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A study of application of cloud computing for qualitative teaching and learning

[1] Mukund A Kulkarni, [2] Dr. SS Gulavani
[1] Assistant Professor, Bharati Vidyapeeth, Deemed to be University, Pune, Institute of Management, Kolhapur, Maharashtra, India
[2] Associate Professor, Bharati Vidyapeeth, Deemed to be University, Pune, Institute of Management, Kolhapur, Maharashtra, India

Abstract
The Educational Institutes are offering various academic services online through cloud computing technology. Due to the demand from the students community. The use of Internet, Smart phones and various other facilities that are making the students use the various applications for the serious study. The Universities have already launched various apps that are widely used by the students. The authors have studied various educational applications that are used and their use will increase in near future. Cloud Computing in education has bright future ahead due to wide applications of Internet to the society. All this is done to improve the quality of teaching and learning in the Institutes.

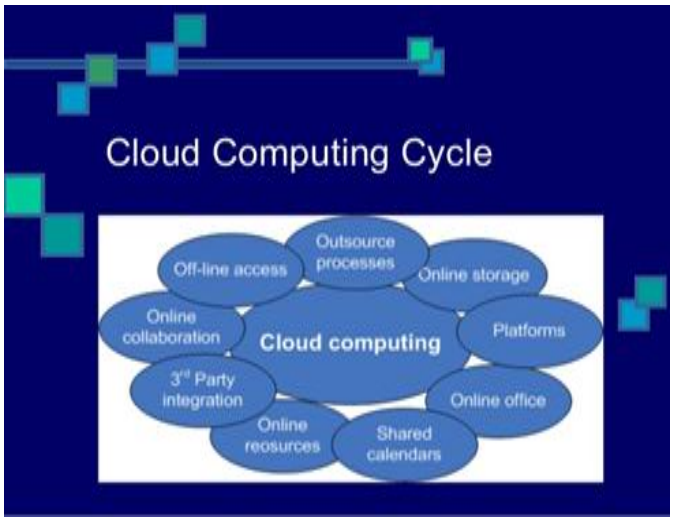
Keywords: cloud computing, education, client, web portal, security, online, browser

1. Introduction
The new technology of cloud computing is playing important role in industries and now the main sector of education can be made best by this. With its cost efficiency, enabling of collaboration and sharing of resources, and its ability to improve access, cloud computing is likely to play a big role in the classrooms of tomorrow. This technology is widely used in Industries for performing various function in the Industries. Educational Activities can also be done through this technology. Cloud computing is an information technology (IT) paradigm that enables ubiquitous access to shared pools of configurable system resources and higher-level services that can be rapidly provisioned with minimal management effort, often over the Internet. Cloud computing relies on sharing of resources to achieve coherence and economy of scale, similar to a utility.
Third-party clouds enable organizations to focus on their core businesses instead of expending resources on computer infrastructure and maintenance. Advocates note that cloud computing allows companies to avoid or minimize up-front IT infrastructure costs. Proponents also claim that cloud computing allows enterprises to get their applications up and running faster, with improved manageability and less maintenance, and that it enables IT teams to more rapidly adjust resources to meet fluctuating and unpredictable business demand. Cloud providers typically use a "pay-as-you-go" model, which can lead to unexpected operating expenses if administrators are not familiarized with cloud-pricing models.

2. Areas of cloud computing in education covered
The many academic areas covered in this technology some them are as listed below.

- Cloud based Research
- Cloud Platform for Teaching and Learning
- Cloud Services in E- Learning
- Collaboration and Group Learning
- E-Leaning
- Education Cloud
- Open Source Cloud Computing
- Teaching and Learning in the Cloud

3. Cloud computing cycle

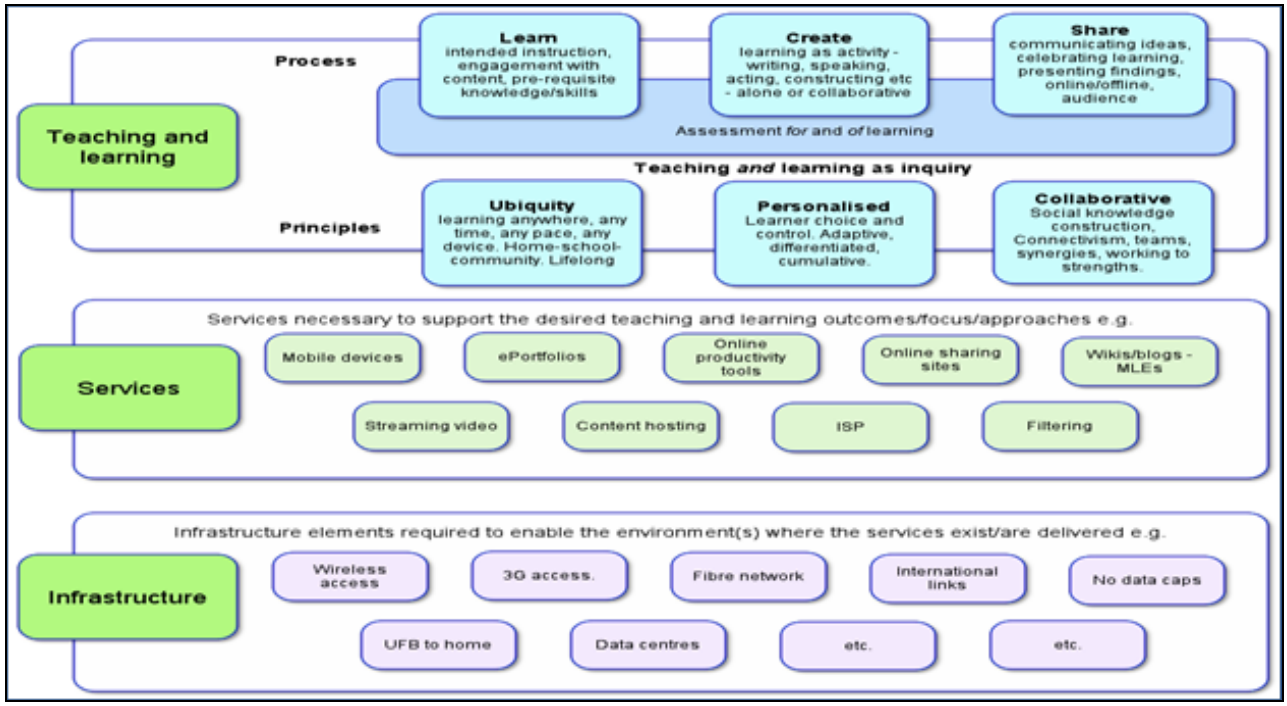


***Source*:** https://in.images.search.yahoo.com/yhs/search

Fig 1

The above figure shows the cloud computing cycle in which various stages are shown.

4. Process of teaching and learning through technology

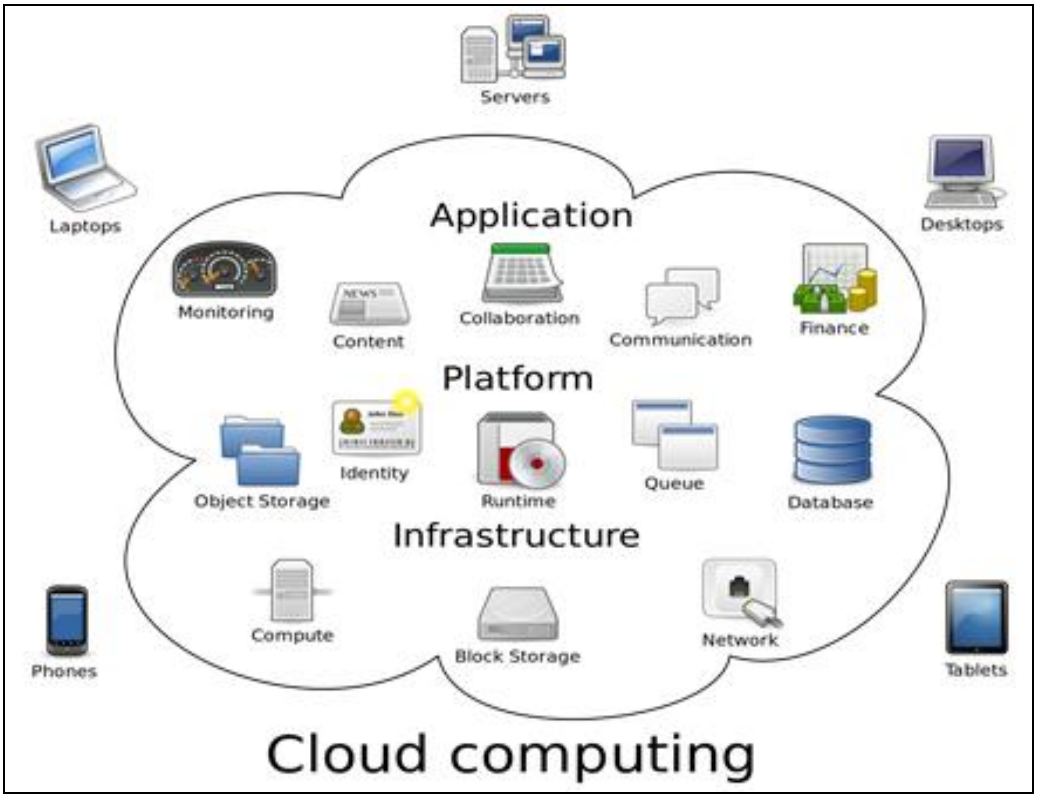


***Source*:** https://in.images.search.yahoo.com/yhs/search

Fig 2

The above figure shows the teaching and learning, services and Infrastructure in detail.

5. Using Cloud Computing Technology for Education



Source: https://en.wikipedia.org/wiki/Cloud_computing

Fig 3

The above diagram shows the various components of cloud system used for educational applications. The main system works on cloud for managing the knowledgebase and is widely used in present IT Sector. The various devices like phones, laptops, servers and desktops can be used as output devices to share the educational knowledge.

6. Educational Enterprise Resource Planning (ERP) System

The many educational Institutes are implementing an educational ERP system to automate its administrative activities. This project is divided into different stages. Presently student and teacher data capturing stage is widely used which will lead to online automation of student attendance across the university on mobile as well.

7: Academic Administration System

Academic Administration System (AAS0 automates and integrates the activities involved in academic administration. It includes components such as Programme Information, Student Attendance, Academic Monitoring, Extra-curricular Activities, Internal Assessment and Student Documents. This system works on cloud keeping all the data on cloud and access whenever required through program.

8. Benefits of Cloud Computing

1. Globalize your Educational Services
2. Reduce spending on technology.
3. Reduce capital cost Improve accessibility and Improve flexibility
4. Less personal required once installed
5. Monitor project more effectively and Achieve economic of scale

9. Issues in Cloud Computing

1. Reliable Internet connectivity is required
2. Infrastructural Facilities for networking are required.
3. High Speed Internet Connectivity.
4. Experts for Installation and Maintenance of the systems are required.
5. Cost required in development of such systems
6. Security and Protection issue.
7. Legal Issues.

10. Conclusion

As we move forward in higher education and look for the quality in teaching and learning the use of cloud computing will be mile stone in making the students better in all the subjects if the subjects are taught in proper manner. The advanced tools are important source to improve the quality of education. The cloud computing will have memory usage benefit and all the best software's used to extract the knowledge can be used for the students. The Authors have done decent contribution in creating the awareness in this important topic of education and its quality.

11. Acknowledgement

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