A STUDY ON CLOUD AND ITS USE IN EDUCATIONAL DOMAIN

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ABSTRACT

A Cloud Application Programming Interface (Cloud API) is a type of API that enables the development of applications and services used for the provisioning of cloud hardware, software, and platforms. A cloud API serves as a gateway or interface that provides direct and indirect cloud infrastructure and software services to users. Before some years ago Educational domain worked on paper work with large physical storage. Lot of the projects, internal assessments of the students were keeping physically in the dead stock storage system if strength of students admitted for program is huge then record keeping is tiresome job.

To keep record properly of Each and every student for long time big system is required to the colleges. Since 2013-14 number of the universities implemented CGPA/SGPA for post graduation as well for Technical Education in the India.

Keywords: *Cloud, Educational Domain, Computing, ICT (Information Communication Technology)*

INTRODUCTION:

"Cloud computing" is the next typical step in the advancement of on-demand information technology services and goods. To a large extent, cloud computing will be based on virtualized resources. This paper discusses the concept of "cloud" computing, some of the

issues it tries to address, related research topics, and a "cloud" implementation available today and its utilization in educational domain. Today, almost any business or major activity uses, or relies in some form, on IT and IT services. These services need to be enabling and appliance-like, and there must be an economy of-scale for the total-cost-of-ownership to be better than it would be without cyber infrastructure. Technologies need to improve end-user productivity and reduce technology-driven overhead. In educational sector IT is the primary for an organization, 50% of its efforts not directly connected to its primary work should have to do with IT overhead, even though remaining 50% of educational work might be conducted using electronic means. Elements of a successful information technology (IT) are its ability to become a true, valuable, and economical contributor to Educational domain. "Cloud" computing embraces cyber infrastructure, and builds upon decades of research in virtualization, distributed computing, "grid computing", utility computing, and, more recently, networking, web and software services.

It implies a service oriented architecture, reduced information technology overhead for the end-user, greater flexibility, reduced total cost of ownership, on demand services and many other things are available to the educational organizations in the form of saved records on cloud.

> *"A powerful underlying and enabling concept is computing through service-oriented architectures (SOA) – delivery of an integrated and coordinate suite of functions to an end-user through composition of both loosely and tightly coupled functions, or services – often network based. Educational concepts are component-based system engineering, coordination of different services through workflows, and virtualization".*

In an SOA environment, end-users request an IT service (or an integrated collection of such services) at the desired functional, quality and capacity level, and receive it either at the time requested or at a specified later time.

ICTservices, cloud interface and Educational Domain:

- Education domain holds numerous records estimate for the future when it collaborates with IT. Educational domain is bounded with tracking results and checking performance across the system for management, educators and students.

- Students and Higher education have gone globally. More and more students are tried to pursue learning internationally with various online and offline courses. This has led to a strategic development in students for new business models aimed towards international partnerships. Owing to latest innovative technologies and altering student profiles and attitudes, everyone from faculty and parents, to third-party information regulators and providers are now able to integrate together. As per

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learning evolution and its documentation space available in the server is low and cloud is must element require storing all information timely on Collaborative platforms. Instructional design and social media are merely few methods to stay in lead in this learning revolution.

- The demand for more responsibility in terms of student's placements and success is altering the core institutional procedures in student administration, E-marketing and data management. So to address this demand, there is a need of latest tracking and metrics mechanisms which would aid in demonstrating proof of 'value addition'. All type of student related data should be stored in the big data storage or cloud.

- Advanced Generation Students have big expectations from colleges, they demand digital learning and expect institutions to enhance their skills and get them 'corporate-ready'. Therefore, only those institutions which can render this edge, and much more, would be able to keep their classrooms full of ICT infrastructure. Students want much more from the colleges and institution for their advancements with Webinars, seminars, blogs.

- Lot of the multinational companies checks historical data of each and every student at the time of verifications before offering the jobs. Educational institutes were lazy to keep the record of each and every student with their all external and internal documents with paper record. Cloud service provides better option to keep historical data of student with their internal and external. Internet communication Technology provide solutions that simultaneously cover all industry challenges, improve quality at optimum cost efficiencies as well as aid educational institute to extenuate the risk of a constantly evolving learning environment. Leveraging the newest in enterprise and consumer technology, catering to advanced students, retaining talent and working with organizations to comprehend IT funding.

- **Cloud services improves business value of Education by addressing challenges in the following ways:-**

- **Transformation to cloud**: Enable educational organizations to construct futuristic learning enterprises by providing solutions like enterprise mobility, disaster recovery, security and digital content management. Improves quality of education with global touch. Very few teachers in India utilize ICT effectively but lots of the teachers are illiterate aboutthe internet and computers. Educational institutions not familiar with new methods of the data storage they stores their data in traditional format such as printing material as well as compact discs, DVDS, or Hard disc but now a day's very big data entered into the environment with better security. Clerical business transforms with computer technology to the ICT and Internet business. With cloud

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technology data transferred to the big data storage technology where data stored and can retrieve any time from historical data.

- **Innovative ideas for Educational domain with Cloud and ICT:**

- Educational organizations to co-develop innovatory solutions to meet the needs of evolving students, administration and faculty. We aid clients test, evaluate, deploy cutting-edge technology and business models that alter the manner that provide education in Educational domain.

- **Solutions and Recommendations**

- Document Management System: Various documents related to the students, administrations, Government and affiliation related documents may be analyzed in proper online transaction process mode.

- Data Warehousing and Business Intelligence: Proper utilization of data in Ware housing, minimization of forms, auto generation of reports timely, Special alerts for students and parents, teachers, Head of departments, management authorities, about various Events and outcomes.

- Collaboration of colleges for social workings: As per NAAC accreditation some marks are reserve for social work Checked by the committee. Works such as NSS, NCC and other social activities are calculated here which are represented in front of the NAAC committee.

- APP for students: Now students are well familiar with mobile apps Each and every document must be accessed on the mobile is today's need. System must be compatible with mobile app may easily access to the mobile.

- **Cloud services**: Cloud-based administrations can help institutes decrease costs and quicken the utilization of new innovations to meet developing educational needs. Students can utilize office applications without purchasing, install and stay up with the latest on their PCs. It likewise gives the instructors of Pay per use for a few applications. Lesson arranges labs, grades, notes, and PowerPoint slides – pretty much anything computerized that you use in training is effectively transferred. Your information, content, data, pictures – anything you store in the cloud normally requires verification (ID and secret word, for instance) – so it is not effectively available for anybody. Cloud computing opens up a universe of new conceivable outcomes for students, particularly the individuals who are not served well by customary training frameworks. With cloud computing, one can reach more and more diverse, students.
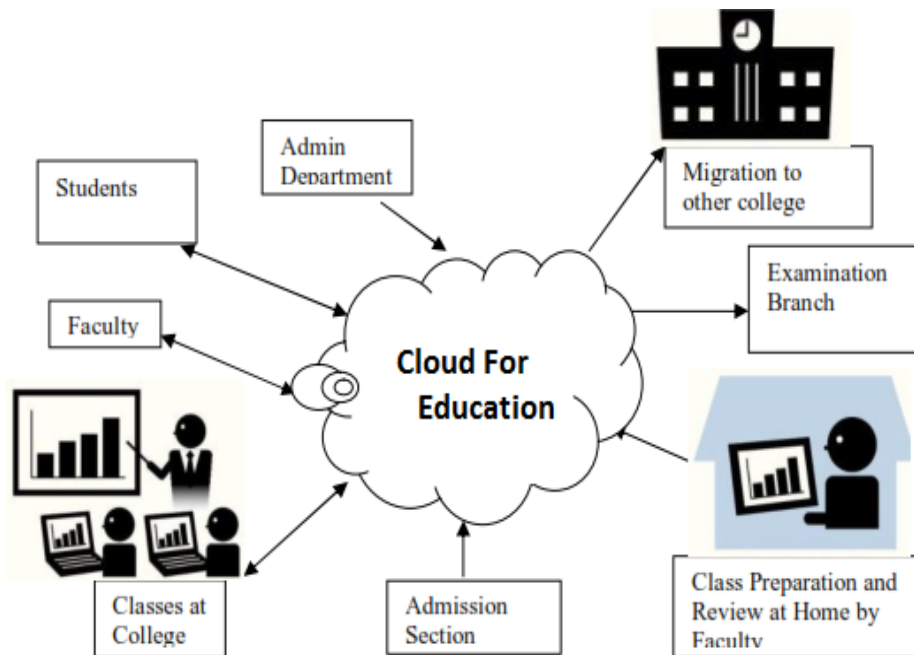
Services attached to Education Cloud

One of the greatest focal points of cloud-based registering is the software-as-an-Service model. Numerous   product projects are presently accessible either free or on an ease membership premise, which considerably   brings down the expense of key applications for students. Education cloud will definitely diminish the carbon impression. In these and different ways, cloud computing is lessening costs, as well as making a situation where all students can have admittance to amazing instruction and assets. Whether you are a chairman, an instructor, a student, or the guardian of a student, now is an incredible time to investigate how cloud-based applications can advantage our youngsters, and your school.

Education application's development, maintenance & management

Consulting and integrating services for students:

Today, education is undergoing change at an unprecedented rate. The economic and social realities require changes to the ways education is delivered, and today's educators must be able to use technology to facilitate learning and help students excel. The convergence of IT and teaching methodologies will revolutionize the way students learn and will drive both students and faculty to higher level of creativity, performance, and interaction. The education institutions are moving towards more unified, integrated systems that support greater levels of collaboration, communication and service delivery. Campus Management's IT professionals can evaluate your current processes and compare them to best practices at leading institutions to help identify key areas for improvement, including processing time,

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resource consumption, utilization of people, equipment and technology, compliance, process bottlenecks, and business exposure.

Today's colleges and universities aspire to succeed and to lead in an increasingly complex environment. They strive to deliver excellence in teaching and learning and business, while increasing operational efficiencies. The challenges in doing so, however, are numerous. First, they must meet the changing expectations and needs of students. Student bodies have grown more diverse yet share one key trait: they live in an increasingly connected, mobile, information-rich world. Because of this, many students have come to expect (or even need) online, personalized access to information, services, classes, and professors. We provides comprehensive infrastructure assessment & consulting, implementation & migration, project & program management, security, and technology support services specifically designed for today's higher education customer. We offer end-user computing solutions including workspace management and messaging services; wireless network; enterprise computing services including data storage and server & systems support; and information assurance, business continuity, and disaster recovery services.

Infrastructure services Classroom teaching and Cloud services :

Infrastructure as a Service is the most straightforward of the four models for delivering cloud services is the virtual delivery of computing resources in the form of hardware, networking, and storage services. It may also include the delivery of operating systems and virtualization technology to manage the resources. Rather than buying and installing the required resources in their own data center, companies rent these resources as needed. Infrastructure as a Service abstracts hardware (server, storage, and network infrastructure) into a pool of computing, storage, and connectivity capabilities that are delivered as services for a usage-based cost. Its goal is to provide a flexible, standard, and virtualized operating environment that can become a foundation for PaaS and SaaS. IaaS is usually seen to provide a standardized virtual server. The consumer takes responsibility for configuration and operations of the guest Operating System (OS), software, and Database (DB). Compute capabilities (such as performance, bandwidth, and storage access) are also standardized Service levels cover the performance and availability of the virtualized infrastructure. The consumer takes on the operational risk that exists above the infrastructure. Infrastructure as a service (IaaS) is a form of cloud computing that provides virtualized computing resources over the internet. IaaS is one of the three main categories of cloud computing services, alongside software as a service (SaaS) and platform as a service (PaaS).

- **Private social networking portal where parents, students, teachers, etc., can come and discuss on their child's progress.**

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- **Online portals related to internal trainings,** etc: The online method of learning is best suited for everyone. This digital revolution has led to remarkable changes in how the content is accessed, consumed, discussed, and shared. Online educational courses can be taken up by office goers and housewives too, at the time that suits them. Depending on their availability and comfort, many people choose to learn at weekends or evenings. Unlike classroom teaching, with online learning you can access the content an unlimited number of times. This is especially required at the time of revision when preparing for an exam. In traditional form of learning, if you cannot attend the lecture, then you has to prepare for that topic on your own in Learning, you can attend the lectures whenever you want with ease. A prime benefit of learning online is that it makes sure that you are in synchronization with modern learners. This enables the learner to access updated content whenever they want it. Online Learning enables educators to get a higher degree of coverage to communicate the message in a consistent way for their target audience. This ensures that all learners receive the same type of training with this learning mode.

- **Student faculty(stakeholders survey):**

- As part of a process of quality assuring its work, the Inspectorate of the Department of Education and Skills invites principals, teachers, chairpersons of boards of management or their nominees and chairpersons of parents' associations or their nominees, to complete this survey. The survey is short and should take less than 10 minutes to complete. You will be asked for your views on the whole-school evaluation or whole-school evaluation, management, leadership and learning process are you asked to indicate your role: principal, teacher, chairperson/nominee of a board of management, chairperson/nominee of a parents' association. Principals and teachers are then asked to indicate whether your school is a primary or post-primary school. All respondents will then be asked if they wish to complete the survey in English Depending on your selection, you will be directed to the relevant survey and asked to insert your username and password to begin completing the survey. The username and password are designed to assure your anonymity as a respondent. You will then be asked a series of questions and you should simply click on the answer that best reflects your opinion. There are no rights or wrong answers. It is your perspectives that matter. At the end of the survey, you will have an opportunity to provide additional feedback on the evaluation process in your school/college, if you wish to do so.

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