

# ICT Tool in Higher Education and Overall Institutional Functioning

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## Abstract:-

Traditional way of teaching-learning is lecture method with blackboard, chalk and talk. In this classical method, teacher speaks and students listen. Teacher give extra verbal components like speech, voice modulation, facial expression gesticulation and body movement. These tools are used to express something to transfer the things or knowledge to students,. Teaching can be made interesting by demonstration by using audio-visual aids. In this case there is no flexibility in learning. Students should be well attentive. Higher education is at cross roads. At one end there is high demand of higher education and a the other end quality is questioned. The novel digital technology has become inevitable and essential and it promises revolutionary benefits.

A good higher education system is required for overall prosperity of a nation. The increase in growth in higher education sector had made the administration of higher education institutions complex. Some researchers says that integration of ICT tools help to reduce the complexity and increase the overall administration of higher education. The study has been undertaken to know various functional areas to which ICT is deployed for information administration in higher education institutions and to find the use of ICT in all these functional areas. A theoretical model was derived and validated.

## Keywords:-

ICT Tool, Information, Administration, Administrative activities, teaching and learning.

## I. INTRODUCTION

Information and communications technology (ICT) is an important part of most organizations these days[1]. Computers began to be used in colleges in the early 1980s, and several scholars suggest that ICT will be an important part of education for the next generation [2-3]. Up- to- date technology offers many methods of enhancing classroom teaching and learning [4-5] stated that new technologies have the potential to upkeep education across the curriculum and deliver opportunities for efficient student- teacher communication in ways not possible before. ICT in education has the potential to transform teaching. However, this potential may not easily be realized, as Dawes underlined when he stated, “problems arise when teachers are expected to implement changes in what may well be adverse circumstances”. Due to ICT’s importance in society as well as in the future of education, identifying the possible challenges to integrating these technologies in colleges would be an important step in improving the quality of teaching and learning. Balanskat, Blamire[6] argue that although teachers appear to acknowledge the value of ICT in schools, they continue encountering obstacles during the processes of adopting these technologies into their teaching and learning.

However, despite the Ministry of Education, India having embarked on the project in providing a virtual learning platform in colleges to enhance ICT usage among teachers, ICT has not been fully adopted in the teaching and learning process in most of the higher education institutes in the country. Only a few teachers are using ICT as teaching and learning tools [7]. This is because the challenges outweigh the benefits. Therefore, this study is expected to generate information on the teachers’ perceptions and challenges of integrating ICT tools in the teaching and learning process. With changes in modern technologies learners need to be equipped with updated knowledge that will help them adapt to the changing world. Such knowledge leads to better communication and increased 21st century skills as a result of e- Commerce and self- employment in the ICT sector. Many studies have been conducted to investigate the challenges to technology integration in education[8-9]. This study provides teachers’ perception and perceived barriers to the use of technology tools in classroom’s teaching and learning process.

## II. OBJECTIVES

1. To identify teachers’ perceptions in implementing ICT tools in teaching and learning in classroom.
2. To determine the challenges of using ICT tools in teaching and learning in the classroom among college teachers.
3. To identify that to what extent do teachers use ICT tools in teaching and learning in the classroom.

However, in this paper ICT tools refers to the common technology- based tools that are using in colleges such as computer, Laptop, LCD, digital photocopy machine, digital Audio and Video devices, digital camera, scanner, DVD player and multimedia projector. The ICT has significant implications on higher education. According to latest survey ICT is often used as an extended synonym for information technology, but is more specific term that stresses the role of unified communications and telecommunications, computers as well as necessary enterprise software, middleware, storage and audio-visual systems. The ICT had been used by academic researchers but it can popular after it was used in a report to the UK government by Dennis Stevenson[10] The information is not only in textual form but in audio video or any other media is also to be transmitted to the users.

India is developing as a knowledge economy and it cannot progress without the support of ICT. ICT in higher education is the need of the hour. Today if any institution of higher learning denies the importance of ICT the future of stockholders will be in dark. It has been the potential to provide solution to many of the challenges their education faces today. Therefore ICT not to be feared but to be embraced so as to empower them and not to replace them.

Following are some of the areas where computers can be used for effective educational administration.

1. General administration
2. Personal record maintenance
3. Inventory management
4. Financial accounting
5. Library system

Information and communication technology plays a an important role to support powerful, efficient management and administration in education sector. It is to be specifying that the technology can be used from student administration to various resource administrations in an education institution. The various administrative challenges for Indian education system of the 21<sup>st</sup> century as:

1. Universal and individual challenges
2. Global and local challenges
3. Balancing between traditional and modern approaches
4. Long term and short term considerations
5. competition and equity challenges
6. Extraordinary expansion of knowledge

Many studies reveals that the need for ICT integration into administrative activities of higher education institutions. The various ways of introducing technology in education institution administration are the as:

- (i) Admission through we enabled services
- (ii) Day-to day activities of the educational institutions
- (iii) Sending email notices and agendas to staff in place printing and distributing them
- (iv) Submission of lesson plan through email
- (v) Insist all the teachers to create a class web page
- (vi) Staff members administration.

### III. THEORETICAL FRAMEWORK

Davis, Bagozzi and Warshaw[11] developed a theory of 'action relating to reasons' so called Technology Acceptance Model (TAM). Later based on their work, Venkatesh and Davis[12] investigated the reasons some people use computers and their attitudes towards them that called TAM 2. They tested this model with 107 adult users, who had been using a managerial system for 14 weeks. They found that people's computer use was predicted by their intentions to use the computer and that perceived usefulness was also strongly linked to these intentions. According to Venkatesh and Davis when teachers are presented with a new technology, two key factors would influence their decision from the extended variables around them about how and when they will use it.

- External Variables
- Perceived usefulness
- Perceived ease- of- use
- Attitude toward use
- Social influence processes

### IV. THEORETICAL MODEL

ICT play play an important role in reducing operational inefficiency and improving decision making in many areas of governance. Integrated Higher Education Services system is one such concept that acan empower the governing bodies to administer the progress

of the education plan in the whole country and serve various stakeholders in a much better manner. Administrative systems include personnel administration, student administration, resources administration, financial administration and general administration. It is clear from the administrative activities in a higher education institution consists of student administration staff and resources administration, communication and general administration.

According to Hossein[13] ICT provides several facilities and possibilities for educational administrators to do their tasks. Communication and information systems have changed the very nature of higher education, allowing information to be transferred, stored, retrieved and processed by almost all who works, study and interact with given institution.

As we know the successful introduction of radio, television and computer technology in field of education recently. It gives an important example of sustainable and successful ICT coming from developing countries. In the field of higher education, mobile phone will be the next generation of transformative device in the field of education. The mobile companies are in competition and are continuously introducing new smart mobiles with advanced features, teaching and learning tools, applications and increasing distribution and lowering costs to allow anyone to purchase a mobile. In India in Jan. 2009 alone gained more than 16 million new mobiles subscribers.

Mobiles technology also gives teachers a new means of education delivery and allows them to connect with their students at any time. Teachers from rural areas can interact with experts in developed countries in real time using a basic mobile device. Mobile technology is more useful to today's college students. About 85 percentage of adult between age group 18 to 30 years have a smart phones. The ownership among students is even higher according to the EDUCAUSE report. This technology is unique including connectivity, camera, sensors and GPS have a great potential to the academic experience. The growing mobile landscape represents new opportunities for learners both inside and outside the classroom. In case of potential of smartphones in teaching learning process MP government announced it will provide smartphones to the school students with 75% attendance.

Student administration is an important and integral part of information administration. This involves various activities from admission process to learning activities till processing of results and performance analysis. The introduction of ICT in this process enhances the overall admission activities of higher education institutions by making it more accessible to many. Based on literature this includes admission enquiry by students, course allotment and availability of information and other communications to guardians or parents.

Staff administration includes recruitment and work allotment of faculty and staff in the institution, their attendance and leave management and performance appraisal. This includes relevant communication to and from the institutions and among peers. ICT helps in processing of voluminous records in a quick, meticulous and impeccable manner and making data easier. ICT helps in providing good communication system in higher education system. ICT provides timely information to all concerned. A very important part of information administration is general administration of higher education institutions which includes the various day to day activities of the entire system.

## V. METHODOLOGY

In higher education Information administration was identified as one of the important area. Use of information technologies improve the overall environment and efficiency of higher education institution and helps to improve the allocation of resources, management communications, personal services, student records, productivity. The methodology adopted are:

1. Research Design
2. Item generation
3. Content validity
4. Reliability test
5. Criterion validity
6. Path validity

### 1. Research Design

Research Design In this research, quantitative methodology was used to collect and analyze the data obtained from all the respondents. A questionnaire was self- developed and finalized by the researchers before being distributed to the targeted group of respondents. The questionnaire was designed specifically to address research objectives with regard to teachers' perception on use of ICT tools in colleges.

### 2. Item generation

Item categories include information administration. It consist of three main components ie student administration, staff administration and general administration with communication as an integral part of these three components.

### 3. Content Validity

It is measured by relying on the knowledge of people who are familiar with the construct being measured. The subject matter experts give in the form of questions. Their feedback and is then analyzed and informed decisions can be made about the effectiveness.

#### 4. Reliability test

It is the degree to which an assessment tool produces stable and consistent results.

#### 5. Criterion validity

It is the extent to which a measure is related to an outcome.

#### 6. Path validity

It is used to describe the directed dependence among a set of variables.

## VI. CONCLUSION

Devoted teachers will always be the backbone of ICT initiative. Without teachers who are willing to learn about ICT and adapt own teaching methods to integrate technology into the curriculum. The use of various multimedia devices like television, videos, smart boards, computer, laptop, ipad, tablet PC, and mobile can create a more challenging and engaging learning environment for students of all ages. With increasingly important role of mobile plays an important role today.

This study is more related to identifying the perceptions in implementing ICT tools in teaching and learning in the classroom among college teachers. Furthermore, it examines the challenges of using ICT tools in teaching and learning in the classroom among college teachers and recognizes the effectiveness of the extent of ICT tools in supporting classroom teaching and learning. Based on the study the findings indicate that average level of the perceptions in implementing ICT tools in teaching and learning in the classroom among college teachers, high level of challenges of using ICT tools in teaching and learning in the classroom among college teachers and recognizing the effectiveness of the extent of ICT tools in supporting teaching and learning in the classroom.

This study shows that demographic factors do not have major impact on information administration in higher education institutions. It was also evident that all the functional areas identified have an influence on information administration. This shows that enhancing the use of ICT tool on these functional areas and especially for general administration will enhancement of overall information administration in higher education institutions in the global competitive environment. This also help to education planers to use technology based administration in higher education institutions as well as institutional function.

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