Cloud Computing And Education Sector Cost, Benefits, Barriers And How To Overcome Barriers

Atif ishaq
SZABIST,
MS (Information Technology)
Dubai,
atiishaq@yahoo.com

Dr Muhammad Nawaz Brohi
SZABIST
Head of campus
Dubai, UAE
mnbrohi@szabist.ac.ae

Abstract—**Aimed at cloud computing alliance with education sector. The main characteristic of cloud computing over e-learning and the cost, barriers and benefits while implementing cloud. Every technology has pros and cons so for this cloud computing so, in this paper we further discussed what are the barriers and how to overcome these barriers so we can make more secure our data on the could. In the future we can make sure these security issues and privacy issues not occur after successfully implementing framework.**

Keywords—Cloud Computing; e-learning; Barriers; Cost; Reduce Barriers;

I.   Introduction

Computing is transmuted to a mode commoditized and mannerly delivered alike to tradition such as water and electricity .in this kind of models services access depends upon the used requirements without respect to where facilities have been hosted and how they will be delivered. Many computing prototypes have promised us deliver this utility computing vision and these include Grid, cluster computing, and recently cloud computing.[2]*There are many definitions of the cloud and the efforts from the marketing somehow blurred. Cloud is much than just a monetary model. Technologies like cloud can be conveyed in many techniques and in different arrangements and formats.*

II. CLOUD COMPUTING

A.   Essential Characteristics:

- On-demand self-service:
Cloud computing is platform that offers on demand resources, i.e. when the user needs it. In order to achieve this objective, automation and self-service mechanisms are being used. [2]
- **Broad network access**:
Cloud computing platform can be accessed by both thin and thick clients (PDA, Laptops, Smart phones etc.) over a small or a large network i.e. Internet.[2]
- Resource pooling
The cloud service provider uses a multicast model in order to serve multiple clients concurrently, with dissimilar and discrete physical and virtual resources are being allocated dynamically based on users' need.

- Online Education or e-learning
Amid the most recent years, the nature of the Internet was always showing signs of change from a spot used to peruse website pages to a situation that permits end-clients to run programming applications. Intuitiveness and cooperation have turned into the watchwords of the new web content. There is doubtlessly the future fits in with the Web 3.0 (additionally called the insightful Web). There are a few distributed computing administrations suppliers that offer backing for instructive frameworks. Among them are Amazon, Google, Yahoo, Microsoft and so forth. (Using Cloud Computing for E-learning Systems) Information innovation instruction of schools was for the most part directed in PC classroom. [3]

III.   E-learning communication technologies

Asynchronous exercises use innovations fro example online journals wikis, and examinations sheets .Members may trade thoughts or data without other members contribution in the meantime e-mail is likewise offbeat since stand out members should be online to send or receive an e-mail

Synchronous activities involve all participants exchanging ideas and information at the same time. examples of synchronous communication include face-to-face discussion, online chat sessions, and virtual classrooms or meetings. [4]

IV.   Cost and benefits:

A.   No Boundaries, No Restrictions:
Alongside locational limitations, time is one of the issues that learners and instructors both need to face Learning. On account of up close and personal taking in, as far as possible participation to a gathering of learners who can take part in the range, and on account of time, it restricts the group to the individuals who can go to at a specific time. [5]

B.   More Fun

Outlining a course in a way that makes it intuitive and fun through the utilization of sight and sound or the all the more as of late created routines for gamification improves your engagement element, as well as the relative lifetime of the course material being referred to.

C. Cost Effective

This is coordinated to both learners and educators, yet there is a decent risk that whatever your part you needed to pay over the top measures of cash eventually to obtain overhauled variants of reading material for school or college.[6]

D. It Just Fits!

As companies and organizations adopt technologies to improve the efficiency of day-to-day operations, the use of the internet becomes a necessity.

V. CONCERNS THAT ARISE WITH E-LEARNING

A. Isolation

Though e-learning offers simplicity, adaptability and the ability to remotely get to a classroom in the understudy's own particular time, learners may feel a feeling of disconnection. This is on account of learning online is a performance representing the most part, [7]

B. Health Related Concerns

E-learning requires the utilization of a PC and other such gadgets; this implies eye fatigue, terrible stance and other physical issues may influence the learner. At the point when running an online course it's a decent practice to convey rules about right sitting stance and work area.

VI. BARRIERS FOR LEARNING

Things are fun at to start with, however then the learner gets to be mindful of their impediments and is baffled by the crevice between what they need to perform and what they are able to do. Trepidation of humiliation, uncertainty, and deficiency can inch in and rapidly attack the learning procedure.

A. Learners

One of the fundamental critical components in training is learner. Indeed in instruction we instruct learners to learn. Learner certainty and skill in utilizing PCs e-learners felt sure about utilizing PCs. Around a third (36%) said they were exceptionally certain about utilizing PCs for an extensive variety of tasks.[8]

B. Access to computing facilities at home

Before starting the course we have to check the learner's facilities at their home. It is one of the most important factors for learners to help them in their communication.

C. Computer provision at college

Alongside, setting up gear's at home, we require PC procurement for school or school before beginning the course. Attitudes towards PC and ICT utilization in the same examination on grown-up learners, they were gotten some information about their dispositions towards PC use as a component of their course and more customary techniques for learning. [8][9]

VII. Ways to Reduce Emotional Barriers in E-Learning

A. Set Proper Expectations

Individuals need to comprehend that what they are encountering is ordinary and that any uncomfortable sentiments are a typical piece of the learning background.

B. UtilizeGamification

While numerous individuals accuse computer games for keeping children stuck to a screen as opposed to being outside on a sunny day, computer games can offer various advantages.[10]

VIII. SOLUTION AND FUTUREWORK

There can be many ways to implement cloud in education with sector after avoiding all the barriers but there are many chances of security and privacy issues. In the future we should look after the while implementing technologies with other. Securities and privacy issues are main factors nowadays for all kinds of standards and technologies. After implementing we should define the entire possible framework.

References

[1] Buyya, Rajkumar, et al. "Cloud computing and emerging IT platforms: Vision, hype, and reality for delivering computing as the 5th utility." Future Generation computer systems 25.6 (2009): 599-616.

[2] .Mell, Peter, and Tim Grance. "The NIST definition of cloud computing." (2011).

[3] Pocatilu, Paul, Felician Alecu, and Marius Vetrici. "Using cloud computing for E-learning systems." *Proceedings of the 8th WSEAS international conference on Data networks, communications, computers.* World Scientific and Engineering Academy and Society (WSEAS), 2009.

[4] Hrastinski, Stefan. "Asynchronous and synchronous e-learning." *Educause quarterly* 31.4 (2008): 51-55.

[5] Kondo, Derrick, et al. "Cost-benefit analysis of cloud computing versus desktop grids." *Parallel & Distributed Processing, 2009. IPDPS 2009. IEEE International Symposium on.* IEEE, 2009.

[6] Childs, Sue, et al. "Effective e-learning for health professionals and students—barriers and their solutions. A systematic review of the literature—findings from the HeXL project." *Health Information & Libraries Journal* 22.s2 (2005): 20-32.

[7] Ong, Chorng-Shyong, Jung-Yu Lai, and Yi-Shun Wang. "Factors affecting engineers' acceptance

of asynchronous e-learning systems in high-tech companies." *Information & management* 41.6 (2004): 795-804.

[8] Barkema, Harry, John Bell, and J. M. E. Pennings. "Foreign entry, cultural barriers and learning." *Strategic management journal* (1996): 151-166.

[9] Galusha, Jill M. "Barriers to Learning in Distance Education." (1998).

[10] Brauner, Cheryl Boydell, and Cheryll Bowers Stephens. "Estimating the prevalence of early childhood serious emotional/behavioral disorders: challenges and recommendations." *Public Health Reports* 121.3 (2006): 303