

## **CLOUD COMPUTING AND DIGITAL LEARNING IN RELATED TO ACADEMIC ACHIEVEMENT OF STUDENTS AT STANDARD XI**

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### **ABSTRACT**

Cloud computing, a rapidly developing technology has brought new change and opportunities in the field of education. Digital learning platform brings a new learning environment, develop their skills, memory power and providing enormous information in learning. The cloud computing is the good choice for digital learning to provide the facilities and services of learning. This study suggest to cloud computing to digital education is feasible and to bring greater clarity learning content to simplify the learning.

**Key words:** Cloud Computing, Digital learning, etc...

### **INTRODUCTION**

Today, learning uses more advance technology day in, day out so students have become more technologically knowledge. Cloud Computing has continued to be adapted by more organizations due to visualized resources through the internet, as well as dynamic scalability. To improve learning the successful implementation of information and communication Technology can be very challenging. The literacy is best achieved in classrooms where the technology is an integral part of the educational environment. The increasing Technology in the schools is encouraged by number of students. They seek their children to be technologically literate for successful career and making the 21st century a better tomorrow. The technology is used as a daily tool for learning and solving real world problems. It is dangerous to consider future trends

not simply in terms of technological developments but also in learner's skills and opportunity. Digital learning growing so fast nowadays, student have access to quality education from anywhere in the world, as long as they have access to a digital device. Being physically available in the classroom not the only learning option, people can schedule their learning session according to their convenience, using tools and platforms.

## CLOUD COMPUTING

Definition of cloud is defined by many expert, but the National Institute of standards and Technology (NIST) definition is a generally accepted standard: Cloud Computing is a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (such as networks, servers, storage applications and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction. More simply, a cloud can be considered to be a collection of hardware, software, and other resources that can be accessed over the internet, and used to assemble and solution on demand to provide a set of services that to the requester.

## IMPLEMENTING CLOUD COMPUTING IN EDUCATION

The importance of increased technology in the education focuses on almost exclusive on the ideas that, "technology is the wave of now a days and youth must need skill with technology to get update themselves with advance education the real world". Cloud computing mostly suited for academic sector. Cloud computing is providing help in education by reducing costs for study materials. Different types of cloud service providers offering free services providing applications like: emails, document storage, Google docs, calendars, and website making language software's. In this study, it has been planned to observe the learning activities and usage of students are using cloud- based applications in supported to learning environment in between classes too. It was proposed to foster and connect classroom learning experience.

## EDUCATIONAL USE FOR CLOUD COMPUTING

The immediate benefits of cloud computing are understandable: cloud computing applications reduce infrastructure and IT cost, rise accessibility, enable collaboration and allow organizations more flexibly in customizing their products both for their product and for their

viewers. But cloud computing has other impacts as well, as the possibility to greatly change how education works, both in online courses and in traditional classrooms.

- No more expensive textbooks
- No more outdated learning materials
- No expensive hardware required
- No expensive software required
- reaching more and more diverse students

Cloud computing applications open up a world of new possibilities for students, particularly those who are not served well by traditional method of education. Education moved modern technology through via internet.

#### USAGE OF CLOUD COMPUTING APPLICATIONS IN EDUCATION

By availing the services and cloud computing the following benefits can enjoy in the domain of education.

1. Student can access at any time the web resources for enhancing their computer skill.
2. Students can visit the educational website for new updates.
3. Students can use web based materials for their learning.
4. Students can download free software with the help of web tools.
5. Students can use Google applications for their studies related works.
6. Students can include YouTube videos in their presentations.
7. Students can enjoy storage area provided by web tools.

Cloud computing application is a new paradigm of the technology world and it is known as the third revolution. Cloud computing enables the migration, desktop application to web based applications such as Gmail, Google calendar, Face book, Skype, and blog. Cloud computing application provides long term mailing services and web based applications which are accessible

with a variety of computer and mobile platforms. The students can freely share their data in the cloud computing application for learning and research purpose.

## DIGITAL LEARNING

Digital learning is any type of learning that is accompanied by technology or by instructional practice that makes effective use of technology.

## IMPORTANCE OF DIGITAL LEARNING

Digital learning is an effective learning method to enhance students' learning experience. It emphasizes a high-quality learning experience and provides access to challenging contents, feedback through formative assessment, and self-learning opportunity at student's own pace.

Technologies to support the students to develop their skill and memory power. It cannot focus without a silent environment, and some engage themselves with interactive activities to concentrate. It provides opportunities to learn at your own pace.

Digital learning to develop effective self-directed learning skills. They are able to identify what they need to learn, find and use online resources, finding the problem and get solution.

Digital learning lies in your ability to interact and work with others around the globe. Students can connect with fellow students over LinkedIn or other social media to enhance communication, leading them to develop or create some creative outcome.

Most important of all is that technology saves the time for more learning activities. Digital learning can sustain differentiated activities for different learners within one classroom. Student engagement is often enhanced in a digital environment, with appropriate teacher guidance and support.

Students are introverted with the classroom environment and aren't comfortable speaking in public. In an online environment, it will be much easier to express their thoughts with others. This will make them more confident, easy to remember and self-conscious while learning.

Online Quizzes exams –lets agree; waiting for your test score can be stressful. It is much easier and immediate to get your score through a digital learning platform and provide the functionality to track your progress thoroughly and efficiently.

Student can grasp knowledge from experts even having environmental barriers to reach quality education through digital learning.

It is able to develop effective self-directed learning skills for students. To engage the students, as you have the help of devices, app and multimedia tools to make learning a more interactive and enjoyable prospect.

Creates a more engaged Environment .you may think technology is just a distraction, but it can help and encourage active participation in classroom.

Skimming is reading a text quickly to get a general idea of meaning. It can be contrasted with scanning, which is reading in order to find specific information. It is a specific reading skill which is common in reading newspapers, messages and emails.

It is a speed reading techniques which enables the reader to cover a vast amount of material very rapidly. It is a process of reading over text with the purpose of getting only the main ideas or the overall impression of the content. Students to get the information they need quickly without wasting time.

## NEED AND SIGNIFICANCE OF THE STUDY

Cloud computing applications and digital education are commonly used to generate interest on student in subject specific topics as well as to engage students. In recent years, technology is a main position among the student. Many of the students collect the data through online only. Learning more is essential to ensure the quality learning in attempting to understand the different methods of study in school education. The cloud computing and digital education can assure the learners of education to go faster the academic performance. The present study has been undertaken with the view to enable plus one student to concentrate on these areas which needed stronger in academic achievement. It may help the students to evaluate themselves more positively in learning from different angle and also to develop new instructional techniques for developing more positive approach in student. Hence, the study attempted a study of cloud computing and digital education related to academic achievement of student at plus one.

The findings of the research enable students to work more effectively. Positive utilization of cloud computing and digital learning is important and the major criteria for appraising the academic achievement for students.

## STATEMENT OF THE PROBLEM

The familiarity and use of Cloud Computing and digital education are important for the fast development of the students. Since students are not familiar with cloud computing, the attitude of the students may be negatively affected. Everyone has felt the benefits of technology used in learning. The Use of cloud computing and Digital learning in the field of education has enhanced motivation and improved their skills of the students. It is expected one in the modern education. The cloud computing and digital education has made the learning ambit wide and have included cross cultural interactions. It has made the universe as a freely interactive home. Hence, it has been entitled as “Cloud computing and digital learning in related to academic achievement of the Students at standard XI “.

## OBJECTIVES OF THE STUDY

The objectives of the present study is as follows,

- ❖ To study the level of cloud computing of higher secondary school students.
- ❖ To study the level of digital education in higher secondary school students.
- ❖ To find out the significant difference in cloud computing among higher secondary students with respect to Gender, Locality, Types of School and Family status.
- ❖ To find out the significant difference Digital Education among higher secondary students with respect to Gender, Locality, Types of School and Family status.
- ❖ To find out the significant relationship between Cloud Computing and Academic Achievement among higher secondary school students.

## HYPOTHESES OF THE STUDY

1. There is no significant difference between Cloud Computing among higher secondary students with respect to Gender, Locality, Types of School and Family status.
2. There is no significant difference among digital education among higher secondary students with respect to Gender, Locality, Types of School and Family status.

3. There is no significant relationship between Cloud Computing and Academic Achievement among higher secondary school students.
4. There is no significant difference between Digital Education and Academic Achievement among higher secondary school students.
5. There is no significant difference between the influence of Cloud Computing and Digital Education toward Academic Achievement of higher secondary school students

#### REVIEW OF RELATED LITERATURE

Singaravelu G. and Sivakumar A. (2016) examined a study of utilization of cloud computing applications among post graduate students of Tamilnadu Agricultural University. Objectives of the study: 1. To explore the level of Utilization of cloud computing application and research attitude among post graduate students of Tamilnadu Agricultural University. 2. To examine the utilization of cloud computing application among post graduate students of Tamilnadu Agricultural University. Methodology: The investigator adopted survey method for the study. Sample: One hundred and Forty seven (147) students studying post graduate courses in Tamilnadu Agricultural University were selected as sample for the study. Tool: Researcher's self-made Utilization of cloud computing applications scale was used for the study. Findings: The results show that the level of utilization of cloud computing application among post graduate student is above average. It was found from the study that there is a significant association between utilization of cloud computing application and selected independent variables among the postgraduate students of Tamilnadu Agricultural University.

ICT Adoption Impact on Students' Academic Performance: Evidence from Saudi Universities (Wael Sh. Basri, Jehan A. Alandejani, and Feras M. Almadani 2018) Objective of this study :This study investigates and explores the adoption of information communication technology by the universities and the impact it makes on the university students' academic performance. The study also examines the moderators' effect of gender, GPA, and student majors on the relationship between ICT and academic achievement. Method of this study: By using a quantitative research approach and a sample size of 1000 students, data were collected about the ICT adoption in universities and the relative performance of students belonging to four Saudi universities. Statistical Techniques: Structure equation modelling was chosen to determine

the validity of the research model. The Analysis of Moment Structures (AMOS), specially used for structural equation modelling and path analysis, was used as the research tool. Finding: The findings reveal that there exists a relationship between ICT adoption and academic performance in a conservative environment. An additional finding also stated that ICT adoption resulted in the improvement of the performance of female students more than the male. However, students' IT major was found to be making no impact on students' academic achievement. A discussion of findings, limitations, and suggestions for future research has been provided in the study. Finally, it also provides implications of the current study to the existing knowledge.

An Analysis of the Effects of Multimedia Teaching on Student Achievement (RamazanBulut 2019) Multimedia settings can be defined as digital settings in which elements with visual, audio or visual audio characteristics that appeal to individuals' auditory and visual senses are presented in a combined way. Such settings are employed in numerous fields including movies, advertisements, tourism, commerce and education. Method of the study: The study employed a mixed method. The aim of the study is to analyse the effects of social studies education based on multimedia setting on students' academic achievement. The study was designed using the explanatory sequential design which is part of the mixed method. Finding: The major finding of the study is that social studies teaching based on the multimedia setting had much more positive effects on student achievement than traditional teaching, but this effects was not statistically significant. The qualitative findings suggested that the reason for it is related to crowded classroom size, high levels of students' academics readiness and noise in the classrooms. It is possible to conclude that teaching based on multimedia setting has much more positive effects on academic achievement in contrast to traditional teaching and it makes topics to be learned much more understandable and learning environment much fun.

## METHODOLOGY

In this research, survey method will be used. Research methods are also important in a research process. They describe the various steps of the plan of attack to be adopted in solving a research problem, such as the manner in which the problems are formulated, the definition of

terms, the choice of subjects for investigation, the validation of data gathering tools, the collection, analysis and interpretation of data, and the process of inferences and generalizations.

The researcher selects the Population as plus one Student from Higher Secondary Schools in Coimbatore. Simple Random sampling technique will be used to select a sample for this study as the selection of Higher Secondary Students from Coimbatore.

#### TOOLS USED FOR THE STUDY

In the present study, the investigator developed the following tools.

1. (i) Utilization of Cloud Computing Application scale  
(ii) Digital education scale
2. Academic achievement

#### STATISTICAL PROCEDURE

Fifty one items represent the aspect of usage of Cloud Computing application in the day-to-day life of Plus one Students. The response of the tool was on a 5 point Likert scale with responses such as Strongly Agree, Agree, Undecided, Disagree, Strongly Disagree. The responses were given with the weightages of 5, 4, 3, 2 and 1 for Strongly Agree, Agree, Undecided, Disagree, Strongly Disagree respectively.

#### FACTOR ANALYSIS

After the factor analysis the scale consists of the 52 statements on usage of Cloud Computing application scores could ideally range between 1 and 52. The 121 plus one Students were organized in the ascending order on the basis the usage of cloud computing scale of the respondents. The topmost 27% of respondents (33) were termed as low usage of cloud application group and bottom most 27% of the respondents (33) as high usage of cloud computing application group.

After the factor analysis scale consist of the 67 statements on digital learning application scores could ideally range between 1 and 67. The 121 plus one students were organized in the ascending order on the basis usage of Digital Learning scale of the respondents. The topmost

27% of respondents (33) were termed as low usage of cloud application group and bottom most 27% of the respondents (33) as high usage of cloud computing application group.

## STATISTICAL TREATMENT

The statistical treatments used in this study are given below

1. Mean, standard deviation, Skewness and kurtosis for all distributions.
2. ‘t’ test of significant of difference between the means of large independent sample.
3. Analysis of covariance
4. Factor Analysis
5. Test of significant of product moment ‘r’ The detail of analysis and discussion of result are furnished in the next chapter.

## CONCLUSION

Cloud computing creates a universal platform with simplified scalability. Therefore it will be vital for schools and individuals to shift to the cloud, to experience the cheap and convenient avenue to information and technological services. Digital education brings to student and their education, whether it be knowledge based or practiced. The study help to their the cloud computing and digital education related to academic achievement of the student at standard XI.-in a personal instruction and wellbeing of others and of the planet.

## REFERENCES

- Veeramanickam, M.R.M., &Radhika, N. (2014). A Smart E-Learning System for Social Networking. *International Journal of Electrical and Computer Engineering*, 4(3), 447-455. Retrieved April 24, 2014, from <http://iaesjournal.com/online/index.php/IJECE/article/viewFile/5933/3194>
- Sivakumar and G. Singaravelu. Utilization of Cloud Computing Application. *American Journal of Educational Research*. 2016; 4(11):792-797. doi: 10.12691/education-4-11-3

Wael Sh. Basri, Jehan A. Alandejani, Feras M. Almadani, "ICT Adoption Impact on Students' Academic Performance: Evidence from Saudi Universities", *Education research International*, vol. 2018, Article ID 1240197, 9 pages, 2018. <http://doi.org/10.1155/2018/1240197>

TahirahBinti Mt Tahir, SangeethRamalingam, NurulhayatiBintiIlias, &BisyaarahBintiMohdSurur. (2016). Study of the Application of Cloud Storage Services among Students: A Survey at a Malaysian Tertiary Institution. In *E-Proceeding of the 4 Global Summit on Education GSE 2016* (pp. 257-267). 43600 Kajang, Selangor: World Conference Resources @ WorldConferences.net. [https://worldconferences.net/proceedings/gse2016/fullpaper/GE 108 STUDY OF THE APPLICATION OF CLOUD STORAGE SERVICES AMONG STUDENTS A SURVEY AT A MALAYSIAN TERTIARY INSTITUTION.pdf](https://worldconferences.net/proceedings/gse2016/fullpaper/GE108%20STUDY%20OF%20THE%20APPLICATION%20OF%20CLOUD%20STORAGE%20SERVICES%20AMONG%20STUDENTS%20A%20SURVEY%20AT%20A%20MALAYSIAN%20TERTIARY%20INSTITUTION.pdf)  
<https://etraverse.com/article/how-digital-learning-is-changing-the-face-of-education/#:~:text=It%20redefines%20how%20we%20derive,to%20their%20time%20and%20pace>.

<https://etraverse.com/article/how-digital-learning-is-changing-the-face-of-education/>