

The Use of Interactive Whiteboards for English Foreign Language Education

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Abstract: This paper highlights the usefulness of interactive whiteboards in improving teaching and learning English as a foreign language. For language learning, it is important to develop learners' communicative competence as language is a vehicle for communication. It is not uncommon that learners who master grammar principles nevertheless fail to speak confidently in real situations. Interaction, which involves input and output, is critical in developing communicative competence in a language. The interactive whiteboard, as implied by the name, can increase interaction between teachers and learners and among learners, as opposed to a plain whiteboard, since the main function of interactive whiteboards is its interactivity. Thus it can be an effective tool for English education. This paper explains from both the theoretical and the practical viewpoint the advantages and techniques involved in the use of interactive whiteboards in teaching English as a foreign language in order to encourage educators and English foreign language teachers to implement interactive whiteboards in teaching so as to improve the outcomes of English education, and it also points out common pitfalls the teachers should avoid.

1 INTRODUCTION

English has become an international language and plays an important role in our lives. With the help of English, people with different cultures and different language backgrounds can communicate with each other. Governments worldwide attach much importance to English education in their countries. The big challenge of learning English in many countries is a lack of authentic language speaking environment and limited time for communication in class. It was reported that there is a lack of interaction for real communication in English foreign language classes (Gklouzeli, 2015). The English classroom, in most circumstances, is formed by a teacher standing before a podium and students taking notes during the lesson. The lack of authentic language speaking environment and limited chance of communication will lead to a lack of proficiency in communicative competence of language. With the increasing frequency of communication between countries and people, the demands of communicative competence

of English language increase. No matter language is a vehicle for the expression of functional meaning or a vehicle for the realization of interpersonal relations and for the performance of social transactions between individuals (Richards and Rodgers, 1986), communicative competence is of pivotal importance as an indicator of language level.

The coming of Information and Communication Technology (ICT) and the studies proving that ICT can enhance the outcomes of education suggest to us using modern technology to achieve more effective ways of teaching and learning English as a foreign language. The development of digital technology offers us a variety of options. Among the various kinds of ICT tools, the interactive whiteboard can be an ideal ICT tool for English education. An interactive whiteboard is a modern instructional tool proved to be an effective technology facilitating teaching and learning. According to findings from British Education Communications and Technology Agency (BECTA, 2003) (BECTA is that government's lead agency for Information and

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Communication Technology in education), interactive whiteboards can provide benefits to both teachers and students. For teachers, interactive whiteboards can encourage spontaneity and flexibility, allowing teachers to draw on and annotate a wide range of web-based resources; enable teachers to save and print what is on the board, including any notes made during the lesson, reducing duplication of effort and facilitating revision; allow teachers to share and re-use materials, reducing workloads; have been widely reported to be easier to use than a computer in teaching. For students, interactive whiteboards can increase enjoyment and motivation; provide greater opportunities for participation and collaboration, developing students' personal and social skills; reduce the need for note-taking through the capacity to save and print what appears on the board; etc.

Research showed that interactive whiteboards can improve student learning because there are increasing attention and participation in the learning process (Olivares and Castillo, 2018). A study by (Tertemiz, 2015) indicated that both teachers and students held the view that interactive whiteboards can reduce distractions and attract student attention. Luo and Yang (2016) researched the effect of the interactive functions of whiteboards on elementary students' learning. The findings showed that teachers' use of the interactive whiteboards' basic interactive function helps to enhance students' willingness to learn and enjoyment of learning. It is an undeniable fact that through active involvement in instruction pupils learn more effectively (Dostál, 2011).

This article aims to introduce the interactive whiteboards as instruments for teaching English as a foreign language. Features of the interactive whiteboards and scientific basis of incorporating interactive whiteboards will be presented. Educational applications of interactive whiteboards in English foreign language education will also be highlighted. To conclude, the issue of the effective use of interactive whiteboards in real situation and suggestions to effective integration will be provided.

2 METHODOLOGY

The paper aims to elaborate the potential of interactive whiteboards for English education. This is achieved by studying the affordability of interactive whiteboards, the scientific basis of using interactive whiteboards in teaching and the previous research published in journals and conference proceedings included in Web of Scientific and SCOPUS, with respect to using interactive whiteboards for English

education. In other words, theoretical and qualitative analysis is employed in the study.

3 FEATURES OF THE INTERACTIVE WHITEBOARDS

Interactive whiteboards are a conglomeration of all previous educational technologies like the chalkboard, plain whiteboard, television, video, overhead projector, CD player and personal computer, but with the added advantage of being able to interact with various elements of these media (Hall and Higgins, 2005). BECTA (2003) gives the definition of interactive whiteboards as follows:

An interactive whiteboard is a large, touch-sensitive board which is connected to a digital projector and a computer. The projector displays the image from the computer screen onto the board. The computer can then be controlled by touching the board, either directly or with a special pen. Among the potential applications are:

- using web-based resources in whole-class teaching
- showing video clips to help explain concepts
- demonstrating a piece of software
- presenting students' work to the rest of the class
- creating digital flipcharts
- manipulating text and practicing handwriting
- quick and seamless revision.

Interactive whiteboards include three main parts: the whiteboard, the projector, and the computer. The projector shoots an image onto the interactive whiteboard. Materials and software on the computer can be displayed on the interactive whiteboard. Normally, we operate a computer with a mouse, but with an interactive whiteboard, we can use our hands and a tool. The whiteboard is touch-sensitive. Whether a Word document or PowerPoint, you can open it just by tapping on the screen with fingers. You can write anything on the board by hand, and your handwriting can be cleaned by hand or by a digital eraser.

The electronic touch-sensitive whiteboard can act as an overhead projector screen, as well as a platform that operations can be made on it. The electronic pen can be used to edit, modify or save previously written

text. With the electronic pen, the difficult information to teach and important points can be marked with different colours, helping students know well the difficult and important points in the learning. Meanwhile, the edited materials can be saved in a different format and sent to students so that students do not need to take notes in class, allowing the students to devote their attention to participation in class. Teachers can make a real-time record of the whole classroom teaching process for students to review learned knowledge after class. Compared to projector multimedia, the main function of which is used for displaying text, pictures, WORD, PowerPoint, etc., an interactive whiteboard, by enabling teachers to make marks or notes on the materials, is a more effective instructional tool. In addition, interactive whiteboards include various kinds of digital teaching materials, teachers can direct use these resources or utilize the materials to make individual teaching plan and courseware.

Most interactive whiteboards contain interactive textbooks containing videos, audio, hyperlinks and extra materials, helping teachers save time for preparing lessons. There are many interactive software programs, such as ActivInspire, Smart Notebook, etc., built in the interactive whiteboards. Teachers can use these interactive programs to create tests or questions and students can do exercises by directly operating the whiteboard during the lessons, which increases interactions in class. Interactivity is an approach to learning in which the teacher and learners interact to ensure understanding, enhance conceptual development and stimulate debate. Learning is stimulated through participation rather than through the rote or passive learning which characterizes didactic approaches (Thomas, 2010).

The response system is another attractive function. All students can have boxes resembling mobile phones, with which they can interact with the interactive whiteboard simultaneously. When teachers create exercises or activities, students are asked to press buttons to choose their answer. Afterwards, they can see the feedback immediately. This affordance increases students' engagement.

4 THEORETICAL BASES

4.1 Constructivism

Constructivism is an influential theory in the field of education that delineates and sheds light on the essence and nature of education. According to

constructivism, learning is a process of constructing meaning, which is achieved by the interaction between existing knowledge and new ideas. That means learning is a process of discovering the relationship between what is already known and something new. In other words, knowledge is not merely imparted to the student by the teacher but gained by construction of meaning which is conceptualized within the existing context. From a constructivist point of view, a context is important to learning because the construction of meaning cannot take place without a context (Slavin, 2003). The aforementioned context is better referenced in a learning environment in which the teacher can interact with students and students can also interact with each other. It is acknowledged that a better learning environment or atmosphere plays an important role in learning in that it can facilitate students' understanding of knowledge.

For English language study, language environment is crucial. The biggest challenge of learning English in non-native speaking countries is a lack of an authentic English speaking environment. In most cases, students cannot access a real language environment in the traditional classroom. Interactive whiteboards enable teachers to integrate a large number of teaching resources such as educational software, audio, videos, pictures, animation, etc., into the teaching process, which enables students to listen to native speakers' spoken English. The use of educational software, audio, videos, images, animation also helps effectively activate the connection of the old knowledge and the new knowledge, thus helping students understand and process the new knowledge. In addition, the use of interactive whiteboards capable of integrating various Information and Communication Technology (ICT) and multimedia in the classroom can provide an authentic language learning environment, promoting interactions between teachers and students. A constructivist classroom is student-focused, and the teacher acts more as a facilitator than in the one-directional model of the traditional teacher-centered classroom.

Constructivists believe that student-focused instruction can help students become active learners, instead of just passive learners. Active participation is crucial to the retention of usable knowledge. The main affordability of an interactive whiteboard is its interactive function that increases classroom interactions between teachers and students and among students themselves.

4.2 Theory of Second Language Acquisition

Humans acquire language in only one way - by understanding messages or by receiving 'comprehensible input' (Krashen, 1985). Speaking is a result of acquisition and not its cause. Speech cannot be taught directly but 'emerges' on its own as a result of building competence via comprehensible input. If input is understood, and there is enough of it, the necessary grammar is automatically produced (Krashen, 1985). Although comprehensible input is necessary for acquisition, it is not sufficient. The 'affective filter' is a mental block that prevents acquirers from fully utilizing that comprehensible input they receive for language acquisition. When the acquirer is anxious, unmotivated or unconfident in the process of receiving a message, he or she may understand what he hears and reads, but the input will not reach the LAD (Chomsky's Language Acquisition Device: LAD). When this happens, we say the filter is up. And the filter is down when the acquirer is not concerned with the possibility of failure in language acquisition and when he considers himself to be a potential member of the group speaking the target language. The filter is lowest when the acquirer is more involved in the message (Krashen, 1985). We can summarize that comprehensible input and a low affective filter are two important factors encouraging second-language acquisition (Krashen, 1985). Using interactive whiteboards can help students achieve comprehensible input and a lower affective filter. Firstly, when using interactive whiteboards in teaching, the teacher can use videos, pictures, images, and animation, which are built-in or stored in interactive whiteboards, to help students understand knowledge. Sometimes knowledge and ideas are abstract and complicated so that it is not easy for students to understand without the help of these aids. In other words, these technological aids make input more comprehensible. Additionally, with the help of an interactive whiteboard, the teacher can integrate words, pictures, images, videos, audio, animations, etc., into the teaching material, presenting teaching content in a vivid way, and students can also physically manipulate the texts on the whiteboard, making learning more enjoyable, thus reducing the anxiety and enhancing students' motivation for learning.

5 APPLICATIONS OF INTERACTIVE WHITEBOARDS IN EFL EDUCATION

A noteworthy number of studies have accredited that interactive whiteboards can improve the outcomes of English education. In an article by Zezulková (2017), the interactive whiteboard was used to teach English lessons. The subjects were 11 to 15-year-old students. In the study, the teacher designed speaking, vocabulary, grammar, writing, reading and listening activities with the help of an interactive whiteboard. For example, for developing students' speaking skills, the teacher created an activity called "one story". Firstly, the teacher presented an image on the board and then told the students to tell a story. The first student would initiate the story and stop in the middle of a sentence. Then the second student continued the story. Like the first student, the second student also stopped in the middle of a sentence. And the rest of the student followed the same pattern until the teacher told them to finish it. For vocabulary learning, the teacher created an activity called "one body" in which the teacher presented a person's silhouette and icon (speakers) on the interactive whiteboard. By clicking on the icons, the students can listen to the words about body parts. The students can come to the whiteboard and drag the body parts to the right place on the silhouette. Grammar learning is not infrequently unpopular with students. Interactive whiteboards can make grammar learning more interesting. In the research, the teacher used the "word order" activity to teach grammar, in which a few sentences were divided into single words and can be dragged on the screen. The students were invited to come to the whiteboard to put the words in the right order.

The writing activity in the study was similar to the aforementioned speaking activity. In the writing activity, the students were told to write a short story together. The teacher prepared a blank page on the whiteboard and the first student was asked to come to the front to write one sentence but stop in the middle of the sentence. The second student would finish the partial sentence and start a new one, and the rest of the students followed this pattern until it was finished. In the listening activity, students were required to listen to some people talking and drew what the people had been talking about. Likewise, the students were asked to come to the front to draw something which can be drawn simply, such as a house, the sun, a car, etc., according to what they hear. The recording can be replayed if necessary, and the pictures can be

saved and used to retell the story next time. As to the reading activity, the teacher prepared one or more poems or rhymes in the interactive whiteboard. The students were asked to come to the board and drag the rhyming words to pairs. Then the students practiced the pronunciation with the teacher. Finally, they read the whole poem. The result indicated that the activities designed by using an interactive whiteboard led to an increasing interaction and cooperation between the teacher and students and amongst students. And students became more active in the class.

Gkiouzeli (2015) studied the role of interactive whiteboards in English as a foreign language class in Greece. He reported that interactive whiteboards increased the students' participation when the pedagogical tools the teachers used were complemented by stimulating materials presented on the interactive whiteboards and the way the interactive whiteboard intervenes and affects the interpersonal exchanges between teachers and students looks like real life exchanges. Language is a living thing, so the best way to learn a language is in an interactive and authentic environment (Lin and Chu, 2018). In other words, the study showed that the use of an interactive whiteboard can facilitate English teaching and learning.

Dudáková (2013) researched using interactive whiteboards in teaching English in the Czech Republic. The participants were English foreign language teachers from primary, lower, upper secondary language schools and kindergartens. A questionnaire was used in the survey. In the study, the majority of teachers held the view that interactive whiteboards are supportive in all areas of English teaching, including practice, vocabulary, grammar, listening, presentation, reading, writing, tests, speaking. They considered that interactive whiteboards make teaching more effective.

Katwibun (2014) studied the use of interactive whiteboards in vocabulary teaching. The subjects were 51 11th-grade students. The research instruments consisted of three lesson plans, three interactive whiteboard instructional media packets, post-teaching teacher's notes, vocabulary knowledge tests, students' participation observation form, and attitude questionnaire. Visual and audio tools of interactive whiteboards were used to teach vocabulary. A vocabulary knowledge test was employed to assess students' vocabulary knowledge after using the interactive whiteboard. The study showed that implementing interactive whiteboards as instructional tools in vocabulary teaching can improve students' vocabulary knowledge and it can

also increase students' participation and motivation in English learning.

Consistent with the above findings, a study by Lin and Chu (2018) on the effectiveness of the interactive whiteboards on English language teaching indicated that the interactive whiteboards can improve the outcomes of English education. The participants in the study were 43 students from Grade 3 in Sahes Elementary School in Taiwan and their language proficiency level was not significantly different before the study. The students were divided into two groups: the experimental group and the control group. The former were taught through interactive whiteboard-based instruction and the latter through normal instruction. After several weeks of instruction, the two groups were given an immediate test and a retention test respectively. The results revealed that the experimental group significantly outperformed the control group on both the students' immediate test and retention test. In addition, most students said that they enjoyed the interactive whiteboard-based learning environment.

6 CONCLUSIONS

This paper discusses the potential of the interactive whiteboards in teaching English as a foreign language. In general, the majority of studies indicated that the interactive whiteboards are proven technological tools. However, it is the teacher who implements it that makes the changes happen rather than the functionalities of the interactive whiteboard itself. Recent research indicated that most teachers use it as a projector in teaching practice and the interactive function is in most case neglected. Many teachers seem to use the interactive whiteboard merely as a large –scale visual blackboard or a simple presentation tool. As a consequence, the use of interactive whiteboards often has no significant impact on teachers' pedagogy (Vita, et al, 2018). Research found out that there is a need for teachers to improve technological competencies and abilities in schools. Teachers' knowledge of effectively using interactive whiteboards is often insufficient (Olivares and Castillo, 2018). Exerting the most interactive effect of the whiteboard depends on teachers because teachers determine how it can be used in the classroom. For effective classes, especially for communicative ones involving lots of interaction in the classroom, teachers need to focus on developing their pedagogy because the technology is only the means for serving to that purpose (Toscu, 2013).

Teachers' competence in using interactive whiteboard plays an important role in the integration of technology in educational settings in which the affordances of the technology come into play. Therefore, in order to enhance teaching quality and effectiveness of student learning, due measures should be taken to train teaching staff to be competent in using the interactive whiteboards. Investment in good quality training on the pedagogical use of this technology becomes increasingly important. Special emphasis should be placed on how this technology can be exploited to develop pedagogical practices based on a socio-cognitive view of communicative teaching, which is in line with the latest developments in language teaching research and practice (Hadadi, et al., 2014).

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