

**OBSTACLES TOWARDS THE USE OF ICT TOOLS IN TEACHING OF
INFORMATION & COMMUNICATION TECHNOLOGY IN SRI LANKAN
UNIVERSITIES:
SPECIAL REFERENCES TO SOUTH EASTERN UNIVERSITY OF SRI
LANKA**

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Abstract:

Information and communication technologies (ICT) have become commonplace entities in all aspects of life. Across the past twenty years the use of ICT has fundamentally changed the practices and procedures of nearly all forms of endeavor within business and governance. Within education, ICT has begun to have a presence but the impact has not been as extensive as in other fields. This paper examines the obstacles toward the use of Information and Communication Technology (ICT) tools in teaching and learning Information and Communication Technology at Sri Lankan Universities specially focus on South Eastern University of Sri Lanka. The finding of a survey identify that the most significant obstacles are: ICT tools are changing too fast to keep current, extra time and effort needed after integrating ICT tools teaching and learning, the management did not provide any incentive for lecturers to integrate ICT tools in their teaching, the network connectivity was poor, the management did not have any evaluation in integration of ICT tools in teaching. Further, the paper provides a summary of the significant obstacles to implementing IT tools in teaching and learning ICT in Sri Lankan Universities and suggests some possible coping strategies to mitigate their effects on ICT tools implementation and this paper adopts analytical appraisal approach hence, reviews the development so far.

Keywords: *ICT tools, higher education, e-learning, Information & Communication Technology, obstacles*

Introduction

Information and communication technologies (ICT) have become commonplace entities in all aspects of life. Across the past twenty years the use of ICT has fundamentally changed the practices and procedures of nearly all forms of endeavor within business and governance. Integration of Information and Communication Technology (ICT) tools in teaching has been at the forefront of the education sector in recent years. ICT is an umbrella term that includes any communication device or application, encompassing: radio, television, cellular phones, computer and network hardware and software, satellite systems and so on. Within education, ICT has begun to have a presence but the impact has not been as extensive as in other fields. This paper examines the obstacles toward the use of Information and Communication Technology (ICT) tools in teaching and learning Information and Communication Technology at Srilankan Universities specially focus on South Eastern University of Sri Lanka. In South Eastern University of Sri Lanka there are

five computer units belongs to five faculties. They are teaching Information Communication Technology to their students Using ICT tools. So this study conducted to encounter what are the obstacles towards the use of ICT Tools in teaching of Information Communication Technology. The finding of a survey identify that the most significant obstacles are: ICT tools are changing too fast to keep current, extra time and effort needed after integrating ICT tools teaching and learning, the management did not provide any incentive for lecturers to integrate ICT tools in their teaching, the network connectivity was poor, the management did not have any evaluation in integration of ICT tools in teaching. Further, the paper provides a summary of the significant obstacles to implementing IT tools in teaching and learning ICT in Sri Lankan Universities and suggests some possible coping strategies to mitigate their effects on ICT tools implementation

Literature review

There is a significant body of research relating to the obstacles to the integration of ICT tools in teaching at higher education as reported in [1,2,3,5]. Such publications are valuable information source for countries which would like to improve and make a success on ICT tools integration in teaching. Lessons learned can serve as useful guidelines for others. There is little literature on barriers of ICT tools integration in developing countries. Among the factors that affect the technology use in these developed countries are summarized as: availability of equipment, sufficient equipment, up-to-date equipment, maintenance of the equipment, infrastructure, staff training and development, technical staff support, vision and incentives, time factor, and other relevant, support.

Studies have shown that lack of equipment, out-of-date equipment, poorly maintained equipment, and poor network infrastructure are the prominent obstacles to the integration of ICT tools in teaching. These studies reflected that is essential to have sufficient, up-to-date and well maintained equipment, as well as good networking infrastructure to support its use in teaching. We consider equipment to include both hardware and software.

Studies also highlighted that insufficient provisions in training, inadequate and inappropriate training are important obstacles to implement to the implementation of ICT tools in teaching [3,5]. The training must coincide with course goals and be seen as an integral course component [4]. The training should focus on how educators can use the technology effectively in teaching, not just directions on how to use the tools[2].

Poor technical support would make negative impact on educator's desire to integrate ICT tools in teaching. At the initial stage of ICT tools integration, support and advise from technical staff are needed for selection and installation of the necessary hardware and software. During the delivery of lesson to students, technical support is urgently needed to troubleshoot and repair any malfunction equipment. For those educators who are interested in developing their own course

content, a multi-skilled team of technical support is necessary for the development phase [3].

In higher education, educators are encouraged to actively involve in research activities and rewarded based on research publications. There are few institutions that have ICT vision, incentives system and recognition for educators who successfully integrated ICT tools in teaching. In common perception among researchers that peers support and positive feedback from students would motivate educator to initiate or continuously use ICT tools in teaching. In addition, management support and involvement is critical to the successful integration of ICT tools in teaching [1,6].

Research statement

Educators need to be able to use ICT tools in the classroom in order to prepare students for 21st century. Sri Lanka is categorized under the intermediate stage for ICT tools integration in teaching by UNESCO Asia and Pacific Regional Bureau for education. Under this category, it is documented that the country have national ICT policies and master plans, and is in the stage of applying and testing various strategies, but have not fully integrated ICT within education system. This raises the question of what were the obstacles to the use of ICT tools in teaching for countries under intermediate stage such as Sri Lanka. The literature review that was carried out could not trace any study that has been done in Sri Lanka to answer this question.

Methodology

To study the use of ICT tools and factors affecting its use in teaching at higher education, the area of the study was South Eastern University of Sri Lanka. Our population was the staff and students of computer unit those are belongs to five faculties of the University. There are more than 2000 students and staffs belongs to the Computer unit. So we decided to collect information through a survey using semi structured questionnaire. Then we selected our sample using 1.20 range. We used the qualitative research techniques and random sampling techniques to select a sample of 100 respondents to identify obstacles towards the use of ICT tools in teaching of Information & Communication Technology. For this purpose research was designed on using the semi structured questionnaire for the purpose of data collection. The data was collected over the period of one month to keenly detect the concern objective under research study. The collected data was then analyzed. The frequency tables and percentiles were used to display the results. A questionnaire consisting of 25 questions was designed. Data collection through a questionnaire survey was chosen because it allows a larger sample, and the collection of larger amount of data in relatively short time.

The objectives of the survey were:

- To gauge the use of ICT tools in teaching Information and Communication Technology.

- To seek information on how ICT tools have boosted in teaching, the obstacles to their use, and the factors that contribute to their successful usage in teaching.

The questionnaire consisted five parts, the first part of the questionnaire gathered the respondent's background. The second part of the questionnaire was dedicated to collect data on use of ICT tools in teaching. The third part of the survey was focused on how ICT tools have boosted teaching in ICT. The fourth part of the survey was designed to identify the obstacles to ICT tools integration in teaching. The fifth part was dedicated to collect the data on success factors towards the ICT tools integration in teaching ICT. Respondents provided information through both closed-ended and open-ended questions on these topics.

Questionnaire were distributed to computer units of five faculties of South Eastern University of Sri Lanka. These computer units were chosen because they offer ICT subjects to their students. These units are considered as the representative of the ICT teaching community of South Eastern University of Sri Lanka.

This article will present the findings related to the obstacles encountered towards the use of ICT tools in teaching ICT. The degree of agreement on the item as an obstacle to the use of ICT tools in support teaching were rated using a Likert scale, starting from NO COMMENT, STRONGLY DISAGREE, SLIGHTLY DISAGREE, SLIGHTLY AGREE, AGREE and STRONGLY AGREE. The data analysis was identifying the obstacle by grouping by the same category scale.

Result of the study

Results relevant to this paper, focusing on Obstacles towards the Use of ICT Tools in Teaching of Information & Communication Technology. A total of 100 questionnaire were distributed and 90 usable set were returned. The calculated percentage value for each item is ordered by the highest value of agree category as shown in Table 1. Two open-ended questions were asked to gain an understanding of the barriers that experienced by respondents but not included in the question. However, their responses were generally congruent with those close ended questions.

Discussion

The below table indicates the results of our survey. The table shows that the five most important obstacles that encountered by us, will be elaborated in the order of significance.

1. The ICT tools are changing too fast to keep current:
The result of first finding that "Do you think, ICT tools are changing too fast to keep current? 59% respondent Agree that frequently changes of ICT tools are the major obstacle to teaching and learning ICT but 38.4% are disagree with that statement, 2.6 % respondents never gave the answer.
2. Extra time and effort needed after integrating ICT tools teaching:

The second finding reveals details about that the answer for the research question that “Do you think, Extra time and effort needed after integrating ICT tools teaching? 57.0% respondent agree with that statement but 38.4% are disagree with that and 4.6% respondent didn’t give their opinion.

3. The management did not provide any incentive for lecturers to integrate ICT tools in their teaching

The third finding reveals details about that 56.3% respondents say that The management did not provide any incentive for lecturers to integrate ICT tools in their teaching and learning but 41.7% are disagree with that statement and 2.0 respondents are didn’t put any command for that statement.

4. The network connectivity was poor

The fourth finding reveals details about that the majority of respondent (52.4%) say that poor network connectivity is one of main obstacle to use of ICT tools in teaching Information Communication Technology, 37.0% didn’t agree with that and 10.6% respondents didn’t answer for that.

5. The management did not have any evaluation on integration of ICT tools in teaching

The fourth finding reveals details about that 48.9% respondents are believe that one of major obstacle is the lake of evaluation of management on integration of ICT tools in teaching, 38.5% don’t agree with that and 12.6% are not response for that.

Items	Agree category (%)	Disagree category (%)	No Comment (%)
1. The ICT tools are changing too fast to keep current	59.0	38.4	2.6
2. I had to spend Extra time and effort needed after integrating ICT tools teaching:	57.0	38.4	4.6
3. The management did not provide any incentive for lecturers to integrate ICT tools in their teaching	56.3	41.7	2.0
4. The network connectivity was poor	52.4	37.0	10.6
5. The management did not have any evaluation on integration of ICT tools in teaching	48.9	38.5	12.6

Table 1. The major obstacles encountered towards the use of ICT tools in teaching

Conclusion

The findings of this study have several similarities with other findings on the use of ICT tools in higher education in the developed nation as shown in [2, 3]. The similar factors are: time must be allocated to faculty members, the institution has to provide a proper evaluation and incentive plan on integration of ICT tools in teaching, reliable ICT tools and good network connection for the continues use of ICT tools in teaching, and quality technical support. The survey result has again verified that these factors are of great importance for faculty members. Barriers for ICT tools integration are very similar for both the developed and developing countries.

In summary, there is an increasing need for institutions of higher learning to be sensitive toward the needs of the faculty members for the ICT tools integration in teaching. The implication of this finding must be taken seriously by management in order to produce an “ICT friendly” environment for faculty members. The successful integration of ICT tools could contribute towards enhancing the teaching and lead to producing quality graduate to meet the priorities of the country.

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