Cogitation & Analysis of e-Exam Model for Autonomous College

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Abstract—e-Exam System has become a valuable and important resource for autonomous college examination system. Many autonomous colleges have used the examination automation which may be semi automated or fully automated, but its potential has not been fully utilised. e-Exam is a very effective and user-friendly tool for providing good automation for examination process by bringing a positive and drastic change in the working of autonomous colleges. In most of the autonomous colleges, awarded by UGC, examination system is managed manually. The manual examination system is facing many problems such as delay in declaration of result and sometimes even mistakes in results. e-Exam is an effective tool for governing those mistakes and automating various phases of examination system at different administrative levels to bring faster, paperless, responsible, efficient, reliable, scalable, transparent and robust automation of examination solutions.

Keywords—CCE, e-Exam, EMS, Pre-Exam, Post-Exam, Offline Module, Online Module & UGC.

I. INTRODUCTION

Higher Education System is budding worldwide because of governments’ policies and awareness of education in society. Being integral and critical part of Education System, examination process needs more attention and efforts. In India number of universities and colleges are growing rapidly therefore to keep the pace of increased complexity in examination system use of information technology is very essential and productive.

This research problem evolved with the concept of making a standardized and unanimous automated examination system which serves all needs of examination system for autonomous colleges in India. Presently autonomous colleges have their own manual and computerized examination process system which leads to anonymity and lack of consistency. In this research the emphasis is on the software (e-Exam System) that automates all activities covering every aspect and task of examination system within the framework of norms and regulations of University and UGC.

II. REQUIREMENT OF E-EXAM SYSTEM FOR EXAM MANAGEMENT

It has been observed that every autonomous college have their customized system of executing and maintaining examination related data which is not suitable for controlling and managing the same at generalized common platform. As per the resources and capacity, colleges manage examination system in various modes. Diversity in data processing results in various inconsistencies which increase complexity at various level of the examination system. In India autonomous colleges follow same norms and rules set by the UGC therefore the automated e-Exam System is developed according to standards which caters the required services and utilities of the autonomous colleges.

e-Exam System has provided means for faster and better exam management and student information system with efficient storage, retrieval and processing of data and exchange and utilization of information to its users. e-Exam System has the promising ability to provide better services to the examination administrations. If optimal potential of e-Exam system is utilised, it can definitely increase effectiveness and efficiency of the examination system. The nature of technology is that, everything becomes almost transparent once it is rooted in every autonomous college. Dr. A.P.J. Abdul Kalam, Indian scientist and administrator who served as the 11th President of India from 2002 to 2007, said that “there is a demand for a more transparent and reliable system of examination, evaluation and reporting”.

III. SIGNIFICANCE OF E-EXAM SYSTEM

The undertaken research was important for uniformity of examination system at national level. e-Exam System definitely brings all autonomous colleges on common platform and integrates all activities of examination.

This examination management system will definitely bring all autonomous colleges on common platform and integrate all activities of examination.
e-Exam System has achieved the finest, convenient and cost-effective system to manage all tasks of examination for autonomous colleges. The application serves the solution to all the complex logics and working pattern in the structure of standard examination system.

IV. STUDY AND ANALYSIS

A. Organization and Various Phases of Examination System

Organisation of examination is very typical jobs that involving different types of data processed and managed by different phases within the examination process of the colleges. The complication increases with the increasing number of examinations during session. Right from the initial stage of students’ registration to the final stage of result declarations, various activities are required to be initiated with proper responsibility, care and sophistication.

In autonomous colleges to understand examination system, it is essential to understand the regulatory process of the university examination process and sources of data to regulate college examination. The university conducts examination for the regular as well as failure students (Ex-Students) in the examination. The regular as well as Ex-students apply for examination to their respective colleges. For conducting examination, proper data is managed. The data management for examination can be divided into two phases:

1) Pre-Exam Phase: In this phase the student application form is processed and all applicable student details such as students registration, fee details, paper attestation, Exam Form allocation, Hall Ticket allocation etc has to be done. Any inconsistency in form is directly convey or informed to the student so that it can be removed before dead line. This is one time exercise which is carried out at least one month before the examination.

2) Post-Exam Phase: This phase begins right from sending answers sheets for valuation, collecting valued answer sheets, record the marks obtained, applying grace marks criteria as per guidelines, results declaration, dispatching mark card etc. up to the processing student’s request for recheck or revaluation.

During these phase, the records related to students need to keep for a specific period of time and some of the data such as student marks obtained and their registration need to be preserved in order to ensure the future verification or to settle disputes which arising about genuineness or verification of the university degree at anytime during the life time of the student.

B. Overcoming of Manual of Examination System

Nevertheless the manual examination system is well organized in to branches, but still the process of paper based records is quite slowly. The process of manual examination process continues for months and causes both physical and mental strain to college administrations. Reporting and declaration of results also takes a very long time due to which student remains ideal during this period. Sometimes the delay in result declaration causes heavy loss to the students such as student cannot join for further studies or appear to competitive exam or join jobs due to unavailability of result in time. Some limitations of the existing examination system are as follows:

- Students have to either communicate through postal mail or visit college even for minor inquiries regarding examinations. The visit to college wastes a student’s valuable time and money and cause unnecessary trouble. It is a common view to find students rush towards various service windows of college for getting exam related forms, depositing fees and to get to know the result status.

- Manual Examination system may leads to errors, takes lots of time and wastage of valued resources. Furthermore the maintenance and storage of piling up paper based records are really difficult.

- Due to repetition of cycle during examination process, same data is recorded repeatedly in different branches of examination. Due to which huge data duplication leads to heavy expenditure of revenue for stationeries. In current system, the student records management is very exhausting. Indexing the student record, retrieval or maintenance of manual records is time taking and really slow process.

- The chances of tempering student records in manual examination system remains. Due to lack of online verification the chance of unfair practice such as, preparing fake mark sheet is possible which damage the University or Colleges credibility.

The research of examination system has helped to overcome the problem for the development of automated e-Exam System. It takes thorough analysis of manual examination process of autonomous college. Also, deep study and research of software has done which helped the research team to understand the scope and challenges for the development of research project.

The projects and documentations which helped for research and development of this system are:
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- Exam-software.  
- EduManage.  
- Think exam.  
- True Result Management Software.  
- School Management Software.  
- Critical Test Result Management.  
- CCE Result Management Software.  
- Campus Management System.  
- PANACEA - School and College Management Software.  
- PERCEPT - College Management Software.

Through this study and analysis of software documentations, structure and work flow process of autonomous college, e-Exam system is developed which helped team members to understand the purpose, scope and the challenges for developing this automated system.

C. Features of e-Exam System

e-Exam System has revolutionized the entire examination process by diligently meeting the requirements of the autonomous college in conducting examination. This research project are conducted at utmost security and sophistication enabled through cutting-edge communication and information technology. The system automates the complete life cycle.

On the basis of online and offline modes, the e-Exam System is divided into two Phases:

1) Offline Modules for Exam Management System (EMS): This system automates the systems running at Autonomous College that serves the effective approach and command on the management.

Some of the key features of this phase are highlighted below:

- Students Registration.  
- Manage Course and Subjects.  
- Student Verify.  
- Start Exam.  
- Verify Exam Form.  
- Verify Hall Tickets.  
- Enter Internal and External Marks.  
- Declaration Result.  
- Merit List.  
- Upgrade Eligible Student.  
- Search any Student by name, father name, ID, Class, section etc.  
- Display Student Report.  
- Display Student Status.

- Display Student’s Exam Results  
- Customized Report Generation

2) Online Modules for Student Portal: This application part provide the student all required information related to the college and regular updates

Some of the key features of this phase are highlighted below:

- News Alert.  
- Notice Board.  
- Download Exam Form.  
- Download Hall Ticket.  
- Issue / Complain Box.  
- Examination Result and status.  
- Time Table.  
- Daily/weekly/Monthly announcement.  
- Warnings.

D. Challenges of integrating of e-Exam in education

As discussed earlier, e-Exam has huge potential to make the Indian autonomous college as fully automated. Most of the manual work can be taken care of by e-Exam System, but there are many challenges which hamper the opportunities. Some of the key challenges are:

1) Non-availability of infrastructure: As there is no proper housing facility for these technologies. Lack of proper planning computers is purchased ahead without furnishing the room or building to install these computers. Furthermore, infrastructure in developing countries is of poor quality.

2) Unwillingness to adopt new technology: As most of the universities and colleges were established in late 60’s and 70’s, most of the employees working in these universities and colleges are at their retirement age presently, so it is really difficult to change their mind set to adopt new technology. Scientific studies showed that at old age it is really hard to learn new ways of doing work using technology. Young and energetic officers/officials need to be get exposed to this technology and made them aware to the benefits of the technology.

3) Absence of motivational quality: Integrating e-Exam in autonomous college examination is not an easy task. It requires a wide range of support including higher management convincing the officers and officials to adopt e-Exam System. For this task a motivational leadership is must. The motivational leader is necessary before, during and after the implementation of the project.
4) Regular changes in administration: The frequent changes of top administration adversely affect the institutions. New obligatory takes months to understand the situation and it also depend upon his willingness. Sometimes before understanding the situation he has to leave the institution.

V. CONCLUSION

Modern era is the era of technology, resulting in changing the lives of millions of people. Today almost every autonomous college is imparting education in the field of e-Exam System, but its use in teaching and administrative functioning of college is meagre. The meaning of computerization is limited to just typing or surfing web; full potential of e-Exam System has not been explored by many colleges. e-Exam is very useful tool to have transparency, reliability and efficiency in autonomous college examination system.

There are endless possibilities by suing e-Exam System with examination system. Automated e-Exam System will ensure efficiency and effectiveness in the examination system and render convenience of on-line queries by cutting down time and cost and breaking down geographical barriers, thus bringing a sea change in the existing manual examination system.

REFERENCES

[5] DBMS : Complete Reference
[8] Mario Freire and Manuela Pereira, Encyclopedia of Internet Technologies and Applications by