

SMART CLASSROOM 4D AS A MEDIA OF EDUCATION FOR LEARNING INNOVATION IN PRIMARY SCHOOL IN EAST JAKARTA

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Abstract

The development of technology, information and communication is capable of providing effectiveness and interactivity in human life. Management of learning tools is very necessary. Even this growth is gradual. Metamorphosis of the library which emphasizes the provision of print media, into the supply-demand and service delivery in a multi-sensory of the diversity of the individual's ability to absorb information, makes the service provided is absolutely mandatory and widely varied. In addition, with the ever-expanding advances in the field of information and communication technology, as well as the discovery of the dynamics of the learning process, the implementation of teaching and learning activities are increasingly demanding the variation of media education.

The learning process is generally easier to do if it is done through audio-visual media than reading pages of text books. Just imagine, how lucrative for the trainees to understand a chapter with a full visual depiction in the classroom. The concept of the Smart Classroom education has become a privilege for students in the 21st century. This study aims to create a media-based learning 4-dimensional theater through smart classroom in history lessons Elementary School fourth grade as a medium capable of providing effectiveness and interactivity of the students in understanding the history lesson. Smart Class 4D Theater is following the development of educational technology. The method consists of, requirements analysis, design, programming, testing and implementation. With this learning media, introduction to wake up a space for public elementary school students, will be more visual, interactive, dancing, easy and quick to understand.

Keywords: Smart Classroom, 4D, Innovation, Primary School, Media of Education.

1. INTRODUCTION

The development of educational technology cannot be released with the development of technology in general. Various educational tools and modern educational facilities that contribute to the optimization of the learning process, both at school and in everyday life. The development of technology, particularly information and communication technology offers a lot of variety of easiness in learning, allowing a shift learning orientation of the process of preparing a variety of knowledge into the process of guidance in making

individual exploration of the science. In addition, it is also very possible paradigm shift from teacher-centered teaching philosophy (teachers centered) into a student-centered learning (student centered).

Judging from the basic philosophy, learning is essentially a process of communication that is aimed at delivering a message / information in order to stimulate their thoughts, feelings and interests as well as the attention of learners. In the learning process, material development / teaching materials can be through a variety of ways, one of which is the development of teaching materials with optimization of three-dimensional media. Media used to facilitate communication in the learning process is often termed instructional media. Various efforts are made to foster creativity and motivation of teachers in utilizing information and communication technology to improve the quality of education. It is hoped that the planned learning program should be based on the needs and characteristics of students and directed to change student behavior in accordance with the objectives to be achieved.

One of the media used in learning, and is believed to be more stimulating student interest in learning is audio visual media. Audio-visual media is also one of the alternative means in the process of technology-based learning. Audio-visual technology-based learning can be used as an alternative means to optimize the learning process, due to several aspects, among others: a) is packaged in the learning process, b) more attractive for learning, and c) can be edited (corrected) at any time. By utilizing computer technology is expected that the audio-visual learning can be used to deliver a more interesting subject matter, including the visualization of teaching materials, making it more attractive among students. Through audio-visual learning can be more interactive and more allow two way traffic in the learning process.

The lessons of history until today is still a subject that is categorized number two, even umpteen numbers of several subjects at school so that teachers convey any basic education, and with consideration of the history is the subject of memorizing and easy, so any teacher can teach. Irony indeed, when the government started to declare professionalism in teaching with the introduction of teacher certification, still found in many schools found that assign tasks to teachers who do not teach the history of history-based, when the name of professionalism can be achieved. It is the teaching of history categorized inappropriately, but on the other hand sometimes mistake comes from a history teacher's inability to create innovative learning model, or use creative teaching methods.

The learning process is generally easier to do if it is done through audio-visual media than reading pages of text books. Just imagine, how lucrative for the trainees to understand a chapter with a full visual depiction in the classroom. The concept of the Smart Classroom education has become a privilege for students in the 21st century. Technology has changed the way many human lives.

2. SMART CLASSROOM 4D AS A MEDIA OF EDUCATION FOR LEARNING INNOVATION IN PRIMARY SCHOOL IN EAST JAKARTA

2.1. Smart Classroom

Smart Classroom use all the interactive content such as videos or presentations and visually appealing method in teaching attracts trainees who have difficulty with traditional teaching methods in the classroom. In fact Smart Classroom practically like going to the movies, moving images used to convey learning. Full visual information of this kind is very eye-catching and the trainees will be easily connected with the learning materials. This is because the senses of sight and hearing them involved and it helps them to remember information more quickly and effectively.

Smart Classroom enables teachers instruct students simultaneously remote and local. It provides a pen-based user interface on the projection screen and computer-vision-based module for selecting students remotely using a laser pointer. A virtual assistant speech, being able to use computer animation allows the teacher control the presentation of learning materials and teacher informed the class events effectively. In addition, the module automatically cameraman intelligent context switching between multiple live video cameras so that the distance for the students always follow the focus of the class. The underlying software infrastructure systems, intelligent platform, has a multi-agent architecture technology based education with loosely be coupled to publish a coordination model and wire protocol is well defined. The development of intelligent platform interface is simple enough, so developers can easily understand and use the system.

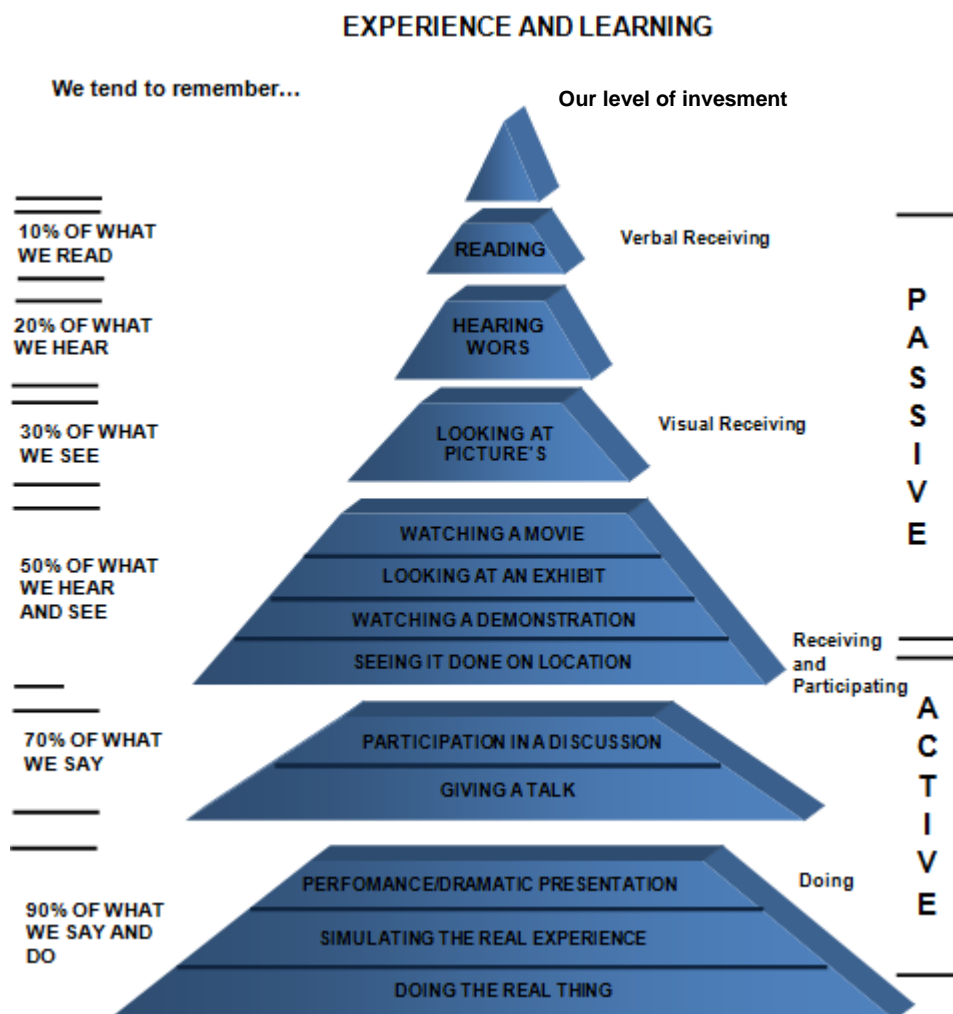
2.2. Media of Education

The word comes from the Latin media which is the plural of medium restrictions on the media very broad sense, but we restrict the media education course that the media used as a means of learning activities and materials. Why should the media in learning? Questions like that are often arise questioning the importance of media in teaching. We must know in advance the concept of abstract and concrete in learning, because the learning process is essentially the communication process, delivering a message of introduction to the

receiver.

Messages such as content / teaching poured into symbols of communication both verbal (word and writing) and non-verbal, this process is called encoding. The interpretation of symbols such communication by students is called decoding. Sometimes the interpretation is successful, sometimes not. Failure to understand what is heard, read, seen or observed. failure or obstacle in the communication process known as barriers or noise. The more verbal understanding more abstract accepted. So where is the function of the media? It helps us see diagram cone of learning from Edgar Dale, which clearly emphasizes the importance of media in education.

Table 1. Cone of Experience and Learning



In general, the media have utility:

1. Clarify the message that is not too verbalistic.
2. Overcome the limitations of space, time, energy and resources senses.
3. Excite learning, more direct interaction between students with learning resources.
4. Enables children to learn independently according to their talents and abilities of visual, auditory and kinesthetic.
5. Give the same stimuli, likening the experience and perceptions of the same cause.

In addition, the contribution of learning media according to Kemp and Dayton, 1985:

1. Submission learning message can be standardized
2. Learning can be more attractive
3. Learning to be more interactive by applying learning theory
4. The timing of the learning can be shortened
- 5 The quality of learning can be improved
6. The learning process can take place whenever and wherever needed
7. A positive attitude of students towards learning materials and the learning process can be

improved

8. The role of the teacher towards a positive change

2.3. Smart Class Collaboration as a Media of Learning Transformation in the 21st Century

Smart collaborative classrooms are a series of tools and techniques to create a 21st century learning space that is supportive of several different types of classrooms, including blended classrooms, whole classes and small groups. The system is more rewarding than a traditional classroom for innovative schools that employ innovative teachers. The creators of the smart collaborative classrooms want to enable a transforming learning experience through flexible classroom spaces that use multiple learning modes such as flipped classrooms (the act of watching lectures at home and doing the actual work in the classroom) and one-on-one learning, which they hope to make more collaborative between teacher and student, as well as more social.

Using a smart collaborative classroom promotes learning that is more centered on the students and their abilities, rather than traditional teaching methods that do not always work for a student's learning style. There is a full range of products and services available with the smart collaborative classroom that helps to evolve the classroom into one that is based on today's technology and will adapt easily to future technologies. Each smart collaborative classroom includes several smart board 800 series interactive whiteboards, a smart response interactive response system, a document camera, an audio system, the smart notebook and smart exchange software and a smart care protection plan to set up your new smart classroom.



Fig 1. Smart Classroom Learning for Education

The equipment used in the smart collaborative classroom is used for several methods of teaching. The system looks to engage all students in learning no matter what type of learner they are. It utilizes the smart notebook software and includes downloaded lessons that focus on skill development. Teachers and students can even be certified in the smart notebook software. The system also integrates with personal wireless devices that students can use for learning, such as tablets or laptops.

The system is much different from the traditional chalkboard classroom. It is collaborative and flexible so that it easily accommodates all students and their changing learning environments. It allows students to work together with their peers and teachers to make use of the work space.



Fig 2. Smart Collaborative Classroom

Teachers and schools that are interested in setting up the SMART Collaborative Classroom can experience a working learning environment that uses the SMART Collaborative software in order to see how the system works. Educators can tour the classrooms, get a hands-on experience with the software and devices and even see the classrooms at work with actual students.

The study of smart classroom equipment and its application model is an inevitable requirement for the development of educational information to a higher stage. This study is of great significance for the promotion of the digital school construction, elimination of the difficulties faced by the multi-media teaching, enhancing of student innovative ability. The ultimate objective of the study is to change learning and teaching methods in the information age. All though it may have some disadvantages, we think that smart will bring new life to learning.

3. ACKNOWLEDGEMENT

A federal movement called The 21st Century Classroom Initiative is underway aimed at providing every classroom in the country with interactive educational tools within the next few years.

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