



SCIENCE EDUCATIONAL BLOGGING PAGES- A TECHNOLOGICAL BRIDGE BETWEEN STUDENTS AND EDUCATORS

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Abstract

The world is becoming more complex, accordingly the the students are expected to learn high-level skills such as how to access, evaluate, analyze, and synthesize vast quantities of information, etc.,. Technology can assist these expectations and make the students more successful and hence the teachers. But nowadays most of the class rooms, even the science class rooms are following the traditional way of teaching with black board and chalk. However the black board and chalk assisted teaching is required in science subjects teaching for mathematical steps, expressions, equations etc., in spite it is possible to implement ICT (Information Communication Technology) in making the class room more interactive and understandable. The technology also affirm and advance the relationships between educators and students. This paper briefly explains how the technology via educational blogging pages ensures and improves the learning skills in students.

Keywords: Technology, ICT, skills, Teaching, blogging pages

I. INTRODUCTION

The foremost advantage of traditional teaching methodology involves quick and active learning of students due to one to one students-Teacher interaction. The students doubts can be immediately clarified by the teacher in understanding of theories which is been discussed in the classrooms. In traditional class room, the communication between the students and teachers increase the confidence level of the

students, apart from that the activities conducted by the teachers makes the students more attentive, fun and feel interest.. The best part of traditional education is the syllabus completion in scheduled time. In spite of all the above facts, the main disadvantage is “Spoon feeding”, that is students always seeks the assistance of teacher which suppresses the creativity nature of them and fail them in knowing their strengths. As teachers, our prominent duty is to promote students intellectual qualities through higher order thinking, problem solving, improved communication skills and deep understanding of the concepts, which will not be acquired by the traditional black board–chalk method of teaching. The Information Communication Technology (ICT) aided teaching can fulfill this gap left by the traditional Teaching methodology.

Computer aided communication is gaining interest nowadays and becoming a fact to everyday life in developing and developed countries. As it is clearly visualized that ICT is changing every aspect of human life activities such as trading , entertainment, research, defense also in education. “Development of the Nation” – the phrase gain meaning only if the development is Science and Technology driven.

This paper briefly discusses about how a information communication technology can make our education system efficiently by fulfilling the gap left over by the traditional teaching methodologies.

II. OVER VIEW OF ICT IN SCIENCE EDUCATION

Various ICT aided teaching methodologies and platforms are being implemented at different

countries of the world. TeresaMartín et al [1] tried with Moodle platform to share the knowledge of physics via different kinds of activities such as chats and forums between students and teachers. Woodrow et al[2] conducted a case study on Technology Enhanced Instruction (TEI) model, Technology enhanced secondary Science Instruction (TESSI) and showed significant changes in teaching. Mohamad et al[3] study and showed a observable change in using technology in physiology courses. Hannatu Abdullahi [4] succeeded in implementing the ICT in school science lab in promoting the intellectual qualities of students. Though the above studies are supporting the ICT aided education system there are ample of drawbacks which we need to consider especially in India, being an Asian country. The Indian culture will not easily accept the usage of mobile by girls since browsing on internet is not safe which may lead to cultural and social loss of students. As in the 21st century, our students have adequate ICT tools such as software packages and platforms like Android, Linux, Microsoft, Apple, Google, open-source etc., Moreover they can use smart phones. To access online dictionaries and social media etc.,[5]. But using smart phones and ICT tools by the students themselves won't really give and expected positive impact in the knowledge growth, despite the ICT must be linked to the pedagogy.

III. THE ROLE OF TECHING COMMUNITY IN ICT EDUCATION

In order to make the ICT based education to achieve its target, the awareness and the moral support must be given to the teaching community.

The teachers must be equipped in implementing ICT in teaching and assessment. So the government Organizations and the Universities should take the responsibility in making their teachers to gain abundant knowledge in ICT based education via various workshops and conferences etc.,. Apart from this in their own institution itself the teacher together can form a forum and provide understanding of technological aspects, fostering new ideas in implementing technology in class room.

This paper investigates one such ICT enabled

teaching methodology

IV. WHY BLOGGING IS SUBSTANTIAL FOR STUDENTS

A regular record of our thoughts, opinions, or experiences that we can put on the internet for other people to read " is termed as blog. The secret behind the use of blog page is that it requires minimum technical knowledge to create and maintain compare to the traditional websites and easily accessible in any computer or mobile. Since students are disparate in category, the educators must take the responsibility to make the students to understand. One of the crucial part of blog page is that, it allow the students who feel shy in asking doubts in the class room to interact with the educator freely. Furthermore Blogs can be used as a class room management tool.

From the Frame of reference of educator, the blogs can be used to share the assignment topics, study materials; related informations regarding the subject .From the student point of view, he can download the materials and can also post his doubts pertaining to the particular topic. In the traditional class room, if the student is absent, to learn the particular syllabus covered, he must reach other students destination which cause him lots of difficulty, or if the student is lazy enough he leave the topic and he sufferers during examination. The pivotal advantage of the blog page is , if the student is absent, due to incessant updating of the blog page, the student will be benefitted .Fig.1.

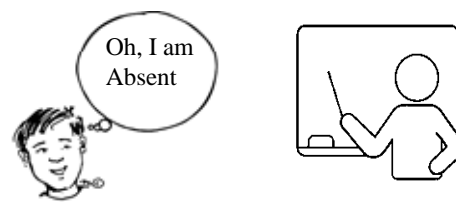


Fig.1.a.Traditional class Room

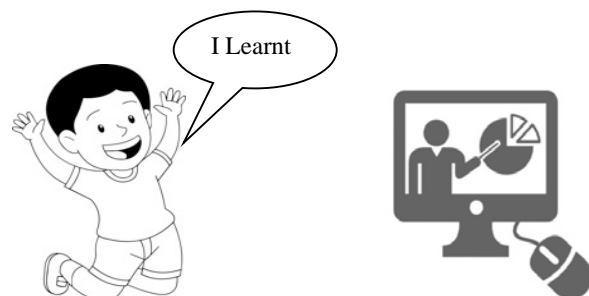


Fig.1.b. Online class Room

So, this paper briefly discusses about one such Blogging page meant for Physics subject.

v. THE BLOG “VIRTUAL PHYSICS CLASS ROOM”

The elite reason behind the selection of a blog page to enlighten the student is timely updating of resources by the teachers who does not have pure computer background with minimal cost. Since blog pages does not require deep computer knowledge and we can have free blog page to access.

In view of implementing ICT in an innovative manner in teaching and learning process, a blog page virtual Physics Class Room is created and enriched with various useful and interesting features for the sake of students benefit. Since science involves both theory and Laboratory, the present blog page is designed to make the students to grasp both the knowledge.

Regarding the theory segment, the resources provided are

1. Syllabus and Memory Map
2. Study in absentia
3. Assignment
4. Study materials
5. Question Bank
6. Videos, PPTs and Photographs

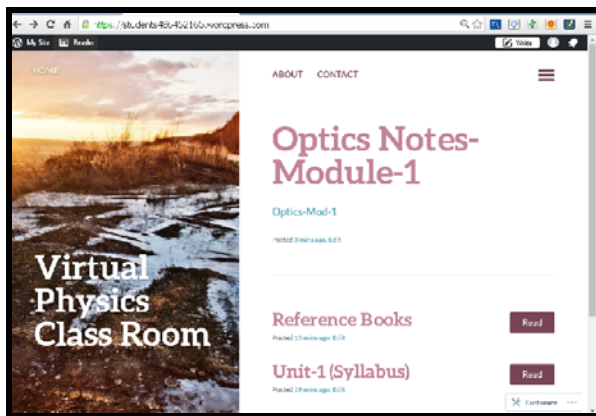


Fig.2. The Blog Page “Virtual Physics Class Room”

Related to Laboratory,

1. Basic Instruction about the Lab
2. Know about your Instruments
3. Learn the Experiments
4. Virtual Lab
5. Viva-Voce Question Bank

VI. RESOURCES FOR THEORY SUBJECT

A. Syllabus and Memory map

The impel of syllabus is it is the document which outlines everything that will be covered in a class; the student must have consciousness about that, so it plays a important role in our page.

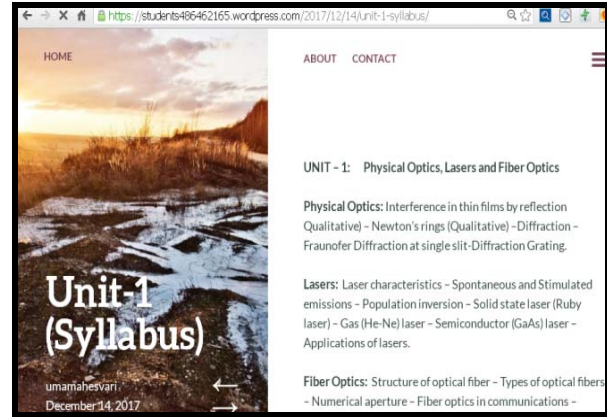


Fig.3. The post of “Subject Syllabus”

The Memory Map is another interesting feature added. The memory maps increases the learning ability. A memory map is a pictorial representation that connects information around a central subject. The memory map for each unit is also included for students better understanding.

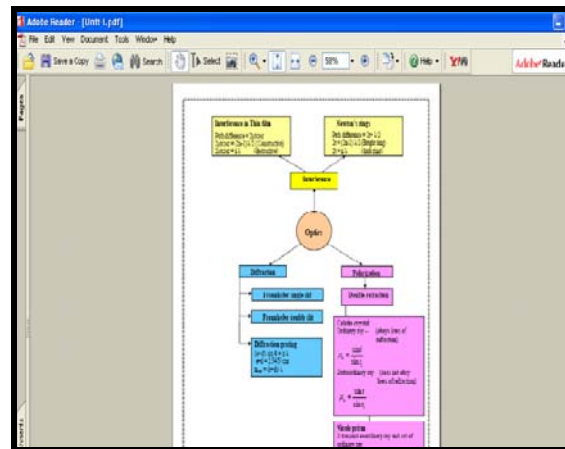


Fig.4. The post of “Memory map”

B. Study in absentia

The study in absentia is the paramount part of this blog page, it is a different online –interactive opinion which allows the students who are absent for a particular period will be aware of the concept which was taught on that day. In the Part the entire unit is divided into certain modules,

the modules have the explanation of the particular topic in a very simple manner with assistive diagram and with example. One such module is shown in Fig.4

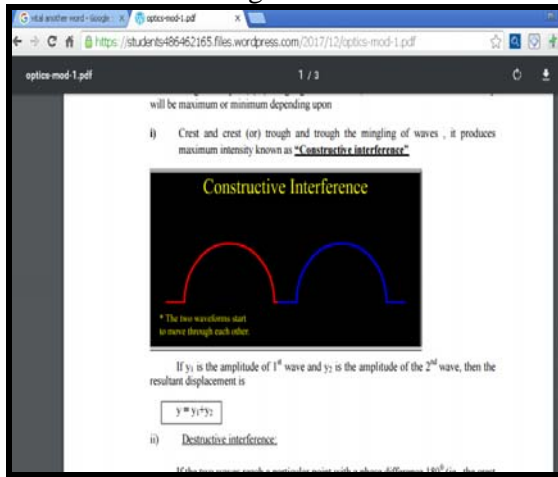


Fig 5. The post of "Module of a Unit"

C. Assignment / Worksheet

This is rational part of the blog page, which consists of assignment topic or worksheet pertaining to the particular module posted, if the student is intelligible about the particular module, he can do the assignment topic or the worksheet. A sample worksheet is shown in Fig.5.

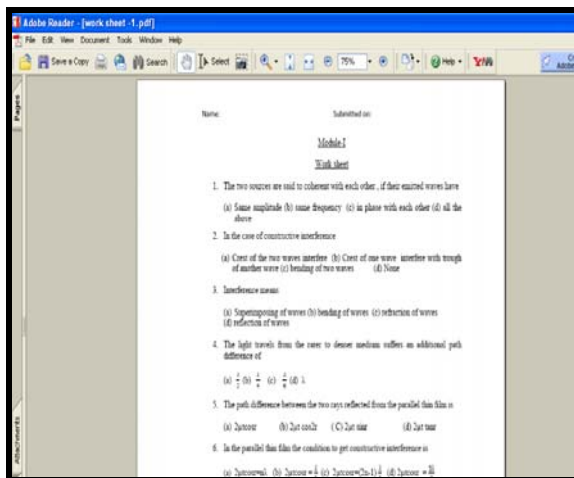


Fig.6. The Post of "Worksheet of the Module"

D. Other notable Resources

The other assisting facilities included in the Blog page are

1. Question Bank: This comprises of Unit wise all possible descriptive and objective type questions. University Question paper collection and Institutional wise Internal

Examination Question Paper Collection.

2. Related PPTs, and Videos animation Links of the particular topics

VII. Resources for Laboratory

The prime difference between the existing lab resources available and our blog page is that in web by means of YouTube etc., the videos which are getting do not explain the experiment clearly and only very few are available regarding science. Apart from this, the existing virtual lab facilities created by the Universities do not cover all the experiment pertains to our syllabus still complicated in understanding.

A. Basic Instruction about the Lab

This part encompass basic instruction to be followed in Laboratory, maintenance of observation and Record Note books, their mark weightages, etc.,

B. Know about your Instruments

This is the rudimentary part in the Laboratory, it introduces the instrument to the students which they are about to handle in the laboratory. This module introduces the instruments parts, precautions to be followed, measurement procedures, error handling, significance, etc,

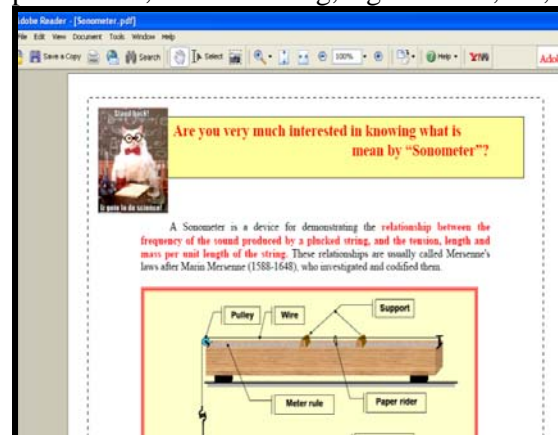


Fig.7. The Post of "Know about the Instruments"

C. Learn the Experiments

This section introduces the components, instruments used to perform a particular experiment in the form of their photographs and even step by step strategy to perform it in advance before coming to the laboratory.

