



Universities and colleges constantly need to upgrade their hardware and software as a way of attracting students and keeping up with drastically changing environment. Students already used Cloud computing technologies by accessing programs such as Twitter, Facebook, Gmail etc.

## **II. Literature Review**

National Institute of Standards and Technology of U.S. Department of Commerce defines cloud computing as a „model for enabling ubiquitous, convenient, on demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction“. Gartner defines cloud computing as a „style of computing in which scalable and elastic IT-enabled capabilities are delivered as a service using Internet technologies“. Microsoft product like live@edu which is browser based and provides student access to email, office package as well as skydrive. Google App Education even used by many developed countries which provides similar benefits as those of Microsoft products. Cloud computing helps the students get to access exams, courses and can relay their assignments for the students, the two parties teachers and students involved in the process. By using cloud SaaS application both teachers and students can access their respective data on tab or mobile phones.

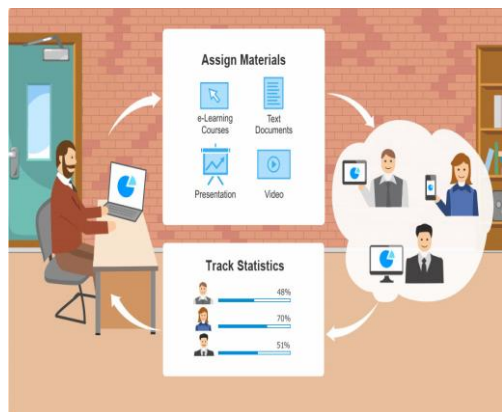
During the year 2014 -2017 the research in cloud computing has adopted many stepwise practices which was even published in many journals like IEEE Xplore, SpringerLink etc. They tried to cover the gaps in higher education by using cloud computing. According Alharthi 2017 securities are implemented with these legal issues. The result statistically even showed the physical location is also a factors.

Militaru et al. (2016) explored the factors that lead to cloud computing adoption in higher education based on the TAM (Technology Acceptance Model) framework by surveying 96 students at a university in Romania reveals with the fact that cloud computing can be adopted by students and institutes.

So far study has been done and published by various university which highlighted that SaaS is compatible with other software. It is comparatively easy to access and reliable. SaaS is useful in management field like human resource management, computerized accounting and content management.

## **III. Benefits of Cloud computing in higher education :**

- (i) By using Cloud computing the IT infrastructure will automatically maintained.
- (ii) It allows to use the personal workspace.
- (iii) Backup will not required..
- (iv) The collaboration with online services ensures capabilities and will secure communication.
- (v) It will help to reduce the common problem like insufficient teachers, poor infrastructure, help in creating bridge between the organization and fresher's candidate.
- (vi) Service available all the time to the users. Since it is user friendly and can be manage large data.



#### IV. Research Methodology

Research has been done with 168 students which was started in the month of September 2017 and lasted until mid November 2017. The students from Master of Computer Management were participated. The questionnaire was created in Google Docs. Firstly, general data i.e. gender, age and year of study is collected. Secondly, the data is collected for the need of cloud services by using different devices. The data were collected about gender, frequency of accessing internet and devices used for accessing internet. For proving the hypothesis we used non-parametric test : Spearman co-relation test.

#### V. Problem and Hypothesis

As per today’s scenario the students are increasingly dependent on internet for their assessment. This implies the students and teachers are actively uses the internet facility and cloud services. Thus the study focuses on software as a service for students.

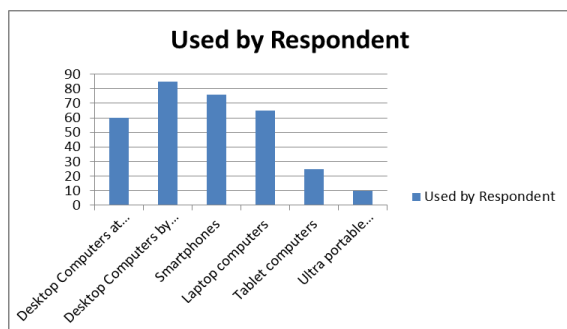
**Hypothesis:** There is no positive correlation between number of devices from which students access the Internet and frequency of cloud services use.

**Result:** Total number of students participated are 168 among which 68% males and 32% females. On the question “Which devices do you use for internet and data?”

The respondents mostly use smartphones (76%), laptop computers (65%), minimum numbers selected desktop computers at home (60%), and faculty members (85%), tablet computers are used by (10%), ultra portables computers used by (2%). The populations were from age group 19-25 years indicated 80% of respondents used online services daily.

Devices	Desktop Computers at house hold	Desktop Computers by faculty members	Smartphones	Laptop computers	Tablet computers	Ultra portable computers
Used by Respondent	60	85	76	65	25	10

Table showing the Cloud services used by respondent



The Spearman Correlation indicates a relation between variables “Different devices used by the respondent “and “different cloud services used by the respondent”.The analysis also shown the weak corelation where as in current scenarion the cloud services were used by the people by with different devices and for the students the smart phones is very ease to used the service.

Respondent uses cloud services			
	Cloud Services	M	S D
1	for synchronization files	2.26	1.01
2	multimedia sharing	2.89	1.25
3	Communication software	3.16	0.06
4	E-Learning	2.5	0.89

But the statistical analysis with  $r=0.18$  and statistical significance of  $p<0.05$ .

Hence there is a negligible relation between this two is not proved strong enough what as expected.

## VI. Conclusions:

With the increasing use of online services with hand on available devices the use of SaaS is highly used by students. It is easy to share the ideas, thoughts and knowledge. Students may create their own environment which help to access many online services.The “not sure” type of answer also showed that students need the cloud services but not ready to use complete 100% of it.

The students gave the average and unsatisfactory answers for using cloud services frequently or need and use of cloud applications/services ,from which we can predict they are not ready for cloud services .It is necessary to make them educate and motivate about cloud services and its advantages in education.It is necessary to spread the aware ness about the benefits of the cloud services.

## VII. References

- [1] Al-Zoube, M., E-learning on the Cloud, International Arab Journal of e-Technology, Vol.1, No.2, 2009,
- [2] Bittman, T., Cloud Computing Inquiries at Gartner, 2009,
- [3] Cloud Computing in Education, IITE Policy Brief, UNESCO, 2010,
- [6] Horrigan, J.B., Use of Cloud Computing Applications and Services, 2008,
- [7] Kop, R., Carroll, F., Cloud Computing and Creativity: Learning on a Massive Open Online Course, European Journal of Open, Distance and E-Learning, 2011,
- [9] Mallikharjuna Rao, N., Sasidhar, C., Satyendra Kumar, V., Cloud Computing Through Mobile Larning, [10] Mell, P., Grance., T., Final Version of NIST Cloud Computing Definition, NIST, 2011,
- [11] Sultan, N., Cloud computing for education: A new dawn?, International Journal of Information Management,
- [12] Žganec, T., na nebu ni na zemlji, Infotrend 184, 2011.