DERS KİTABINA DAYALI EĞİTİMDEN TEKNOLOJİ DESTEKLİ EĞİTİME GEÇİŞ: İNGİLİZCE DERSİNDE AKILLI TAHTA KULLANIMINA İLİŞKİN ÖĞRETMEN VE ÖĞRENCİ GÖRÜŞLERİ

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Öz

Çalışma Süleyman Demirel Üniversitesi Yabancı Diller yüksekokulunda eğitim gören öğrenci ve İngilizce'yi akıllı tahta kullanarak öğreten öğretmenlerin bu uygulamaya ilişkin görüşlerine yer vermektedir. Akıllı tahta ya da benzer araçları yabancı dil öğretilen sınıflarda yaygın bir şekilde kullanılmasına rağmen ne kadar etkin olduklarına ilişkin soru hala güncelliğini korumaktadır. Bu çalışma bir yandan akıllı tahta ortamında İngilizce öğrenen öğrencilerin ve İngilizce'yi akıllı tahta kullanarak öğreten öğretmenlerin görüşlerini irdelerken diğer yandan teknoloji ve mesleki gelişim arasında olması muhtemel ilişkiyi araştırmaktadır. Çalışmanın verileri ön-test ve son-test anketleriyle birlikte öğretmen ve öğrencilerle yapılan yapılandırılmış görüşmeler yoluyla toplanmıştır. Son-test sonuçlarına dayalı olarak İngilizce öğretmenlerinin akıllı tahta kullanımına ilişkin düşüncelerinde olumlu bir değişim gözlenmiş olup akıllı tahta kullanımı çalışmaya katılan öğretmenlerde mesleki anlamda 'yetkinlik' hissi kazandırmıştır. Bu sonuçlara ek olarak, akıllı tahta kullanımı öğrencilerin derse daha iyi odaklanmasını sağlayarak ders materyallerini içselleştirmelerine katkıda bulunduğu görülmüştür.

Anahtar Kelimeler: Teknoloji, Akıllı Tahta, İngiliz Dili Öğretimi

A TRANSITION FROM COURSEBOOK-BASED LANGUAGE INSTRUCTION TOWARDS TECHNOLOGY-ENHANCED CLASSROOMS: OPINIONS OF TEACHERS AND STUDENTS REGARDING INTERACTIVE WHITEBOARD TECHNOLOGY IN AN EFL CONTEXT

Abstract

This article reports on a case study conducted on Turkish teachers of English and Turkish learners regarding their opinions of interactive whiteboard in an intensive English language preparation program at a state university in Turkey. Although interactive whiteboards (Henceforth IWBs), and similar devices have been widely used by teachers in language classrooms the question of how efficient they are in language classrooms remains unanswered. The present study both reveals the English language teachers' and learners' opinions regarding the use of interactive whiteboards in language classes and explores the relationship between technology use and sense of professional development. The data presented in the article were collected through pre and post questionnaires along with

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structured individual interviews with the teachers. The findings of the research suggest that Turkish teachers' opinions regarding interactive whiteboards changed in a positive way over time. Furthermore, it was found that using technology helps teachers develop a sense of 'ableness' which in turn is translated into more effective teaching practices. The findings also revealed that interactive whiteboards help students engage in the lesson and internalize the lesson content more effectively through visual representations.

Key Words: Technology, interactive white boards, English language teaching

1. Introduction

Recent years have seen the pervasive use of technology in every field including education requiring teachers and administrators to review and revise their curricula and lead them to integrate technology into their teaching. As thus, teachers of the digital age, regardless of the subject matter they are teaching, are supposed to utilize technology to some extent in addition to having a deep knowledge of their field, a thorough understanding of the learning process and a sincere commitment to professional development. The case is not different in the foreign/second language teaching profession. It is not too long ago traditional blackboard and coursebook-based language instruction have been replaced by DVD players, CD players, computers, memory cards and data travellers. It is evident that today more and more internationally-recognized coursebook companies in the field of language teaching are competing with each other to release the coursebook which is enhanced with the richest multimedia resources possible to secure their places in the market. Given the fact that nowadays average student enters the classroom equipped with a modest pack of technological devices including cellular phone, MP4 Player, digital dictionary, use of some kind of technology in classrooms seems to be inevitable. Of the technologies provided to the service of language teachers and learners interactive whiteboard (henceforth IWB) is considered to be the most recent one.

Although this and similar devices have widely been used by teachers in language classrooms the question of how efficient they are in language classrooms remains unanswered. To date, a substantial body of research regarding the use of interactive whiteboards has been conducted[1]. In almost every study, both students

[1] G. Beauchamp. Teachers' Use of Interactive Whiteboard in Primary Schools. Technology Pedagogy and Education. 13 (3). 327-348, 2004. W. D. Beeland. Student Engagement, Visual Learning and Technology: Can Interactive Whiteboards help? Retrieved May 23 2012 from http:// chiron.aldosta.edu.are/Artmanscrpt vol 1 no 1 beeland_am.pdf. 2002, D. Glover & D. Miller. Running With Technology: The Pedagogic Impact of the Large Scale Introduction of Interactive Whiteboards in One Secondary School. Journal of Information Technology for Teacher Education, 10, 257-276. 2001. I. Hall. & S. Higgins. Primary Schools Students' Perceptions of Interactive Whiteboards. Journal of Computer Assisted Learning, 21 (2), 102-117. 2005., B. Lee & M. Boyle. Teachers Tell Their Story: Interactive Whiteboards at Richardson Primary School., 2004. Retrieved May 23, 2012 from www.iwb.net.au/advice publications/documents/Teachersstory2.

and teachers were found to hold positive attitudes towards IWBs. In a very recent study conducted by Mathews-Aydınlı and Elaziz[1] Turkish students' and teachers' attitudes towards the IWBs were investigated. A total of 458 students at different levels and 82 teachers participated in the study. The results of the study revealed that both teachers and students have positive attitudes towards IWBs. Another finding was that there was a positive correlation between the length of exposure to IWBs and the students' awareness of the technology. In the same study the authors call for more studies on the usefulness of this technology in language classrooms. As there is a dearth of study conducted on this technology in EFL contexts such as Turkey, it is deemed that the present study will contribute to the limited data pool with a different sample.

This study aims to investigate the opinions of both English language teachers who have recently been using IWBs and students enrolled in the English Preparatory School at Süleyman Demirel University in Turkey.

2. Interactive Whiteboard Technology

Language classrooms of the digital age have been invaded by a number of hi-tech instructional equipments. To date, there have been a number of studies investigating the effects of technological equipments on the understanding of English[2]. The studies in language teaching have revealed that technology plays an important role in actualization of effective teaching and learning practices and thus there is a positive link between teaching and learning and technology.

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doc., P.Levy .Interactive Whiteboards in Learning and Teaching in Two Sheffield Schools: A Developmental Study. Retrieved May 23, 2012 from http://dis.shef.ac.uk/eirg/projects/ wboards.htm. G.Moss et. al. The Interactive Whiteboard, Pedagogy and Pupil Performance Evaluation. Retrieved May 23, 2012, from www.dfes.gov.uk/research/data/uploadfiles/RR816.pdf. A.Smith. Interactive Whitebord Evaluation. Retrieved May 23, 2012, from http://www.mirandanet.ac.uk/pubssmartboards.htm. K.Wall et.al. The Visual Helps Me Understand the Complicated Things: Pupil Views of Teaching and Learning with Interactive Whiteboards. British Journal of Educational Technology, 36 (5), 851-867., 2005. J. Mathews-Aydinli & F. Elaziz. Turkish Students' and Teachers' Attitudes Toward the Use of Interactive Whiteboards in EFL Classrooms, Computer Assisted Language Learning 23 (3), 235-252. 2010.

[2] J. Egbert & Yoko Nakamichi. The Impact Of Call Trena M. Paulus Instruction On Classroom Computer Use: A Foundation For Rethinking Technology In Teacher Education *Language Learning & Technology* 6,(3),108-126 http://llt.msu.edu/vol6num3/egbert/default.html, 2002. B.Arslan. Bilgisayar Destekli Eğitime Tabi Tutulan Ortaöğretim Öğrencileriyle Bu Süreçte Eğitici Olarak Rol Alan Öğretmenlerin BDE'e İlişkin Görüşleri. *TOJET* 2 (4), 2003. R.D. **Verdugo & I.A. Belmonto Usıng Dıgıtal Stories To Improve Listening** Comprehension With Spanish Young Learners Of English, *Language Learning & Technology* 11 (1). 87-101, 2007**.** S. İnal. İngilizce Öğretmen Adaylarının Bilgisayara Yönelik Tutumlarının Bazı Değişkenler Açısından İncelenmesi 6. Uluslararası Eğitim Teknolojileri Konferansı, Doğu Akdeniz Üniversitesi, 19-21 Nisan Gazi Mağusa/ KKTC. 2006. S. İnal. İngilizce Öğretmenlerinin Eğitim Teknolojisini Kullanma Sıklığı 5. Uluslararası Eğitim Teknolojileri Konferansı. Sakarya Üniversitesi 22-24 Nisan, 2005.

Of the technologies offered to the service of language teachers and learners IWB is considered to be relatively the most recent one. Interactive whiteboard technology operates with a computer and a projector which projects the computer's desktop onto the board's surface. Included in the general uses of the IWBs are keeping notes as an electronic file for review by students, providing a larger display of any software supplied with the IWB , capturing notes written on a whiteboard and internet browsers. Put simply, today, IWBs are used in schools as replacements for traditional blackboards.

A remarkable body of research is emerging that investigates the impact of IWB technology on teaching and learning. In a recent longitudinal study conducted on primary school children in England the impact of IWB technology on student performance in Maths, Science and English with an emphasis on some variables such as age, gender and special needs was investigated[3]. It was found that all pupils who had been taught with IWB made progress in the mentioned subject matters. Included in the findings were also increased motivation, attitude and attention.

The researchers stated that the use of IWBs also helped students internalize abstract and more complex concepts by creating 'a co-operative learning community. Another study conducted on public schools investigated the efficacy of IWBs on students in relation to student engagement, student acquisition of content, concepts and skills taught using this technology[4]. It was found that students were more engaged through student-centered activities. Another finding of the study was that the teachers using IWBs ask their students higher order questions requiring students to engage in analysis and synthesis.

In a small-scale research project carried out by Levy[5] on two secondary schools, data were collected through classroom observations, interviews with teachers and student questionnaires. Based on the findings of the study, Levy argues that multimedia resources used in classrooms help students learn better making the given information 'more tangible' and easy to internalize. According to Levy, in the field of language learning where students are challenged to learn a language other than their mother tongue, multimedia resources provide students with a more effective social learning atmosphere.

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[3] P. Latham. Teaching and Learning Mathematics: The Impact of Interactive Whiteboards Results of the North Islington Education Action Zone RM Easiteach Mathemtics Project. London: BEAM Education. 2002.

[4] S. Martin. Interactive Whiteboards and Talking Books: A New approach to Teaching Children to Write? *Literacy*, 41 (1), 26-34., 2007.

[5] P.Levy. Interactive Whiteboards in Learning and Teaching in Two Sheffield Schools: A Developmental Study. Retrieved June 12 2012 from http://dis.shef.ac.uk/eirg/projects/wboards.htm.2002.

Relating to the benefits of IWB technology, Bell[6]states that the teachers who use this technology have opportunity to adjust their instruction to address a wider range of learning styles existing in their classrooms. According to Bell, tactile learners benefit from IWB by touching and marking at the board, visual learners can see what is taking place in the classroom on the board and auditory learners use advantages of sound capabilities of IWBs.

Another study by Glover and Miller [7] revealed that in order for successful integration of IWBs into curriculum, adequate training and personal development should be taken into consideration.

In a very recent study, Silva[8] et.al, investigated the potential applications of IWBs in teaching English to young learners. They argued that children learn best through interacting with their three senses; seeing, hearing and touching and IWB has potential to provide young learners with a wide range of stimuli through text, images, audio or video. They further stated that IWB provides opportunities to stimulate their senses through visual representations supported by sounds and also interacting with the board.

3. The Research Context

The present research was undertaken in an intensive English Preparatory Program at a state university in Turkey. The school provides a 34-week of intensive EFL teaching instruction to incoming students who are majoring in the fields other than English. That is, none of the students enrolled in the program are ELT-majors. Starting in the 2005-2006 academic year the school went through a restructuring process devising its current curriculum. Within the process, the school adopted a skills-based approach and accordingly the new coursebooks were selected by a committee of teachers. Along with academic skills building coursebook, another coursebook which aimed at teaching general English, was providing IWB applications. Before the curriculum innovation, the English instruction given at the school heavily relied on coursebook and teachers were not using technology other than CD players. Only one of the classes was equipped with a DVD player and LCD projector and these low-tech equipments were rarely used

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[6] M.A.Bell. Why Use an Interactive Whiteboards? A Baker's Dozen Reasons! Teachers. Net Gazette. Retrieved May 23 2012 from http://teachrs.net/gazette/JAN02/mabell.html

[7] D. Glover & D. Miller.Running with Technology. The Pedagogic Impact of the Large Scale Introduction of Interactive Whiteboards in One Secondary School. *Journal of Information Technology for Teacher Education* 10, 257-276. 2001.

[8] Silva, P., de Oliveira Marcelo, M.A., & Ferreira da Cruz, M.R.D. The Benefits of Using Interactive Whiteboards in Teaching English as Foreign Language to Young Learners Learning Process. Presentation given at Humanities Conference 08, Istanbul, July 15-18 2008, http://h08.cgpublisher.com/proposals/274/index_html.

in speaking classes. The in-service training offered by the school to teachers was limited to sporadic one-shot training sessions which were provided by the teacher trainers working for the coursebook publishers. The topics of these seminars varied from teaching language skills to vocabulary teaching. Most of the time these seminars were organized in accordance with teacher trainers' availability and preselected topics , that is, not based on the instructors' needs.

Needless to say, any kind of innovation imposed on a teaching setting brings with itself certain amount of resistance. A number of researchers point out that adequate training and time to practice with hands on experience are crucial to effective integration of any kind of technology[9] .To this end, the teachers who would use IWBs were ensured that they would receive adequate training and would be allowed ample time to practice before its widespread use in the classrooms. With this in mind, the school asked the software provider who formerly stated to provide only two training sessions to go on training sessions throughout the summer vacation. Envisioning the challenges in transition from coursebook-based instruction to technology-enhanced teaching the school management used all the ways available to help the transition proceed as smooth as possible. Throughout the summer vacation a total of 9 training sessions lasting approximately two hours were provided by the software company. In addition to formal training, the teachers were also encouraged to practice the new technology individually when they are available.

During these sessions, an awesome cooperation was evidenced among the teachers. The teachers were amazingly helping each others' professional development. During this process it was also found that some of the teachers were so engaged in the individual learning process that they started to check out the related websites on the internet. It was amazing to see the teachers who entered the director's office with a bunch of ideas related to use of IWB after browsing a variety of websites on IWB.

[9] D.P.Ely. Conditions That Facilitate the Implementation of Educational Technology Innovations. Journal of Research on Computing in Education, 23 (2). 298-305 . 1990. M. Dupagne, & K. A. Krendl . Teachers' Attitudes Toward Computers: A Review of the Literature. Journal of Research onComputing in Education, 24 (3), 420-429. 1992. H.R. Marcinkiewicz,. Computers and Teachers: Factors Influencing Computer Use in the Classroom. Journal of Research on Computing in Education, 26 (2), 220-237. 1994. D. M. Dusick The Learning Effectiveness of Educational Technology: What Does That Really Mean?. Educational Technology Review, 10 (2). 10-12 .1998

4. Research Questions

The present study was guided by the following research questions:

1. What are the opinions of Turkish teachers of English about the IWB in terms of its use, teaching capabilities and sense of satisfaction it provides?
2. Do their opinions change over time?
3. How does this technology affect their teaching?
4. What are the potential advantages and disadvantages of this technology as perceived by the participating teachers?

In order to investigate students' opinions regarding IWB use two open-ended questions were asked;

5. What are the advantages of learning English through IWB ?
6. What are the disadvantages of learning English through IWB?

5. Methodology

The study utilized qualitative and quantitative data collection instruments. The data were collected through a researcher-developed questionnaire and structured interviews conducted on teachers. The students were asked two open-ended questions in a questionnaire.

5.1. Participants

A total of six instructors and twenty-six students participated in this small-scale case study. The instructors were actively using IWB in their general English course. They were provided with 9 training sessions lasting approximately two hours and they were encouraged to practice the new technology as much as possible. Of the six participants two were males and four females. Their teaching experience ranged from one year to thirteen years. A total of twenty-six students were randomly selected. The students have been receiving an intensive English preparatory education at Süleyman Demirel University as a general requirement of their particular major. The participating students were majoring in engineering fields (food, textile, electronics and communication and civil engineering departments).

5.2. Data Collection

In order to collect data for the present study a questionnaire developed by the researchers was utilized. The questionnaire included three parts as *use*, *teaching capacity of IWB*, and *satisfaction* having a total of seventeen items designed around

a four-point Likert scale with statements 'strongly agree', 'agree', 'disagree', and 'strongly disagree' (see Appendix I).The questionnaire was administered to six instructors twice; the first one was conducted in the third week of IWB implementation and the second one took place at the end of second month of the use in the same semester. In order to triangulate and possibly extend the findings of the present study, structured interviews were conducted on the teachers. In the qualitative paradigm, interviews provide opportunities for researchers to probe particular variables for detailed descriptions. According to Glesne and Peshkin[10] the potential strength of interviews lies in the fact that interviews provide opportunities to learn about the things which might otherwise be missed by the researcher. The researchers used the structured interview approach as this particular type provides a number of practicalities: as they are systematic it is preferred when their is a limited period of time for research, this particular type of interviews facilitates organization and data analysis as the format of the interview allows researcher to locate each informant's response to the same question quickly[11]

Each instructor was interviewed once. The interviews lasted forty-five minutes to one hour. The time for the interviews was arranged according to instructors' availability. Interviews were conducted after the courses were finished when there was no interruption .In order to create flexible and comfortable atmosphere the interviews were conducted in Turkish. All interviews were recorded for transcription.

The participating teachers were asked three questions:

1. How has this technology affected your teaching?
2. What impact have you seen on your students as far as their learning progress is concerned?
3. What do you think are the potential advantages/disadvantages of this technology?

In order to learn students' opinions of the IWB technology, a questionnaire was designed by the researchers and administered to the students at the end of the second month of IWB implementation.

The questionnaire included two open-ended questions as:

1. What do you think are the advantages of IWB-supported lessons?
2. What do you think are the disadvantages of IWB-enhanced lessons?

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[10] C. Glesne & A. Peshkin. Becoming Qualitative Researchers An Introduction. Longman: N.Y. 1992

[11] M. Patton. Qualitative Evaluation and Research Methods. Newbury Park, CA: Sage Publications.1990

5.3. Data Analysis

The collected data were analyzed by using SPSS Version 17. The responses to the questionnaire were compared. Percentages and arithmetic means were calculated. As the interviews were of the structured type, the researchers presented the emerging opinions under three broad categories assigned to each of the three questions.

Students' opinions about IWB technology were analyzed by counting the emerging opinions. They were later categorized as advantages and disadvantages. The findings were presented in a table.

6. Findings

6.1. Questionnaire Data

The questionnaire was administered to six instructors who have been using IWB technology actively in their language classes. Total points received by the instructors were investigated and arithmetic means were calculated. The findings were presented in the Chart below.

Based on the pre-test /post-test findings, the pre-test responses of the first instructor with two years of teaching experience were found to be 45 between 'disagree' and 'agree'. However, the same instructor's response tended to 'agree' in the post-test with an inreased arithmetic mean from 45 to 65.

Similar change was also seen with the second instructor who has two years of teaching experience. The second participant's arithmetic mean increased from 65 (between agree and strongly agree) in the pre-test to 69 in the post-test (strongly agree) The third instructor with thirteen years of teaching experience was found to be very positive about the technology in both the pre and post test. In the pre-test the third instructor's mean was 71 (strongly agree) and this increased to 75 in the post-test.

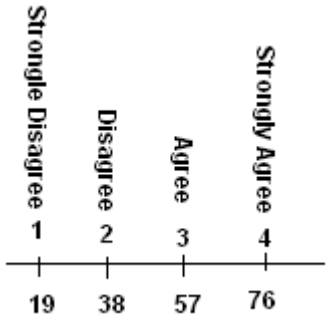
The arithmetic means received from the fourth instructor with six years of teaching experience in the pre-test and post-test were not found statistically significant. (56 in the pre-test and 55 in the post-test= agree) However, the points received from the fifth participant revealed a tendency from 'disagree' to 'agree' with arithmetic means increasing from 48 to 57.

As far as the general arithmetic means are concerned, instructors' opinions about IWB technology were found to change from 'agree' in the pre-test (58.16) to 'strongly agree' in the post-test (64.50). Based on the findings of the questionnaire data, it might be concluded that there is a significant difference in the pre-test and post-test results obtained from the questionnaire. That is, the instructors' opinions about IWB technology have changed in a positive way over time.

Table.1. Pre and post questionnaire findings

Years of teaching experience		Point	Degree
2	Pre-test	45	Between Disagree-Agree
	Post-test	56	Agree
2	Pre-test	65	Between Agree-Strongly agree
	Post- test	69	Close to Strongly Agree
13	Pre- test	64	Between Agree-Strongly agree
	Post- test	75	Strongly Agree
6	Pre- test	56	Agree
	Post-test	55	Agree
1	Pre- test	48	Between Disagree-Agree
	Post- test	57	Agree
2	Pre- test	71	Close to Strongly Agree
	Post- test	75	Strongly Agree
General arithmetic mean	Pre- test	58,16	Agree
	Post- test	64,50	Between Agree-Strongly agree

The questionnaire included a four-point Likert scale including statements: 4: strongly agree 3: agree 2: disagree 1:strongly disagree



6.2. Interviews

Six instructors who have been using IWB technology in their language classrooms for over two months were interviewed. The researchers used a structured interview format; therefore each of six instructors was asked the same questions. The interview findings were presented under three broad categories as IWB and teaching, IWB and students' learning progress, and perceived advantages/disadvantages.

Interactive Whiteboard and Teaching

Within the structured-interview paradigm, the teachers were asked the same questions. Overall, the interview data were compatible with the findings of the questionnaire data which suggest a positive tendency toward IWB technology. The opinions stated by the teachers suggest that use of IWB promoted overall participation and motivation among students. The teachers also stated that this technology helped them both manage the classroom better than ever and save time. The following quotations illustrate their opinions. One of the teachers with two years of teaching experience stated that:

It really affected students in a positive way. We should accept the reality that our students are computer age children. Once they see such an application which is highly visual it automatically draws their attention. First and above, it helps student participation. In the past, it was difficult to find a volunteer student to answer my question. After this technology, they answer not as individuals but chorus. Now in the lesson, question and answer sessions go concurrently. They simply like to watch some visuals and listen at the same time on the board.

A female teacher with two years of teaching experience pointing out the practicality of the technology stated a positive change in herself as a teacher. The following quotation illustrates how she feels professionally 'able' and how a technologically-developed teacher might feel a step further than his/her colleagues;

It is very practical. You don't have to carry a CD player with you. Everything is ready for you in the classroom. At the beginning, though, I was nervous. However, after using the technology every day in my lessons I started to gain confidence in myself. *Now, I even feel myself a step further than my colleagues who do not use it. I feel that even the students started to respect me more than ever since I am a teacher who can use technology like them.* This feeling also enhanced my classroom management skills. I am very happy that I can integrate technology in my lessons. It gives a different kind of sense of achievement, satisfaction, and of course confidence.

Relating to the management issue, another teacher with one year of teaching experience shared her feelings:

With this technology classroom management is not a problem anymore. Once I plug in their (students) eyes are fixed on the board and silence dominates the whole classroom. I can use class time more effectively as I do not spend extra time to warn students to keep quiet. I feel that my teaching now is more effective and enjoyable.

A male teacher with 13 years of teaching experience stated his feelings about this technology:

It minimized my mimics. In the past, I was using body language a lot to draw students' attention and naturally I was getting tired. When I turn on the computer I only guide them. It saves enormous amount of time on the part of teaching. Another point, it helps students understand the lesson content better than ever. I think, as the lessons are visually enhanced the students easily conceptualize the lesson content by integrating what they hear with what they see.

The same teacher also mentioned how the use of IWB helped him improve problem solving skills;

Technology is a very useful thing. However, it works with power. That is, no electricity no IWB. As we face power outages in our school setting we sometimes cannot use it. However, I must say that this technology helped us improve problem solving skills. Whenever we enter the classroom we have to think about alternatives, a B plan in other words. This technology forced us to prepare fully for the lesson. In other words, we know that we have to enter classroom with an alternative lesson plan in our file.

One of the teachers stated how this technology created an 'interactive environment' in his classroom and how this helped student participation. The same teacher also mentioned the positive effect of the technology on student attendance;

As the system provides an interactive environment in the classroom students are motivated. This ,in turn, encourages students to participate in the lesson. It helped passive listeners to become active or partial participants. For instance, as they wonder how the technology operates, they want to come to the board to do exercise. I can say that it even helped students' attendance. Just because of the curiosity they started to attend classes regularly.

Interactive Whiteboard and Students' Learning Progress

The interviewees argued that this technology encouraged students to speak more in the classroom and helped students improve pronunciation of some problematic sounds. A female teacher with two years of teaching experience shared her feelings:

I think students' speaking and listening skills have improved thanks to this technology. At first when we were using CD player I must confess that I was getting bored with rewinding function of the tape recorder. So I was providing students with limited number of listening activity. However, with this technology, it is very easy to locate the place where I want my students to listen. We can several times listen to the same listening task as many times as

we need. Repetitions helped our students improve their pronunciation. To illustrate this with an example my students now learned how to pronounce 'climate' in English.

Another female teacher with one year of teaching experience emphasized the relationship between IWB technology and participation in speaking activities:

…once students see a wonderful and colorful visual on the board they automatically want to say something. For instance, last week the unit was about the attractive destinations in the world and there was wonderful scenery from a country. Majority of the students wanted to say something about this scenery.

Potential Advantages and Disadvantages

Based on the above quotations we can enumerate the advantages on the part of the students as enhanced motivation, participation, regular attendance, engagement in the lesson, desire to produce oral speech and easier conceptualization of the lesson content. From the teachers perspective the potential advantages of IWB can be enlisted as a better classroom management, sense of 'ableness' and resulting feeling of confidence, saving time, improved problem solving skills and full preparation before each lesson.

Of the participating teachers one male teacher with six years of teaching experience shared his concerns about this technology and age factor;

According to my observation, this type of equipment attracts only a certain group of students. I mean, the students who just graduated from high schools between ages 17 and 18. These students warmly welcome this type of technology. However, I think, older students are not that motivated.

Another female teacher with two years of teaching experience stated her concerns regarding the time needed for the configuration of the equipment.

When we first set the equipment it takes time. Once it is set there is no problem. Sometimes through the end of the lesson the system needs a reconfiguration (calibration of the markers) . It takes time. When this happens I spend some time trying to fix it and naturally the students get bored.

Another disadvantage stated by the teachers is related to the physical environment needed for IWB applications. Relating to this issue one of the teachers stated;

In order to create a quality vision in the classroom we need to draw the curtains and turn off the lights. In the morning lessons, some students fall asleep. If we keep the lights on then the vision is not that quality.

Another teacher complained about the school's policy to protect the equipment during the breaks;

As this is an expensive equipment we are asked to protect the equipment by taking the students out of the classroom during the breaks and locking the door. Some students are not happy with this attitude. Once they come back to the classroom for the next lesson I see them demotivated.

6.3. Students' Perspective

In order to investigate students' opinions regarding IWB, a questionnaire with two open-ended questions was administered to randomly-selected 26 students. The findings were summarized in the following table.

Table 2. Students' opinions about language instruction through IWB: Advantages and Disadvantages

N	DISADVANTAGE	%	ADVANTAGE	%
26	electricity outage	32	easy conceptualization of the lesson content	15
26	lack of quality of vision	22	contemporary education	23
26	inappropriate classrooms for this technology	12	lessons are enjoyable	32
26	inappropriate seating plan	18		
26	having to go out of the classroom during breaks	38	increased capacity to recall the given instruction	22
26	technical problems occur	21	increased curiosity to follow the lesson	13

7. Conclusions of the Study and Recommendations for Further Research

The findings of the present study revealed that teachers' opinions regarding the IWB technology show a positive tendency from 'I agree' to 'I strongly agree'. An increase in the means of pre and post questionnaire was evidenced. Much research has been conducted on the advantages of technology-enhanced instruction. However, it should be noted that there are a number of disadvantages documented on instructional technology. Based on the findings of the present study, it is true to say that interactive board technology has noteworthy potentials in terms of participation, motivation, attendance, classroom management. However, as other

instructional Technologies, interactive boards operate with electricity. Overdependence on power is a great weakness but not an insurmountable one. The schools of which curriculum is based on technology must have generators as energy suppliers when there is power outage.

The researchers recommend that in a longitudinal study the impact of interactive boards on improvement of listening and speaking skills should be investigated in detail. That is, the efficacy of interactive boards in improving the language skills needs to be studied.

Another recommendation is that interactive boards can be used with learners from different age groups. The findings of such a study will provide insights into the population who use the technology best. Another study might compare the amount of retained knowledge in classical teaching classrooms and interactive board-furnished classrooms.

Future researches which explore different linguistic areas with population of different age groups and technological materials could further substantiate the link between education and technology.

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