Interactive Whiteboard and its Integration in a Classroom

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Abstract

Modern technologies have become an inseparable part of our everyday life. We can see them all around us and whether we like it or not, we have to accept that they are gradually changing the way we live. The changes have been made in all aspects of our society including education. The nature of a traditional classroom as probably most of us can still remember has been replaced by its modern version with an interactive whiteboard as its central element. The paper brings a theoretical review of basic information about using IWBs generally in teaching and then with a special emphasis on teaching English as a foreign language. The initial chapters of the paper deal with a short introduction to the history of IWBs and their birth with some examples of definitions. The following chapters present an overview of benefits and potential disadvantages of their use in the classroom as well as an insight into the changes and impact that they have had on traditional classroom.

Key Words: interactive, whiteboard, motivation, classroom, learnign,

Abstrakt

Moderné technológie sa stali neoddeliteľnou súčasťou nášho každodenného života. Vidíme ich všade navôkol či sa nám to páči, alebo nie, musíme prijať fakt, že postupne menia spôsob nášho života. Tieto zmeny sa dotkli všetkých aspektov spoločnosti vrátane vzdelávania. Charakter tradičnej triedy, ktorý si pravdepodobne všetci pamätáme, nahradila jeho nová podoba s interaktívnou tabuľou ako hlavným prvkom. Tento článok prináša prehľad základných informácií o používaní interaktívnych tabúľ vo všeobecnosti ako aj s osobitným dôrazom na vyučovanie anglického jazyka. Úvodné kapitoly prinášajú krátky prehľad o vývoji interaktívnych tabúľ, ich vzniku spolu s ich niekoľkými definíciami. V ďalších kapitolách autor príspevku prináša prehľad o výhodách a nevýhodách ich používania na hodinách, rovnako tiež následne zmeny a dopad na podobu tradičnej triedy.

Kľúčové slová: interaktívny, tabuľa, motivácia, trieda, učenie,

Introduction

New technologies play an important role in our everyday life. They have become not only an integral part of our work but also a kind of entertainment; moreover, the recent years proved that they have entered the field of education, too. Today, almost every lesson is in a way dependent on the use of modern technologies. Every day we hear news of some new devices designed to ease our life and help us perform better. Thanks to engineers and other experts from all over the world, our lives have become more comfortable, easier, and definitely more interesting. Schools are the environments where modern technologies have so much to say. It (modern technology) is entering

a number of school subjects, where languages are not an exception (Ishtaiwa & Shana, 2011). Numerous studies have indicated that the use of technologies in schools has developed new ways of teaching and learning. The rebirth of traditional classroom can be seen in the changes from its traditional nature to a modern, technology-based one. Using traditional blackboards as teaching media is no longer suitable for children growing up with computer (Yang, Wang & Kao, 2012). Ilter (2009) refers to educational technology as having a big role in EFL classrooms.

The use of CALL (computer assisted language learning) devices, such as emails, internet sites, blogs, podcasts, and IWBs (interactive whiteboards), has been linked to greater motivation and effectiveness of teaching a foreign language (Aydinli & Elaziz, 2010). The use of CALL devices in lessons is growing and it plays an important role in teaching at all levels of education, from pre-primary to the tertiary level of education. Among them, the interactive whiteboard (IWB) can be seen as a hub allowing educators to exploit various resources and technologies at the same time and in one place. However, the fast development rate of modern technologies sets new challenges for both teachers and teacher trainers who are often forced to use the technology in an effective way even though they do not have any prior experience with it. Thus, what is needed is the complex classroom-based research on the use of IWB in teaching in order to identify its strong and weak points.

The first interactive whiteboard (IWB) system was created more than 18 years ago. Since then, it has been used by a large number of enthusiastic teachers in many countries all over the world. What is more, the number of people is still increasing. Schimid (2006) describes IWB as a touch-sensitive presentation device that is used in connection with a computer and a digital projector. Another definition comes from Lewis (2009, p. 33) who defines an IWB as "a touch-sensitive board that is connected to a computer and a projector and displays a computer desktop. Unlike a conventional projector, it allows the computer to be controlled by touching the projection on the board. The IWBs are best understood as three components:

- the board itself,

- the software that comes with it,

- the software produced for the IWB by publishers."

The projector displays images and the content of the computer screen on the board, and using an electronic pen (stylus) the teacher can even control and manipulate the content. With most recent IWBs, the computer can be controlled by a finger touching the area of the board. In a classroom, IWB can be used in almost every part of the lesson. Its versatility allows it to be used for brainstorming, frontal teaching, discussion sessions, planning and editing of writing, or even grammar or vocabulary practise for the whole class. Jones (2004) reports using the IWB during instruction leads to greater student participation. Gerald and Widener (1999) claim that IWBs support classroom interaction and conversation. Moreover, they argue that IWBs help to present new cultural and linguistic elements of the target language. Numberous other studies confirmed a direct correlation between the use of IWB on a lesson and a higher motivation of the students to

learn the subject. Lee and Boyle (2003, p. 203) have found out that "children are always enthusiastic and show heightened motivation when [an interactive whiteboard] is used in the classroom and … it causes greater attention and enthusiasm to participate and respond. Other studies, namely of Haldane (2007) and Mohon (2008), have concluded that there exist three main benefits of the IWB use in classrooms:

- improved student motivation, engagement, and achievement;

- increased lesson interactivity;

- improved teaching (more effective pedagogy.

1 Technology and the age of learners

Interactive whiteboards are used at all levels of education. They can be seen at the very low level of pre-primary education where teachers use them in the form of games as well as on a lesson at a tertiary level being a part of teaching academic subjects. There is an assumption that teachers at different levels use them differently, depending on cognitive abilities of their learners, but in general it can be said that IWBs help teachers to integrate various resources into their lessons. Glover and Miller (2002) in their research found out that interactive whiteboards help teachers to meet different learning styles of learners. The study of Goodwin (2008) compared two kindergarten classes and the effects of the use of modern technology tools on lessons of mathematics. The study focused on the students' ability to understand fractions. The two experimental groups, where one used regular mathematics program of explanation, and the other with the instruction based on the use of IWB, were compared and the results proved that students who received instruction with IWB and other interactive tools had greater growth in their cognitive and symbolic abilities than those in the comparison group. The same can be applied to secondary level language classrooms where the results of a number of studies suggest that the use of IWBs have positive effect on whole-class language interaction. The reason for that is that IWBs are able to integrate different sources of authentic materials, digital media, internet sites, and the ability to manipulate grammar and vocabulary items (Schmid, 2010; Walker, 2003). In the case of vocabulary, Plass, et. all (2003) state that learning vocabulary is enhanced when the presentation includes visual aid and verbal coding, which is the area where IWBs can assist well.

1.1 Benefits of the use of IWBs

Interactive whiteboards provide many opportunities for both groups involved in the teaching process - the learners and teachers. Many studies have proved their positive impact on the increase of motivation of learners as well as the personal professional development of the teachers working with IWBs on lessons regularly. Levy (2002) describes IWBs as tools that provide teachers with the means to integrate multimedia resources (e.g. texts, images, videos, diagrams, figures, etc.) into their classes. With this function they are the course of variety in a classroom. Moreover, thanks to the fact that the material is created on the spot in the class, in front of the students, another great advantage of the use of IWBs is the possibility to edit the presented material

in real time so that the specific needs of each class are met. Thanks to that the teacher can get immediate feedback from the students and adjust (edit) the presented content in a way that it is more easily understood.

Getting correct and immediate feedback is essential for learners because they want to measure their progress and obtain answers in a short time. Teachers sometimes face difficulty in finding proper authentic materials for listening and speaking activities (Celce-Murcia, 2001). But thanks to the immediate access to the internet with a number of different resources, this obstacle seems to have become obsolete. Various tools and working environment of IWBs are designed so that teachers may save their materials in a kind of "projects" and re-use them as many times as they need it. Thus, instead of preparing new materials over and over, they can use and revise the already prepared materials, or even add something new, which is always done based on the students' feedback. Gerard et al., (1999) argues that IWBs increase the conversation in the classroom since the teacher interacts with the students. Thanks to the fact that an IWB can display various types of language input (images, audio, video, etc.), and that it directly involves active participation of either of the teacher or of the students (they are asked to come to the board and work with it), it supports the notion of multiple learning styles such as visual, auditory, and kinaesthetic. Straková (2013, p. 92) summarises benefits of the use of modern technologies in a classroom and offers her list of advantages of using ICT in teaching languages. She mentions the following points:

- high motivation of learners,

- support of self-directed learning,

- support of self-management,

- access to internet sources,

- access to enumerable mobile applications,

- possible use inside as well as outside the classroom, etc.

Similarly, Davies (2008) in his Guide to using interactive whiteboards provides a list of the arguments for and against using interactive whiteboards in the class:

- encouraging heads-up learning,

- encouraging a hands-on kinaesthetic approach,

- helping to bring the outside world into the classroom,

- helping to cut down on photocopies,

- teacher-centred classroom,

- overwhelmed by technology,

- increased planning time.

1. Potential limitations and drawbacks of the use of IWBs

Although it may seem that during the recent years IWBs have become almost a perfect teaching aid for all classrooms, it is also true that there have been a number of researches which proved that the use of IWBs can also bring certain limitations or even disadvantages into the classroom. Reedy (2008) criticises the fact that after some time many teacher**s** end up using IWBs as tools for presenting PowerPoint presentations which may have a negative impact on the degree to which learners actively engage in complex thinking and reasoning. Cutrim Schmid (2008) adds to this debate that such inappropriate overuse of presentation on lessons might potentially mean problems dealing with the lack of cognitive engagement of the students. She develops her idea further claiming that low level interaction from the side of students may have rather negative or even a detrimental effect on the depth of cognitive engagement. Levy (2002) names a number of other things which may hinder the expansion of IWB technology in a classroom. At first there is the lack of teacher's confidence to use and work with IWB. Many times**,** we have students in a class who are much more confident with using modern technology and different devices than teachers themselves. However, it is one of the tasks of a responsible teacher to overcome these technological obstacles and master the device at an appropriate level. Secondly, it is the time needed for the preparation of materials to be used with an IWB that deters teachers from working with it. Needless to say, at the very initial stage, teachers have to pass special training in order to work with IWBs independently. Despite that fact, there still exist worries about the possibility of breaking down, recalibration, and other technological problems connected to an IWB. Levy (2002) reports that teacher's incompetence in using IWBs can cause serious problems during the lessons. Teacher's learning how to do it during the lesson can be the source of boredom for students who can very easily loose attention and motivation to learn that subject. Finally, Gray et al. (2005) report that the increase in the pace of the lesson, which can be seen to contribute to the rapport in a classroom, may in the end result in limited interaction between the teacher and the students.

2 IWBs and ESL classrooms

It has been proved that the teaching process is in most cases positively supported by the use of IWBs on lessons. The questions, however, is to what extent do we need to reconsider traditional pedagogical approaches that the ESL teachers have adopted and use them in their classes. Many studies have reported that the level of integration of the IWB use on lessons is based on teacher's individual pedagogical approach or teaching style. To be able to teach a lesson with an IWB, the teacher sometimes must change his/her lesson plan. This can sometimes be seen as positive, but on the other hand, in some cases teachers may consider it a disadvantage. A number of authors have found that teachers' pedagogical approaches when using an IWB were consistent with the approaches they used when teaching without technology (Bennett & Lockyer, 2008). Contrary to that, there are a number of authors who claim that the impact of IWBs on teachers and their lessons is so great that they speak about a "distinctive pedagogy" (Haldane, 2007). In initial stages this situation led to supporting teacher-cantered approaches, but throughout the time it continuously

changed into current state in which students have become the centre of a lesson with the emphasis put on their active participation in lessons. To prove that Sweeney (2010) reports that teachers moved from initial use of presentation capabilities connected with the use of IWB towards less scripted approaches of the use of IWBs on lessons. Furthermore, Mohon (2008) who analysed possible changes in teacher's pedagogy through the use of IWBs concludes that if a teacher uses appropriate strategy to achieve given object, the change will emerge. The presented results root from the analysis of teacher's experiences recorded in a reflective journal as well as from the students' responses in a questionnaire. Cogill (2010, p. 174) goes in the analysis of possible impacts of IWB uses on the pedagogy changes and presents "a framework for IWB pedagogy based on theory and empirical evidence from IWB practice." Within this framework she defines three basic components when IWBs have the potential to change the pedagogical knowledge. These are:

- more time to teach through saving writing time during the lesson,

- sharing pedagogical views through joint lesson planning,

- flexible access to work at a later stage and more time for discussion to focus on effective learning (2010, p. 169).

A responsible teacher, however, should be aware of the fact that even beneficial use of IWB can represent a threat to the lesson flow if too much focus is given to an IWB itself. In such cases a lesson may become too teacher-centred and the motivating factor of IWB's presence on a lesson becomes demotivating one. It is the responsibility of all teachers to keep a balance between the appropriate use of IWBs and traditional teaching activities and methods (Goodison, 2003).

Conclusion

The presented review of different studies revealed that the use of interactive whiteboards in classrooms, and here I mean not only EFL classrooms, may be seen as rather positive as to its impact on the motivation of the students and their learning success achieved in these classrooms. It has been shown that working with IWBs does not necessarily have to be easy, especially in initial stages of their use. As Cimermanová (2011, p. 4) claims „Our students were born in the digital era and live their digital life as digital natives (Prensky 2001, p. 1). We, the teachers, have several choices: to act as digital immigrants (ibid) or use traditional methods. There is nothing wrong in opting for any of those possibilities. It is always the teacher who decides how to present materials and how to achieve educational aims."

It is a proven fact that the traditional classroom of the last century is gone. The content might have remained almost the same but what has definitely changed are the methods and approaches to teaching foreign languages. The traditional blackboard with white chalk has been replaced with interactive whiteboards, available to bring almost endless lists of authentic materials. What is even more important is the fact that they are still able to provide a bridge that connects learners and the teacher without breaking communication in the classroom. Moreover, from the

above stated it is clear that IWBs have a positive effect on students' engagement, their use increases motivation, and support various learning styles and intelligences of the learners.

Despite all the pros that have been listed here, teachers should remember to keep a rational balance of using IWBs on lessons and avoid overusing them, which can have an exactly opposite effect and lessons may thus become just the stage of an "actor" performing his act without creating challenging and motivating environment for learning.

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