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## **AN INTERACTIVE WHITEBOARD AS A SUPPORT TOOL TO A TEACHER**

### **ІНТЕРАКТИВНА ДОШКА ЯК ПОМІЧНИК ВИКЛАДАЧА**

### **ИНТЕРАКТИВНАЯ ДОСКА КАК ПОМОЩНИК ПРЕПОДАВАТЕЛЯ**

Розглянуто використання інтерактивної дошки у навчальному процесі. Приділено особливу увагу проблемі використання інтерактивної дошки для досягнення більшої продуктивності заняття. В роботі підіймаються питання ефективності використання інтерактивної дошки під час занять; з'ясовується, чи отримують студенти більший обсяг знань на уроках з використанням інтерактивної дошки в порівнянні з традиційними уроками; чи є інтерактивна дошка гарантією цікавого уроку сама по собі. Наведені приклади, чим традиційне заняття відрізняється від заняття з використанням інтерактивних технологій. У роботі описано, як використання SMART Board може полегшити процес викладання і зробити його більш жвавим і цікавим. Також вказані причини, чому студентам подобаються заняття з використанням інтерактивної дошки. У публікації порушуються теми появи і розвитку інтерактивних дошок в освітньому процесі. Особливу увагу було присвячено проблемам, з якими стикаються студенти і викладачі при використанні інтерактивної дошки на занятті, і можливим способам їх вирішення. Розглядаються імовірні причини незадовільних результатів при вивченні матеріалу за допомогою інтерактивної дошки. Автор підкреслює, що «інтерактивна дошка – це помічник викладача, а не його замісник». У статті наведені методи ефективного використання інтерактивної дошки викладачем; пояснюється, чому заняття з використанням подібних технологій зацікавлюють студентів. В даному дослідженні зачіпається питання необхідності соціалізації студентів під час занять і шляхи досягнення цієї мети. Тут також згадані можливі негативні сторони використання інтерактивних технологій при навчанні студентів і ймовірні причини небажання викладачів застосовувати інтерактивну дошку на своїх заняттях.

*Ключові слова:* інтерактивна дошка, інтерактивне навчання, інтерактивні технології.

В данной статье рассматривается проблема использования интерактивной доски для достижения большей продуктивности занятия. В работе поднимаются вопросы эффективности использования интерактивной доски во время занятий; выясняется, получают ли студенты больший объем знаний на уроках с использованием интерактивной доски по сравнению с традиционными уроками; является ли

интерактивная доска гарантией интересного урока сама по себе. Приведены примеры, чем традиционное занятие отличается от занятия с использованием интерактивных технологий. В работе описано, как использование SMART Board может облегчить процесс преподавания и сделать его более живым и интересным. Также указаны причины, почему студентам нравятся занятия с использованием интерактивной доски. В публикации затрагивается тема появления и развития интерактивных досок в образовательном процессе. Особое внимание посвящено сложностям, с которыми сталкиваются студенты и преподаватели при использовании интерактивной доски на занятии, и представлены возможные способы их решения. Рассматриваются вероятные причины неудовлетворительных показателей использования интерактивной доски при изучении материала. Особое внимание уделяется вопросу «интерактивная доска – помощник преподавателя, а не его заместитель». В статье приведены методы эффективного использования интерактивной доски преподавателем, и автор объясняет, почему занятия с использованием подобных технологий заинтересовывают студентов. В данном исследовании затрагивается тема необходимости социализации студентов во время уроков и пути достижения этой цели. Здесь также упомянуты возможные негативные стороны использования интерактивных технологий при обучении студентов и вероятные причины нежелания преподавателей применять интерактивную доску на своих занятиях.

*Ключевые слова:* интерактивная доска, интерактивное обучение, интерактивные технологии.

The article reviews the using of an Interactive Whiteboard in the learning process. The paper deals with the problem of utilizing an Interactive Whiteboard to make a lesson more efficient. The author brings up an issue of effectiveness of using of an Interactive Whiteboard during lessons, ascertains if students obtain information in larger volume comparatively with traditional learning. A question is put if an Interactive Whiteboard ensures an interesting lesson on its own. Examples are given of how a traditional lesson differs from a lesson using interactive technologies. This paper describes how using SMART Board can ease the learning process and make it more vivid and interesting. Also, there are reasons why students like classes with the use of an Interactive Whiteboard. The publication deals with the emergence and development of Interactive Whiteboard in the educational process. Particular attention was devoted to the difficulties faced by students and teachers when using an Interactive Whiteboard in class and possible ways to solve them. The probable causes of unsatisfactory results of using of an Interactive Whiteboard when studying the material are considered. Particular attention is paid to the issue of "an Interactive Whiteboard is an assistant to a teacher, but not his/her substitute." The article presents methods for the effective use of an Interactive Whiteboard by a teacher and explains why classes using such technologies interest students. This study discusses the need for socialization of students during the lessons and ways to achieve this goal. It also mentioned the possible negative aspects of using interactive technologies in teaching students and probable reasons why teachers do not want to use a Smart Board in their classes.

*Keywords:* Interactive Whiteboards; IWB; Smart Boards; technology.

Ukrainian society is facing the task of increasing its economic and industrial power. To have a competitive economy we need to increase competitiveness of Ukrainian education.

The age of rapidly developing technologies sets the rules that concerns changes in the field of education. Modern students are used to get information not from books but from electronic media, therefore they meet the use of Interactive Whiteboards (IWB) in educational audiences with enthusiasm.

The analysis of psychology, pedagogical and methodical literature shows activity of scientific research in relation to the modern technical teaching aids, but the

majority of them come down to demonstration of using IWBs in the process of teaching different subjects [1].

An IWB is a large interactive screen in the form of a whiteboard. An IWB can be presented by both an autonomous computer with a large touch screen and a device connected to the notebook and a projector, and a touch panel. IWBs are used in schools, training sessions, conferences and board meetings.

If to examine all types of IWBs, then it is needed to look back at what was going on in the XX century. The first electronic IWBs appeared at the beginning of 90-ies. A company Microfield Graphics (the USA) became a pioneer with the electronic IWB of SoftBoard. Such boards looked as ordinary marker boards, however all records done on an electronic board instantly appeared on the screen of the personal computer.

An electronic IWB is an enormous touch screen on which it is possible to demonstrate the different functions of user interface by means of a pen or a finger. Electronic IWBs allow combining all advantages of classic presentation with possibilities of high-tech.

The first IWBs were developed for using in offices. They were created by a company Xerox PARC in 1990-ies. These whiteboards were used for conferences in small groups and carrying out round table meetings. In 1991 a company SmartTechnologies created an IWB with using a projector.

The Multimedia-projector connected to the electronic IWB allows working in multimedia environment, combining classic presentation with demonstration of information from the Internet, a computer, a flash drive or a camera.

Basic advantage of electronic IWBs is possibility to write down the process of creation inscriptions and pictures and reproduce them afterwards. Thus, at the beginning of 90-ies software of electronic IWBs laid basis for creation an application for distance education. It allowed giving educational courses simultaneously in a few cities of a country.

The listeners of such seminars could read information from the monitors or map to the large screen for a collective discussion.

Everyone agrees that due to IWBs educational process revives considerably in all classes without an exception, a lesson passes to a higher quality level; students activity grows absolutely [1]. Students like to see colourful pictures and be engaged in the learning process, not just «be present». But SMART Boards are relatively new and unusual device for Ukrainian educational establishments so they are sometimes used only to watch videos and to show colourful texts. We are going to study different types of utilizing IWBs which help improve learning process.

A powerful technical tool and the implementation of the latest multimedia tool is the SMART Board interactive software and technology training complex. Many literary sources describe the component composition, purpose, tools of the interactive learning complex. An attempt was made to substantiate the methodology of using interactive technology in the educational process; attention was paid to software application for the development of teaching materials; the possibilities of using an electronic IWB in the educational process of higher educational institutions are determined. Such scientists as Dr. Gemma Moss, Dr. Carey Jewitt, Professor Ros Levaâiç, Dr. Vicky Armstrong, Alejandra Cardini and Frances Castle made a research of effectiveness of SMART Boards in educational process [5]; Dr. Tetiana Koval emphasized on using electronic devices for increasing knowledge acquisition [7], [8]. A great deal of work was made by C. Betcher, and M. Lee who described implementation of an IWB, methods and results in their study «The Interactive Whiteboard Revolution: Teaching with IWBs» [3].

The purpose of this research is to study efficiency of using IWB on the lessons, if students gain knowledge in larger amount than while traditional learning, if they show better results on test. We also wonder if the lessons become more interesting and vivid while using IWB.

All such electronic devices whether movies, radio, television, or personal computers, were first developed for the average user or the office market and only then gradually adapted for use in the educational sphere. For most of these products, schools were largely a secondary market. In contrast, the first SMART Board was sold to universities in 1991, and the first IWB was sold to the university in the mid-

1990s. Nowadays there are dozens of alternative players in this area who release their products specifically for the educational market. Since IWB technology was perceived as a technology for learning, most vendors are demonstrating significant commitment and responsiveness to the needs of this market. [3].

Work with an IWB increases the level of comprehension of the material through a combination of various forms of information transfer – visual, voice and tactile. The organization of the lesson, including various forms of presenting information, plays an important role. Each student is known to have his/her own preferences and style in the study of foreign languages. As psychology studies show, the more neuro systems are involved in the educational process, the better it will be possible to reproduce the acquired information subsequently.

Thus, it became necessary to use up-to-date teaching ways in order to realize the educational goal of raising and improving the usual teaching methods that were practiced earlier. This should be the main goal, rather than mainly focusing on academic achievements.

In addition, the use of a progressive multimedia system and modern teaching methods should encourage the teacher to improvise the natural teaching-learning process. [2].

Such complex combination strongly affects the student, forming associative links that help understand the material better. In fact, associations are a natural follower of our ideas [10].

There are many opinions about necessity of using IWB in the educational process. Some teachers insist that IWB is not more than an entertainment as colourful and sound device. But there is a thought that having IWB is not a deal, you must know how to use it properly. There is this curious idea that if we simply buy the best equipment—be it the best TV, the best video, the best computers or even the best textbooks—then the quality of the technology can somehow improve the standard of the teaching. While it would be comforting to think that simply having the best equipment will be a recipe for instant success, there is far more to it than this. By all

means, do the research in order to get the right technology for the school, but remember that this is just one small part of the overall picture [3].

IWB can be just as readily used by the senior teacher preparing students for a public exam, the special education teacher working with students with learning disabilities, a distance education teacher working with remotely located students, a teacher using a highly differentiated discovery-based approach, or the kindergarten teacher working with five-year-olds. The boards are often employed in a range of ways—from an easy board for writing notes and drawing diagrams, right through to a fully integrated, multimedia-enabled, large-screen digital convergence facility [3].

The objective of using IWB isn't to take traditional book learning, hands-on experiences, or paper testing away from students. Instead, they're designed to brace and interact students up by adding selection to instruction, getting them moving, and providing cool ways to respond to questions.

SMART Board supports the teaching method of foreign languages in 3 main ways: 1) it helps the presentation of recent linguistic and cultural components, 2) it supports interaction with the class and 3) it promotes the teacher's organizational skills [4].

An IWB supports learners as well. Current education theories are grounded in the notion of the social learner and position student engagement as a key component of knowledge construction: 1) whole-class teaching brings the entire class together, focuses their attention and provides structured, teacher-focused group interaction; 2) constructivism relies on the learner to select and transform information, build hypotheses in order to make decisions and ultimately construct meaning; 3) learners actively engage in the learning process through reading, writing, discussion, analysis, synthesis and evaluation, rather than passively absorbing instruction (e.g., lecture model of instruction) [2].

Students like to work on SMART Board! They are all excited about this board that you just need to touch to use. They especially love to write with their fingers, so even activities like quizzes are fun on the electronic board! They ask to be quizzed, only for the fun of writing on the board. This magic board brings true excitement in

the classroom. Many studies show how much this excitement and positive attitude is important for learning. From a hormonal point of view, the learning process cannot be started without a student's positive attitude. The emotional and psychological state of the student, via hormonal activity, is crucial. Using SMART Board gives them a positive attitude.

Despite the evident advantages in entertainment of the students during the lesson some researchers state that there are no statistically individual differences at level due to the use of IWB [9]. And there are also some disadvantages of using IWB reported both by students and teachers: visual deterioration, fatigueability, setup difficulties, errors in an image at the use, possibilities of technical failure; high cost. In addition, preparation of a lesson with the use of IWB is time-taking process supposing a large additional piece of work on making up the material in electronic form [10].

To sum up, an IWB is a wonderful way to focus students' attention in the classroom. Teachers report great success with having students come up and work out problems on IWB in front of the classroom. Because the technology is interesting, students are eager to work with it, and teachers should take advantage of this by having every student come up and work on the board.

Application of an IWB corresponds to the method of perception the information which is usual for the students of new generation which requires more visual information and stimulation. According to the psychological researches people memorize only 20% of what they see, 30% of what they hear, 50% of what they see and hear and 80% of what they see, hear and do simultaneously. Due to these data one can say that IWB application can improve quality of obtained data [10].

However you do not have to forget that an IWB is a not magic tool which solves all problems instantly. A board will never be able to replace a teacher completely. Any lesson with the use of an IWB must have an accurate plan and structure, achieve certain goals and results. Ultimately, smart technologies only help a high qualified teacher make his/her lesson more vivid and informative, and an IWB makes students not just attend a lesson but participate in it and enjoy it. As it was reported by C. Betcher, and M. Lee in their research "The interactive whiteboard revolution:

Teaching with IWBs”: “An IWB can be used as a regular dry-erase whiteboard, a basic electronic whiteboard or a dynamic digital convergence facility that sits at the centre of a media-rich digital teaching hub. It is the teacher, not the technology, decides how effectively an IWB will be used in their classroom” [3].

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