Constraints Faced by the Students in Use of Educational Technology for Learning

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RESEARCH ARTICLE

Constraints Faced by the Students in Use of Educational Technology for Learning

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ABSTRACT

The present study was conducted in two state agricultural universities i.e., one from north andone from south part of India. The universities were selected purposively based on the utilization of ET for creating better learning approaches among students.Postgraduate students of these two universities were randomly selected as a respondent from various departments. 60 respondents were selected from one university and 60 from other, thus the sample size of the study being 120. Data was collected through interview schedule and collected data were subjected to appropriate statistical analysis. The study indicated that the majority of the respondents faced lack of managerial skill in utilizing the available budget underfinancial constraints. In adequatenumber of practical classes for using ETunder administrative constraints, lack of training in use of educational technology under technological constraints, lack of knowledge and skill about use of educational technology (ET) toolsunder psychological constraints, and lack of maintenance of available devicesunder physical and material constraints. The study also revealed about suggestions of majority of the respondents viz., better management of available budget, provide more number of practical classes on ET by the department, proper maintenance of available ET devices at institutes, organizing more number of motivation classes regarding use of ET tools.

INTRODUCTION

Integration of the technology in learning process is more effective for the students and their learning outcomes. Hedberg (2006) stated that the educational technologies in university education are widely promoted for their potential to enrich, enhance and extend student learning experiences, they have not yet met with these expectations and yet these technologies continue to have an increasingly integral role in university learning practices. Brown (2006) defined that E-learning is the macro concept that includes online and mobile learning environments. M-learning is also an

important component of educational technology in higher education. Educational Technology plays a crucial role in learning process in the present educational system but integration of the advanced learning technology is sometimes creating problem in using by the students because of lack of awareness, knowledge and skills. Instructional personnel (teachers, instructional designers, etc.), mindful of the real-world needs of learners and constraints faced in the learning context, strive to apply sound learning theories and instructional design approaches to integrate new technologies as they arrive on the scene with increasing rapidity, abundance, and complexity (Brill and Park2008). ET includes medias like audio and video, computer, tablets and mobile devices, social networks, webcams, whiteboards, virtual classroom, learning management system, training management system, and learning objects. The present study deals with the constraints faced by the students and suggestions given by them to overcome constraints regarding use of educational technology in learning. A major significance of this study is the potential to apply findings to university student's education approaches to support future learning in any virtual or physical technologyenriched spaces.

Literature Review

Talebianet et al. (2014) stated that educational tools do not work for everyone or everywhere in the same way. Agricultural students from Iran country were faced many problems regarding ICT tools as an educational purpose due to lack of infrastructure facilities and nature of teaching and learning in agricultural field.

Wankhade et al. (2017) revealed that 100% of the students were faced problems of low power supply, 98.33% of the students expressed that there was no backup system for power supply like invertor or generator instead of power cut. 91.67% of the students faced problem of lack of maintenance of available computers, 83.33% of the respondents faced problem of insufficient computers in the collage. It was also reported that majority of the students faced problem of unavailability of computer facilities, lack of printing facilities, lack of sufficient books for issue and lack of knowledge about ICT in Learning.

Singh and Pal (2018) revealed that majority of the students (40%) expressed problems regarding accessing e-resource due to poor connectivity followed by 36% students had lack of knowledge about how to use computer. 32% students were said that lack of sufficient computers with poor internet facilities inhibit them to use,

and lack of information technology using skills by 30% of the students.

Suggestion also indicated that the increase data (bandwidth) and network with sufficient bit for better access, sufficient amount of computers at institute, providing conducive environment, and better electrical backup for better learning environment.

Objective

- x To identify constraints faced by the students regarding use of educational technology in learning.
- x To record and analyse the suggestions given by the students on the constraints in learning.

METHODOLOGY

The present study was used quasi-experimental research design where data were collected through open ended interview schedule. Students were randomly selected as a respondent from various departments. Sixty respondents from one agricultural university from South India and another 60 from North India.Thus, the sample size of the study was 120.Students were asked to put their comments on constraints faced by them and suitable suggestions for overcoming the constraints regarding use of educational technology in learning. Data was collected through interview schedule and collected data were subjected for content analysis and used appropriate

statistical tools viz., frequency and percentage.

RESULTS

1. Constraints faced by the students in adoption of educational technology in Learning.

Multiple responses were taken to ascertain the constraints faced by the students in adoption of educational technology in learning and analysed by content analysis, frequency and percentage. Data regarding these constraints are presented in table 1. The data revealed regarding financial constraints that the majority of the students (82.5%) faced lack of money for purchase ET tools/devices, followed by lack of management of available money (95.8%). The administrative constraints faced by students are such as lack of practical classes for using ET (96.66%), lack of guidance by teachers to use ET (92.5%) and lack of curriculum management for learning (81.66%).

Table 1 also revealed about technological constraints that the majority of the students faced lack of training regarding use of educational technology (100%), followed by improper maintenance of available devices (92.66%) and lack of technical knowledge to access ET tools (85.83%).

The table 1 also revealed psychological constraints such as lack of knowledge and skill about use of

educational technology (ET) tools (96.66%), lack of awareness about ET tools (81.66%) and lack of motivation for learning with educational technology (85%). The physical constraints faced by the students arelack of maintenance of available devices (93.33%), lack of lab facilities in the department (83.33%), lack of smartboard in the department (80%) and non-availability of computers (74.16%). Similar constraints were indicated by the other researchers (Bhankole and Uludayo, 2012) that the slow internet connections increased the time spent on internet and invariably the cost of usage is increased. That the non-provision of free internet facilities for them in the University unlike their counterparts in some neighbourhood Universities that enjoy their intuitional internet free of charge is a very serious impediment limiting Internet use.

Table 1: Constraints faced by the students in using Educational Technology in learning

Sl. No.	Constraints and Suggestions	Frequency	Percentage
1.	**Financial Constraints**		
a.	Lack of money for purchase ET tools/devices	99	82.50
b.	Lack of management of available money	115	95.83
2.	**Administrative Constraints**		
a.	Lack of curriculum management for learning	98	81.66
b.	Lack of practical classes for using ET	116	96.66
c.	Lack of Guidance by the teachers for using ET	111	92.50
3.	**Technological Constraints**		
a.	Improper maintenance of available devices	110	91.66
b.	Lack of advanced training in use of ET in learning	109	90.83
c.	Lack of technical knowledge to access ET tools	120	100.00
4.	**Psychological Constraints**		
a.	Lack of motivation for learning with educational technology	98	81.66
b.	Lack of awareness about ET tools.	102	85.00
c.	Lack of knowledge and skill about use of ET tools	116	96.66
5.	**Physical/Material Constraints**		
a.	Non-availability of computers.	89	74.16
b.	Lack of smartboard in department	96	80.00
c.	Lack of lab facilities in department	106	88.33
d.	lack of maintenance of available devices	112	93.33

*Multiple responses obtained.

2. Suggestions given by the students to overcome constraints in adoption of educational technology in learning.

Multiple responses were taken to ascertain suggestions to overcome these constraints in adoption of educational technology in learning. The suggestions were analysed by content analysis, frequency and percentage is presented in Table 2.The suggestions provided by the students are to better management of available budget,provide financial support to students for purchase educational technology tools,providemore number of practical classes on ET by the department for students, followed by providing mass media exposure,to overcome finance and administrative constraints.

Students also given suggestion to overcome technological constraints that proper maintenance of available devices in institute, providing technical knowledge and provide training on use of ET for learning purpose. Table 2 concluded that the suggestions given by students to overcome psychological constraints are frequently conduct of motivation classes regarding use of ET tools, providing training on knowledge and skill development regarding ET develop to confidence, and conduct workshop for awareness of ET tools for students.Suggestions given by the students to overcome by physical / material constraints are proper maintenance of available devices, provide smartboard for every department, providing sufficient computer facilities and developing academic atmosphere for adopting ET tools.It would provide the rich environment and motivation for learning which seems to have a profound impact on the process of learning in education by offering new possibilities for learners. These possibilities can have an impact on student performance and achievement. Similarly, wider availability of best practices and best course material in education, which can be shared by means of ICT, can improve academic achievement of students. The overall literature suggests that successful ICT integration in educationis more important (Noor-Ul-Amin, 2013).

Table 2 Suggestions given by the students to overcome constraints in using Educational Technology in Learning.

Sl. No.	Constraints and Suggestions	Frequency	Percentage
1.	**Suggestions on financial constraints**		
a.	Financial support may be provided to purchase ET devices	112	93.33
b.	Should be better management of available money	120	100

2.	**Suggestions on administrative constraints**		
a.	Good mass media exposure may be provided	118	98.33
b.	More number of practical works may be provided for using ET tools	120	100
3.	**Suggestions on technological constraints**		
a.	Proper maintenance of available devices in institute	117	97.5
b.	Technical knowledge may be provided	107	89.16
c.	Provide training on use of ET for learning purpose	99	82.5
4.	**Suggestions on psychological constraints**		
a.	Frequently conduct motivation classes regarding use of ET	120	100
b.	Conduct workshop for awareness of ET tools for students.	114	95
c.	Training may be provided on Knowledge and skill development regarding ET	115	95.83
5.	**Suggestions on physical constraints**		
a.	Sufficient computer facilities may be provided.	97	80.83
b.	Proper maintenance of available devices	118	98.33
c.	Academic atmosphere may be developed and maintained.	79	65.83
d.	Provide smartboard for every department	110	91.66

*Multiple responses obtained.

CONCLUSION

The study indicated that the majority of the respondents faced lack of management of available money in order to address financial constraints, lack of practical classes for using ET under administrative constraint, lack of training regarding use of educational technology, lack of knowledge and skill about use of educational technology (ET) tools, and lack of maintenance of available devices under physical and material constraints respectively.

The suggestions provided by the majority of the respondents were better management of available budget, provide more number of practical classes on ET by the department, proper maintenance of available devices in the institute, frequently conduct of motivation classes regarding use of ET tools and proper maintenance of available devices.

This research will contribute to the body of knowledge in extending the literature on ET. Similarly, it will provoke management to come up with various appropriate strategies on how to manage these challenges faced by students in using ET tools for learning purpose. The limitation of the study is that the findings cannot be generalized to the respondents

which were not part of the study. A comparative study is needed across two universities to validate the findings of this study and get anaggregate view on the adoption of ET tools by students and make specific conclusions.

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