### Mobile learning process for Students by using Cloud computing

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#### **Abstract**

Nowadays E-learning process, online learning process provides effective teaching methods for students in various educational systems. Students are able to access learning material and videos, image files, text based files through mobile devices in cloud environment. Students are able to get this information at any time by using mobile learning process in cloud computing environment at any location. This type of learning process is revolutionary educational learning process and provides quality of education for students in various academic institutes.

#### 1. Introduction

Learning methods are changed based on the student needs. Various learning methods are used for student educational system such as Distance learning methods, Online learning methods, Pedagogy methods, assessment methods, Elearning methods etc. Now a day's wireless technology is used for getting learning process to the students with the help of Mobile devices[2]. Cloud environment is applied for getting learning resources of educational learning process at any time at any where through mobile devices. This paper presents design process for mobile learning of educational system. Design process for M-learning based Educational system in Cloud computing environment is presented in section 3.In section 4 Questionnaire design is given. Results and discussions in section5.Conclusions are in sections 6.

#### 2. Related work

Many researchers have been done work on quality of education for students. Previously Distance learning process, Virtual learning process, Classroom based learning process, Comprehensive learning process are used for learning techniques of students[4]. Discussions are made for the improvement of quality of Educational system by Paduri and Conradie. Some of the researchers are performed on limitations of E-learning system. CarstenUllrich etal provides design structure of M-learning process which gives interactive learning process for students. Xuefei Chen et al discussed the various modes of learning process such as acceptance-based mobile learning and autonomous mobile learning process.

# 3. Design process for M-learning based Educational system in Cloud computing

Actually M-learning system is developed by using E-learning and Distance learning process. Cloud computing techniques are applied for M-learning process [1].

M-learning application is downloaded from the server to client mobile device through the wireless internet connections. Online applications in which server provides various services to the clients with the help of mobile browsers. In this case when we want to download the whole amount of M-learning application from server to client through mobile browsers. It requires more memory and storage capacity of the mobile device is very less for storing the learning content. To overcome these problems M-learning applications are able to develop more efficiently with the help of Cloud computing techniques.

In Mobile-learning system students are able to choose any topic from any source without storing any data or anything in their device [8]. Students are able to use services from datacenters when they are in small villages.

Student's information which includes with attendance, instructors and their reports. To know the progress of student, parents can communicate with their instructors by using interactive classroom.

#### Previous session component

The last session is stored in the system. It allows users to open a particular session.

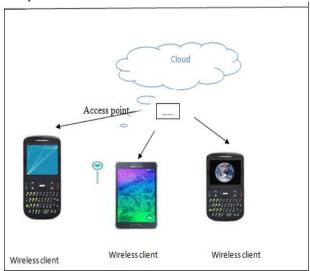


Fig 1: M-learning process for students in cloud environment

#### 3.1. Learning course material and Labs component

It provides various services for students and learning target, objectives of course, learning plan, online materials. Cloud computing is a new technology for introducing new learning process to students by sharing information on the university platform. Students can able to retrieve the information at any time with the help of cloud environment by using internet connection.

Students can share learning resources, Labs components and tests are performed on their exercises with in the given time and date through mobile phones [3]. It provides Collaborative learning process and communication environment is supported by the cloud. This method provides adequate educational environment for lectures, students to improve the learning process at educational institutes [11].

Cloud computing can be used for any type of users in all different criteria such as hardware, software, infrastructure etc. Users able to pay the amount based on their usage only. This type of system is used for implementation of educational system by using cloud computing. The important aspect of M-learning process is learners are able to get the knowledge from the portion of resources .These resources are shared at anytime, at anywhere when they want to need with no cost.

In this type of learning system, Students are able to learn any topics based on their choice. These services are performed from datacenters of cloud to access the topics through mobile phones when they are in small village or remote place [3]. Students are able to register and get credentials for usage of web services. It can be used to download any mobile application which is in mobile and access content from the cloud through internet connections. Various topics are selected based on their needs. We can share this information among different educational systems.

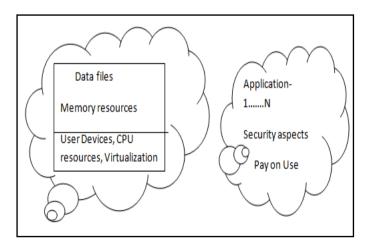


Fig 2: Resources for Cloud and Client Model Infrastructure [3]

#### 4. Questionnaire design

An education tool is used by using cloud computing for the creation of a course about image/video processing.

Students can able to understand various concepts of learning material through mobile phones [10][12].

S.NO	Question	Agree	disagree
1	Design process of Mobile learning Based on Cloud computing is useful for Educational institutes .	80%	20%
2	Is it learning educational tool is useful Mobile cloud application process for increasing effective learning process.	60%	40%
3	Do you know Mobile Cloud application Platform is used for educational system in future.	75%	25%

## TABLE.1 Questionnaire design for an Education tool is used by using cloud computing

Mobile cloud application computing design application tools used for universities in class rooms

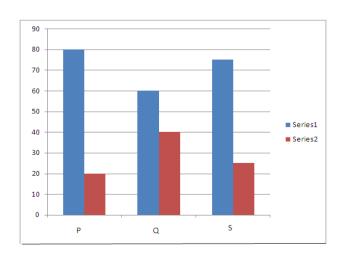
**X**= Design process of Mobile learning Based on Cloud computing is useful for Educational institutes.

**Y**= Is it learning educational tool is useful Mobile cloud application process for increasing effective learning process.

**Z**= Do you know Mobile Cloud application Platform is used for educational system in future.

S. No.	Question	Agree	Disagree
1.	P	80%	20%
2.	Q	60%	40%
3.	S	75%	25%

**TABLE.2** Questionnaire design for Mobile cloud application computing design application tools



### Fig 3: Design of Mobile application by using cloud computing tools in class rooms [12]

#### 5. Results and discussions

This type of Design process for a mobile learning system which is relevant with model of Mobile Cloud Application and Cloud Communication of an academic application design model process are very important. Mobile Cloud application design model for learning system is useful for different categories of courses which are in information technology [6].

Model of Mobile cloud Application which is used in learning system for students. This model is used for sharing the information of course material. Audio files, video files, Text document which will be accessed from the cloud. Download that material by the mobile user with the help of mobile devices. Self assessments are conducted for identify the performance of teachers.

#### 6. Conclusions

- Cloud based Mobile learning process is useful for students, staff, Trainers, Institutions.
- It is mainly useful for students which are living in rural parts.
- > It provides good quality of education.
- ➤ In future Government take initiative for the implementation of this system in schools, colleges.

#### 7. References

- [1] http://www.mobilecloudcomputingforum.com [accessed on 15 July 2012.
- [2]N. Mallikharjun Rao ,C.Sasidhar, V.Satyendra Kumar, "Cloud Computing through Mobile learning (IJACSA) International Journal of Advanced Computer Science and Applications, Vol. 1, No. 6, December 2010.
- [3]N.Mallikharjuna Rao, V.Sathyendra Kumar, D.Sudhakar and P.Seetharam, —Cloud computing approaches for educational institutions||, International Journal of Computational intelligence and information and Security, ISSN: 2150-5570, Vol 1 No 7 page no: 20-28, IJCIIS September 2010.
- [4] Architecture, Applications, and Approaches' Accepted in Wireless Communications and Mobile Computing Wiley.
- [5] Foster, Y. Zhao, I. Raicu, and S. Lu, "Cloud Computing and Grid Computing 360-Degree Compared," in

Proceedings of Workshop on Grid Computing Environments (GCE), pp. 1, January 2009.

- [6] R. Buyya, C. S. Yeo, S. Venugopal, J. Broberg, and I. Brandic, "Cloud computing and emerging IT platforms: Vision, hype, and reality for delivering computing as the 5th utility," Journal on Future Generation Computer Systems, vol. 25, no. 6, pp. 599 616, June 2009.
- [7] Y. Huang, H. Su, W. Sun, J. M. Zhang, C. J. Guo, M. J. Xu, B. Z. Jiang, S. X. Yang, and J. Zhu, "Framework for building a low-cost, scalable, and secured platform for Web delivered business services," IBM Journal of Research and Development, vol. 54, no. 6, pp.535-548, November 2010
- [8] Chen, J. Liu\*, J. Han, and H. Xu, "Primary Exploration of Mobile Learning Mode under a Cloud Computing Environment," in Proceedings of the International Conference on E-Health Networking, Digital Ecosystems and Technologies (EDT), vol. 2, pp. 484-487, June 2010.
- [9] H. Gao and Y. Zhai, "System Design of Cloud Computing Based on Mobile Learning," in Proceedings of the 3rd International Symposium on Knowledge Acquisition and Modeling (KAM), pp. 293 - 242, November 2010.
- [10] Jian Li, "Study on the Development of Mobile Learning Promoted by Cloud Computing," in Proceedings of the 2nd International Conference on Information Engineering and Computer Science (ICIECS), pp. 1, December 2010.
- [11] W. Zhao, Y. Sun, and L. Dai, "Improving computer basis teaching through mobile communication and cloud computing technology," in Proceedings of the 3<sup>rd</sup> International Conference on Advanced Computer Theory and Engineering (ICACTE),vol. 1, pp. 452 454,September 2010.
- [12] Boukari Souley, David Emmanuel Aniobi, "A Framework for Mobile Education System for Higher Institutions in Nigeria", Journal of Software Engineering and Applications, vol- 7, pp 791-816, 2014