CLOUD COMPUTING TECHNOLOGY IN EDUCATION SYSTEM

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Abstract

In ancient India gurukul were the temples where the students received knowledge and get educated. The clock rotates and with the entrance of British rule the position of these gurukul were taken by schools. The sole purpose of starting schools was to make education available to each and every person in the country without the difference of cast, creed, or any type of financial issues. But till now hundreds of years have been passed but still there are places in India where getting proper education is just a dream. There are isolated areas situated not only at villages but also outside the major cities where schools are not present, if schools are there then no good teachers available. At several places they have only middle schools and no high school. Thus these type of problems keep emerging out and put hindrance to dawn of education to reach everywhere in India. Various surveys conducted by government put ahead the result that present system of education is not worth and has many loop holes associated with it. Cloud computing is the knowledge which has built by years of study in Distributed systems, grid computing etc and thus by using this technology we can make available the answers to all the short comes and promise to provide quality education to each and every citizen of India

Introduction

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 and labs facilities seriously causes affects 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 we have the hope that we can overcome all these short comes and maintained a proper centralized system where all the authorities can check the education system from each and every aspects and continue monitor and guide the system. They not only check the needs of the institutions but also ensure that quality education ids provide to every student and also his attendance, class performances etc can be effectively maintained.

Cloud Computing

Cloud computing technology is the result that has been generated with years of hard work in grid computing, parallel computing and virtualization. Cloud computing as a new model of IT promise stipulation of computational resources on demand and abstraction of technical details by the clients. The various types of services provides by the cloud are:

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 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.

IT in present education system

IT and education system, both the terms are not in any sort of relation in the present day situation. Role of IT is very partial in school level education system. Entire work in school are mostly done in the form of hand written clerical work. We can witness for taking attendance teachers have attendance registers, Fee in most schools are recorded on the fees registers and many other work mostly done in the form of paper work and there is no system to monitor a student at a particular day or particular time thus as a result no monitoring can be done by the government. Also the quality of teachers on whom we are putting our faith that they will tech our wards at very best are not professional experts and they are adopted as a faculty because they are ready to work at minimum salary. Also the parents cannot see the usual or monthly growth of their wards and no structure for daily monitoring of attendance of students(in both private and government schools)and teacher(in government schools) .

Implementation of cloud computing technology

Cloud computing technology promises to provide solutions for all the desired problems mentioned above. Once any of the computer system connected with internet gets started then it will directed the student, teacher or in better words a whole institute to the cloud. In cloud both the students and teachers have to login with their separate id and from here the first best feature that is to monitor attendance of teacher and student is possible, secondly Live and recorded both type of the lectures can be seen by the student. The best part of this facility is that a student studying at any school and another student studying at any big name school both are attending the same tutorial from a highly skilled faculty at the same time. Thirdly entire examination process is changed and now the exams will be conducted on cloud and the results of each and every exam that is even a class test is reported directly to the concerned authority. With this new system parents can be able to monitor their ward attendance and his growth in the session. This new system also helps the students to prepare well for the upcoming competitive exams like NTSE,IIT JEE,AIEEE,PET,PMT etc and stop the fashion of joining big coaching and spending their parents hard earned income.
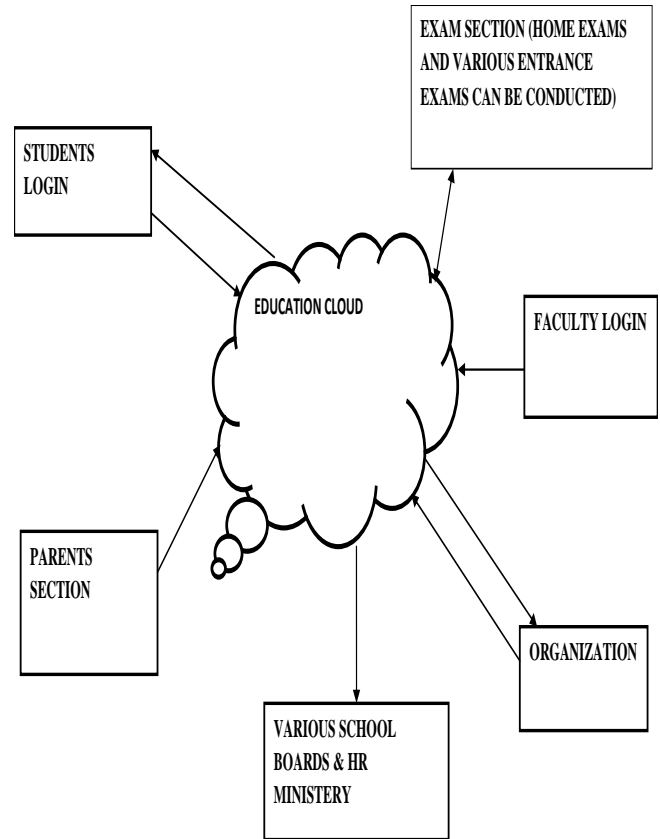

Fig 1: Various services attached to Education Cloud

Figure 2: Actual function by each service.

Advantages

1. Benefits of better services

a) **Elasticity of service:** In a single moment many students and teachers can store data, and the best part is that there is no limitationof space and thus user's capacity to store data increase to a larger extent.

b) **Quality of service:** Service quality is the most important feature and in maximum cases where exact necessities have to be fulfilled by the outsourced resources and outsourced services.

c) **Availability**: Availability of the services is the most important and desired by the user using the education cloud.24/7/365 is the availability that is needed by this system without failure

2. Economic and technical Benefits from education cloud

a) **Reduction of cost** - Cloud system that we are proposing is friendly to our pockets and it will reduce the cost by allowing us the facility of Pay per use. That is we have to pay only for the resources which we are using and thus it does not put any financial burden on any of the institute, government or student.

b) **Focus on education only** – Schools and governments are now free to focus on there goals that is making more research facilities available to the students and making the environment global in spite wasting time on worrying about the buildings, labs, teachers etc.

c**) Going Green**- Education cloud will surely reduced the carbon footprint.

d) **User friendly** – This new facility is user friendly and no need to worry about the complexity. It is easy to understand and easy to operate.

e)**Free from boundation of locations**: From anywhere a teacher can login and take the lecture. Also from other layers are also important and there use is shown in the diagram 2.
anywhere a student can login the check his grades, submit assignments etc.

f) **Management of data** – A large amount of data is generated by each school and thus to maintain them effectively and to use it appropriately when needed is the best feature of the education cloud.

Strategy about implementation of proposed system
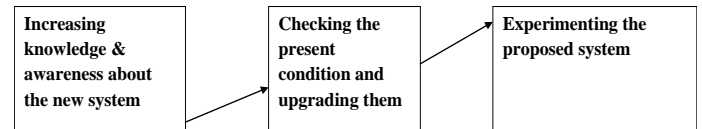
Fig 3: Strategy about how one should proceed.

1. Increasing knowledge about the present system: This concept is entire new and thus it is necessary for the teachers first to understand it. When the teachers understand it then they can easily explain it to students and parents very easily.

2. Many places are there in India in which computer is a big machine. There we can hardly find any computer expert and thus we have to arrange a one well versed engineer for here. Similarly we have to check the internet availability, speed of the internet etc. Thus if there are facilities then well and good else we have to upgrade them.

3. Now this is the major step in which we will run our proposed system and check the results and cover all the errors and finally recheck it again and again .

Security of our important data

With this education cloud we are saving our important and crucial data in one place and it will be easy for hackers to get it at once. One more important point of concern is that we do not have cloud in our country and if we are using other countries cloud then that also a matter of concern. So the best solution for this outsourcing of our data is that CBSE board make a education cloud for all the school (both state and central boards affiliated) under 1 roof and thus we do not need to send our data outwards to other countries and thus our crucial data will remain safe.

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.

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