An Emerging Trend of Cloud Computing In Education Sector

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Abstract:

Technology plays a very significant role in our day to day life. There is a huge demand for internetbased applications in different areas. Education is one of the emerging sectors where online applications have tremendous scope in e-learning technology. It helps knowledge based learning, build confidence and interest among learners. Cloud computing in education motivates learners to learn at their own pace. This research paper focuses on an emerging trend of cloud computing in the education sector. IT also specifies benefits and challenges faced during adopting cloud technology into the education sector. There is a huge impact of the pandemic on the education sector. In today's century education is one important component that is needed to make our dreamscome true and cloud computing provides enormous E-learning facilities for the student-centric education system.

Keywords: Cloud computing, education sector, pandemic days, distance learning, technology, virtual, E- learning.

1. Introduction:

Nowadays cloud computing is one of the biggest trends. Rapid increases in demand information in education has computer technology it pleasure very important role in education every E- learning depends upon the internet devices in today's generation are assign less internet wifi based on low cost of cloud computing enable to student access electronic panting and mobile devices to the internet 24 hours in a days. Cloud Computing provides multiple resources of information technology (e.g. storage, communication, collaboration, via services offered by cloud service provider (CSP)).

The Benefits of the future enhance over the past few years the future of cloud computing has changed. Today the world is strongly connected with one another with the help of digital

technology and cloud computing. The current situation of covid -19 pandemic days' people work from their home but they have to communicate and collaborate online during the lockdown situation. Cloud computing technology helps to provide commendable service in the healthcare domain and provides an advanced infrastructure for facilitating digital transformation.

2.   Literature review:

In this education system facing many challenges, there are almost large areas where research andinvestigations have been done in education. The article explains the technology being adopted in the education system. According to the author education has an important role in developed country in present scenario classroom teaching has become more advanced education with technology (Kiran yadav,2014), Covid -19, a pandemic that was caused in the year 2019.According to (Asadi Z., Nadria, h, 2019) this is an impact on covid -19 all over the world. Due to this pandemic situation all the sector are affected among which the education sector has seen a drastic change in the way of technology and learning (Azorin. C, 2020) the education institute all over the world are closed .and that time everyone he adapted online learning this pandemic has caused everyone to adapt new ways of learning and teaching platform like zoom, WebEx, Microsoft teams, Google meet have student connected.

3.   Research Methodology:

This paper is draft by collecting the secondary data secondary data includes research papers, datafrom graphical representation, data from various website such as Javatpoint, w3 resources .com this paper is type of conceptual based paper which brief study of emerging trend of cloud computing in education and also has data about impact of covid-19 in education too.

4.   Cloud computing:

Cloud is a platform which is almost a virtual environment which gives an efficient access for users. Cloud computing concept has a common way of working called pay-as-per-use. Cloud computing have deployment models by which one can use a cloud computing like public, private, community, hybrid cloud computing provide services such as a platform services PAAS softwareas a service ,SAAS infrastructure as a service all the cloud provider provides such services whichis based on pay-as-per-use condition all the cloud provider have their private datacenter and data marts, they also follow strict norms of the government regarding renting the cloud. Cloud Computing provides virtualization which is a development of physical hardware and software intoa virtual atmosphere in the cloud, we get hardware, software and all other infrastructures that reduce the cost of the institutions, especially IT related institutions cloud concepts widelyencouraging the terms efficiency, reliability, portability, flexibility and security.

5.   Cloud Computing in Education:

Education is a crucial sector of our life. Without education no person is able to survive a better life. Nowadays E-learning is the current trend in education and cloud based applications allow learners to learn as per their requirement with limited technical resources and dependencies. TodayEducation can be gained from remote places and at low cost ,no need to bravely learn, struggle forthe education ,learning does not stop now–a-days being updated is more important, cloud provides a platform to learn anywhere and anytime it gives us an advantage of community learning. This automatically created distributed location and campus, distance learning demand increased due to the cloud emerging in education under rural and urban areas both got the platform to be one virtual area.

5.1] Benefits of cloud computing in education:

1) Cost Reduction: Education institutes who traditionally emerged in teaching got a virtual space to reduce cost. Cloud provides required hardware and software with no need of physical appearances of the infrastructure and opportunities to gain knowledge in less cost.

2) Remote Location: An Education institutions that uses cloud have their data centers at particularremote location from which students can connect from anywhere and any time

3) Extra large amounts of studying: Students get the benefit of studying at their dream institute from a remote place. Whereas teachers got an opportunity to teach from their remote place and got more opportunities to work teachers and students both can update their knowledge due to internet and cloud extra large of one way education added up with youtube / video based learning, forum based learning, social e-learning

5.2] Challenges of Cloud Computing in Education

1] Internet connectivity and bandwidth: Issue of internet connectivity and matters both sides of the cloud users. Users can be institution or student too institution should spend amount for proper connectivity of internet for their whole staff and student. Similarly student should have good bandwidth and connectivity for learning

2] Data security: Data security concerns are due to non efficient encryption algorithms of cloud computing software or models and another leftover footprint which remains insecure and hack-able .

3] Vendor commitment: Choosing the right vendor critical for cloud adoption in education sector risks workload and management of unforeseen issue be must handled by a choosed vendor
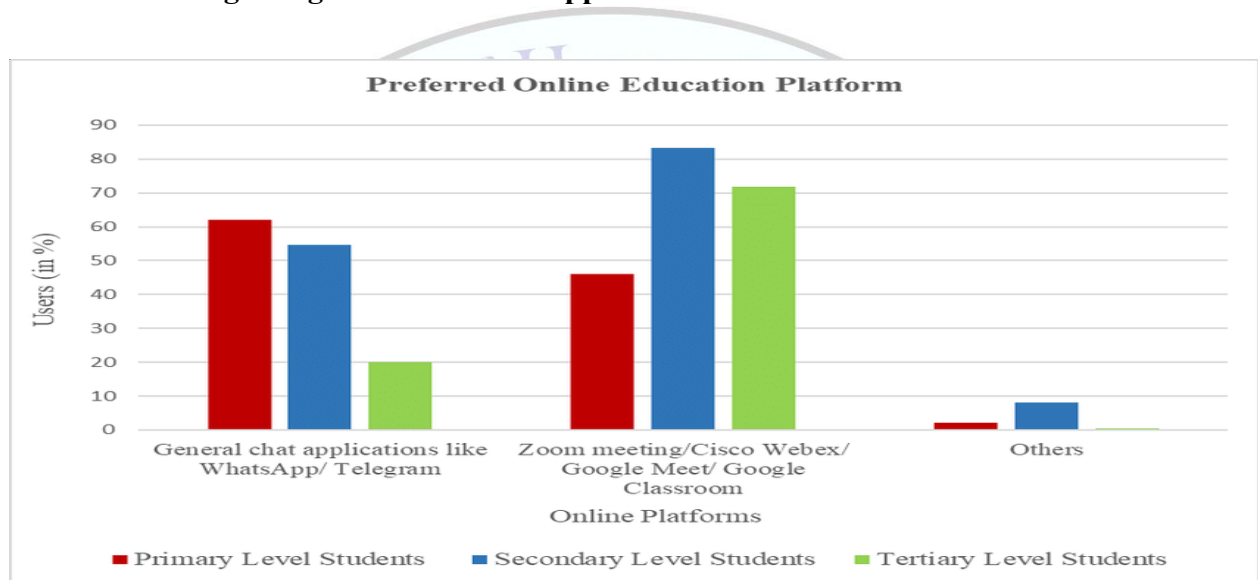
5.3] Usage of cloud based applications in education sector:

Tremendous impact of cloud get emerge during pandemic covid-19.All the institutions who are emerged in education adapted innovation technology into their infrastructure .This pandemic for

filled made people to move towards technology and cloud ,where as their made of learning, teaching and overall education system changed from offline to online .Advanced technologies of cloud emerged in the education sector and improved the quality of the education many forms of education comes into existing such as massive open online course (MOOCs) Virtual Learning Environment (VLE).YouTube learning, Seminar online platform etc.

Fig. Usage of cloud based applications in education sector [4]

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Many online platforms launched India for unstoppable learning .The purpose of this application isto keep education continuing in the pandemic. Education institutions recommended this application for staff and students. Most of the staff was not able to adopt this application but slowly slowly all opened with new changes. Cloud based applications such as zoom, Google Meet, cisco, Microsoft were adopted by the institutions the most. These apps made education easy and reliable. Cloud platform provides a common space to the students and teachers. Google introduced Google classroom from teachers and students where intuitions got a relief to conduct assignments,activities, and practical approaches for students. Many institutions started online seminars and guest lectures, conferences with the help of this application. ByJU'S', Topper, upgrade ,great learning ,TCS-ion, brainly Vedantu etc started providing online courses, learning, live learning sessions with practice tests and assignments with security constraints.

Online exam being conducted from pandemic. There was no option to conduct exams in offline mode, education must go on these institutions and universities decided for online exams. Now-a- days all the education institutions, universities, recruitment sessions, gov examination exams are conducted in the online mode. Popular online exams software's are speed exam, think exam,

Kahoot, so creative etc

Limitations and Scope of Future Research:

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Limitations and Scope of Future Research:

This paper mainly focused on the emerging trend of cloud computing in the education sector. Before pandemic many of the intuitions, companies and organizations where aware of cloud technology, some of them where using cloud technology after the pandemic all the sectors adoptedthe cloud which alternatively saved their infrastructure cost and gave more benefits. Thus, cloud vendors and cloud users increased .Education sector got a platform to keep education going on inpandemic covid-19 years. This paper contains data collected from secondary resources. In future study of student's approaches can be included in research. Another limitation is technical aspectsare missing. Future research paper will cover all the mentioned aspects.

Conclusion:

Cloud technology is widely emerging into various sectors thus this technology has a more demand similarly in the pandemic days we widely and effectively used cloud applications for learning.ICT and IOT multimedia resources are based on cloud are also used now-a-days. Cloud computing made enable to learn anywhere and anytime ,allowed distance learning which enhance thebackward area to learn efficiently in education sector after pandemic adapted E–learning and other resources, forms of learning which gave a platform for student to gain knowledge from each and

every field and also teacher got a platform to share their knowledge using such application this also reduced costs ,saves time, enhance the opportunities , increase in rate of income etc.thus ,Cloud Computing can be referred as efficient ,reliable ,portable flexible and secure technology. This paper concludes with the benefits of cloud into education sectors. It also specifies the challenges and situation and rapid adoption of the e-learning using cloud applications after covid -19pandemic

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