



RESEARCH ARTICLE

USES OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN CHHATTISGARH'S
HIGHER EDUCATION INSTITUTIONS

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ABSTRACT

The purpose of the present paper is to study the relationship between the use of information and communication technologies (ICT) and student performance in higher education. So far, economic research has failed to provide a clear harmony on the effect of ICT investments on student's achievement. The second hypothesis advocates that ICT uses need a change in the organisation of higher education. While ICT equipment and use rates are growing very fast in the Chhattisgarh, the adoption of complementary organisational designs is very slow and differs from one institution to another. This may explain the observed differences in students' achievement.

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INTRODUCTION

During the last two decades higher education institutions have invested a lot in information and communication technologies (ICT). ICT has had a major blow in the university context, in administration and in teaching and learning methods. One baffling question is the well-organized impact of these technologies on student achievement and on the returns of education. Many academic researchers have tried to answer this question at the theoretical and empirical levels. They have faced two main difficulties. On one hand, student performance is hard to observe and there is still confusion about its definition. On the other hand, ICT is evolving technologies and their effects are difficult to isolate from their environment. There is no standard definition for student performance. The standard approach focuses on achievement and curricula, how students understand the courses and obtain their degrees or their marks. However, a more extensive definition deals with competencies, skills and attitudes learned through the education experience. The narrow definition allows the observation of the outcomes of any change in higher education, while the more extensive definition needs a more complex strategy of observation and a focus on the labour market. The outcomes of education are mainly validated in the labour market.

The relationship between the use of ICT and student performance in higher education is not clear, and there are contradictory results in the literature. Earlier economic research has failed to provide a clear consensus concerning the effect on students' achievement. Starting from this point, the aims of this paper are two-fold: first, we summarise the main findings of this extensive literature and second, we give two complementary explanations on the contradictory results. Our first explanation is that most of the literature has focused on direct effects of ICT while it is more appropriate to look at the indirect effects through the traditional channels. Since student performance is mainly explained by a student's characteristics, educational environment and teachers' characteristics, ICT may have an impact on these determinants and consequently the outcome of education. The differences observed in the performances of students are thus more related to the differentiated impact of ICT on the standard determinants. The second explanatory hypothesis is that ICT needs a shift in organisation. While ICT equipment and use rates are growing very fast in the chhattisgarh, the adoption of complementary organisational designs is very slow and differs from one institution to another. This may explain the observed differences in students' achievement. Our paper is structured as follows: section one surveys the literature on students' performance and the use of ICT, section two explains the impacts of ICT on the traditional determinants of students' performance and finally, section three underlines the role of organisational change in education on students' performance.

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Table 1. Comparison of Student Evaluation of Learning Effectiveness

Learning Objectives	Online		Classroom	
	Effectiveness Mean	Importance Mean	Effectiveness Mean	Importance Mean
Improving my intellectual level	3.47	3.67	3.20	3.78
Improving my analytical skill	3.60	3.47	3.30	3.78
Improving my critical thinking skill	3.67	3.53	3.30	4.11
Improving my writing skill	3.20	3.27	2.60	3.58
Improving my awareness of ethical issues	3.47	3.07	3.03	4.11
The learning experience was successful	87%		100%	

Literature Review

Regardless of the quantity of technology placed in classrooms, the key to how those tools are used is the instructor. The majority of instructors believe technology usage is important for teaching, however, lack confidence and understanding during integration process. Furthermore, instructors should possess the skills and competencies essential for designing, delivering and evaluating instruction, since "Successful integration of technology requires not only the knowledge of the technology and its potential use but also the skill to plan and execute a good lesson (of which the technology is only a part)" (Painter, 2001). When technology usage is aligned with the instructional goal, where technology is integral to teaching, successful integration might be succeeded. Otherwise, the use of technology alone is not a sufficient indicator of integration. Therefore, "teacher educators need to place instructional technology education within the context of teachers' work in the classroom" (Mayo, Kajs & Tanguma, 2005). Wang, Ertmer & Newby (2004) concluded about this topic "...as our future teachers achieve high confidence levels for technology implementation, meaningful technology use can come closer to being the norm, rather than the exception.". Deaney, Ruthven & Hennessy (2003) also considered three major points for using ICT: the need for wider skills for effective use of tools, the need to focus on the power of technology and the need to shift familiar patterns of classroom interaction by introducing technology. Given the importance of access to technology, technology-competency and effective integration of technology, an understanding of how instructors and pre-service teachers in a faculty of education perceive technology can help institutions of higher education to successfully integrate, in relation with the current ICT usage. Understanding the factors contributing to the utilization of technology and the possible relations of these factors will lead us to educate technology-competent teachers. Under the light of these facts, the main purpose of this study was to examine factors that contribute to teachers' utilization of technology and suggest recommendations regarding to the effective utilization of technology.

Objectives of the study

- There are current provision of technology utilized by both government colleges and private colleges.
- Teachers and students faced obstacles during teaching learning process.

Hypothesis of the study

- There will be no significant difference between technology utilized by both government colleges and private colleges.

- There are obstacles faced by both teachers and students during teaching learning process.

MATERIALS AND METHODS

Stratified Random technique was used .Total 300 u,g students were taken from 5 govt.collg.and 5 private college.

Tools

A self made questionnaire on ICT usage by Vijaylaxmi Singh and Smita saxsena was used to find out the objectives of the study. The survey asked the students to assess the effectiveness of the class in achieving the objectives on a scale of Yes or No.

The result is presented in Table 1

Classroom students tended to evaluate and rank the five teaching objectives as more important than the online students did, but they assessed the effectiveness in achieving the five objectives lower than the online students did. The largest discrepancy occurs in the assessment on the effectiveness of improving writing skills. An explanation for this discrepancy is that online students are required to write more than classroom students, because most communication in the online environment is carried out by writing and then posting that writing. However, all online students considered that the learning experience was successful, whereas only 87% of the classroom students did so. This study conducted on 300 students from 5 govt. colleges and 5 private colleges in durg district and found that ICT facilities are found in both colleges as comparison to govt, colleges private colleges students are more advanced in using ICT in learning.

Conclusion

Furthermore, participation may be less intimidating and the quality and quantity of interaction may be increased in online classes. The findings have several implications for student learning, course development, and curriculum design. Online interaction can be used to enhance learning, especially for students who tend to be reserved in the classroom setting.

Suggestions

- ICT can be helpful in teaching where teachers are less.
- It can also be helpful for girls education in tribal regions where colleges are less.
- Government should provide ICT facilities to the colleges where it is needed.
- There is a need for training for teachers who are less competent in handling computers.

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