

# Multimedia Based Visual Learning Process Is a Very Much Effective Way at Present Education System: A Study on Barisal Cadet College

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## ABSTRACT

*In the traditional education system teachers generally have taught students with verbal instructions. Nowadays, teaching and learning methods is being changed for developing pattern of Information and Communication Technology (ICT). It's time to engage students with digital methods such as multimedia, interactive learning system etc. so that they can improve their learning capabilities. At present, these techniques are very much indispensable to create high quality and realistic learning environment for students. Visual learning can be easier to understand and deal with their learning significantly. A lesson was developed on 'solar system and the earth' for the students of class eight in Barisal Cadet College using different multimedia application tools. The objective of this paper was to examine of student's abilities to acquire new knowledge or skills through visual multimedia based learning materials. I conducted teaching into two different groups of students of class eight where one group was taught with traditional system and another group was taught with multimedia tools and assessed with the same questionnaires. Student's response and perception were very positive towards the multimedia based techniques than the traditional method.*

**KEYWORDS** - Learning system, Learners, Students, Education, ICT, Multimedia, Visual learning,

## 1. INTRODUCTION

At present technological issues can easily attract the all classes of people. Education system is not beyond of it. Student easily express enthusiasm about ICT based learning. Multimedia allows teachers to integrate text, graphics, animation, and other media into one package to present comprehensive information for their students to achieve specified course outcomes. Multimedia permits the demonstration of complicated processes in a highly interactive, animated fashion and that instructional material can be interconnected with other related topics in a more natural and intuitive way [1]. We have chance to change our traditional reading and memorization habits with interesting contents through the effective

use of technology. Different communication media have promoted implementation of learning environment that is the big factor to adapt students with their learning system. Multimedia Technology can help to create high quality learning environments especially for the students through, different media like texts, graphics, sound, animation etc. It is true that education system is gradually being moved away from pen-and-paper oriented teaching, allowing for a more digital learning environment [2]. The term 'blended learning' has gained considerable attention in the recent years as particular forms of teaching with technology. The combination of traditional learning with visual technique are applied as blended learning system. The Department for

Education and Skills in 2003 [3], for example, provided the following definition:

"If someone is learning in a way that uses information and communication technologies, they are using e-learning. They could be a pre-school child playing an interactive game; they could be a group of pupils collaborating on a history project with pupils in another country via the Internet – it all counts as e-learning." Actually due to the disadvantages of E-Learning a new approach of learning has been developed [4]. The purpose of multimedia based learning is to discover the mixing of media [5] in education system. The main focus of this research will be to determine the most effective learning methods. My study was designed to observe the following purposes.

a. The effectiveness of visual learning when integrated with a traditional learning

b. To observe students performance after learning with multimedia tools.

Main purpose of this study was to investigate the students' responses on multimedia contents in learning Geography. This paper has been organized on the basis of literature review, methodology, result analysis, problems, possible remedies and conclusion.

## **2. LITERATURE REVIEW**

Everyday life in the 21st century is started with image, visual technologies and visual practices. Modern education and communication environments offer alternative ways in the learning process. The terrain of communication, creativity and education is changing in profound ways. Traditional uses of literacy and associated means for representing and communicating are mutating at every level and in every domain [6]. Technology is being widely used in the present educational system. It has no doubt that multimedia tools has been very much acceptable technique in education sector. ICT based learning plays a very much important role in assisting students in learning processes [7]. It has the possibility to enhance the whole education system with multimedia

technologies. The positive impact of the developed program on students abilities is to understand new knowledge or skills. Multimedia education offers an alternative to traditional education that can enhance the current methods and provide an alternative. Similarly, another group of researchers [8] developed an English short play as a teaching material to promote learners (second language learners) English learning attitude and interests that was evaluated by three professors. The findings of the study reveal that incorporating project-based learning into the development of an English short play can effectively guide students in creating the short play effectively. Animation media can help them to adopt their English vocabulary and receive higher average score than those who apply the normal one at statistical significance level [9]. It is a beneficial teaching material to stimulate and support the learners to enjoy the class with good results.

In Sri Lankan universities in integrating web-based learning and interactive computer aided language learning in English as a Second Language and foreign languages proved to be most successful in enhancing student performance. This promising multimedia technology is worthy for both school and higher education. An interactive multimedia courseware with story telling approach supports learning process and the knowledge could be delivered and recognized easier [10]. It is obvious that method of interaction design for enhancing student's cognitive ability is essential [11]. Interactive materials are effective for students. They can adopt with materials very quickly.

Islam [12] wanted to know the feeling of students when learning materials was playing. All students were very enthusiastic and wanted to see the video more when stopped video. Computer aided language learning process is very important and student can take it quickly [13]. There a lot of multimedia institute in Dhaka city and they can produce world quality work. Animation industry in Dhaka city has good

prospect although some obstacle need to overcome for success [14].

Various educational technologies have created tremendous opportunities to create effective student-centered learning environments [15]. For example, rich perceptual experience can be easily created in a computer-based learning environment for students to construct meanings; the internet brings in rich information that's socially and culturally familiar to the students. An emphasis on designing technology-enhanced learning environments can be seen in the curriculum design guidelines across cultures (for example, Curriculum Development Council 2007; Ministry of Education, Singapore). [16] Argue that computers need to be applied to the educational settings as mind tools rather than

simple knowledge deliverers. Computers act as the mentor that leads learners into the desirable learning tracks, and improve their learning performance. Erwin [17] showed that students in a multimedia based class were significantly higher in their final examination scores (dependent variable) than those in a traditional class.

However, it has a positive impact for promoting learning so designing and developing the materials related to ICT require essential aspects for paying careful attention.

### 3. METHODOLOGY

The study was conducted in two phases dividing the students of class eight of Barisal Cadet College into two groups and each group containing 25 students.

Table 01: Number of students categorized for the experiment.

| Class | Group-A<br>(Multimedia based learning system) | Group-B<br>(Traditional learning system) |
|-------|-----------------------------------------------|------------------------------------------|
| Eight | 25                                            | 25                                       |

At first, a lecture was developed on the topic of 'solar system and the rotation and revolution of earth' as learning materials using different multimedia tools that was presented to students of first group 'A' step by step. Another group of students 'B' were taught in the traditional way of learning. Then the students of both group sat for answering the same 20 questions.

### 4. Result analysis

The table 01 shows the number of questions answered by the students of both group. Where the questions answered pattern were divide into four categories firstly 1 to 5, secondly 6 to 10 thirdly 11 to 15 and fourthly 16 to 20. In this category the number of students of group A (multimedia based learning system) were more successive in answering maximum number of questions compared to group B (traditional learning system).

Table 02: Number of questions answered by students from both group.

| Number of answered question | Group-A<br>(Multimedia based learning system) | Group-B<br>(Traditional learning system) |
|-----------------------------|-----------------------------------------------|------------------------------------------|
| 1-5                         | 0                                             | 2                                        |
| 6-10                        | 6                                             | 13                                       |
| 11-15                       | 12                                            | 5                                        |
| 16-20                       | 2                                             | 0                                        |

The figure 01 is showing that 2 students from group A (multimedia based learning system) gave 16 to 20 right answer whereas no students of group B (traditional learning system) in that achievement. Students of group A (multimedia based learning system) also were very successive in answering 11 to 15 questions but group B (traditional learning system) was not so successive.

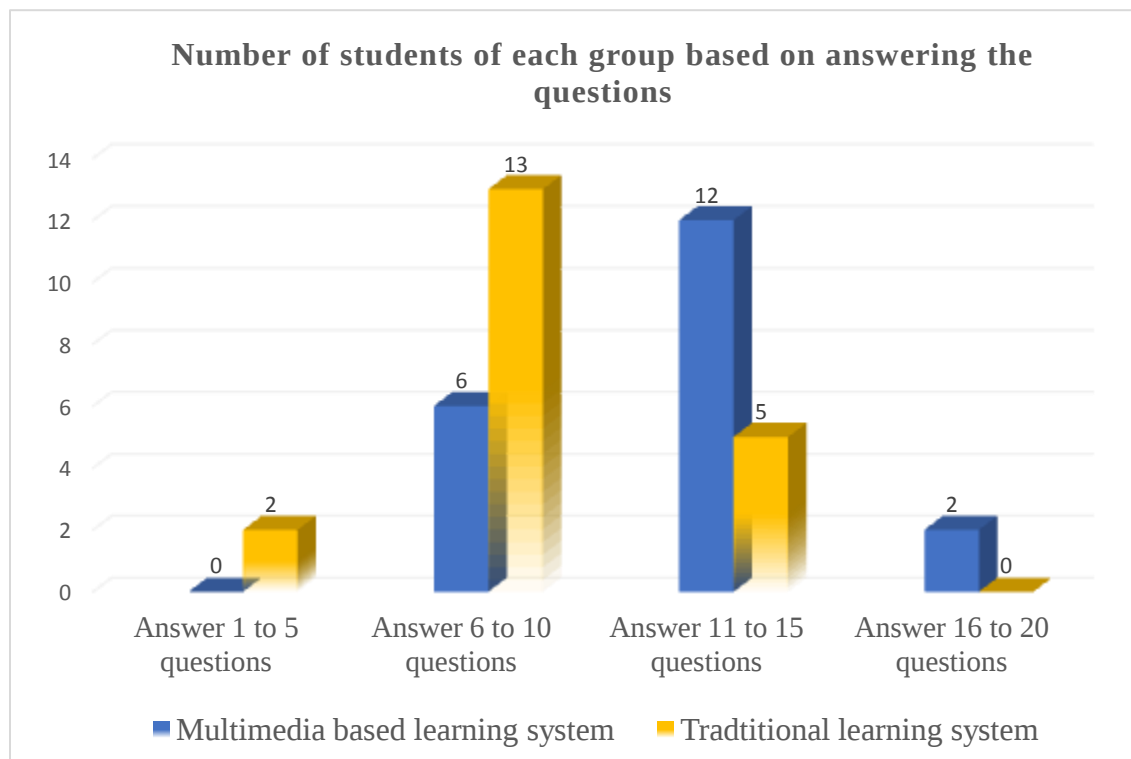


Figure 01: Comparison of number of questions answered by the students of both group.

So, it can be said that the performance of group A (multimedia based learning system) was higher than the group B (traditional learning system). And the students of group A also were very enthusiastic in learning compared to the group B.

## 5. Conclusion

The main purpose of this study was to find out the effectiveness of multimedia based learning system compared to traditional learning processing. To conduct the study different types of multimedia applications and software were used. It was observed that the impact of multimedia based learning process is exclusively

high to improve the learning skills, although the research had no intention to the replacement of traditional education system. My purpose was to analyze multimedia tools as a method for promoting learning and quick adaptation with learning materials. The students were very much enthusiastic and attentive to multimedia based class. Though multimedia based learning process has some drawbacks such as cost, looking at slide background more attentively than the main theme etc. However, this study may be fruitful to adopt with the present dynamic education system as well as gradual advancement of technologies.

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