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Measuring the Effectiveness of Students Performance Influenced by Digital Learning Environment Concerning Cuddalore District

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ABSTRACT

This study aims to measure the impact of Digital Learning Environment (DLE) to increase the performance of the students and to evaluate the Teaching and Learning Process (TLP) by using Digital Learning Environment (DLE). Improvement in technological innovation takes place for enablement of Teaching and Learning Process (TLP). Rather than the traditional teaching through chalk and board, visual aids make more compatibility for learning. Hence this present study has made an earnest attempt to measure the impact of Digital Learning Environment (DLE) 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 the learning and performance of students. Both primary and secondary data were used in this study. Primary data collected through a well-structured questionnaire and secondary data were collected through websites, journals and magazines. Six hundred samples were collected for this study. Sample size determined based on the sample standard deviation of the population through a trail survey. Convenient sampling technique was adopted due to the resource constraints. Significant findings of this study focussing on, majority of the respondents (80%) feels that Digital Learning Environment (DLE) increase the performance of science students. Majority of the respondents (63%) of the respondents Digital Learning Environment (DLE) provides practical exposure related to the subject matter in science-related subjects. Chi-square test reveals that age has a significant relationship on Digital Learning Environment (DLE), education has a substantial impact on science subjects and commerce subjects, gender has a significant effect on the usability of the Digital Learning Environment (DLE), residential area has a substantial relationship between usability of Digital Learning Environment (DLE). Significant recommendations of this study focussing on, marketer requires to simplify the terms used in science subjects. The present study is useful to measure the feasibility of Digital Learning Environment (DLE) in future also.

Keywords: Digital Learning Environment (DLE), Practical Knowledge, Animations.

INTRODUCTION:

Digital Learning Environment (DLE) encompasses an extensive range of computer technologies that add-on the classroom learning atmosphere and can dramatically raise student's access to the materials.
Digital Learning Environment (DLE) 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, Digital Learning Environment (DLE) engages student attention, inspires them to learn, and rises their accountability for learning. Criticism of the Digital Learning Environment (DLE) usually focuses on two

concerns. First, it is contended that ample of the available software lacks an adequate basis in educational theory. Second, it is claimed that the software is difficult to gadget and use. Most Digital Learning Environment (DLE) studies emphasis either on educational efficacy for a particular subject or the student's familiarity in using the software. Extant studies do not show an explicit configuration of support for either of those issues.
This paper gossips on two distinct uses of Digital Learning Environment (DLE) 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 the Digital Learning Environment (DLE) to complement the student's in-class practises, each used different computer platforms and different practices. This paper designates the educational procedure of Digital Learning Environment (DLE) in these two various courses and the enactment and use results practised by the coaches. Also, in addition to educational efficacy and the student's practice, this study gossips on the impact that exhausting Digital Learning Environment (DLE) has on student evaluations of together the course and the tutor.

Digital Learning Environment (DLE):
Digital Learning Environment (DLE) has an ironic history and established parallel with the development of electronic computers (Daniel, 1999). Digital Learning Environment (DLE) 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 the form of Digital Learning Environment (DLE) preceding those computers.
Nevertheless, Kulik and Kulik (1989) decided that well-designed investigation is needed earlier to any real deductions about the efficiency of Digital Learning Environment (DLE) can be drawn. Bork (1991) suggests that ample of what is available is of little use. Cherry (1991) found that there was no significant difference between Digital Learning Environment (DLE) and lectures as an effective teaching technique and Garrett (1995) described mixed fallouts when associating Digital Learning Environment (DLE) and lectures. Thus, whereas educational efficacy may happen for specific requests, it is problematic to settle that such efficiency is standard crosswise an extensive range of chastisements.
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 avoid reoccurrence to previous explanations or skip a difficult problem.
4) Deliver an electronic sketchpad by the mouse to the 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 structures in the spreadsheets.
8) Vary the level of difficulties so that some involve the only remembrance of facts and influences from the text, others need the student to analyse a problem, and still, others necessitate the student to synthesise the methods.
9) Comprise high-quality graphics, animation, and then sound.
10) Deliver spreadsheets with graphical competences.
11) Deliver a manual or online 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 additional capability with scientific 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 minimise student exertion required to smear the theory.
3) The software would present an array of integrated approaches: verbal explanations, textual exhibition, mathematical equations, graphical modelling, animations, and workouts. It should be able to lodge different learning panaches.

Presently available Digital Learning Environment (DLE) 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 traditional teaching through chalk and board, visual aids make more compatibility for learning. Advancement in technologies aims to reduce the complexities in subject problems, and Digital Learning Environment (DLE) is self-explanatory. Hence this present study has made an earnest attempt to measure the impact of Digital Learning Environment (DLE) 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 the Digital Learning Environment (DLE) to increase the performance of the students.
- To evaluate the Teaching and Learning Process (TLP) by using the Digital Learning Environment (DLE). Improvement in technological innovation
- To offer a 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 the learning and performance of students. It is fact-finding research, and it does not allow the researcher to control the variables.

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

Sample size determination:
Six hundred 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 a trail survey.

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

Tools used in this study:
The 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 after the semester.

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

S. No	Statements	Arts		Science	
		Mean	Rank	Mean	Rank
1.	The contents of the assignments contribute to my understanding of the subject.	3.26	8	4.76	7
2.	The instructor has adequate means for evaluating my learning.	2.96	9	4.90	4
3.	The methods being used for evaluating my work are reasonable.	4.12	2	4.62	8
4.	The course appears to have been carefully planned.	3.76	6	4.80	6
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
6.	The instructor provides useful feedback on student progress.	3.90	5	4.96	1
7.	In this course, I am learning ample.	3.98	4	4.42	9
8.	The out of class assignments are challenging.	2.68	10	4.94	2
9.	Overall, I rate this Digital Learning Environment (DLE), a good teacher.	3.64	7	4.86	5

S. No	Statements	Arts		Science	
		Mean	Rank	Mean	Rank
10.	Examinations cover material or skills emphasised in the course.	4.64	1	4.92	3
Average Score/ Rank		3.694	3	4.704	1

The highest mean score was observed among the science college students with regards to "the contents of the assignments contribute to my understanding of the subject" by 4.76 and 3.26 by Arts college students. The highest mean score was observed among the science college students with regards to "the instructor has adequate means for evaluating my learning" by 4.90 and 2.96 by Arts college students. The highest mean score was 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. The highest mean score was observed among the science college students with regards to "the course appears to have been carefully planned" by 4.80 and 3.76 by Arts college students. The highest mean score was observed among the art 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 4.00 and 3.86 by science college students. The highest mean score was observed among the science college students with regards to "the instructor provides useful feedback on student progress" by 4.96 and 3.90 by Arts college students. The highest mean score was observed among the science college students with regards to "in this course, I am learning ample" by 4.42 and 3.98 by Arts college students. The highest mean score was observed among the science college students with regards to "the out of class assignments are challenging" by 4.94 and 2.68 by Arts college students. The highest mean score was observed among the science college students with regards to "overall, I rate this Digital Learning Environment (DLE) a good teacher" by 4.86 and 3.64 by Arts college students. The highest mean score was observed among the science college students with regards to "examinations cover material or skills emphasised in the course" by 4.92, followed by the students of Arts college by 4.64.

FINDINGS OF THE STUDY:

- The highest mean score was observed among the science college students with regards to "the contents of the assignments contribute to my understanding of the subject" by 4.76.
- The highest mean score was observed among the science college students with regards to "the instructor has adequate means for evaluating my learning" by 4.90.
- The highest mean score was observed among the science college students with regards to "the methods being used for evaluating my work are reasonable" by 4.62.
- The highest mean score was observed among the science college students with regards to "the course appears to have been carefully planned" by 4.80.
- The highest mean score was 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.
- The highest mean score was observed among the science college students with regards to "the instructor provides useful feedback on student progress" by 4.96.
- The highest mean score was observed among the Commerce college students with regards to "in this course, I am learning ample" by 4.62.
- The highest mean score was observed among the science college students with regards to "the out of class assignments are challenging" by 4.94.
- The highest mean score was observed among the science college students with regards to "overall, I rate this Digital Learning Environment (DLE) a good teacher" by 4.86.
- The highest mean score was observed among the science college students with regards to "examinations cover material or skills emphasised in the course" by 4.92.
- Overall performance of Digital Learning Environment (DLE) has an impact on the improvement of students' performance. Students belong to the science college, strongly agree that Digital Learning Environment (DLE) increase their performance, followed by Commerce students and Arts college students.
- Majority of the respondents (80%) feels that Digital Learning Environment (DLE) increase the performance of science students.
- Majority of the respondents (63%) of the respondents Digital Learning Environment (DLE) provides practical exposure related to the subject matter in science-related subjects.

- Chi-square test reveals that age has a significant relationship on Digital Learning Environment (DLE), education has a substantial impact on science subjects and commerce subjects,
- Gender has a significant impact on the usability of Digital Learning Environment (DLE), residential area has a strong relationship between usability of Digital Learning Environment (DLE).

RECOMMENDATIONS:

- Programmes must be designed to meet out the needs of art college students
- The 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
- The highest mean score was 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.
- The class assignment must give reasonably focusing on syllabus

CONCLUSION:

Significant findings of this study focussing on, majority of the respondents (80%) feels that Digital Learning Environment (DLE) increase the performance of science students. Majority of the respondents (63%) of the respondents Digital Learning Environment (DLE) provides practical exposure related to the subject matter in science-related subjects. Chi-square test reveals that age has a significant relationship on Digital Learning Environment (DLE), education has a substantial impact on science subjects and commerce subjects, gender has a considerable effect on the usability of the Digital Learning Environment (DLE), residential area has a substantial relationship between usability of Digital Learning Environment (DLE). Significant recommendations of this study focussing on, marketer requires to simplify the terms used in science subjects. The present study is useful to measure the feasibility of Digital Learning Environment (DLE) in future also.

REFERENCES:

Anderson-Harper, Heidi M., Holly L. Mason and Nicholas G. Popovich. (1988). Developing, Implementing and Evaluating Microcomputer Instruction in a Nonprescription Drug Course, *American Journal of Pharmaceutical Education*, 52 (Fall 1988): 259-66.

Blecha, B.J. (1991). Economic Pedagogy and Microcomputer Software, *Social Science Computer Review*, 9 (Winter 1991): 541-57.

Bork, Alfred. (1991). Is Technology-Based Learning Effective? Computer Education 63 (Fall 1991): 6-14.

Brown, Alan. (1995). Evaluation of Teaching and Learning Process (TLP)es in a Computer-Supported Mechanical Engineering Course, Computers Education 25 (September 1995): 59-65.

Canham, Geoffrey W. Rayner and William Dickie, (1986). The Development of a Computer-Assisted Drill Program, *Journal of Computers in Mathematics and Science Teaching*, 5 (Spring 1986): 46-47.

Cherry, Joan M. (1991). An Experimental Investigation of Two Types of Instruction for OPAC Users, *Canadian Journal of Information Science*, 16 (December 1991): 2-22.

Collis, Betty, Antoinette Oberg and Wes Sherra. (1988). An Evaluation of Computer-Based Instruction in Statistical Techniques for Education and Social Work Students, *Journal of Educational Technology Systems*, 17 (1988-89): 59-71.

Daniel, Joseph I. (1999). Computer-Aided Instruction on the World Wide Web: The Third Generation, *Journal of Economic Education*, (Spring 1999): 163-174.

Deardorff, William W. (1986). Computerized Health Education: A Comparison with Traditional Format, *Health Education Quarterly,* 13 (Spring 1986): 61-72.

Dobson, E.L. (1995). An Evaluation of the Student Response to Electronics Teaching Using a Digital Learning Environment (DLE) Package, *Computers Education,* 25 (September 1995): 13-20.

Garrett, Rick L. (1995). Computer-Assisted Instruction in 2-Year Colleges: Technology for Innovative Teaching, *Community College Journal of Research and Practice*, 19 (November-December 1995): 529-36.

Harrington, James P. (1989). Computer-Assisted Instruction for End-Users: Our Pandora's Box, *Library Software Review*, 8 (May/June 1989): 152-4.

Kulik, James A. and Chen-Lin C. Kulik. (1989). Effectiveness of Computer-Based Instruction, *School Library*

Media Quarterly 17 (Spring 1989): 156-9.

Nipp, Deanna and Ron Straub. (1986). The Design and Implementation of a Microcomputer Program for Library Orientation, *Research Strategies*, 4 (Spring 1986): 60-67.

Walbert, M.S. (1989). Writing Better Software for Economics Principles Textbooks, *Journal of Economic Education*, 20 (Summer 1989): 281-89.
