Innovation in Teaching Methodology for Transformation of Knowledge

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Abstract—*This study aims to focus on Innovation in Teaching Methodology for Transformation Knowledge. In present global era of science and technology gives numerous opportunities for powerful and effective learning. It becomes very essential to import then knowledge about new technology–enabled collaboration with in education.*

Keywords: *ICT-Information communication technology WBT–Web based training*

1. INTRODUCTION

From primitive society to modern Information Communication Society (ICT) education played avital role for shaping the society. Transformation of education through different Medias and medium and the effect of transforming to transformer need adoption of Teaching Learning Principals for betterment of learning outputs. The technology adopted for teaching learning process critically emphasized on maximum output in the part of learner whereas the adoption of technology limited the learners, resources and adoptive environment strength and weakness. Education is a light that shows the mankind the right direction to surge. The purpose of education is not just making a student literate but adds rationale thinking, knowledge ability and self–sufficiency. When there is a willingness to change, there is hope for progress in any field. Creativity can be developed and innovation benefits both students and teachers.

Across the world, information technology is dramatically altering the way students faculty and staff learn and work. Internet- ready phones, handheld computers digital cameras and MP3 players are revolutionizing the college life. As the demand for technology continues to rise colleges and universities are moving allsorts of student services, from laundry monitoring to snack delivery online. Recently, it was found that web- based learner can achieve seven time more than that of normal learner.

Technology is also changing the classroom experience. The classroom at New York University 's London N Stern school of Business feature all sorts of convenience for students and teachers. For instance, the room is wired with cameras for photographing whiteboards, so students can receive the images as digitals files. In addition, tablet, PCs, compact computers that allow you to write notes directly on to the screen with a special pen, replace the archaic projector. With the tablet technology allow professors to make notes on chairs and spreadsheets and send them directly to their students ' PCs and he will get a feedback from each stu

2. REVIEW OF THE LITERATURE

Joshi C.L. (1992). The construction and try out of networks for for topic of Physics for standard XII science stream.

Objective: To increase the level of understanding of the pupil of higher secondary classes of standard XII science stream in the different topics of 'Physics' which are to be taught by using ' network' diagrams. To evaluate the defectiveness of the teaching using network diagrams compared to the teaching through the traditional method.

Method: Pupils were divided into two groups. They are constituted with the high achievers and low achievers group. These pupils are taught the different possible topics with the network diagram. The simple constituted of pupils of XII science pre-post test were administrated on the pupils.

Findings: i) From the results obtained there is a significant difference on mean achievement post test scores of pupils belonging to group A and group B. ii) There is no significant difference of means of post test scores of pupils of high achievers of group A and high achievers of group B. iii) No significant difference on mean post test scores of pupils belonging to the high achievers of group A and pupils belonging to low achievers of group B. iv) significant difference is obtained on mean post test scores of pupils belonging to the high achievers of group B and pupils belonging to the low achievers of group A.

Sindhi, N.O. (1996), the construction and try out of multimedia package for the teaching of physics in standard XI.

Objectives: i) to develop multimedia package in Physics. Ii) To study the effectiveness of multimedia package in terms of achievement of students.

Finding: there is a significant difference between mean of pretest and post test scores of the experimental group. This shows the defectiveness of multimedia package.

2. Kadhiravan, S. (1991), Effectiveness of computer assisted instruction in relation to student use of self. Regulated learning strategies.

Objectives: To find out whether there is any difference among the three instructional strategies viz. lecture method (L.M) Computer Assisted Instruction (CAI) as individualized strategy and Computer Assisted Instruction with peer interaction (CAIPI) in terms of their effectiveness in improving the performances in physics among the higher secondary student with different level of cognition, viz. knowledge, application and understanding.

Method: the sample consisted of 105 S student of standard XI (First year higher secondary course) studying in three different schools in Coimbatore and Harur in Tamilnadu. Tools used in the study included syllabus based computer software packages, in areas such as wave motion elasticity; a pre- test developed in physics was used to access the knowledge of students at class X level.

3. Dalwadi, N.(2001), Development of computer Assisted Instruction in Science for the student of Standard IX.

Objective: i) to develop CAI in Science for standard IX. ii) To study the effectiveness of the CAI in terms of achievements of students.

Findings: CAI was found to be effective individualized instructional technique for teaching science to standard IX student. It helped the student to learn the topic of 'Light' and clarified the concepts.

4. Singh, B.(2005) Effectiveness of Computer Assisted Instruction for teaching biology

Objective: The study compared the effectiveness of Computer Assisted Instruction (CAI) as compared to lecture method on the topics 'Tissues and cell'

Method: Experimental method was used for conducting this study. Per test, post test, experimental group and control group design was used for the study.

Finding: i) Both the methods were effective in enhancing the learning about cell and tissues. Ii) While lecture method was more effective than CAI for the teaching cell, CAI was more effective then lecture method for teaching tissues.

5. Pate, Kinnary (2008) Computer Assisted Instruction in Physics for the student of Standard XI: An Experimental Study

Objective: i) To develop computer Assisted Instruction package on two units of physics for XI science student studying GSTB syllabus.

Method: multistage sampling technique was used by the researcher in the study. The per–test post- test control group design was employed. Two schools, one in rural and another in urban area was selected to conduct the experiment.

6. Schafhauser, Dian (Camps Technology, v. 23 n4 p18-21 Dec. 2009) Keeping them Online and in school;

Objective: To create predictive models that enables colleges for identifying behaviors that put students at risk for dropping out, flag students who engage in these behaviors, and help identify practices that work in retaining at-risk student populations.

Methodology: Using data to track and manage student enrollment is steadily becoming a standard practice on both two-year and four-year campuses.

Finding: A look at two community colleges that are successfully taking on enrollment and retention challenges.

7. Hung, Jui-Long; Crooks, Steven M.(Journal of Educational Computing Research, v40 n2p183-201 2009)

Examining online Learning Patterns with Data Mining Techniques in Peer-Moderated and Teacher-moderated Courses.

Objective: this study used data mining techniques to examine and compare learning patterns between peer-moderated and Teacher-moderated groups from a recently completed experimental study (Zhang, Peng& Hung 2009)

Methodology: Three data mining techniques-clustering analysis, association rule analysis, and decision tree analysis- were used for data analysis.

Finding: The results showed that most students in the peer-moderated condition had low participation levels and relied on student-content interaction only. On the other hand, teacher presence promoted student interaction with multiple sources (Content, Student and teacher). The finding demonstrate the potential of data mining techniques to support teaching and learning.

8. Guruler, Huseyin, Istandullu, Ayhan; Karahasan, Mehmet (Computers & Education, v55n1 p247-254 Aug 2010)

A new student performance Analysing System Using knowledge Discovery in higher Educational Databases.

Objective: to explore the factors having impact on the success of university students.

Methodology: Used: In this system a decision tree classification is employed as a data mining technique. Knowledge discovery software, called MUSKUP, has been developed and tested on student data. With the software

system all the tasks involved in the knowledge discovery process are kept together. The advantage of this approach is to have access to all the functionalities of SQL server and Analysis Services through single software.

Finding: The study was carried out on the data university students. According to results of the study, the types of registration to the university and the income levels of the students family were found to be associated with student success.

9. Conen, Anat; Nachmias, Rafi (Internet and Higher Education, v14 n2 p67-76 March 2011)

What can instructors and policy makers learn about web-supported learning through Web-Usage mining

Objective: this paper focuses on a web-log based for evaluation pedagogical processes occurring in web-supported academic instruction and student's attitudes.

Methodology: The tool consists of computational measures which demonstrate what instructors and policy makers can learn about web-supported instruction through web-usage mining.

Finding: this paper describe the tool and its computational measures as well as its implementation, first on a sample course and next on 3453 courses websites at Tel-Aviv University.

10. Garcia, Enrique; Romero, Cristobal; Ventura, Sebastian; de Castro, Carlos (Internet and Higher Education v14 n2 p77-88 Mar 2011)

A collaborative Educational Association Rule Mining Tool

Objective: This paper describe a collaborative educational data mining tool based on association rule mining for the ongoing improvement of e-learning courses and allowing teachers with similar courses profiles to share and score the discovered information.

Methodology: The mining tool is oriented to be used by non-expert instructors in data mining so its internal operation has to be transparent to the user and the instructor can focus on the analysis of the results and make decisions about how to improve the e-learning course.

Finding: In this paper, a data mining tool is described in a tutorial way and some example of rules discovered in an adaptive web-based course.

11. TareqMitibMurad.(2009), studies on The Effects of Task–Based Language Teaching on Developing Speaking Skills among Palestinian Secondary EFL Students in Israel and Their Attitude towards English.

Objective: To investigate the effect of an instructional programme based on the task based language teaching on developing the speaking skills of Palestinian secondary EFL students in Israel and their attitude towards English.

Method: The researcher conducted this study on a sample of 2 groups: an experimental group taught by the task based programme (TBP) and a control group taught conventionally. The participants in the study are the 91 eleventh grade students from high schools. A task based program developed by the researcher, pre–test and post–test of speaking skills, an attitudinal questionnaire were used as instruments for data collection. ANCOVA & MANCOVA were used to analyze the data. Findings 1. The TBLT program enhanced significantly the Speaking Skill of the Students of the experimental group and positively affected their attitudes towards English. 2. This Program improved the girls' speaking skills more than the boys' in the experimental group. Study:

12. Fung LanYong(2010) Studies on A Study on the Assertiveness and Academic Procrastination of English and Communication Students at a Private University.

Objective To examine the assertiveness and academic procrastination of English and Communication students at a private university in Sarawak, Malaysia. Method: Subjects who were administered Rathus Assertiveness Schedule (Rathus, 1972, 1973) comprised 53.8% business students and 46.2% engineering students. About 57.9% were male students and 42.1% were female students. Their mean age was 18.5 years. Subjects who were administered the Procrastination Assessment Scale–Student (Solomon &Rothblum, 1984) comprised 44.4% business students and 55.6% engineering students. About 60.8% were male students and another 39.2% were female students. Their mean age was 18.5 years. Responses on both instruments were coded using Microsoft Excel spreadsheets. Data were analyzed using SPSS, Version 17.0 Findings 1. Business and engineering students who had taken English and Communication Skills significantly differed on assertiveness. Engineering students had higher mean scores than their business peers. 2. Male and female students who had taken English and Communication Skills differed significantly on assertiveness items. 3. Significant age differences in assertiveness were found among English and Communication students. Older students had higher scores on positive assertiveness than their younger counterparts.

Objectives of the study

The Prime objective of research are:

1.**Learner centred–**This study approach learner centred. Focus on providing constructive and practical based learning as well as to increase rational thinking.

2. **Innovation -**The need of education programme to be innovative. At its basic level the innovation process focuses on "doing new things and doing existing things better."

3. **Promoting of e-learning-** on line machine learning is faster, constructive, creative and web based training (WBT) to provide internet–functionality enabled new scheme of communication.

4. **Collaborative–**To digital educational collaboration to get knowledge from many sources.

5. **Research–based–**Developing scientific, systematic process of learning.

3. RESEARCH METHODOLOGY

This paper is based on critical analysis of views and articles related to the filed researchers, educationist and academicians. The written articles and personal understanding with interactive relation of thoughts, philosophy, and bibliographical rationality of the researcher are presented.

4. NEW INSIGHT AND NEW RESOURCES

In education field–it applies the new resources of digital technologies, which have the potential to radically transform learning. It also affect learning ownership because when learner feel ownership of their learning, they are able to apply their own insights about–how they learn best.

5. RECENT MULTIMEDIA BASED LEARNING

Multimedia, is the combination of various digital media types such as text, images, audio and video, in to an integrated multi–sensory interactive application or presentation to convey information to an audience. Traditional educational approaches have resulted in a mismatch between what is taught to the students and what the industry needs. As such, many instructions are moving towards problem based learning as a solution to producing graduates who are creative, think critically and analytically, to solve problems. In this paper we focus on using multimedia technology as an innovative teaching and learning strategy in a problem–based learning environment by giving the students a multimedia project to train them in this skill set.

6. MULTIMEDIA BASED LEARNING ENVIRONMENT AND ITS STRENGTH AND WEAKNESS

- Teachers often continuously talk for an hour without knowing students response and feedback.

- The material presented is only based on lecture notes text books.

- Teaching and learning are concentrated on " play and plug " method rather than practical aspect.

- The handwriting of the lecturer decides the fate of the students.

- There is an in sufficient interaction with students in classroom.

- More emphasis has been given on theory without any practical and real life time situations.

- Learning from memorisation but not understanding.

- Marks rather than result oriented.

- creates clear understanding.

- Power Point can be used widely.

- Innovative thinking improves.

7. STRENGTHS

- Makes a particular concept clear.

- Students develop interests to know exactly the concept.

- Creates long lasting memory/ correlation of a concept.

8. WEAKNESSES

Take quiet long time for a teacher to introduce a concept.

Initial difficulty in understanding a particular concept will be encountered.

9. CONCLUSION

Ultimately the teaching people are satisfied when he could reach the students community with his ideas and views, so teaching depends up on successful mode of communication and innovation though we mean the changes that we propose to be included in our medium of communication or even inclusion of some other elements in communicating information. Education is an engine for the growth and progress of any society. It not only imparts knowledge, skills and inculcates values but is also responsible for building human capital which breeds, drives, and sets technological innovation and economic growth, in today's era information and knowledge standout as very important and critical input for growth and survival. Rather than looking at education simply as a mean of achieving social upliftment, the society must view education also as an engine of advancement in a information era propelled by its wheels of knowledge and research leading to development. ICT and Multimedia based learning environment can fulfil our requirement and strength our knowledge based society.

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