



“Design & Evaluation of Android Based E-Model: A Case of Undergraduate & Post Graduate IT Students”

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Abstract

ICT based education has become a strong need in today's educational environment from primary to higher education. To develop student centric approach, ICT tools plays a vital role for communicating, presenting and transforming knowledge from teacher to student. Despite of location and time, teaching process along with study material is possible by suing different modes of e-learning i.e. synchronized and asynchronized. In the pandemic situation of Covid-19 distant based education i.e. e-learning has raised tremendous importance, dully permitted by the respective government authorities. People have used tools & apps like Whatsapp, google meet, youtube, facetimes, messenger, sykpe, and other web based service in their daily routines. This particular paper is focuses the usability of e-learning tools in higher education for specially BCA & MCA programme. A pilot survey has been conducted from MCA students where they have described their need of E-model in MCA curriculum for teaching and learning process. At the same time it also studies learning opportunities and challenges for implementation or using E-Model in their academics

Keywords: E-Learning, E-model, IT(Information Technology), BCA (Bachelor of Computer Application), MCA(Master of Computer Application) Curriculum.

Introduction

The term E-learning is related to education system and its technology. Education system is used to impart the knowledge of a particular subject to the students at primary, secondary and higher education level. In this system teaching and learning activities are closely associated to each other. There have been significant changes in teaching learning methodology till date. The traditional education system includes class room method along with

chalk and talk technique in learning process. The introduction of ICT (Information & Communication Technology) has given different dimensions for providing educational services. E-learning can be delivered in two ways i.e. 1) Synchronous 2) Asynchronous. In synchronous mode learning environment in which everyone takes part at the same time. Lecture is an example of synchronous learning in a face-to-face environment. Asynchronous learning includes email, electronic mailing lists, threaded conferencing systems, online discussion boards, wikis, and blogs.

In the regard of E-learning the Ministry of Electronics & Information Technology Government of India has defined the vision as E-development of Indian as “The engine for transition into a developed nation and an empowered society.”¹

According to Bonk and Reynolds “To promote higher order thinking on the Web, online learning must create challenging activities that enable learners to link new information to old, acquire meaningful knowledge, and use their metacongnitive abilities; hence, it is the instructional strategy and not the technology that influences the quality of learning.”²

Educational system makes use of various tools and techniques for imparting the knowledge. The applications of ICT have explored number of opportunities to deliver the subject material through the use of computer, internet, multimedia, audio, video, images, animation, streaming video, satellite communication, computer based training, web based learning, etc. All these facilities are referred as E-learning.

The research study is confined to MCA institutes of Maharashtra state. The primary data has been collected by using questionnaire technique. The population is 126 units out of that 24% has been selected by using simple random sampling technique. The respondents are MCA pursuing students from institutes which are affiliated to respective universities of Maharashtra state.

Statement of the Problem

Related literature review is done to define the problem of statement i.et. Use of E-learning tools and techniques in BCA & MCA programme through a design and development of E-Model which is suited for BCA & MCA curriculum. So that students may be benefited in their academics and knowledge transformation.

Objectives of the Research

- 1) To design a E-Model for BCA & MCA Students.
- 2) To find out the hurdles for implementation of E-model in their curriculum.
- 3) To propose E-model based on students feedback responses.

Hypotheses of the Research

Following are the hypotheses of the present research study.

(¹H₀): Elearning tools are helpful for students for improving academic skills.

(²H₀): E-model is a replacement for traditional teaching-learning process.

Scope:

The research study helps to understand the importance of E-learning tools and techniques in teaching & learning process. The proposed E-model facilitates students syllabus, online exam, downloading features, audio/video, notes, books, PDF, programs, algorithm, result on email id, etc. From remote places also E-model can be used by 24x7. It provides better teaching learning opportunities.

Limitation:

This research study is restricted to the Khandesh Region (Dhule, Nandurbar, Jalgaon) of Maharashtra state. This study includes respondents of BCA and MCA students.

Research Methodology

The proposed research study is confined to BCA, MCA students (respondent) from respective colleges of Khandesh region. Through survey method and random sampling technique primary data has been collected punched into excel sheet for further analysis, findings and understanding students opinion regarding E-learning tools in their academics. Hence, MCA institute is a sample unit.

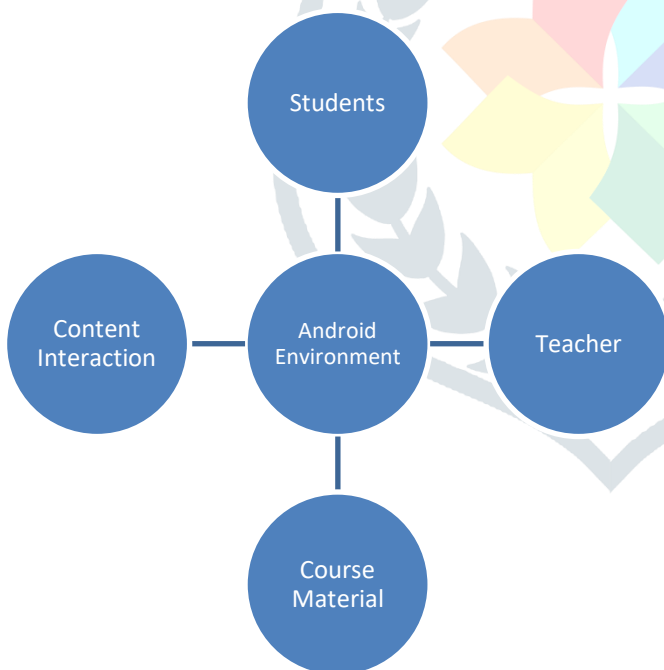
Architecture of E-Model

Fig 1: “Architecture of E-Model”

Services of E-Model







| Particulars | |
|--|---|
| New User Registration  | Downloading  |
| Updates  | Online Examination  |
| Admin user  | Native User  |

Fig 2: “Services of E-Model”

Data Analysis & Interpretations

The data analysis and interpretations are given in the form of following listed tables.

Table 1 : “Respondents from Khandesh Region”

| Sno. | Name of City | Total |
|----------------|--------------|------------|
| 1 | Dhule | 30 |
| 2 | Nandurbar | 30 |
| 3 | Sakri | 20 |
| 4 | Shripur | 20 |
| 5 | Parola | 20 |
| 6 | Jalgaon | 30 |
| Total : | | 150 |

Above table shows total count of respondents which has been selected randomly from the respective cities of Khandesh region included districts like Jalgaon, Dhule, and Nandurbar. These respondents are students of UG and PG courses

Table 2: “Ratings on Parameters/Facilities Used in E-Model”

| Sno | Parameter | Ratings (0 to 5) |
|--------------------|----------------------|------------------|
| 1 | User friendliness | 4 |
| 2 | Authenticity | 4 |
| 3 | Privacy | 4 |
| 4 | Study Materials | 5 |
| 5 | Downloading Facility | 5 |
| 6 | Notifications | 5 |
| 7 | Remote Access | 5 |
| 8 | Question Papers | 5 |
| 9 | Interface | 4 |
| 10 | Hyperlinks | 5 |
| Out of 50 : | | 46 |

Above table 2 relieves the scoring given by respondents for the different facilities/parameters used in E-model. In which majority of the respondents are strongly in favor of model facilities. Each parameter is scaled on 0 to 5, total score is $10 \times 5 = 50$, out of which 46 score is given by the BCA and MCA pursuing students.

Table 3 : “Elearning tools are helpful for students for improving academic skills”

| Sno | Opinion | Total | Per % |
|-----|--------------|------------|------------|
| 1 | Fully Agreed | 139 | 93 |
| 2 | Neutral | 11 | 7 |
| 3 | Not Agreed | 0 | 0 |
| | Total | 150 | 100 |

Table 3 explores opinions on the question of whether Elearning tools are helpful for improving student’s academic skills. So, the majority of the students i.e. 139, 93% fully agreed and remaining 7% are neutral.

Table 4 : “E-model is a complete replacement for traditional teaching-learning process”

| Sno | Opinion | Total | Per % |
|-----|----------------------|------------|------------|
| 1 | Complete Replacement | 2 | 1 |
| 2 | As a Learning Tools | 148 | 99 |
| 3 | No Answer | 0 | 0 |
| | Total : | 150 | 100 |

Table 4 reveals opinion on the stated question and the majority of the respondents 99% says that E-model is not a replacement for traditional teaching learning process rather it is a very good tool for learning activities.

Conclusions:

- 1) The present EModel is useful for BCA and MCA students for teaching learning activities in their academics.
- 2) This model is not a substitute for traditional teaching learning methodology.
- 3) This model can be used along with regular teaching learning process as an additional tool.
- 4) EModel provides required material to the students like notes, ppt, and hyperlinks for their study point of view.

References

- 1) <http://deity.gov.in/content/vision-mission>
- 2) P.P. Sing, Sandir Sharma, —E-Learning New Trends and Innovations, Deep & Deep Publications, 2005.
- 3) Briony Oates, “Researching in Information System and Computing”, Sage Publications.
- 4) Bruce Joyce , Marshal Weil ,”Models of Teaching”, 8th Edition, PHI
- 5) <http://indiatoday.intoday.in/education/story/indian-institutes-of-management-to-launch-e-learning-portals/1/344589.html>
- 6) Allah Nawaz, Amanullah Khan “ Emerging roles of eTeacher in higher education” International Journal of Business Management and Administration Vol. 2(1), pp. 008-014, January 2013, ISSN 2327-3100
- 7) Hazel Morton, Nancie Gunson, and Mervyn Jack “Interactive Language Learning through Speech-Enabled Virtual Scenarios” Hindawi Publishing Corporation Advances in Human-Computer Interaction Volume 2012, Article ID 389523