



Role of ICT for Administration in Educational Institute

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Abstract -

Information and Communication Technology (ICT) has become essential part of educational administration for quality enhancement and fast work. The role of ICT becomes very important in the field of education as the world is rapidly moving into digital media. ICT can be used in most of administrative tasks such as student record and staff database. ICT based administration is key part of educational Institute as it reduces efforts for time consuming and tedious work. Hence, this paper addresses major functional areas of ICT, its need, issues in implementation, benefits and finally the implementation of ICT in college.

Keywords - Information and Communication Technology (ICT), staff administration, student administration, functional areas, educational institute

I. Introduction

Information and Communication Technology (ICT) plays a very important role in administration of education sector. ICT can be used from student administration to various resource administrations like staff administration, general administration etc. ICT includes technological tools and resources which are used to communicate, create, distribute, store and manage information. The technologies include but not limited to computers, hardware, network, software, television, equipments, videoconferencing and electronic mail [4]. College administration can be made less laborious and fast by application of ICT. Existing resources in educational institute can be well organized and utilized with the help of ICT. Administrative task becomes easy by reducing manual paper work. It also helps in keeping and retrieving fast electronic data records of

students and staff. Most of the times, teaching faculties are busy in doing iterative, monotonous administrative work like attendance monitoring etc. This reduces teachers' quality time for academic teaching. To enhance the quality of teaching, administrative task can be automated with tailor made software. This paper highlights major functional areas of ICT, its need, issues in implementation, benefits and finally the implementation of ICT in college.

II. Main Functional Areas of ICT

There are various administrative functional areas in which ICT can be applied for efficient working of institution.

Student Administration : Student's personal profile, academic record, result, fees record, attendance record, placement record, alumni record, etc can be maintained with the help of ICT. Academic records like time table generation, home assignments & subject notes uploading and downloading, online exam test, project presentation, sending academic records, attendance, marks of students to parents, students placement record etc can be part of ICT. ICT can help in generating various kinds of certificates that are required by students like bonafide certificate, leaving certificate, No Objection Certificate etc. Student can give the feedback through the software and can be part of alumni association through the web site of institute.

Staff Administration: In maintaining record of staff like personal details, pay scale, grade, leave record, qualification improvement record, recruitment, performance of teaching and non-teaching staff ICT is very useful [1].

General Administration: Following are sub areas of general administration where ICT assists in office management and preserving financial records of the institutions, communicating with other sister institutions, facility of online



fee payments, scheduling of examinations, allocating invigilators for exam, students e-hall ticket generation, online admissions process of students and staff communication for happenings and schedule etc through e-circulars[2], inventory management, biometrics for staff attendance to record exact timing of incoming and outgoing from the institution, Security of the campus by using metal detectors at the entrance and CCTVs. For managing the above mentioned functional areas of the institutions and to work effectively, efficiently and faster access of information to staff, teachers, students, the institution must have Institution Management Software which provides a single secure database structure that organizes stores and retrieves real time information.

III. Need of ICT

Administration is central function of the college. ICT is mainly used in students' administration and staff administration. ICT simplifies various processes at college. ICT is needed in educational administration for following reasons.

- It increases transparency, accountability in financial management and budgetary.
- It helps in proper decision making [3]
- It helps in increasing the coordination among administrative staff, students and teachers.
- Manual administrative tasks leads to huge workload, it helps in reducing this workload.
- It leads to planned management.
- With the help of ICT, various reports can be generated with minimum efforts which are required by governing bodies like, DTE, AICTE, university etc.

IV. Issues in Use of ICT

Many issues can arise while designing and implementing ICT and that should be considered by the institute.

Reluctant Staff

Most of the administrative staff has the phobia of technology and they also don't want to learn, they resist change, they rely more on manual work than the computers. The college should train their administrative staff to meet the needs using ICT tools available.

Fear of Misuse of Data

Some of the management staff may have fear of misuse of institute data by antisocial elements [3].

Cost of implementation. High cost incurred for acquiring, installing latest software can be big challenge in self financial institutes [1].

Lack of coordination and planning Proper coordination and planning are key success of implementation of ICT.

Lack of it will be failure of ICT.

Finally, the main challenge in implementation of ICT is balance between traditional and modern approaches in administration.

V. Benefits of using ICT

Applying ICT for administration can serve following benefits

- Routine and repetitive tasks in administration can be automated, which results in fast and accurate work. Large amount of data can be handled efficiently and securely. Information or data can be changed easily and readily available, thus quality of work can be enhanced.
- It helps in efficient management and control of education and institution
- It saves time through automation; this saved time can be used for more constructive and innovative work by the staff.

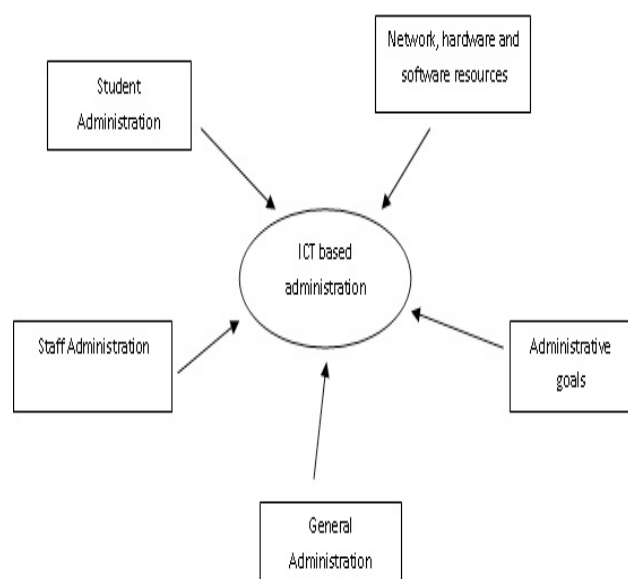


Fig 1. Model for ICT based administration in institute



For the institute ICT based administration includes developing software subsystems based on above administrative area. ICT administration is divided into three phases.

- In the first phase student administration software will be developed. Currently most of the student's administration is done by using Microsoft Excel. Newly developed software will automate almost all the administrative tasks like managing students' information – admission details, fees structure, course etc and will help in generating various reports and certificates through it.
- In second phase staff administration software will be developed which will help in managing staff information, leave records, salary generation etc. All these tasks are done currently by using Microsoft Excel and word.
- In third phase biometrics for staff attendance has already been implemented. Along with this, financial software and e-forms availability on the website for students is also implemented. Some of e-circulars are sent to staff through email, most of the student's notices / messages are circulated through Google groups as a part of general administration. Security of institute is maintained through CCTVs. As a part of third phase biometric attendance of staff will be linked to Staff administrative sub system.

Tailor made Institution Administration Software contains all above sub systems using required hardware, software and network resources along with defined administrative goals.

VII. Result and Discussion

In the academic year 2013-14 and 2014-15 few experiments and implementations of the in-house software modules like Training and placement module, students registration and

admission module, result analysis, Mock online MCQ test etc. have been successful.

VIII. Conclusion

Administration is very important part of educational institute and ICT plays important role in college administration. It is also important to create the environment necessary for effective functioning and well-organized acceptance of ICT in college administration. Rather than implementing all administrative task on ICT at a time, it's always better option to do it phase wise, as there are various issues involved in implementing ICT. Student administration and staff administrations are major functional areas with which we can start with ICT by developing phase wise tailor made software. By developing some of the in-house software mentioned above we could achieve benefits of ICT.

References

- [1] Annapurna Pyla, ICT as a Change Agent for Higher Education and Society, International Conference on EGovernance & Cloud Computing Services(EGov '12) Proceedings published by International Journal of Computer Applications® (IJCA)
- [2] Dr.R.Krishnaveni and J.Meenakumari, Usage of ICT for Information Administration in Higher education Institutions – A study, International Journal of Environmental Science and Development, Vol. 1, No. 3, August 2010
- [3] Niyaz Ahmad, Effective Educational Management: An Implementation Of ICT in Administration of Higher Education Institutions
- [4] Ulka Toro (Gulavani) and Millind Joshi, ICT in Higher Education: Review of Literature from the Period 2004-2011, International Journal of Innovation, Management and Technology, Vol. 3, No. 1, February 2012.