A study on the role, importance and effectiveness of ICT integration in teaching-learning process of self-financing MBA colleges in Calicut

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ABSTRACT

Globalization and innovations in technology have led to an increased use of ICTs in all sectors and education is no exception. ICT is a generic term referring to technologies which are being used for collecting, storing, editing and passing on information in various forms. There is growing evidence that ICT application to the core field of education can accelerate and improve learning on a number of fronts from basic skills, problem solving, information management, work habits, motivation, establishing life-long learning habits and concepts development. There is a powerful role of ICT in the process of teaching learning and educational innovation. ICT can offer contribution that enhances quality in teaching, learning and evaluation through improvements in cognition, convergence, culture, and pedagogies. ICT can bring about classrooms without walls when teachers are ready to realize the potential of this effective tool. Use of ICT can improve the quality of the educational experience by providing rich, exciting and motivating environments for learning. The new developments in ICT can create dramatic influence upon the structure, functions, and processes of educational institutions. ICT can create unimaginable changes in methods of teaching, sources of knowledge, curriculum framing, learning styles, managements of learning environments, and interfacing all these elements with the larger economic and cultural systems that are functioning around education. This paper deals with the role, importance and effectiveness of use of ICT in self-financing MBA colleges of Calicut district. A total of 70 students from 4 self-financing MBA colleges in Calicut have been selected based on convenience sampling technique to complete the survey questionnaire of this quantitative study. The findings of the study illuminate that most of the students agree to the benefits of integrating ICT into their teaching learning pedagogies.

1. Introduction

Over the last two decades, the rapid growth of ICT has become one of the most important topics discussed by the scholars in education. This is due to the capability of ICT in providing a dynamic and proactive teaching and learning environment. The information explosion has changed the nature of knowing from the ability to recall information to the ability to define problems, to retrieve information selectively and to solve problems flexibly, which therefore changes the nature of learning from the need to master topics in class to the need to learn autonomously. In line with the current digital era, teachers are required to integrate ICT in their daily teaching and replace their traditional methods with modern tools and facilities. The main focus of this paper is on the impact of ICT integration in teaching learning process.

Information and communications technology (ICT) offers new and innovative modes of learning for all students at all educational levels, ICT can bring about classrooms without walls when teachers are ready to realize the potential of this powerful tool. ICT can offer contribution that enhances quality in teaching, learning and evaluation through improvements in cognition, convergence, culture, and pedagogies.

There is growing evidence that ICT application to the core business of education can accelerate and improve learning on a number of fronts from basic skills, problem solving, information management, work habits, motivation, establishing life-long learning habits and concepts development.

1.1 What is ICT?

Information is basically data, which with the addition of learning becomes knowledge. In other words learning which is based on the capacity to find, access, apply and transform information into new knowledge. Important competencies which learners require to make this transformation are often called information literacy competencies and include awareness of the need for information, the ability to critically analyse information and evaluate its usefulness and ultimately to be able to apply the information, turning it into knowledge.

Communication is that simple act of dialogue between peoples and cultures that takes on a new dimension when combined with ‘information’ and ‘technology’.

Technology is not strictly limited to the Internet and includes simpler technology such as CD ROM, video, television etc. although the term ‘information technology’ does imply the use of the Internet and telecommunication networks. Certainly in educational practices, information technology falls into two parts: firstly the computer technology which is computer based courses, computerized tests, word processors, graphics software, spreadsheets, databases and presentation software and second telecommunications software which offers distance
courses, distributed educational resources, e-mail, videoconferencing, bulletin boards, whiteboards and chat.

1.2 Objectives of the Study

1. To study the impact of integrating ICT in teaching pedagogy.
2. To study the role of ICT in making the teaching learning process much effective.
3. To understand the student responses regarding integration of ICT and its benefits.

1.3 Research Methodology

For accomplishing the above objective, primary and secondary data were used. Primary data was collected through questionnaire. Secondary data collected from internet, text books, various published national and international journals, study reports of different agencies were used for the study.

1.3.1 Research Tool

The research tool used for this study was a structured questionnaire.

1.3.2 Sampling

The sample size was 70. Convenience sampling method was adopted for this study.

1.3.3 Data Analysis Tools

The collected data were analyzed with the help of statistical tools like Percentage Analysis, Cumulative analysis, Chi Square Test etc.

2. Review of Literature

Dale Spender (2001), an Australian IT commentator, makes some useful comparisons between traditional teaching and learning indicating that ICT can lead to interactive, constantly changing, two way, customised or individualised teaching and learning which allows users to do things with information and make something new - 'print is read, online is used; print is studied, online is making; print is knowing, online is doing' (Educating the global village, Delors 1998:177).

The application of ICT can take many forms and has the ability to ‘revolutionize’ the way teaching and learning occurs. The concurrent use of multimedia and computers permits the development of new pedagogical approaches involving active and interactive learning, e.g. using computer based learning methods, problem based learning, project based learning, online, video conferencing, satellite links (Salmi 2001 : l 16-7).

With the increased use of ICT as a means of instruction, ‘the decreased importance of physical distance means that the best (and the worst educational and corporate institutions) of any country can decide to open a branch anywhere in the world or to reach out across borders using the internet or satellite communication links, effectively competing with any national university on its own territory. Using ICT for quality teaching, learning and effective management revolves around issues that can be categorized as the ‘five Ps - practical, pedagogical, policy, philosophical and personal’ (Cunningham 1998:2).

3. Data Analysis and Interpretation

In order to study the role and impact of ICT integration in teaching pedagogies, the primary data is collected from 70 respondents using structured questionnaire. The collected data is analyzed and presented below.

3.1 Percentage Analysis

Here the important data collected through questionnaire is summarized in a table based on percentage analysis.

<table>
<thead>
<tr>
<th>Opinions on statements</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICT improves effectiveness of classes</td>
<td>F 30</td>
<td>26</td>
<td>7</td>
<td>5</td>
<td>2</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>% 43</td>
<td>37</td>
<td>10</td>
<td>7</td>
<td>3</td>
<td>100</td>
</tr>
<tr>
<td>ICT has a major role in improving teaching</td>
<td>F 28</td>
<td>17</td>
<td>12</td>
<td>7</td>
<td>6</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>% 40</td>
<td>24</td>
<td>17</td>
<td>10</td>
<td>9</td>
<td>100</td>
</tr>
<tr>
<td>ICT helps in better comprehension</td>
<td>F 31</td>
<td>17</td>
<td>9</td>
<td>8</td>
<td>5</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>% 44</td>
<td>24</td>
<td>13</td>
<td>12</td>
<td>7</td>
<td>100</td>
</tr>
<tr>
<td>ICT helps in fast and effective communication</td>
<td>F 29</td>
<td>16</td>
<td>11</td>
<td>8</td>
<td>6</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>% 41</td>
<td>23</td>
<td>16</td>
<td>11</td>
<td>9</td>
<td>100</td>
</tr>
<tr>
<td>ICT helps in updation of knowledge</td>
<td>F 32</td>
<td>19</td>
<td>9</td>
<td>5</td>
<td>5</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>% 46</td>
<td>27</td>
<td>13</td>
<td>7</td>
<td>7</td>
<td>100</td>
</tr>
</tbody>
</table>

The major aspects of percentage analysis is summarized in the above table. It could be seen that Majority of the respondents are either agreeing or strongly agreeing that ICT has a major role and definitely has a positive impact on various teaching learning aspects like better and fast communication, better comprehension, knowledge upgradation etc. So the Percentage analysis method is giving insights on the fact that students feel that ICT can definitely improve their learning experience.

3.2 Testing of Hypothesis.
Ho: There is no significant relationship between use of ICT in teaching and better comprehension of students.

H1: There is significant relationship between use of ICT in teaching and better comprehension of students.

### Table 2
Table showing results of Chi Square test

<table>
<thead>
<tr>
<th>Chi-Square Tests</th>
<th>Value</th>
<th>df</th>
<th>Asymp.S (2-sided)</th>
<th>Exact Sig.(2-sided)</th>
<th>Exact Sig.(1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi square</td>
<td>7.468a</td>
<td>1</td>
<td>.006</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correction b</td>
<td>6.101</td>
<td>1</td>
<td>.014</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>7.431</td>
<td>1</td>
<td></td>
<td>.009</td>
<td>.007</td>
</tr>
<tr>
<td>Fisher’s Exact test</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linear -by- Linear Association</td>
<td>7.362</td>
<td>1</td>
<td>.007</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No of valid cases</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:
- a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.80
- b. Computed only for a 2×2 table

(Chi-Square d.f - 1)

Level of Significance – 5%

If the p value is less than or equal to 0.05 we accept the alternative hypothesis. The p value of the above chi-square table is 0.006 which is less than 0.05 so we reject the null hypothesis and accept the alternate hypothesis and conclude that there is a significant relationship between use of ICT in teaching and better comprehension of students.

### 3.3 Cumulative analysis

Again another cumulative analysis test is conducted to examine the cumulative opinion of the respondents on the benefits of integrating ICT into teaching pedagogy. The median value if found greater than or equal to 4 will indicate the responses are more skewed towards strongly agreeing to the benefits of ICT in teaching learning process.

The table shows that the median value of responses corresponding to all the selected questions highlighting the benefits of ICT in teaching learning process is 4 which indicates that most of the respondents agree to these statements and are of the opinion that ICT helps in improving the teaching learning process.

### Table 3
Table showing Cumulative Analysis results

<table>
<thead>
<tr>
<th>Factors</th>
<th>Use of ICT enhances experiential learning</th>
<th>Use of ICT results in better comprehension</th>
<th>ICT helps in providing updated information</th>
<th>ICT promotes interactive learning</th>
<th>ICT helps in using new pedagogical practices</th>
<th>ICT promotes individualized learning</th>
<th>ICT facilitates easy access to information</th>
</tr>
</thead>
<tbody>
<tr>
<td>respondents</td>
<td>70</td>
<td>70</td>
<td>70</td>
<td>70</td>
<td>70</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>Missing</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Median</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

4. Findings of the study

The major findings of the study is that ICT plays a crucial role in improving the teaching pedagogy of the faculty and also in improving the easiness of learning of the students. According to Percentage analysis, majority of respondents agreed to the following opinions.

- Technology can make learning more effective and accessible
Technology Integration provides learners with relevant updated knowledge and skills
Technology can promote constructivism in teaching and learning
Technology Integration caters to the learners needs of contemporary labor markets
provides dynamic and proactive teaching-learning environment
Enriches student’s learning as well as improves pedagogical practices.
promotes the learning outcome with more latest of knowledge
Overcomes accessibility and distance limitations effectively.
Brings a transformational shift in the teaching learning process.
Allows more self-direction and self-control in the learning process.

Chi Square test also gave a confirming results of the importance of ICT in improving comprehension skills of the students.

Cumulative analysis also indicates that most of the respondents are of the opinion that ICT helps in improving the teaching learning process.

5. Suggestions and Recommendations

Since the study has shown that there is much positive effect of using ICT in teaching pedagogy, ICT integration to teaching methodology should be ensured in the curriculum of all college students especially MBA students. Teaching pedagogy using ICT shall help in attracting more student attraction hence all teaching faculty should be trained to use ICT effectively in their teaching. Students should be also given enough chance to use ICT in doing their assignments and project works. Digital classrooms and e-learning options should be a part of the college infrastructure. Educational policies must identify the evolution in the role of the teacher, and identify new methodologies of teaching integrating ICT into it and thereby equip the teachers to meet the changing needs of the student population.

6. Conclusion

This paper deals with the role, importance and effectiveness of use of ICT in self-financing MBA colleges of Calicut district. The study by all means showed the positive effect of using ICT in teaching methodologies. The major findings of the study highlights the benefits of using ICT in teaching and learning pedagogies and thereby enriching the student learning experience. Majority of the respondents favored the use of ICT in the classroom teaching and learning. ICT in education is not only a matter of equipment, hardware, machines, it is mainly a matter of pedagogy. In essence the underlying purpose of education it is to prepare students for their life and role in society - for their role in their community, to ensure their ability for lifelong learning and to think critically, and for their profession/ trade and ICT will be a tool to facilitate this.

Acknowledgement

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References