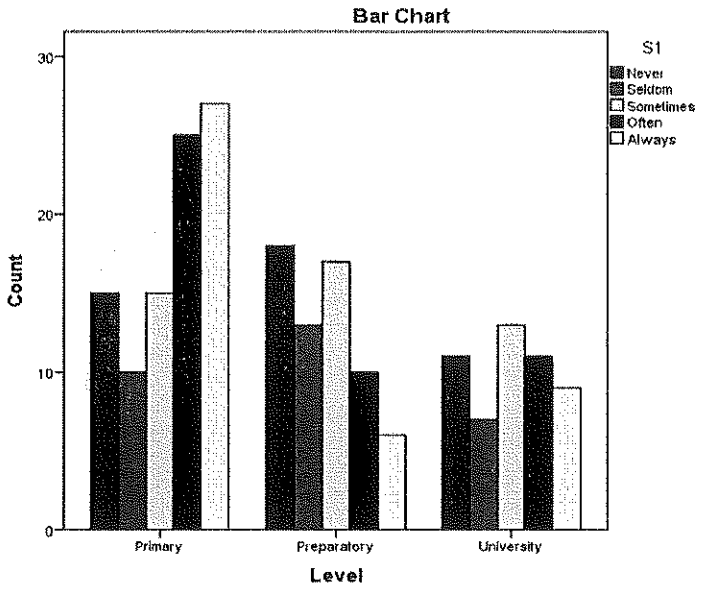

Figure12: Students' responses for S1 based on level studied.

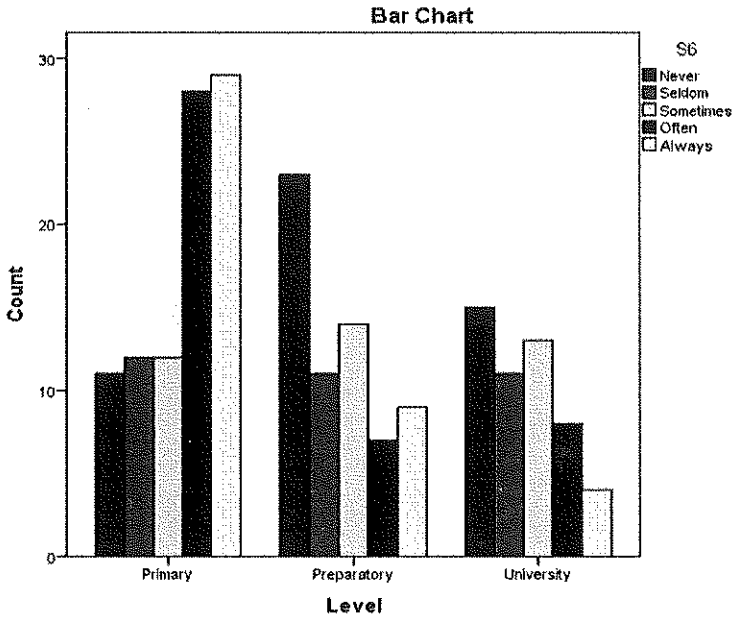

Figure13: Students' responses for S6 based on level studied.

Another statement where differences were observed among the participants' attitudes was statement 4 "My English teacher uses web sources through the SB" $P< 0.05$, [$F(2,204=10.12)$, $P=0.00$]. Regarding responses of students at each level, primary level students (M= 3.29, SD= 1.44) appeared to be significantly different from preparatory level students (M= 2.29, SD= 1.29) $P=0.00$, while differences were not found between university level (M= 2.88 SD= 1.27) students' attitudes and other levels. Regarding these results, it seemed that according to most primary level students, their English teachers used web sources through SB in order to clarify subjects, while preparatory level students' responses were negative and University level students were neutral about this. Figure 14 shows students' responses for this statement based on their levels of study.

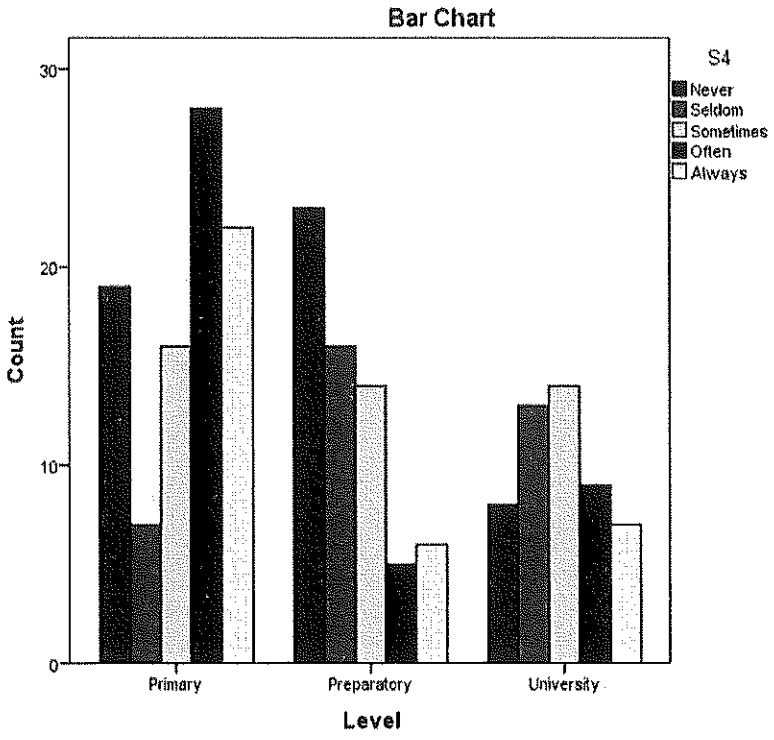

Figure14: Students' responses for S4 based on level studied.

With respect to statement 9 "Technical problems prevent me from learning English when using the SB," primary level students' responses (M=2.34, SD=1.28) were

significantly different from university level students' responses (M=3.27, SD=1.53) P=0.00, P< 0.05, [F(2,204=7.30), P=0.01]. However, differences were not found between preparatory level (M=2.78, SD=1.44) and others. These results indicate that university level students rarely faced technical problems that impeded their learning of English, while most of primary level students stated that technical problems prevented them from learning. Preparatory level students were generally neutral. Please see Figure 15 which shows the differences between levels for this statement.

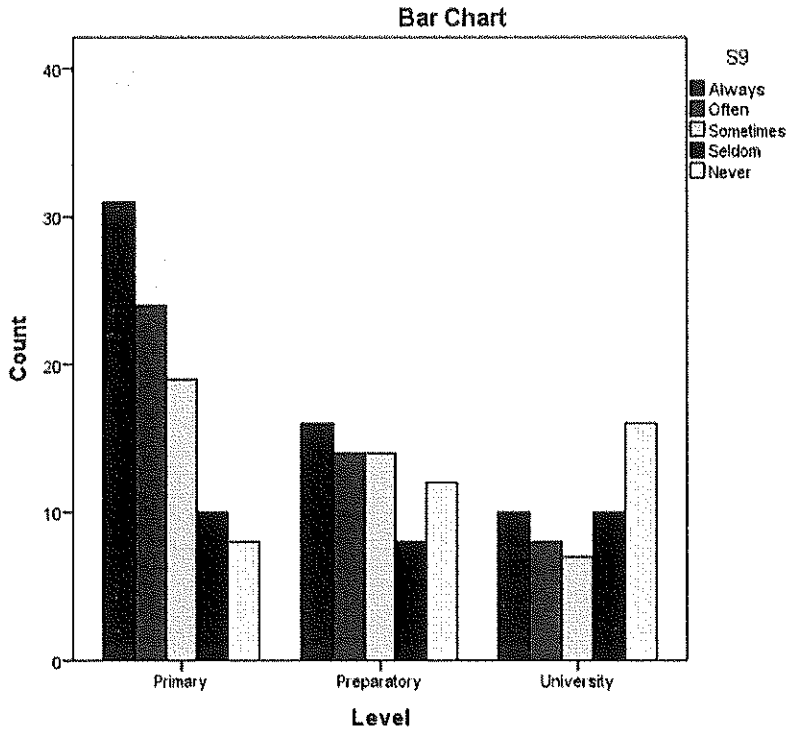

Figure15: Students' responses for S9 based on level studied.

Discussion

The results of the current study appear to be in line with the previous works about using SB in the classroom (Al-Faki & Khamis, 2014; Al-Saleem, 2013; Aytac, 2013; Bacon, 2011; Korkmaz & Cakil, 2013; Elaziz, 2008; Shenton & Pagett, 2007; Hall &

Higgins, 2005). According to the findings of the current study, most teachers and students had positive attitudes towards using SB. In the process of teaching and learning, most students agreed that using SB is enjoyable and they learn English better with it than without it. A great majority of the teachers also agreed that using SB saved time, and they stated that students understood topics better when presented on SB. These results are also parallel with the studies Duran and Cruz (2010), Levy (2002) and Kenwell et al. (2001).

One of the most significant findings of this study was the issue of electricity and technical problems. This item was added to the questionnaire based on the interviews results, which were carried out with EFL teachers while forming the questionnaire. Interestingly, differences were found between groups of both teachers and students; the results indicated that teachers at primary and preparatory schools faced electricity problems more than teachers and students at the university. This finding could be explained based on what the teachers at the university level explained in informal interviews following the analysis of the findings (See chapter 3). According to these teachers, this issue was resolved by installing an Uninterruptable Power Supply (UPS) in every classroom. It appears that they do not have such an additional power supply at the preparatory and primary levels. Thus, this might explain the result that more technical and electrical problems are faced by the teachers at the primary level. Hall and Higgins (2005) have raised a similar issue in their study, claiming that technical problems such as the need to reorient the SB and freezes or crashes of SB during instruction negatively affected students' learning.

Another result of this study is that students at the primary level indicated that their eyes were tired or they experienced pain in their eyes after continuously looking at the SB. This was not reported by preparatory and university students. As Aytac (2014) found that English teachers in primary schools in Turkey used Interactive White Boards, which work

on the same principles as the SB, more than high school teachers, which negatively affected students' eyesight. In other words, using SB all the time during instruction may have such negative side effects on the students' physical health.

Elaziz (2008) and Al-Faki and Khamis (2014) raised the human factor in using technology in education as a possible drawback. In other words, whether the teachers employ the SB properly in field of language teaching and learning is an important issue to consider. According to table 11, there appear to be differences in the way teachers used SB in their classes based on their levels. For instance, EFL teachers at the primary level involve their students, use web sources, multimedia and group activities on SB. These strategies support students' learning by motivating and allowing students to interact in the field of learning English language. Al-Saleem (2013) stated that using web-sources within SB enables teachers to present their lessons better. According to the results of the current study, however, EFL teachers at the preparatory level did not appear to use these strategies appropriately. Thus, these caused problems in the process of teaching-learning from the students' point of view. In informal follow-up interviews, most of the preparatory level EFL teachers stated that they did not have time to employ these strategies in the classroom; they just had time to focus on the course book to cover the given syllabus. They also stated that especially in the 12^{th} grade in which final exams are prepared by the cabinet and Ministry of Education, the students were very exam oriented and that they saw the use of any of these strategies as waste of time. Teachers at the university level sometimes gave opportunities to their students to work on the SB through multimedia and web sources, while they did not use group activities. Again, their reasoning for this was that such methods were time-consuming. Finally, the teachers also raised the issue of their lack of training on how to use SB. This result is parallel with the result of Taskin (2013) who

found that teachers believed that they needed training before they started using SB in the classes.

Teachers have claimed that the level of engagement of their students has been increased with the use of SB and students understood topics better when presented on SB than without it. This finding may be linked to the fact that students have claimed to prepare beforehand for their classes if they knew that their teacher was going to present the lesson using SB. Although this was more common among primary level students, others also agreed with this.

The main findings of this study have been analyzed in this chapter. A discussion of the results was also provided. The findings revealed that both teachers and students have positive attitudes towards using SB in EFL classroom. All participants believed that SB has several benefits for the process of teaching-learning. It also seems that both teachers and students have a common view about the problems and strategies used within SB. As mentioned in reviewed literature, teachers should use SB in a proper way. There are many features within SB they can employ in order to create an effective teaching-learning environment rather than using it as a presentational tool only. Finally, it was found that the teachers believed that they needed training on how to use SB and how to deal with problems on SB. Based on the findings, recommendations and suggestions for further study will be presented in the following chapter.

CHAPTER V

CONCLUSION AND RECOMMENDATIONS

Overview

This study was carried out to reveal both teachers' and students' attitudes toward using the SMART Board (SB) in English as a Foreign Language (EFL) classrooms, which is currently being used in Ishik Schools in the Northern part of Iraq. This chapter will present the summary of the findings followed by recommendations for practice. In addition, implications for further study will also be presented.

Summary of the Findings

The results of the current study can be summarized in two points; first, teachers' and students' attitudes toward using SB in EFL classrooms are positive. Second, despite these positive attitudes, there are obstacles and difficulties faced during the teaching-learning process while SB is used. These difficulties can be grouped into two different factors. The first factor is related to the teachers and the language teaching methods they employ while using SB. From the results, it appears that in preparatory and university levels, teachers use a relatively more teacher-centered model because they do not give opportunities to all students to work on SB and they employ group work less compared to the primary level teachers. As Glover, Miller, Averis and Door (2005) state "there is an increasing awareness of the need to understand the match between technology and pedagogy in the development of interactive learning supported by IWB in schools" (p.155). This principle can also be applied to the SB. In addition, the teachers' lack of training on how to use the SB is another challenge that they faced, as Elaziz (2008) also pointed out in his study. Teachers believed that with training, they could overcome some of the technical problems they experienced while using SB. Furthermore, according to the results, the

teachers at the preparatory level and university level rarely used multimedia, web-sources and group activities in EFL classrooms, which can be related to their lack of training in possible ways of integrating SB in their classroom interaction. To support this result, the students have suggested that their interaction have weakened when their teachers used the SB in their classes, which was a similar finding with Aytac's (2014) study, where the students claimed that they became more passive as their teachers increased the amount of time they employed the SB in the classroom. Considering the vast amount of possibilities within SB and different ways of employing it during teaching, these issues seem to be related to the teachers' lack of training and information in this regard.

The second factor related to the challenges of using SB is related to technical issues. The finding related to the electricity problems, which may cause interruptions and missing all the contents in SB was a significant finding of the current study. Most teachers complained that they faced such a problem especially at the preparatory and primary levels. This result is in line with Al-Faki and Khamis' (2014) findings, where a great majority of teachers agreed that technical problems were the biggest challenge that affected teachers' performance in the class.

Recommendations for Practice

Based on the findings of the current study, the following recommendations can be presented for practice:

- In order to use SB effectively and overcome problems, it is necessary to organize training courses for teachers, which not only focus on how SB can be integrated in the EFL classrooms methodologically but also inform teachers of possible troubleshooting strategies.

- EFL teachers should refrain from using the SB as a presentation tool only and find ways of engaging students by giving them opportunities to work on SB because the main aim of integrating SB into classrooms is to achieve interactivity.
- Programs and anti-virus protection on the SBs in the current schools should be updated because as the teachers have reported, they cause one of the biggest challenges affecting teachers' performance negatively in the classroom.
- The findings of the study suggested that there were some teachers who integrated the SB in their classes in a student-centered way. School administration should encourage further collaboration amongst teachers so that they can share resources and ideas on how to utilize SB and involve their students while doing so.
- EFL teachers should analyze their students' language needs and learning styles to be able to prepare lessons that fit with their students' needs.
- The school administrators should strive to install Uninterrupted Power Supply (UPS) devices in every SB classroom. This helps teachers to continue their lessons without interruption.
- This study may help other educational institutions and teachers who use SB in the classrooms or those who plan to equip their classrooms with this technology. They should regard obstacles faced by those who use it so that they make accurate plans before they start using the SB in their classrooms. Otherwise, without these necessary procedures, SB will be useless and it will just exist as a decoration in the classroom.

Recommendations for Further Research

The informal interviews carried out after the quantitative data was collected and analyzed in this study proved to be extremely useful in understanding some of the issues

and results of the analysis. Thus, it is recommended that an in-depth study, including observations, in-depth interviews and recordings to be carries out on the ways that teachers actually employ the SB in their EFL classrooms. In addition, since differences were found in the students' and teachers' attitudes based on the level of study, a further study to focus on each level separately to analyze the reasons for these differences can be carried out. If the challenges that the students and teachers in the current study have raised are taken seriously and measures to overcome them are taken, then instruction and achievement in language learning can be greatly improved.

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APPENDICES

APPENDIX A

First draft of students' questionnaire

Students' Views on the Use of Smart Board in English Language Lessons

Dear Student,

The aim of this research study is to understand what students think about the use of Smart Boards in English lessons. Please complete the following questionnaire to the best of your knowledge. Personal information will not be used to identify any of the participants. Your participation in this study is voluntary and you can opt-out whenever you wish by informing me. Please feel free to contact me if you have any questions.

Thank you for your co-operation.

Twana J. Mohammed
MA Student
Department of English Language Teaching
Near East University
E-mail:twanadzaiy@gmail.com
Mobile: 009647504491332

Supervisor: Asst. Prof. Dr. Çise Çavuşoğlu
Vice Chair, Department of English Language Tea
E-mail: cise.cavusoglu@neu.edu.tr

Please tick the box that applies to you:

How many years you studied in this school? ——— years.

Gender: ☐ Male ☐ Female

Nationality: ☐Kurdish ☐ Turkish ☐ Other

Grade level: ☐ Primary ☐ Secondary ☐ Preparatory ☐ University

Please put a cross (X) next to the items based on frequency.		Never	Seldom	Sometimes	Often	Always
1	My teacher gives opportunity to all students to work on Smart Board.					
2	I can make eye contact with the teacher when he/she uses the Smart Board.					
3	My teacher uses web sources in order to clarify subjects.					
4	My teacher performs group-working teaching through Smart Board.					
5	My teacher uses videos, sounds, animation, graphical data, and diagrams on Smart Board to explain subjects.					
6	Technical problems prevent me from learning when using the Smart Board.					
7	I learn English better when I follow the lesson from the Smart Board.					
8	I can interact with my friends when Smart Board is used.					
9	My teacher only shows the content which is prepared by himself/herself on Smart Board.					
10	Lessons become enjoyable when Smart Board is used in the teaching-learning process.					
11	Using Smart Board increases my engagement towards the lesson.					
12	When I follow lessons on Smart Board, I gain vitality in learning English.					
13	The contents which are displayed on Smart Board are compatible with my demand levels to learn English.					
14	My language skills have been increased since I attended lessons on Smart Board.					
15	My eyes are tired after I continuously looking at the Smart Board.					
16	My attention disperses in lessons because of the technical problems we have while using Smart Board.					

Thank you for your co-operation.

APPENDIX B

First draft of teachers' questionnaire

Teachers' Views on the Use of Smart Board in English Language Lessons

Dear colleague,

The aim of this research study is to understand what teachers think about the use of Smart Boards in English lessons. Please complete the following questionnaire to the best of your knowledge. Personal information will not be used to identify any of the participants. Your participation in this study is voluntary and you can opt-out whenever you wish by informing me. Please feel free to contact me if you have any questions.

Thank you for your co-operation.

Twana J. Mohammed
MA Student
Department of English Language Teaching
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E-mail:twanadzaiy@gmail.com
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Supervisor: Asst. Prof. Dr. Çise Çavuşoğlu
Vice Chair, Department of English Language Teac
E-mail: cise.cavusoglu@neu.edu.tr

Please tick the box that applies to you:

Age: ☐22-29 ☐ 30-39 ☐ 40-49 ☐ 50-59 ☐ 60-69

Gender: ☐Male ☐Female

Nationality: ☐Kurdish ☐ Turkish ☐ Other

Teaching Experience: ☐1-5 ☐ 6-10 ☐ 11-15 ☐ 16-20 ☐ 21+

Grade level taught: ☐ Primary ☐ Secondary ☐ Preparatory ☐ University

I have previous experience in teaching with Smart Board. ☐ **Yes** ☐ **No**

	Please put a cross (X) next to the items based on frequency.	**Never**	**Seldom**	**Sometimes**	**Often**	**Always**
1	I use web-learning resources in the classroom within Smart Board in order to give more clarification.					
2	I use group-working method when teaching with Smart Board.					
3	I use multimedia materials within Smart Board to explain subjects.					
4	I use Smart Board only when teaching a new language point.					
5	I experience difficulties in integrating Smart Board into teaching English language.					
6	I face problems when students transfer from traditional classes to classes with Smart Boards.					
7	I experience problems with electricity.					
8	I experience problems with finding appropriate pens for the board.					
9	I give a chance to involve every student of the class to participate and work on Smart Board.					
	Please put a cross (X) next to the appropriate box to indicate your opinion.	**Strongly Disagree**	**Agree**	**I don't know**	**Disagree**	**Strongly Disagree**
10	Using i. Tool applications contributes with using Smart Board.					
11	Different versions of Smart Board have an effect on my teaching method.					
12	Using Smart Board is beneficial for students in the future.					
13	Students understand the topics better when I present them using the Smart Board.					
14	Using Smart Board encourages teachers to change their teaching methods.					
15	Using Smart Board inspires teachers to re-think their approach to teaching and learning.					
16	Using Smart Board saves the time.					
17	Teachers need pre-training before they start using Smart Board.					

Thank you for your co-operation.

APPENDIX C

Final version of teachers' questionnaire

Teachers' Views on the Use of SMART Board in English Language Lessons

Dear colleague,

The aim of this research study is to understand what teachers think about the use of SMART Boards in English lessons. Please complete the following questionnaire to the best of your knowledge. Personal information will not be used to identify any of the participants. Your participation in this study is voluntary and you can opt-out whenever you wish by informing me. Please feel free to contact me if you have any questions.

Thank you for your co-operation.

Twana J. Mohammed
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Vice Chair, Lecturer in Education
Department of English Language Teaching
Near East University
E-mail: cise.cavusoglu@neu.edu.tr

Please tick the box that applies to you:

Gender: ☐ Male ☐ Female

First Language: ☐ Kurdish ☐ Turkish ☐ Other (Please state: _____)

Years of teaching experience: ☐ 1-5 ☐ 6-10 ☐ 10+

Grade level taught: ☐ Primary ☐ Secondary ☐ Preparatory ☐ University

Please put a cross (X) next to the items based on frequency.		Never	Seldom	Sometimes	Often	Always
1	I use the SMART Board to replace the activities in our regular course book.					
2	I use web-learning resources in the classroom within SMART Board in order to clarify what I taught.					
3	I use the SMART Board to do warm-up activities only.					
4	I use group-work activities when teaching with the SMART Board.					
5	I use the SMART Board to practice language skills.					
6	I use multimedia materials within the SMART Board to explain subjects.					
7	I use the SMART Board only when teaching a new language point.					
8	I use the SMART Board to do production activities only.					
9	I experience difficulties in integrating the SMART Board into teaching English language.					
10	I face problems when students transfer from traditional classes to classes with the SMART Boards.					
11	I experience problems with electricity.					
12	I experience problems with finding appropriate pens for the board.					
13	I involve all of my students when using the SMART Board in class.					
14	I change my teaching methods when I use different versions of the SMART Board.					
15	When I use the SMART Board, I have to prepare more than otherwise.					

Please put a cross (X) next to the appropriate box to indicate your opinion.		Strongly Agree	Agree	I don't know	Disagree	Strongly Disagree
16	Using i.Tool applications makes it easy to use the SMART Board in class.					
17	I can only use whole class activities when I use the SMART Board to teach English.					
18	SMART Boards allow students to hear authentic language use.					
19	I am happy with the level of engagement that my students show when I use the SMART Board					
20	Students understand the topics better when I present them using the SMART Board.					
21	It is easy to use the SMART Board in class when teaching English.					
22	Using the SMART Board inspired me to re-think my approach to teaching and learning.					
23	Using the SMART Board in class saves time.					
24	Teachers need training before they start using the SMART Board.					

Thank you for your co-operation.

APPENDIX D

Final version of students' questionnaire

Teachers' Views on the Use of SMART Board in English Language Lessons

Dear colleague,

The aim of this research study is to understand what teachers think about the use of SMART Boards in English lessons. Please complete the following questionnaire to the best of your knowledge. Personal information will not be used to identify any of the participants. Your participation in this study is voluntary and you can opt-out whenever you wish by informing me. Please feel free to contact me if you have any questions.

Thank you for your co-operation.

Twana J. Mohammed
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Supervisor: Asst. Prof. Dr. Çise Çavuşoğlu
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Department of English Language Teaching
Near East University
E-mail: cise.cavusoglu@neu.edu.tr

Please tick the box that applies to you:

Gender: ☐ Male ☐ Female

First Language: ☐ Kurdish ☐ Turkish ☐ Other (Please state: _____)

Years of teaching experience: ☐ 1-5 ☐ 6-10 ☐ 10+

Grade level taught: ☐ Primary ☐ Secondary ☐ Preparatory ☐ University

Please put a cross (X) next to the items based on frequency.		Never	Seldom	Sometimes	Often	Always
1	I use the SMART Board to replace the activities in our regular course book.					
2	I use web-learning resources in the classroom within SMART Board in order to clarify what I taught.					
3	I use the SMART Board to do warm-up activities only.					
4	I use group-work activities when teaching with the SMART Board.					
5	I use the SMART Board to practice language skills.					
6	I use multimedia materials within the SMART Board to explain subjects.					
7	I use the SMART Board only when teaching a new language point.					
8	I use the SMART Board to do production activities only.					
9	I experience difficulties in integrating the SMART Board into teaching English language.					
10	I face problems when students transfer from traditional classes to classes with the SMART Boards.					
11	I experience problems with electricity.					
12	I experience problems with finding appropriate pens for the board.					
13	I involve all of my students when using the SMART Board in class.					
14	I change my teaching methods when I use different versions of the SMART Board.					
15	When I use the SMART Board, I have to prepare more than otherwise.					

Please put a cross (X) next to the appropriate box to indicate your opinion.		Strongly Agree	Agree	I don't know	Disagree	Strongly Disagree
16	Using i.Tool applications makes it easy to use the SMART Board in class.					
17	I can only use whole class activities when I use the SMART Board to teach English.					
18	SMART Boards allow students to hear authentic language use.					
19	I am happy with the level of engagement that my students show when I use the SMART Board					
20	Students understand the topics better when I present them using the SMART Board.					
21	It is easy to use the SMART Board in class when teaching English.					
22	Using the SMART Board inspired me to re-think my approach to teaching and learning.					
23	Using the SMART Board in class saves time.					
24	Teachers need training before they start using the SMART Board.					

Thank you for your co-operation.

APPENDIX E

Students' questionnaire/ Kurdish version

رِاثرسی بۆ قوتابیان لەسەر بەکارهێنانی تەختەی زیرەك لە وانەکانی زمانی نینطلیزی

قوتابی بەڕێز:

مەبەست لەم رِاثرسیە بۆ تێطەیشتنە لە بیر و بۆضوونی قوتابیان لەسەر تەختەی زیرەك لە وانەکانی زمانی نینطلیزی، تکایە نەم رِاثرسیە ثڕبکەرە بە ثێی نەو زانیارِیانەی کە هەتە، وە زانیاری بەشداربوو بەکارناهێنرێت بۆ ناسینەوەی قوتابیان، بەشداریت لەم رِاثرسیە خۆبەخشانەیە و هەرکاتێك ویستت دەتوانی ثاشەکشەبکەی و ناطادارم بکەیەوە، بۆ هەر ثرسیارێك دەتوانن داوای رِوونکردنەوەم لێبکەن.

سوثاس بۆ هەماهەنطیت.

سەرثەرشتیار: ثرۆفیسۆری یاریدەدەر دکتۆر ضیسة ضاوشۆغلو
جێطری سەرۆك بەش، وانەبێژ لە بەشی فێرکردنی زمانی نینطلیزی
بەشی فێرکردنی زمانی نینطلیزی Near East University

توانا جمال الدین محمد
قوتابی ماستەر

تکایە نەم خانانە ثڕبکەرەوە کە ثەیوەندیان بە تۆوە هەیە:

ضەند ساڵ دەبێت قوتابی لەم قوتابخانەیە؟ _____ ساڵ.

مێ ☐ **نێر** ☐ **ڕەگەز:**

نیتر ☐ **عەرەبی** ☐ **کوردی** ☐ **زمانی قسەکردن:**

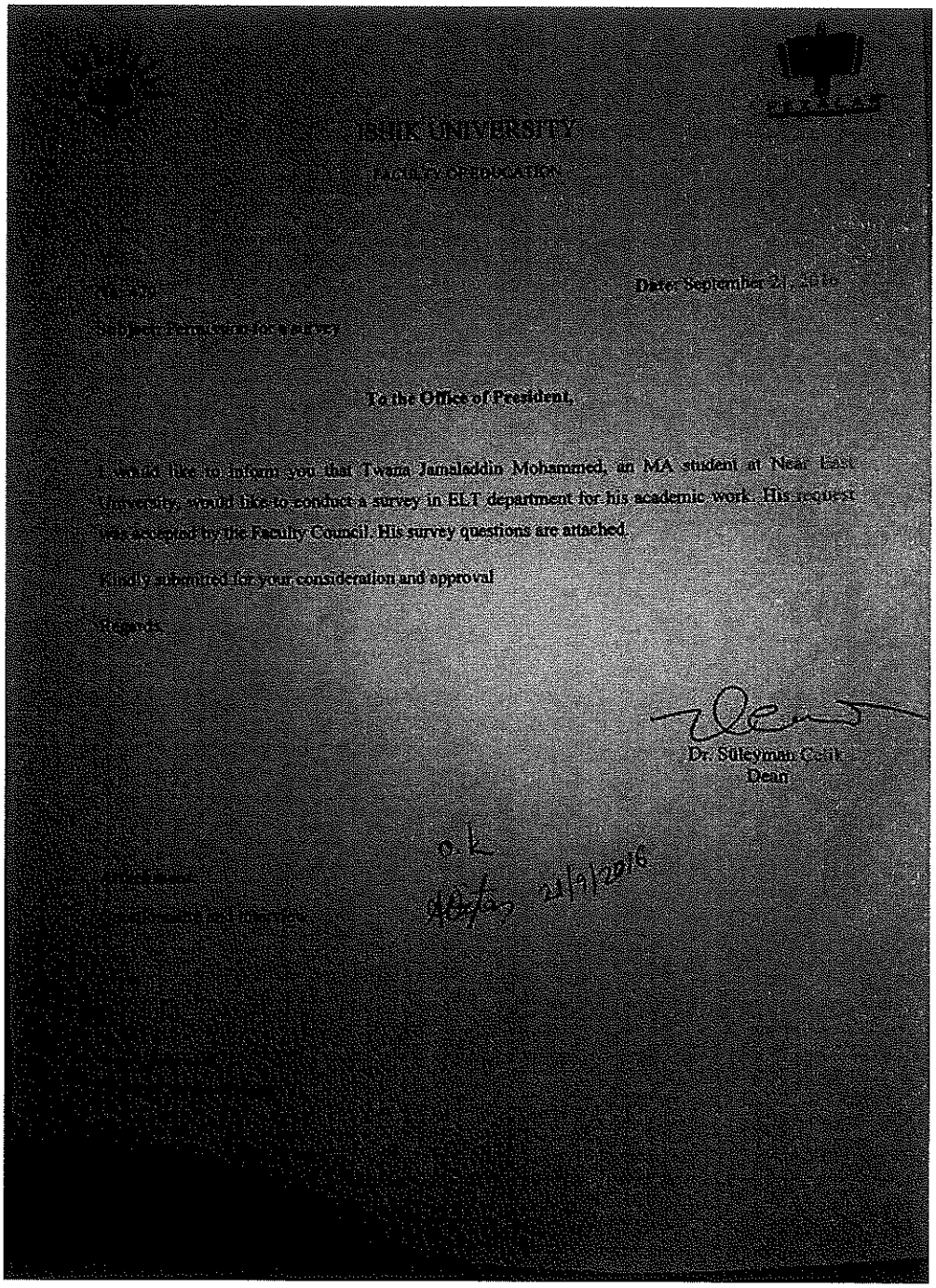
ن ☐ **سەرەتایی** ☐ **قۆناغی خوێندن:**

	تا ض رِادةيةك ئةمانةى خوارةوة رِوودةدةن لة كاتى وانةى زمانى ئينطليزى؟	هةميشة	زؤرجار	هةندى جار	بة دةطمةن	هةرطيز نا
-1	مامؤستاى زمانى ئينطليزى دةرفةت بة هةموو قوتابيان دةدات (SMART Board)بؤ بةشدارى كردن لةسةر تةختةى زيرةك.					
-2	نامادةكارى دةكةم بؤ وانة، ئةطةر مامؤستاكةم بة نيازبيَت بةكاربيَنيَت لة ثؤلدا.(SMART Board)					
-3	(SMART Board) سةرنجى مامؤستا دةدةم كاتيَ كة مامؤستاكةم بةكاردةهيَنيَت.					
-4	لة كاتى بةكارهيَناني تةختةى زيرةك مامؤستاى ئينطليزى سةرضاوةى ئينتةرنيَت بةكاردةهيَنيَت.					
-5	لة لايةن مامؤستا لة (SMART Board) بة بةكارهيَنانى ثؤل وام ليَدةكا سةرنجم سةرقال بيَت.					
-6	(SMART Board) لةكاتي بةكارهيَناني تةختةى زيرةك مامؤستاى ئينطليزى كار لةسةر ضالاكى بة طروث دةكات.					
-7	(SMART Board) مامؤستاى زماني ئينطليزيم ميديا لة بةكاردةهيَنيَت بؤ رِوونكردنةوةى بابةتةكان.					
-8	بةكاردةهيَنيَ ئيَمة (SMART Board)كاتيَك مامؤستا هةردةم بة تةنيا تةنيا ضالاكى خويَندن دةكةين.					
-9	كيَشةى تةكنيكى (SMART Board)لة كاتى بةكارهيَنانى بةربةست دروست دةكات بؤ فيَربوونى زمانى ئينطليزى.					
-10	كاتيَكى زؤر بةهةدةر دةدرىَ لة ضاوةروانى كاتيَك مامؤستا بؤ دادةنىَ.(SMART Board) تةختةى زيرةكمان					
-11	مامؤستاى زمانى ئينطليزى تةنها ئةو ناوةرؤكانة نيشاندةدا كة لة لايةن (SMART Board) لةسةر تةختةى زيرةك خويَدةوة نامادة كراوة.					
-12	مامؤستاى ئينطليزى بة شيَوةيةكى باش خؤى نامادة دةكات (SMART ثيَش دةستثيَكردنى وانة لةسةر تةختةى زيرةك Board).					
-13	لةطةلا هاوثؤلةكانم بة زمانى ئينطليزى بيرورا نالوطؤردةكةم بةكاردةهيَنين.(SMART Board) كاتيَك تةختةى زيرةك					
-14	(SMART Board) كاتيَك مامؤستا تةختةى زيرةك بةكاردةهيَنىَ لة ثؤل من سةرنج و فكرم لةلاى قسةكانى نةو دةبيَت.					

	رِات ضیه بەرامبەر نەمانەی خوارەوە؟	بە تونْدی هاورِانیم	هاورِانیم	مامناوەنْد	هاو رِام	زۆر هاورِام
5	زمانی ئینطلیزی باشتر فێر دەبم کاتێك رِەضاوی دەکەم لە (SMART Board) تەختەی زیرەك وانەدا.					
6	بەکاردەهێنرێت (SMART Board) ئەو کاتەی کە لە دۆخی فێرکردن و فێربووندا وانەکە بە ضێذوو خرۆشتر دەبێت.					
7	(SMART Board) بە بەکارهێنانی تەختەی زیرەك بەشداریکردنم لە وانە زیاتر دەکات.					
8	ئەو بابەتانەی کە لە رِێطای تەختەی زیرەك دەیخوێنین زیاتر لەبیرم (SMART Board) دەمێنێت بە بەراورد لەو بابەتانەی کە بەبێ دەیخوێنین.(SMART Board)					
9	دەبێتە هۆی (SMART Board) تەختەی زیرەك دروستکردنی باریکی لەبار بۆ فێربوونَ لە ئوْلدا.					
0	(SMART Board) لەو کاتەی کە تەختەی زیرەك بەکاردەهێنین بەهرەکانی فێربوونی زمانی ئینطلیزیم بەرەو ئێش ضووة.					
1	ضاوەکانم ماندوو دەبن کاتێك بە بەردەوامی سەیری دەکەم.(SMART Board) تەختەی زیرەك					
2	کاتێك طرفتی تەکنیکی رووەدا لەکاتی بەکارهێنانی ستْرنجم (SMART Board) تەختەی زیرەك لەستْر وانە نامێنێ.					

APPENDIX F

Letter of permission/ Ishik University



ISHIK UNIVERSITY

FACULTY OF EDUCATION

Date: September 21, 2016

To the Office of President,

I would like to inform you that Twana Jamaladdin Mohammed, an MA student at Near East University, would like to conduct a survey in ELT department for his academic work. His request was accepted by the Faculty Council. His survey questions are attached.

Kindly submitted for your consideration and approval

Regards

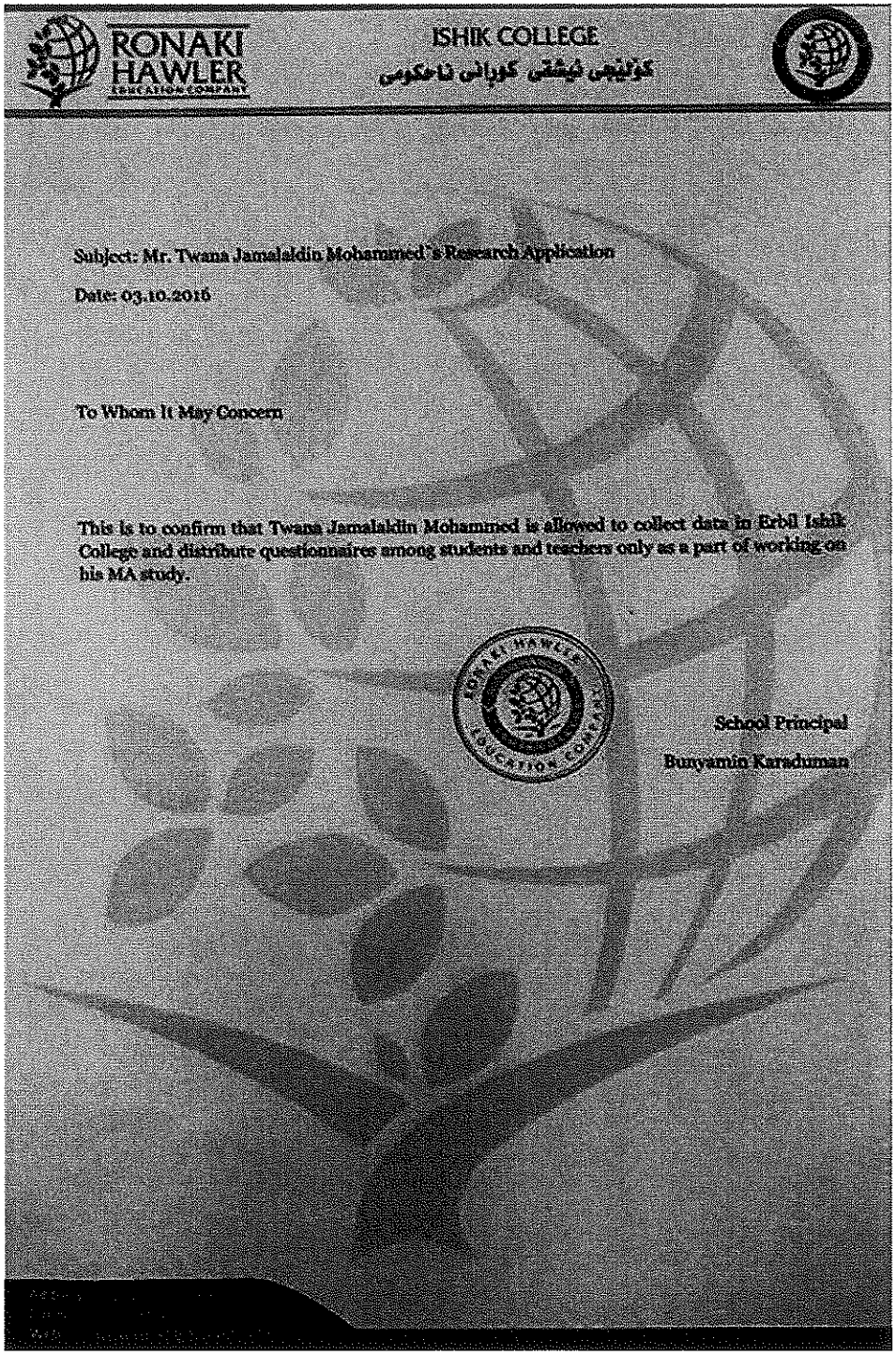
Dr. Süleyman Cavit
Dean

O. k

21/9/2016

APPENDIX G

Letter of permission/Ishik Private Primary School & Ishik Private High School



RONAKI HAWLER
EDUCATION COMPANY

ISHIK COLLEGE
کۆلێجی ئیشتی کوردانی ئاکرەیی

Subject: Mr. Twana Jamalaldin Mohammed's Research Application

Date: 03.10.2016

To Whom It May Concern

This is to confirm that Twana Jamalaldin Mohammed is allowed to collect data in Erbil Ishik College and distribute questionnaires among students and teachers only as a part of working on his MA study.

School Principal

Bunyamin Karaduman

APPENDIX H

Teachers' attitudes towards the use of SB in EFL classrooms: Overall results

Statements	M	SD
21- It easy to use the SB in class when teaching English	3.96	1.07
23- Using the SB in class saves time	3.96	1.09
19- I am happy with the level of engagement that my students show when I use the SB.	3.86	1.11
20- Students understand the topics better when I present them using the SB	3.80	.996
18- SB allows students to hear authentic language use.	3.76	1.00
24- Teachers need training before they start using the SB.	3.66	1.37
5- I use the SB to practice language skills.	3.60	1.19
16- Using i.Tool applications makes it easy to use the SB in class.	3.60	1.16
22- Using SB inspired me to re-think my approach to teaching and learning.	3.60	1.06
9- I experience difficulties in integrating the SB into teaching English language.	3.20	1.27
6- I use multimedia materials within the SB to explain subjects.	3.10	1.37
14- I change my teaching methods when I use different versions of the SB.	3.06	1.31
17- I can use whole class activities when I use the SB in class.	3.06	1.36
4- I use group-work activities when teaching with the SB.	3.06	1.43
3- I use the SB to do warm-up activities.	3.03	1.37
2- I use web-learning resources in the classroom within SB in order to	3.03	1.42

clarify what I taught.

12- I experience problems with finding appropriate pens for the board.	3.00	1.36
15- When I use the SB, I have to prepare more than otherwise.	3.00	1.33
7- I use SB only when teaching a new language point.	2.96	1.35
13- I involve all of my students when using the SB in class.	2.96	1.32
1- I use the SB to replace the activities in our regular course book.	2.86	1.40
10- I face problems when students transfer from traditional classes to classes with the SBs.	2.86	1.40
11- I experience problems with electricity.	2.80	1.49
8- I use the SB to do production activities.	2.66	1.34

APPENDIX I

T-test results based on teachers' gender

	F	Sig.	t	df	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
S 1	6.126	.120	-2.392-	28	-2.28571-	.95546	-4.24288-	-.32855-
			-9.098-	27.000	-2.28571-	.25123	-2.80119-	-1.77024-
S2	6.918	.114	-2.140-	28	-2.10714-	.98469	-4.12419-	-.09010-
			-8.138-	27.000	-2.10714-	.25891	-2.63839-	-1.57590-
S3	1.072	.309	-1.601-	28	-1.57143-	.98156	-3.58207-	.43921
			-2.796-	1.593	-1.57143-	.56209	-4.69005-	1.54719
S4	2.006	.168	-.435-	28	-.46429-	1.06663	-2.64919-	1.72062
			-.811-	1.715	-.46429-	.57271	-3.36542-	2.43685
S5	.000	.986	-.538-	28	-.46429-	.86342	-2.23292-	1.30435
			-.453-	1.100	-.46429-	1.02416	-10.98768-	10.05911
S6	3.624	.067	-.958-	28	-.96429-	1.00665	-3.02632-	1.09775
			-3.643-	27.000	-.96429-	.26469	-1.50738-	-.42120-
S7	4.474	.143	-1.124-	28	-1.10714-	.98469	-3.12419-	.90990
			-4.276-	27.000	-1.10714-	.25891	-1.63839-	-.57590-
S8	.077	.783	-.357-	28	-.35714-	1.00155	-2.40872-	1.69443
			-.346-	1.138	-.35714-	1.03281	-10.26316-	9.54887
S9	3.738	.063	1.406	28	1.28571	.91453	-.58762-	3.15905
			5.347	27.000	1.28571	.24046	.79232	1.77911
S10	5.084	.132	2.045	28	2.00000	.97808	-.00350-	4.00350
			7.777	27.000	2.00000	.25717	1.47233	2.52767
S11	.592	.448	.778	28	.85714	1.10162	-1.39941-	3.11370
			.824	1.169	.85714	1.03983	-8.59878-	10.31306
S12	1.511	.229	1.657	28	1.60714	.97001	-.37983-	3.59412
			2.866	1.578	1.60714	.56070	-1.54361-	4.75790
S13	1.765	.195	-.582-	28	-.57143-	.98156	-2.58207-	1.43921
			-1.017-	1.593	-.57143-	.56209	-3.69005-	2.54719
S14	5.502	.026	.073	28	.07143	.97668	-1.92921-	2.07206
			.278	27.000	.07143	.25680	-.45549-	.59835
S15	.079	.780	.000	28	.00000	.99745	-2.04317-	2.04317
			.000	1.136	.00000	1.03254	-9.92449-	9.92449

S16	1.486	.233	.124	28	.10714	.86579	-1.66634-	1.88063
			.195	1.449	.10714	.54878	-3.36271-	3.57700
S17	.547	.466	-.459-	28	-.46429-	1.01139	-2.53603-	1.60746
			-.305-	1.058	-.46429-	1.52144	-17.44999-	16.52142
S18	.729	.400	.382	28	.28571	.74763	-1.24573-	1.81716
			.532	1.326	.28571	.53664	-3.60959-	4.18102
S19	.092	.764	-.174-	28	-.14286-	.82331	-1.82934-	1.54362
			-.140-	1.090	-.14286-	1.02187	-10.84193-	10.55622
S20	.319	.577	1.183	28	.85714	.72442	-.62676-	2.34105
			.843	1.068	.85714	1.01668	-10.26250-	11.97679
S21	.160	.692	1.346	28	1.03571	.76969	-.54093-	2.61236
			1.016	1.078	1.03571	1.01898	-9.89398-	11.96540
S22	.885	.355	.134	28	.10714	.79674	-1.52490-	1.73919
			.198	1.374	.10714	.54150	-3.60331-	3.81760
S23	.361	.553	-.705-	28	-.57143-	.81077	-2.23221-	1.08935
			-1.052-	1.389	-.57143-	.54294	-4.23115-	3.08829
S24	1.931	.176	-.885-	28	-.89286-	1.00869	-2.95906-	1.17334
			-1.579-	1.630	-.89286-	.56540	-3.93852-	2.15280

ANOVA results based on teachers' years of teaching experience

		Sum of Squares	Mean Square	F	Sig.
S1	Between Groups	1.766	.883	.428	.656
	Within Groups	55.701	2.063		
	Total	57.467			
S2	Between Groups	1.629	.815	.384	.685
	Within Groups	57.337	2.124		
	Total	58.967			
S3	Between Groups	9.011	4.506	2.647	.089
	Within Groups	45.956	1.702		
	Total	54.967			
S4	Between Groups	2.029	1.015	.474	.628
	Within Groups	57.837	2.142		
	Total	59.867			

S5	Between Groups	2.830	1.415	1.046	.365
	Within Groups	36.536	1.353		
	Total	39.367			
S6	Between Groups	.244	.122	.061	.941
	Within Groups	54.456	2.017		
	Total	54.700			
S7	Between Groups	1.885	.942	.498	.613
	Within Groups	51.082	1.892		
	Total	52.967			
S8	Between Groups	4.529	2.265	1.270	.297
	Within Groups	48.137	1.783		
	Total	52.667			
S9	Between Groups	9.608	4.804	3.488	.145
	Within Groups	37.192	1.377		
	Total	46.800			
S10	Between Groups	13.067	6.533	3.973	.131
	Within Groups	44.400	1.644		
	Total	57.467			
S11	Between Groups	.235	.118	.049	.952
	Within Groups	64.565	2.391		
	Total	64.800			
S12	Between Groups	2.696	1.348	.709	.501
	Within Groups	51.304	1.900		
	Total	54.000			
S13	Between Groups	1.796	.898	.493	.616
	Within Groups	49.171	1.821		
	Total	50.967			
S14	Between Groups	.267	.133	.073	.930
	Within Groups	49.600	1.837		
	Total	49.867			

S15	Between Groups	2.769	1.384	.759	.478
	Within Groups	49.231	1.823		
	Total	52.000			
S16	Between Groups	1.532	.766	.549	.584
	Within Groups	37.668	1.395		
	Total	39.200			
S17	Between Groups	.967	.483	.247	.783
	Within Groups	52.900	1.959		
	Total	53.867			
S18	Between Groups	1.084	.542	.517	.602
	Within Groups	28.283	1.048		
	Total	29.367			
S19	Between Groups	.458	.229	.176	.839
	Within Groups	35.009	1.297		
	Total	35.467			
S20	Between Groups	.602	.301	.288	.752
	Within Groups	28.198	1.044		
	Total	28.800			
S21	Between Groups	1.367	.683	.584	.565
	Within Groups	31.600	1.170		
	Total	32.967			
S22	Between Groups	1.908	.954	.823	.450
	Within Groups	31.292	1.159		
	Total	33.200			
S23	Between Groups	6.417	3.209	3.034	.165
	Within Groups	28.549	1.057		
	Total	34.967			
S24	Between Groups	1.430	.715	.363	.699
	Within Groups	53.236	1.972		
	Total	54.667			

T-test result based on teachers' first language

	F	Sig.	T	df	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
S1	.906	.349	.616	28	.34921	.56694	-.81212-	1.51053
			.656	17.643	.34921	.53228	-.77069-	1.46911
S2	4.218	.149	1.331	28	.74603	.56071	-.40254-	1.89460
			1.567	22.708	.74603	.47610	-.23955-	1.73162
S3	.165	.688	1.381	28	.74603	.54012	-.36035-	1.85241
			1.454	17.151	.74603	.51301	-.33560-	1.82766
S4	.117	.735	.382	28	.22222	.58105	-.96800-	1.41244
			.392	16.123	.22222	.56640	-.97775-	1.42220
S5	1.116	.300	-.034-	28	-.01587-	.47240	-.98353-	.95179
			-.030-	12.102	-.01587-	.52954	-1.16856-	1.13681
S6	.821	.373	.896	28	.49206	.54904	-.63259-	1.61672
			.996	19.607	.49206	.49421	-.54017-	1.52429
S7	.085	.773	-.495-	28	-.26984-	.54559	-1.38742-	.84774
			-.472-	13.752	-.26984-	.57188	-1.49848-	.95880
S8	.013	.911	.000	28	.00000	.54641	-1.11927-	1.11927
			.000	14.618	.00000	.55635	-1.18853-	1.18853
S9	.100	.754	1.335	28	.66667	.49943	-.35638-	1.68971
			1.422	17.646	.66667	.46887	-.31982-	1.65315
S10	1.043	.316	2.163	28	1.14286	.52833	.06063	2.22508
			2.262	16.866	1.14286	.50530	.07612	2.20959
S11	1.770	.194	.740	28	.44444	.60024	-.78510-	1.67399
			.782	17.304	.44444	.56803	-.75240-	1.64129
S12	.299	.589	-.872-	28	-.47619-	.54592	-1.59445-	.64207
			-.826-	13.548	-.47619-	.57647	-1.71647-	.76409
S13	1.319	.261	.685	28	.36508	.53307	-.72687-	1.45703
			.762	19.708	.36508	.47887	-.63477-	1.36493
S14	2.180	.151	-.480-	28	-.25397-	.52952	-1.33863-	.83070
			-.541-	20.417	-.25397-	.46910	-1.23122-	.72328
S15	.842	.367	.588	28	.31746	.53962	-.78789-	1.42281
			.557	13.563	.31746	.56950	-.90769-	1.54261
S16	.732	.399	-.135-	28	-.06349-	.47125	-1.02881-	.90182

			-.146-	18.565	-.06349-	.43347	-.97219-	.84521
S17	.046	.832	1.302	28	.69841	.53661	-.40077-	1.79760
			1.259	14.157	.69841	.55464	-.48993-	1.88675
S18	8.946	.106	.429	28	.17460	.40668	-.65844-	1.00765
			.545	26.566	.17460	.32048	-.48347-	.83268
S19	.004	.950	.071	28	.03175	.44836	-.88667-	.95016
			.066	13.054	.03175	.48245	-1.01008-	1.07357
S20	.506	.483	-.079-	28	-.03175-	.40402	-.85934-	.79584
			-.075-	13.817	-.03175-	.42252	-.93908-	.87559
S21	.028	.869	-.257-	28	-.11111-	.43179	-.99560-	.77338
			-.261-	15.768	-.11111-	.42497	-1.01308-	.79086
S22	4.309	.147	-.890-	28	-.38095-	.42781	-1.25729-	.49539
			-.746-	10.903	-.38095-	.51088	-1.50662-	.74471
S23	1.369	.252	-1.362-	28	-.58730-	.43117	-1.47051-	.29590
			-1.194-	11.747	-.58730-	.49168	-1.66114-	.48654
S24	.026	.872	.286	28	.15873	.55588	-.97994-	1.29740
			.276	14.082	.15873	.57603	-1.07606-	1.39352

APPENDIX J

Students' attitudes towards the use of SB in EFL classrooms: Overall results

Statements	M	SD
16- Lessons become enjoyable when SB is used in the teaching-learning process.	3.86	1.09
15- I learn English better when I follow the lesson from the SB compared to the book.	3,84	1.21
20- My English language skills have improved since we started using SB in class.	3.80	1.14
14- I pay attention to what my English teacher says when he/she uses the SB in class.	3.78	1.28
17- Using SB increases my engagement in the lesson.	3.71	1.26
19- SB provides a cooperative learning environment in the classroom.	3.69	1.15
18- I can remember the topics we cover using the SB better than when we learn without it.	3.68	1.21
12- My English teacher comes to class well prepared when he/she uses the SB.	3.53	1.27
5- My attention get distracted when my English teacher uses the SB.	3.48	1.41
7- My English teacher uses multimedia on SB to explain subjects.	3.38	1.39
22- My attention disperses in lesson because of the technical problems we have while using SB.	3.36	1.36
3- I make eye contact with the teacher when he/she uses the SB.	3.32	1.49
11- My English teacher only shows the content which is prepared by himself/herself on SB.	3.31	1.44

2- If my English teacher is going to use the SB in the class, I prepare for the lesson beforehand.	3.18	1.40
10- We waste a lot of time while waiting for my English teacher to set up the SB.	3.14	1.48
21- My eyes get tired after continuously looking at the SB.	3.09	1.35
8- We work on our own when my English teacher uses the SB in class.	3.08	1.51
13- I interact with my friends in English when we use the SB.	3.07	1.26
1- My English teacher gives opportunity to all students to work on SB.	3.05	1.42
6- My English teacher initiates group-work activities using the SB.	2.97	1.46
4- My English teacher uses web sources through the SB.	2.88	1.41
9- Technical problems prevent me from learning English when using the SB.	2.71	1.44

APPENDIX K

ANOVA results based on students' years of studying at Ishik schools

		Sum of Squares	Mean Square	F	Sig.
S1	Between Groups	42.172	3.834	1.982	.132
	Within Groups	377.133	1.934		
	Total	419.304			
S2	Between Groups	15.936	1.449	.726	.713
	Within Groups	389.088	1.995		
	Total	405.024			
S3	Between Groups	31.730	2.885	1.309	.221
	Within Groups	429.584	2.203		
	Total	461.314			
S4	Between Groups	41.895	3.809	1.989	.131
	Within Groups	373.322	1.914		
	Total	415.217			
S5	Between Groups	20.013	1.819	.910	.531
	Within Groups	389.707	1.998		
	Total	409.720			
S6	Between Groups	38.292	3.481	1.686	.079
	Within Groups	402.588	2.065		
	Total	440.879			
S7	Between Groups	48.629	4.421	2.432	.107
	Within Groups	354.453	1.818		
	Total	403.082			
S8	Between Groups	30.987	2.817	1.239	.264
	Within Groups	443.448	2.274		

	Total	474.435			
S9	Between Groups	17.685	1.608	.763	.677
	Within Groups	410.923	2.107		
	Total	428.609			
S10	Between Groups	37.017	3.365	1.565	.112
	Within Groups	419.340	2.150		
	Total	456.357			
S11	Between Groups	22.736	2.067	.988	.458
	Within Groups	407.854	2.092		
	Total	430.589			
S12	Between Groups	8.710	.792	.475	.917
	Within Groups	324.836	1.666		
	Total	333.546			
S13	Between Groups	20.063	1.824	1.140	.332
	Within Groups	311.850	1.599		
	Total	331.913			
S14	Between Groups	8.779	.798	.468	.921
	Within Groups	332.439	1.705		
	Total	341.217			
S15	Between Groups	16.331	1.485	1.010	.439
	Within Groups	286.722	1.470		
	Total	303.053			
S16	Between Groups	14.674	1.334	1.117	.349
	Within Groups	232.805	1.194		
	Total	247.478			
S17	Between Groups	27.043	2.458	1.573	.109
	Within Groups	304.706	1.563		
	Total	331.749			
S18	Between Groups	10.835	.985	.649	.785
	Within Groups	295.755	1.517		

	Total	306.589			
S19	Between Groups	26.784	2.435	1.904	.141
	Within Groups	249.429	1.279		
	Total	276.213			
S20	Between Groups	13.209	1.201	.909	.533
	Within Groups	257.670	1.321		
	Total	270.879			
S21	Between Groups	28.912	2.628	1.460	.149
	Within Groups	351.156	1.801		
	Total	380.068			
S22	Between Groups	27.822	2.529	1.392	.179
	Within Groups	354.275	1.817		
	Total	382.097			

T-test results based on students' gender

	F	Sig.	t	df	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
S1	.056	.814	-1.862-	205	-.40078-	.21520	-.82508-	.02352
			-1.866-	115.876	-.40078-	.21480	-.82622-	.02466
S2	.121	.728	-.175-	205	-.03726-	.21327	-.45775-	.38323
			-.171-	109.713	-.03726-	.21818	-.46965-	.39513
S3	.519	.472	.513	205	.11669	.22748	-.33182-	.56519
			.506	112.087	.11669	.23045	-.33992-	.57329
S4	.674	.413	-1.521-	205	-.32670-	.21475	-.75009-	.09670
			-1.487-	109.645	-.32670-	.21975	-.76220-	.10881
S5	.242	.623	.027	205	.00578	.21452	-.41717-	.42874
			.027	118.187	.00578	.21227	-.41457-	.42614
S6	.287	.593	.466	205	.10367	.22241	-.33484-	.54218
			.468	116.322	.10367	.22162	-.33526-	.54260
S7	3.408	.066	-2.645-	205	-.55350-	.20924	-.96603-	-.14097-
			-2.811-	133.212	-.55350-	.19690	-.94295-	-.16405-
S8	.261	.610	-.961-	205	-.22125-	.23033	-.67536-	.23286

			-.951-	112.885	-.22125-	.23258	-.68204-	.23955
S9	.011	.917	-.522-	205	-.11446-	.21927	-.54677-	.31784
			-.521-	114.853	-.11446-	.21971	-.54967-	.32075
S10	.353	.553	1.151	205	.25984	.22567	-.18510-	.70478
			1.149	114.824	.25984	.22616	-.18814-	.70783
S11	.236	.627	-1.851-	205	-.40367-	.21810	-.83368-	.02634
			-1.881-	119.806	-.40367-	.21455	-.82847-	.02113
S12	3.904	.150	1.670	205	.32113	.19225	-.05791-	.70018
			1.567	100.683	.32113	.20493	-.08541-	.72768
S13	.004	.950	.178	205	.03437	.19307	-.34628-	.41502
			.175	110.991	.03437	.19646	-.35493-	.42367
S14	.413	.521	-1.000-	205	-.19522-	.19529	-.58026-	.18982
			-1.007-	117.228	-.19522-	.19393	-.57929-	.18885
S15	.232	.631	-1.200-	205	-.22069-	.18385	-.58317-	.14179
			-1.148-	104.799	-.22069-	.19217	-.60174-	.16036
S16	.111	.739	-.842-	205	-.14016-	.16644	-.46830-	.18799
			-.840-	114.826	-.14016-	.16679	-.47055-	.19023
S17	3.899	.150	.912	205	.17564	.19264	-.20418-	.55546
			.866	103.239	.17564	.20283	-.22661-	.57789
S18	.003	.957	-.182-	205	-.03382-	.18555	-.39966-	.33202
			-.182-	115.744	-.03382-	.18530	-.40083-	.33320
S19	7.047	.109	2.362	205	.41057	.17379	.06793	.75321
			2.163	96.007	.41057	.18981	.03380	.78734
S20	.602	.439	-.433-	205	-.07553-	.17435	-.41927-	.26822
			-.414-	104.680	-.07553-	.18234	-.43709-	.28603
S21	.953	.330	1.342	205	.27608	.20571	-.12950-	.68167
			1.299	107.330	.27608	.21260	-.14536-	.69753
S22	1.959	.163	.418	205	.08665	.20708	-.32162-	.49492
			.432	124.381	.08665	.20048	-.31013-	.48344

ANOVA results based on students' first language

		Sum of Squares	Mean Square	F	Sig.
S1	Between Groups	4.677	2.339	1.151	.318
	Within Groups	414.627	2.032		
	Total	419.304			
S2	Between Groups	6.709	3.355	1.718	.182
	Within Groups	398.315	1.953		
	Total	405.024			
S3	Between Groups	3.551	1.776	.791	.455
	Within Groups	457.763	2.244		
	Total	461.314			
S4	Between Groups	5.608	2.804	1.396	.250
	Within Groups	409.610	2.008		
	Total	415.217			
S5	Between Groups	3.228	1.614	.810	.446
	Within Groups	406.491	1.993		
	Total	409.720			
S6	Between Groups	.952	.476	.221	.802
	Within Groups	439.927	2.157		
	Total	440.879			
S7	Between Groups	5.501	2.751	1.411	.246
	Within Groups	397.581	1.949		
	Total	403.082			
S8	Between Groups	5.036	2.518	1.094	.337
	Within Groups	469.398	2.301		
	Total	474.435			

S9	Between Groups	1.458	.729	.348	.706
	Within Groups	427.151	2.094		
	Total	428.609			
S10	Between Groups	.812	.406	.182	.834
	Within Groups	455.546	2.233		
	Total	456.357			
S11	Between Groups	9.248	4.624	2.239	.109
	Within Groups	421.341	2.065		
	Total	430.589			
S12	Between Groups	7.185	3.592	2.246	.108
	Within Groups	326.361	1.600		
	Total	333.546			
S13	Between Groups	.244	.122	.075	.928
	Within Groups	331.669	1.626		
	Total	331.913			
S14	Between Groups	10.547	5.274	3.253	.141
	Within Groups	330.670	1.621		
	Total	341.217			
S15	Between Groups	3.471	1.736	1.182	.309
	Within Groups	299.582	1.469		
	Total	303.053			
S16	Between Groups	.308	.154	.127	.881
	Within Groups	247.170	1.212		
	Total	247.478			
S17	Between Groups	.158	.079	.048	.953
	Within Groups	331.591	1.625		
	Total	331.749			
S18	Between Groups	3.486	1.743	1.173	.311
	Within Groups	303.103	1.486		
	Total	306.589			

S19	Between Groups	.384	.192	.142	.868
	Within Groups	275.829	1.352		
	Total	276.213			
S20	Between Groups	5.191	2.596	1.993	.139
	Within Groups	265.688	1.302		
	Total	270.879			
S21	Between Groups	.532	.266	.143	.867
	Within Groups	379.535	1.860		
	Total	380.068			
S22	Between Groups	9.295	4.648	2.543	.081
	Within Groups	372.801	1.827		
	Total	382.097			