Impact of Computer Aided Learning to Increase the Performance of the Students in Selected Arts, Science and Commerce Colleges

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ABSTRACT

This study aims to measure the impact of computer aided learning to increase the performance of the students and to evaluate the teaching and learning process by using computer aided learning. Improvement in technological innovation takes place for enablement of teaching and learning process. Rather than the tradition teaching through chalk and board, visual aids makes more compatibility for learning. Hence this present study has made an earnest attempt to measure the impact of computer aided learning for improving the performance of the students. This study is the nature of descriptive research design. This study measures the description of variables related to learning and performance of students. Both primary and secondary data were used in this study. Primary data collected through well-structured questionnaire and secondary data were collected through websites, journals and magazines. 400 samples were collected for this study. Sample size determined based on the sample standard deviation of the population through trail survey. Convenient sampling technique were adopted due to the resource constrains. Major findings of this study focussing on, majority of the respondents (80%) feels that computer aided learning increase the performance of science students. Majority of the respondents (63%) of the respondents computer aided learning provides practical exposure related to the subject matter in science related subjects. Chi-square test reveals that age has significant relationship on computer aided learning, education has significant impact on science subjects and commerce subjects, gender has significant impact on usability of computer aided learning, residential area has significant relationship between usability of computer aided learning. Major recommendations of this study focussing on, marketer requires to simplify the terms used in science subjects. Present study is useful to measure the feasibility of computer aided learning in future also.

Keywords: Computer Aided Learning, Practical Knowledge, Animations.

INTRODUCTION:

Computer Aided Learning (CAL) encompasses a extensive range of computer technologies that add-on the classroom learning atmosphere and can dramatically rise student's access to the materials.

CAL platforms, which can comprise directed workouts, practice exercises, and connects between students and teachers, can adapt to the capabilities and inclinations of individual students and increase the amount of tailored instruction that student obtains. Students also get assistance from the direct feedback provided by computers and most of them escalate the self-paced learning atmosphere. At its best, CAL engages student attention, inspires them to learn, and rises their personal accountability for learning. Criticism of CAL usually focuses on two concerns. First, it is contended that ample of the obtainable software lacks an adequate basis in educational theory. Second, it is contended that the software is difficult to gadget and use. Most CAL studies emphasis either on educational efficacy for a particular subject or the student's familiarity in using the software. Extant

studies do not show a clear configuration of support for either of those issues.

This paper gossips on two distinct uses of CAL at Arts, Science and Commerce colleges: in moralities of financial accounting course, Basics of physics, Chemistry, Botany and Zoology, Historical events and in principles of microeconomics course. Even though both coaches used CAL to complement the student's in-class practises, each used different computer platforms and different practices. This paper designates the educational procedure of CAL in these two diverse courses and the enactment and use results practiced by the coaches. Also, in addition to educational efficacy and the student's practice, this study gossips on the impact that exhausting CAL has on student evaluations of together the course and the tutor.

COMPUTER AIDED LEARNING:

Computer Aided Learning has a ironic history and established parallel with the development of electronic computers (Daniel, 1999). CAL initiated in the mid-1950s as teamwork between Stanford University and IBM but grew gradually until the advent of personal computers in the 1980s India that do not have computers obtainable for student use, and don't use about form of CAL preceding those computers.

Although educational efficacy and enactment issues have been mutual, CAL has continued popular amongst educators who conserve a belief that it is a convenient addition to classroom actions. A number of revisions have testified that it can be effective in raising exam notches, improving student insolences, and dipping the time desirable to master course ingredients (Canham and Dickie, 1986; Collis, Obserg, and Sherra, 1988-89; Nipp and Straub, 1986). It similarly has been revealed that students like the approach of demonstration (Anderson-Harper, Mason, and Popovich, 1988; Brown, 1995), that it is watched as a positive practice (Deardoff, 1986), and that it is appropriate for individual learning requirements (Dobson, 1995).

Nevertheless, Kulik and Kulik (1989) decided that well-designed investigation is needed earlier to any real deductions about the efficiency of CAL can be drawn. Bork (1991) suggests that ample of what is available is of little use. Cherry (1991) found that there was no important difference between CAL and lectures as an operative teaching technique and Garrett (1995) described mixed fallouts when associating CAL and lectures. Thus, whereas educational efficacy may happen for specific requests, it is problematic to settle that such efficacy is common crosswise a large range of chastisements.

Criticism about software design and implementation is well expressed by Walbert (1989), who specified that the mainstream of CAL needs are naïve and mundane. Blecha (1991) list common design glitches with CAL software: boring keystrokes, gratuitously repetitive operations, software that is difficult to use, and minimal pedagogical value of programs that hide the inner workings of models. Harrington (1989) concludes that CAL programs lack any advantages over printed materials and do not take advantage of the feedback possible of computers.

To address numerous of the shortcomings – perceived and real – of CAL, Walbert (1989) offers precise suggestions for ornamental CAL:

1) Comprise menu-driven open-model replications, database worksheets, then electronic sketchpad.
2) Involve the student in Socratic discourses with collaborating questions and answers prominent to the learning impartial.
3) Consent freedom of steering so that the student can reoccurrence to previous explanations or skip a difficult problem.
4) Deliver an electronic sketchpad by the mouse to fact to, draw, and adjust graphs in response to queries.
5) Give instantaneous feedback to correct and improper answers.
6) Comprise a help ability to answer student queries or provide orientation to the text.
7) Permit students to change the strictures in the spreadsheets.
8) Vary level of difficulties so that some involve only remembrance of facts and influences from the text, others need the student towards analyze a problem, and still others necessitate the student to synthesize the methods.
9) Comprise high-quality graphics, animation, and then sound.
10) Deliver spreadsheets with graphical competences.
11) Deliver a manual or on-line help.

Daniel (1999) delivers a similar, but to a certain degree of different criteria for CAL:
1) The software would be as easy to practice as a chalkboard or notepad but provide extra capability with mathematical accuracy, animations, handling, and rapid scheming.

2) The software would span the learning stages from preliminary exposure to awareness to idea to sympathetic and request. Theoretical modelling, empirical approximation, and policy investigation should be combined to minimize student exertion required to smear the theory.

3) The software would present a array of integrated approaches: verbal explanations, textual exhibition, mathematical equations, graphical modelling, animations, and workouts. It should be able to lodge different learning panaches.

4) The instructional tools would be elastic and adaptable enough to spread to new problems and themes in economics as they ascend.

5) The courseware would be adaptable to dissimilar levels of instruction: philosophies, intermediate, and forward-looking.

6) The courseware would not just supplement a textbook nevertheless would be part of an combined courseware system with presentation resources, textbook, study guide, workbook, and testing ingredients that make practice of the same set of collaborating computer tools.

Presently available CAL programs seem to address numerous of the past disapprovals and appear to integrate many of the suggestions completed by both Walbert and Daniel. The plug-ins reported proceedings in this study are shown to be pedagogically actual within the two separate disciplines and have been successfully implemented and combined into the student's in-class experience.

STATEMENT OF THE PROBLEM:

Rather than the tradition teaching through chalk and board, visual aids makes more compatibility for learning. Advancement in technologies aims to reduce the complexities in subject problems and CAL is self-explanatory. Hence this present study has made an earnest attempt to measure the impact of computer aided learning for improving the performance of the students.

OBJECTIVES OF THE STUDY:

The following objectives framed by the researcher based on the nature of the problem:
➢ To measure the impact of computer aided learning to increase the performance of the students.
➢ To evaluate the teaching and learning process by using computer aided learning. Improvement in technological innovation
➢ To offer valuable suggestion based on findings

RESEARCH DESIGN:

This study is the nature of descriptive research design. This study measures the description of variables related to learning and performance of students. It is a fact finding research and it does not allow the researcher to control over the variables.

Methods of data collection:
Both primary and secondary data were used in this study. Primary data collected through well-structured questionnaire and secondary data were collected through websites, journals and magazines.

Sample size determination:
400 samples were collected for this study from the final year final semester students of Arts, Science and Commerce college students. Sample size determined based on the sample standard deviation of the population through trail survey.

Sampling technique:
Convenient sampling technique were adopted due to the resource constrains. Researcher approaches nearby colleges to gather information for this research study.

Tools used in this study:
Researcher applied proper statistical techniques to find the characteristics of research. Based on this researcher used percentage analysis, mean score and chi-square test were applied.

DATA ANALYSIS AND DISCUSSION:

The data on student assessments included student replies to a survey administered in class at the conclusion of the semester.

5.1: Table showing the opinion of students related to the importance of CAL

S.No	Statements	Arts		Science		Commerce	
		Mean	Rank	Mean	Rank	Mean	Rank
1.	The contents of the assignments contribute to my understanding of the subject.	3.26	8	4.76	7	4.12	6
2.	The instructor has adequate means for evaluating my learning.	2.96	9	4.90	4	3.88	8
3.	The methods being used for evaluating my work are reasonable.	4.12	2	4.62	8	3.18	10
4.	The course appears to have been carefully planned.	3.76	6	4.80	6	4.70	1
5.	Compared with other courses on this level carrying an equal amount of credit, the effort I put into this course is as ample as in other courses	4.00	3	3.86	10	4.64	2
6.	The instructor provides useful feedback on student progress.	3.90	5	4.96	1	4.24	4
7.	In this course, I am learning ample.	3.98	4	4.42	9	4.62	3
8.	The out of class assignments are challenging.	2.68	10	4.94	2	3.64	9
9.	Overall, I rate this CAL a good teacher.	3.64	7	4.86	5	4.22	5
10.	Examinations cover material or skills emphasized in the course.	4.64	1	4.92	3	4.06	7
	Average Score/ Rank	3.694	3	4.704	1	4.13	2

Highest mean score observed among the science college students with regards to "the contents of the assignments contribute to my understanding of the subject" by 4.76, followed by the students of Commerce college by 4.12 and 3.26 by Arts college students. Highest mean score observed among the science college students with regards to "the instructor has adequate means for evaluating my learning" by 4.90, followed by the students of Commerce college by 3.88 and 2.96 by Arts college students. Highest mean score observed among the science college students with regards to "the methods being used for evaluating my work are reasonable" by 4.62, followed by 4.12 by Arts college students and the students of Commerce college by 3.18. Highest mean score observed among the science college students with regards to "the course appears to have been carefully planned" by 4.80, followed by the students of Commerce college by 4.70 and 3.76 by Arts college students. Highest mean score observed among the Commerce college students with regards to "compared with other courses on this level carrying an equal amount of credit, the effort I put into this course is as ample as in other courses" by 4.64, followed by the students of Arts college by 4.00 and 3.86 by science college students. Highest mean score observed among the science college students with regards to "the instructor provides useful feedback on student progress" by 4.96, followed by the students of Commerce college by 4.24 and 3.90 by Arts college students. Highest mean score observed among the Commerce college students with regards to "in this course, I am learning ample" by 4.62, followed by the students of science college by 4.42 and 3.98 by Arts college students. Highest mean score observed among the science college students with regards to "the out of class assignments are challenging" by 4.94, followed by the students of Commerce college by 3.64 and 2.68 by Arts college students. Highest mean score observed among the science college students with regards to "overall, I rate this CAL a good teacher" by 4.86, followed by the students of Commerce college by 4.22 and 3.64 by Arts college students. Highest mean score observed among the science college students with regards to "examinations cover material or skills emphasized in the course" by 4.92, followed by the students of Arts college by 4.64 and 4.06 by Commerce college students.

Overall performance of Computer Aided Learning has impact on the improvement of students' performance. Students belongs to the science college , strongly agree that CAL increase their performance, followed by Commerce students and Arts college students.

FINDINGS OF THE STUDY:

➢ Highest mean score observed among the science college students with regards to "the contents of the assignments contribute to my understanding of the subject" by 4.76.
➢ Highest mean score observed among the science college students with regards to "the instructor has adequate means for evaluating my learning" by 4.90.

➢ Highest mean score observed among the science college students with regards to "the methods being used for evaluating my work are reasonable" by 4.62.
➢ Highest mean score observed among the science college students with regards to "the course appears to have been carefully planned" by 4.80.
➢ Highest mean score observed among the Commerce college students with regards to "compared with other courses on this level carrying an equal amount of credit, the effort I put into this course is as ample as in other courses" by 4.64.
➢ Highest mean score observed among the science college students with regards to "the instructor provides useful feedback on student progress" by 4.96.
➢ Highest mean score observed among the Commerce college students with regards to "in this course, I am learning ample" by 4.62.
➢ Highest mean score observed among the science college students with regards to "the out of class assignments are challenging" by 4.94.
➢ Highest mean score observed among the science college students with regards to "overall, I rate this CAL a good teacher" by 4.86.
➢ Highest mean score observed among the science college students with regards to "examinations cover material or skills emphasized in the course" by 4.92.
➢ Overall performance of Computer Aided Learning has impact on the improvement of students' performance. Students belongs to the science college , strongly agree that CAL increase their performance, followed by Commerce students and Arts college students.
➢ Majority of the respondents (80%) feels that computer aided learning increase the performance of science students.
➢ Majority of the respondents (63%) of the respondents computer aided learning provides practical exposure related to the subject matter in science related subjects.
➢ Chi-square test reveals that age has significant relationship on computer aided learning, education has significant impact on science subjects and commerce subjects,
➢ Gender has significant impact on usability of computer aided learning, residential area has significant relationship between usability of computer aided learning.

RECOMMENDATIONS:

➢ Programmes must designed to meet out he needs of arts college students
➢ Instructor should have proper knowledge while explain the concepts using Computer Aides
➢ Reasonable evaluation methods must be used by the instructors to evaluate the work of students belongs to the commerce college.
➢ Programmers must prepare well plan and execute the same to attract students
➢ Highest mean score observed among the science college students with regards to "the out of class assignments are challenging" by 4.94, followed by the students of Commerce college by 3.64 and 2.68 by Arts college students.
➢ Class assignment must give reasonably focusing on syllabus

CONCLUSION:

Major findings of this study focussing on, majority of the respondents (80%) feels that computer aided learning increase the performance of science students. Majority of the respondents (63%) of the respondents computer aided learning provides practical exposure related to the subject matter in science related subjects. Chi-square test reveals that age has significant relationship on computer aided learning, education has significant impact on science subjects and commerce subjects, gender has significant impact on usability of computer aided learning, residential area has significant relationship between usability of computer aided learning. Major recommendations of this study focussing on, marketer requires to simplify the terms used in science subjects. Present study is useful to measure the feasibility of computer aided learning in future also.

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