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E-LEARNING UNDER CLOUD COMPUTING

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Abstract: Education plays an important role for human being for overall development. Initially in India, education was offered at 'Paathshala'- the place for primary and lifelong education. But the growth of educational systems like University, colleges, Training Centre and several educational places are involved and change themselves depending upon requirement and time need. Conventional educational systems is actually deals with class room based teaching and learning; though today apart from the several education mediums are evolved and growing rapidly. E-learning, Distance Education and Online Education is also an important role of contemporary learning. Cloud computing is a new computing model which is based on the grid computing, distributed computing, parallel computing and virtualization technologies define the shape of a new technology.

It is the core technology of the next generation of network computing platform, especially in the field of education, cloud computing is the basic environment and platform of the future E-learning. It provides secure data storage, convenient internet services and strong computing power.

Key Words: On-line education, E-Learning, Cloud computing, PAAS, Distance education, education system.

Introduction

We live in the computer era where every-thing is on- line. We have to learn where we are? And equip us suitable to the changing scenarios. There is no end for the learning particularly to the academicians. Government of India is promoting the education and encouraging students to join schools, motivating parents to send their ward to schools and thus ensuring that education will helps a person to achieve heights in his carrier and life. Various catchy slogans are given by government and various good schemes like "education to everyone" are started by the government. But all these goes in vain when government not able to provide best facilities to the students. The various schemes makes students reaches to the schools but lack of facilities, good teachers, lack of latest books, transportations and labs facilities seriously causes effects on their results and thus discourages them to continue their education. Thus all the thousands of crores of budgets which the government approves every year for education goes in vain and hinders the process of growth of that student and also of the country in a very large extent as all these processes are interrelated. Thus by implementing cloud computing technology /cloud campus we have the hope that we can overcome all these short comes.

Cloud Computing

Cloud computing is the delivery of computing services over the Internet. Cloud services allow individuals and businesses to use software and hardware that are managed by third parties at remote locations. Examples of cloud services include online file storage like MS office 2013(365), SkyDrive, Google Docs etc. Social networking sites like Facebook, LinkedIn, whatsapp etc. Webmail like Gmail, msn etc. Online business applications. The cloud computing model allows access to information and computer resources from anywhere that a network

Paper ID: UGC 48846-833

connection is available. Cloud computing provides a shared pool of resources, including data storage space, networks, computer processing power, and specialized corporate and user applications.

When you store your photos online instead of on your home computer, or use webmail or a social networking site like Facebook, Picasa, photo-bucket you are using a "cloud computing" service. If you are an organization, and you want to use, for example, an online invoicing service instead of updating the in-house one you have been using for many years, that online invoicing service is a "cloud computing" service. Cloud computing refers to the delivery of computing resources over the Internet. Instead of keeping data on your own hard drive or updating applications for your needs, you use a service over the Internet, at another location, to store your information or use its applications. Doing

Cloud terminology

Services include software and hardware, from e-mail to entire IT platforms, which are hosted in the cloud.This means that someone else makes them available to you on demand—that is, when you need them.

Cloud compliance

Cloud services comply with relevant statutes, such as the Health Insurance Portability and Accountability

Act of 1996 (HIPAA), the Family Educational Rights and Privacy Act (FERPA), and the Schools Interoperability Framework (SIF).

Education System

Educational Systems are changing rapidly their characteristics now a day. An earlier conventional education system was main medium at teaching and learning. But several internet and problems lead the cause of other educational mode. Initially private educational mode was originated to some of the people who are not able to join in regular class room based education, due to lower marks, employment, Fee Structure, Geographical conditions and working condition, time schedule universities are allowed to run private education mode, where student just appear examination for the degree based on preparation of his/her

so may give rise to certain privacy implications.

The various types of services model provides by the cloud computing are see (Fig 1.0):

1. Infrastructure as a service (IaaS): Hardware belongings (like storage) and computing preeminence are presented as services to clients.

2. Software as a service (SaaS): software application as services are presented on The Internet

rather than as software packages to be buy by any

client. Examples are Google web-based office applications (word processors, Spreadsheets, etc.).

3. Platform as a service (PaaS): This refers to providing amenities to sustain the whole significance growth lifecycle including drawing, debugging, testing, Exploitation, operation and support of rich Web application and services on the Internet.

self. This teaching-learning process called Distance Education/cloud campus or E-learning. Conventional Education around the world and even in India. Internet and computer play an important role for distance education and online education. Today class, reference material, library, group discussion and counseling and other activities are fully depends on internet and several computing tools, techniques and mechanism. Cloud computing is an important technology responsible for healthy online and distance education many ways.

E-Learning

E-Learning means electronic learning is a kind of non-conventional education method where regular physical attendance and eye-to-eye contact with the instructor is not required and learning can be done form anywhere and at any time according to convenience of student and at a place suitable to him/her. E-Learning is a technology which support education and learning via information and communication technologies (ICT) like internet, CD ROM or a standalone computer. It is an online teaching method of interactive presentations, videos, chat, online lectures, notes, quiz, tests etc. E- Learning educates students using learning material

Paper ID: UGC 48846-833

that is fully enriched with multimedia content. Students get self-learning experience through the e- text, audio-video materials, online lectures etc. and assess themselves by online self-assessment tests like quiz, online exams etc. e-Learning can become more popular in current scenario where students is more inclined to use ICT equipment's for their daily life. E-Learning can be en-gaging and even addictive for social network and Google generation students.

Many organizations have developed the successful distance learning course wares and modules to overcome the deficiencies present in the traditional educational model.

- Institute of Chartered Accountants of India (ICAI).
- Institute of Company Secretaries of India (ICSI).
- Institute of Cost and Works Accountants of India (ICWAI).
- Institute of Charted Financial Analysts of India (ICFAI).
- NIIT cloud campus.
- Indira Gandhi National Open University (IGNOU) These are the Institutes of repute imparting education towards professional streams like Accounting, Company Secretary, Cost Accounting Analysis, etc., in a self-learning modular approach. Students are required to study the modules dispatched to them periodically and can send the assignments by post for their evaluation. Students facing problems in the concepts and theories can attend the special problem solving classroom sessions held periodically on the regional headquarters all over the country. Also, they can register for the examinations according to their suitability in the prevailing slots.

Growth Of ICT and E-Learning In India

India has taken a very long leap in last few years to improve its educational system and structure, no. of colleges and no. of students has increased dramatically which helps educate a large no of student in different ways. Government set up lots of bodies, centers and started different project to educate its large no of population, government have started lots of distance and online learning programs. After the establishment of University Grant Commission (UGC) in 1956, UGC started the coordination, determination and maintenance of standards of university edu-cation, even IGNOU and other open schools offering distance education degree programs in different disciplines and providing rich study material in textual or audio-visual format through its eGyankosh, sakshat, Gyandarshan etc programs. Government also came with the idea of promontory use of ICTs in education in its Eleventh five year plan (2007-2012) and set up a National Mission in Education through ICT. To promote technology driven education, the country launched a dedicated satellite EDUSAT on September 20, 2004 with the expectation to bring both quantitative and qualitative revolution in education and help in e- Learning or self-education. There are plenty of e- Learning projects launched in India which helps and motivate learners to learn on a computer. Currently there are several projects to promote education learning environment. Some of the major projects are eGyanKosh, Flexilearn, NPTEL, CEC, Institute of Lifelong Learning (ILLL), e-PG Pathshala.

E-LEARNING IN INDIA Methodology of study There are 7 major e-learning projects (eGyanKosh, Flexilearn, NPTEL, CEC, Institute of Lifelong Learning (ILLL), Creation of e-Contents of Fermentation Technology, e-PG Pathshala) running in India.

Projects

The Ministry of Human Resource Development has designed a platform named 'SAKSHAT' as part of the National Mission in Education through Information and Communication Technology. Projects / e-Learning platform including projects sanctioned by NME-ICT, MHRD are as follows:

(A). eGyanKosh (http://egyankosh.ac.in/)

The meaning driven from eGyanKosh is E=Electronic, Gyan=Knowledge and Kosh. eGyankosh is a national digital repository to store, index, preserve, distribute & share digital learning

Paper ID: UGC 48846-833

resources developed by the Open and Distance Learning Institutions in the country. It is implemented and maintained by Indira Gandhi National Open University (IGNOU).

(B).FlexiLearn(http://www.ignouflexilearn.ac.in)IGNOU has introduced aopen course portal called FlexiLearn which provides a self-learning environment with a list of academic advisors/ course guides to act as mentors. FlexiLearn provides free and easy access to IGNOU's courses without any charges.

(C). National Programme on Technology Enhanced Learning (NPTEL) (www.nptel.iitm.ac.in/)

The National Programme on Technology Enhanced

Learning (NPTEL) is a project funded by the Ministry of Human Resource Development (MHRD). The operational objective of NPTEL is to make high quality learning material available to students of engineering institutions across the country.

(D). Consortium for Educational Communication (CEC)(www.cec-ugc.org/) Consortium for Educational Communication (CEC) was set-up as a nodal agency at the national level to address the educational needs of the country through the use of electronic media. CEC has about more than15000 educational video programmes in 50 subjects developed by different Educational Multimedia Research Centers spread in Universities and Institutions of Higher Education across India. 22 Media Centers are working towards achieving this goal under the umbrella of CEC. NME-ICT, MHRD awarded the project named "Development of Course- ware e-Content for Undergraduate".

(E). Virtual Learning Environment, Institute of Lifelong Learning (ILLL) (www.vle.du.ac.in)The Virtual Learning Environment, Institute of

Lifelong Learning (ILLL) is a unique and innovative initiative of the University of Delhi to provide Open Educational Resources (OER) to the teaching and predictably. And pay for only what you use. Any budget-constrained institution has to like that.

3. Applications and content: Rather than waiting in the software procurement line, get hosted software, datasets, and services so fast you'll have plenty of time to work on your mission.

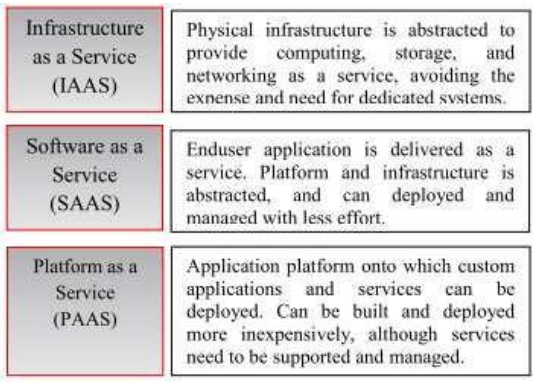
4. Policies and regulations: Proceed carefully, but note how cloud computing can help you meet your institution's compliance requirements.

5. Creative IT: Free your IT department from a keep-the-lights-on approach to foster some creative problem solving that can help teachers better engage their students.

Conclusion

With this proposed system we promise about a single and unique education system and stop the children and the parents to worry about the brand name of schools. This system will also be a boon to stop the coaching culture and helps to save hard earned income of parents. The best part of this system is that the boards' difference which arises due to standard of different boards (different state boards and central governed boards) will come to an end. And no matter a professor of physics taking lecture of class twelfth in Delhi can we view at the same time from a student sitting in a village of Chennai. Thus this new system will spread the quality education to each and every part of India.

Fig.1.0 Cloud Service Model



Paper ID: UGC 48846-833

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