# WEB STORAGE TECHNOLOGY PLATFORM USAGE BY FACULTY MEMBERS IN THE FACULTY OF EDUCATION, AHMADU BELLO UNIVERSITY, ZARIA

By

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### Abstract

This paper examined Web Storage Technology Platform usage by Faculty Members in the Faculty of Education, Ahmadu Bello University, Zaria. Two (2) objectives were identified for this paper which are; to identify the types of WST Platform the Faculty Members are aware of, to find out the extent to which Faculty Members utilise WST Platforms in the Faculty of Education, A.B.U., Zaria. Quantitative research methodology was employed and cross-sectional survey research design was used for this study. The population of the study is the whole 175 Faculty Members in the Faculty of Education, A. B.U., Zaria, excluding staff on sabbatical and staff on study leave. Self-developed questionnaire was used to collect data from the respondents. Descriptive statistics (frequency distribution, percentage, mean and standard deviation) was used to analyse the data collected from the respondents. This study discovered that, google cloud (google docs, gmail) was the most common WST Platform that Faculty Members are aware of. The study also revealed that Faculty Members most commonly utilise Google cloud (google docs, gmail) as the type of WST Platform in the Faculty of Education A.B.U., Zaria and partially utilise drop box. The researcher recommended that; the University management should put more efforts through the ICT Department/unit in creating awareness on different type of WST Platforms available for Faculty Members to utilise. Also, WST Platform service providers should provide more concise, clear and understandable steps to facilitate the high use of the platforms for academic activities.

Keywords: Web Storage Technology Platform, Awareness, Usage, Faculty Members

#### Introduction

The Web Storage Technology (WST) Platform is a part of the wider definition of "Cloud Computing Technology" (Jiehui, Jiyi, Jianqing, & Zhijie, 2011). It is an aspect of Cloud Computing Technology which provides resources and services such as platform, software, and infrastructure to online network platform users via a remote server hosted on the Internet. It can also be said to be an Internet-based platform where services are provided to users on remote servers in a pay per usage of applications, resources and services. As an Internet-based platform, the WST Platform makes applications, services or resources available to users on-demand via the Internet from providers' servers. Users typically utilise the platforms as a way to increase capacity, enhance functionality or add additional services on demand without having to commit to potentially expensive infrastructure cost (Thomas, Zaigham & Ricardo, 2015).

Some of the WST Platforms that are available to users includes Amazon Web Services (AWS), Microsoft Windows Azure, Google cloud, IBM bluemix, Alibaba cloud, Rackspace, Hadoop, Softlayer etc. These available platforms provide an opportunity for Faculty Members to perform their academic activities effectively and efficiently.

The platforms can only provide services to Faculty Members using its features which include; broad network access, resource pooling, on-demand self-service, measured service, rapid elasticity and multiple tenants. Such features enable the WST Platform users to utilise applications, resources and services available on the web anywhere and anytime using Internet-enabled devices such as Smartphones, laptops, desktops, palmtops etc (Srinivas, Venkata & Moiz, 2012).

The WST Platforms enables Faculty Members and researchers wherever to share their works with others, collaborate on assignments, and save documents on the web for access at school or at home. It also provides a number of relevance to educational institutions and Faculty Members in terms of providing free services to staff at educational institutions which include email, contact lists, communication platform, document storage, creation and sharing knowledge and documents and the ability to create websites (Cieplak, & Malec, 2014). Moreover, to achieve the aforementioned benefits of WST Platforms by Faculty Members its awareness is very essential.

#### **Statement of the problem**

Web Storage Technology (WST) Platform is an environment that uses the Internet and central remote storage and processing servers to support user applications and data. The application of WST Platform in higher education institutions and for academic purposes creates numerous advantages. It increases greater access to already stored data in respective of users' location. Spreeuwenberg (2012) stated that "with WST Platform, it becomes easier to store, access, use and manage data with several devices such as smartphones, laptops, desktops, palmtops, etc, to facilitate its access and use anywhere and at anytime". It provides an opportunity for individuals and organizations to avoid financial waste and achieve cost reduction in Information Technology (IT) investment of both hardware and software.

Despite the aforementioned benefits of using WST Platforms to Faculty Members, the researcher's observation, experience and discussions with several Faculty Members in Faculty of Education, Ahmadu Bello University, Zaria, reveal that, Faculty Members are still suffering from loss of valuable academic data as a result of system crashes, theft, loss of hardware storage device, hardware storage malfunction and other unforeseen incidences, which can take an individual many years to recover the data lost, some data lost may never be recovered. It has been experiential by the researcher that, fragile nature of hardware storage facilities, its weaknesses in terms of storing, accessing, using and management of academic documents and activities affects successful and effective conduct of academic activities which include; academic collaboration, virtual teaching, knowledge/documents sharing, communication and supervision among others, some Faculty Members are experiencing technological discomfort imposed by the aforementioned weaknesses of hardware storage facilities, which make it difficult or generally impossible for Faculty Members to discharge some of their academic activities as mentioned above.

The researcher's laptop and external hard disk together with the researcher's office mate laptop were stolen which led to complete loss of data stored therein, a laptop of a senior colleague in the Department of Arts and Social Science Education, Ahmadu Bello University, Zaria, was seized by armed robbers along Ahmadu Bello University Teaching Hospital (ABUTH) and he suffered a lot because of the data stored therein, another laptop of a senior colleague in the Department of Library and Information Science crashed and all the valuable documents vanished.

The researcher discovered that the problem of data loss and difficulty in terms of storing, accessing, using and management of academic documents and activities as a result of the aforementioned challenges is rampant among Faculty Members. Hence, the need to conduct a study on Web Storage Technology platform usage for academic activities by Faculty Members in Faculty of Education, Ahmadu Bello University, Zaria, to find the way out of the challenges.

### **Objectives of the study**

The following were the objectives of the paper:

- 1. To identify the types of Web Storage Technology Platform the Faculty Members are aware of in the Faculty of Education, Ahmadu Bello University, Zaria.
- 2. To find out the extent to which Faculty Members utilise Web Storage Technology platforms for academic activities in the Faculty of Education, Ahmadu Bello University, Zaria

#### **Literature Review**

Literature were reviewed base on the objectives of the study as follows:

### Web Storage Technology Platforms Awareness

Since academics are considered to be important people in the areas of teaching and research in a country, their level of awareness on Web Storage Technology and its utilisation would improve productivity and enhance the University education (Irshad & Gapar, 2017).

A study conducted by (Irshad & Gapar, 2017) titled "The Study on Awareness and Adoption of Cloud Computing by Academics in Sri Lankan Universities" This study was descriptive in nature and self-administered survey questionnaires was used to gather data. The population of the study includes all academic staff of Sri Lankan National Universities. The findings revealed that, out of 125 respondents, 78.4% (98 respondents) said that they are aware of Web Storage Technology platform.

In order to ascertain the level of awareness among the academic Librarians of University of Somalia (UNISO) Library, a study was conducted titled "Cloud Computing Platforms and Technologies: GeeksforGeeks by (Sudhier & Seena, 2018), decriptive survey design was used, the entire academic librarians in UNISO Library served as the population and questionnaire was used to collect the data. The analysis showed that the academic librarians in UNISO Library have relatively very low level of awareness about the technology. Out of 102 academic librarians studied only 33.3% of the respondents were aware of the technology and 66.7% are not aware.

The pilot study conducted by (Hazreeni, Maziah, Shamsunarnie, Wan-Fairos, & Jusoh, 2017) titled "The Awareness and Challenges of Cloud Computing Adoption on Tertiary Education in Malaysia" aim to investigate the awareness level of the adoption of cloud computing among the academics in Tertiary Education in Malaysia, the study also explore the possible challenges faced by the academician while adopting this new technology. The pilot study was done on 40 lecturers in University Teknologi MARA Kampus Kota Bharu (UiTMKB) by using self-administered questionnaire. The results found that 24 (60%) of the respondents are aware of the technology and 16 (40%) of the respondents are not aware of the technology in teaching and learning process.

#### Extent of utilising Web Storage Technology platforms

Internet is evolving rapidly, from a traditional medium of merely providing and utilising information to users, to an indispensable requirement for the users who want to store data, perform computing and even run software applications at any time from any part of the world. This is possible with the advent of technologies such as Web Storage Technology platform which considered being the fifth generation of computing after client-server computing, mainframe computing, personal computing and the web (Toutcha, 2017). Hence, the utilisation of Web Storage Technology allows users to learn, collaborate, and share information online (Munjal, 2015).

Academics and other researchers in Higher Educational Institutions consider Web Storage Technology platform to be a good opportunity for them as its utilisation provides access to unlimited storage spaces and to personal data wherever they are. Furthermore, it helps improve their academic performances, their productivity and, finally, facilitates them in their daily tasks, within the present economical context, the use of Web Storage Technology platform becomes a necessity and not an option for many Universities and academics. Utilisation of Web Storage Technology platform provide answers to many of the challenges faced by the educational sector and the academics in particular (Alsufyani, Safdari, & Chang, 2015).

The potential and efficiency of using Web Storage Technology platform by academics in higher education have been recognized by many European, Asian and African Universities. African educational institutions have not been left behind in terms of using Web Storage Technology in their teaching, learning and research. (Alsufyani, Safdari, & Chang, 2015).

Many Universities and academic staff around the globe have moved swiftly to adopt and utilise Web Storage Technology platforms into their teaching, learning and research processes. Specifically, it has been viewed as an attractive part of research and education within Universities because of its ability to allow searches and collaborative working among its users. McCrea (2009), said that utilisation of Web Storage Technology platform is able to replace existing complex IT configurations and software systems, thus enabling institutions of higher learning to be more focused on teaching and research than on IT management.

Some of the justifications for using Web Storage Technology platforms in educational institutions include: the minimization of costs used in the IT infrastructure, attainment of efficiency in education delivery, improvement of convenience through features such as Pay-per-use, enhancement of resource consolidation, attainment of green IT.

### Methodology

Quantitative research methodology was employed and cross-sectional survey research design was used for this study, the study comprised of 175 Faculty Members in the Faculty of Education, A. B.U., Zaria, excluding staff on sabbatical and staff on study leave. Total population sampling technique was adopted. Self-developed questionnaire was used which is open and close ended in order to collect data from the respondents. Descriptive statistics (frequency distribution, percentage, mean and standard deviation) was used to analyse the data collected from the respondents.

# Data Presentation and Discussion of the Results

 Table 1: Faculty Members' Awareness of the types of Web Storage Technology Platforms for Academic Activities in the

 Faculty of Education, Ahmadu Bello University, Zaria

S/N	Type of Web	Departments														Μ	SD				
	Storage Technology platforms		Arts and Social Science Education		Educational Foundations and Curriculum		Educational Psychology and Counseling		Home Economics		Human Kinetics and Health Education		Library and Information Science		Science Education		Vocational and Technical Education		otal		
		F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%		<u> </u>
1.	Amazon Web	8	6.3	6	4.7	9	7.0	3	2.3	2	1.6	7	5.5	1	0.8	5	3.9				I
	Services (AWS)																	41	32.1	3.0	1.7
2.	Micrsofts Windows	12	9.4	10	7.8	7	5.5	3	2.3	7	5.5	7	5.5	11	8.6	9	7.0				
	Azure																	66	51.6	4.2	2.1
3.	IBM Bluemix	1	0.8	1	0.8	3	2.3	0	0.0	0	-	1	0.8	1	0.8	0	0.0	7	5.5	0.5	0.7
4.	Google cloud (google	32	25.5	17	13.3	12	9.4	8	6.3	16	12.5	11	8.6	15	11.7	12	9.4				
	docs, gmail)																	123	96.2	7.6	2.8
5.	Digital Ocean	2	1.6	0	0.0	1	0.8	0	0.0	1	0.8	1	0.8	2	1.6	1	0.8	8	6.3	0.6	0.8
6.	VM ware	0	0.0	1	0.8	0	0.0	0	0.0	0	0.0	1	0.8	1	0.8	0	0.0	3	2.3	0.3	0.6
7.	Alibaba Cloud	4	3.1	1	0.8	2	1.6	0	0.0	3	2.3	1	0.8	2	1.6	0	0.0	13	10.2	0.8	0.9
8.	Hadoop	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	1.6	0	0.0	2	1.6	0.1	0.3
9.	Rackspace	0	0.0	2	1.6	0	0.0	0	0.0	1	0.8	0	0.0	1	0.8	0	0.0	4	3.2	0.3	0.6
10.	Softlayer	1	0.8	0	0.0	1	0.8	0	0.0	0	0.0	1	0.8	1	0.8	0	0.0	4	3.2	0.3	0.6
11.	Backblaze	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.8	0	0.0	1	1.6	0.1	0.3
12.	Engrade	1	0.8	2	1.6	1	0.8	0	0.0	1	0.8	0	0.0	1	0.8	0	0.0	6	4.7	0.4	0.6
13.	Eucalyptus	1	0.8	2	1.6	1	0.8	0	0.0	1	0.8	1	0.8	1	0.8	1	0.8	8	6.3	0.6	0.8
14.	Drop box	14	10.9	10	7.8	8	6.3	5	3.9	7	5.5	41	32.0	10	7.8	8	6.3	103	80.5	4.7	2.2

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Table 1 shows the Faculty Members' awareness on the type of WST Platforms in the Faculty of Education, Ahmadu Bello University, Zaria. Based on the benchmark of 3.0 mean score adopted for interpretation and decision making of the responses, the Table showed that: Google cloud (google docs, gmail etc), drop box, Microsoft Windows Azure and Amazon Web Service (AWS) were the types of WST Platforms that Faculty Members were very much aware of, because they had mean values above the adopted benchmark. However, Google cloud (google docs, gmail) was the most common WST Platforms they were aware of with average mean scores of 7.6. On the other side, the WST Platforms the respondents are not very much aware of were: Alibaba Cloud, Digital Ocean, Eucalyptus, IBM Bluemix, Engrade, Rackspace, softlayer, VM ware, Backblaze and Hadoop. The least of the WST Platforms the respondents are not aware of were Backblaze and Hadoop with average mean scores of 0.1 each. It can be inferred from the Table that, the type of WST Platforms the Faculty Members in the Faculty of Education, A.B.U., Zaria, were mostly aware of was Google cloud (google docs, gmail). Also, the least WST Platforms they least aware of were Backblaze and Hadoop. This finding corroborates with the finding of Matthew (2015) who stated that "majority of academics in Nigerian Universities were aware of WST Platforms as a segment of Cloud Computing Technology. This implies that if Faculty Members are aware with WST Platforms it will ease their academic activities.

Table 2: Extent of

WST Platforms

utilisation for academic activities by Faculty Members in the Faculty of Education, A.B.U., Zaria

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S/N WSTPs DEPARTMENTS																											
			A.S.S.E	2		E.F.C			E.P.C			H.E		1	H.K.H.I	£		L.I.S			S.E			V & T	1		
		U	RU	UN	U	RU	UN	U	RU	UN	U	RU	UN	U	RU	UN	U	RU	UN	U	RU	UN	U	RU	UN		
		F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F(%)	Μ	SD
1	•	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	0	1.0	
1.	A		10	10	1	9	(5.5)	3	3	5	1	4	0	1	11	4	1	(5.5)	3	0	14	3	1	4	°	1.0	1
		(0.0)	(12.5)	(12.5)	(0.8)	(7.0)	(5.5)	(2.3)	(3.9)	(3.9)	(0.8)	(1.6)	(4.7)	(0.8)	(8.6)	(3.1)	(0.8)	(5.5)	(2.3)	(0.0)	(10.9)	(2.3)	(0.8)	(3.1)	(6.3)		
2.	В	5	15	12	2	13	2	5	6	2	1	3	5	3	9	4	2	6	3	3	12	2	1	11	1	2.3	1.5
		(3.9)	(11.7)	(9.4)	(1.6)	(10.2)	(1.6)	(3.9)	(4.7)	(1.6)	(0.8)	2.3)	(3.9)	(2.3)	(7.0)	(3.1)	(1.6)	(4.7)	(2.3)	(2.3)	(9.4)	(1.6)	(0.8)	(8.6)	(0.8)		
3.	С	1	12	19	1	3	13	2	5	6	0	0	9	0	11	5	0	8	3	0	9	8	1	5	7	0.5	0.7
		(0.8)	(9.4)	(14.8)	(0.8)	(2.3)	(10.2)	(1.6)	(3.9)	(4.7)	(0.0)	(0.0)	(7.0)	(0.0)	(8.6)	(3.9)	(0.0)	(6.3)	(2.3)	(0.0)	(7.0)	(6.3)	(0.8)	(3.9)	(5.5)		
4.	D	32	0	0	10	7	0	13	0	0	9	0	0	16	0	0	11	0	0	17	0	0	11	2	0	4.6	2.1
		(25.0)	(0.0)	(0.0)	(7.8)	(5.5)	(0.0)	(10.2)	(0.0)	(0.0)	(7.0)	(0.0)	(0.0)	(12.5)	(0.0)	(0.0)	(8.6)	(0.0)	(0.0)	(13.2)	(0.0)	(0.0)	(8.6)	(1.6)	(0.0)		
5.	Е	0	18	14	0	7	10	0	8	5	0	0	9	2	9	5	1	7	3	0	12	5	1	3	9	0.7	0.8
		(0.0)	(14.1)	(10.9)	(0.0)	(5.5)	(7.8)	(0.0)	(6.5)	(3.9)	(0.0)	(0.0)	(7.0)	(1.6)	(7.0)	(3.9)	(0.8)	(5.5)	(2.3)	(0.0)	(9.4)	(3.9)	(0.8)	(2.3)	(7.0)		
6.	F	0	16	16	1	4	12	0	7	6	0	0	9	1	10	5	0	7	4	2	7	8	0	4	9	0.4	0.6
		(0.0)	(12.5)	(12.5)	(0.8)	(3.1)	(9.4)	(0.0)	(5.5)	(4.7)	(0.0)	(0.0)	(7.0)	(0.8)	(7.8)	(3.9)	(0.0)	(5.5)	(3.1)	(1.6)	(5.5)	(6.5)	(0.0)	(3.1)	(7.0)		
7.	G	0	17	15	1	4	12	0	7	6	0	0	9	1	9	6	0	8	3	1	8	8	1	4	8	0.4	0.6
	-	(0.0)	(13.3)	(11.7)	(0.8)	(3.1)	(9.4)	(0.0)	(5.5)	(4.7)	(0.0)	(0.0)	(7.0)	(0.8)	(7.0)	(4.7)	(0.0)	(6.3)	(2.3)	(0.8)	(6.3)	(6.3)	(0.8)	(3.1)	(6.3)	••••	0.0
8.	Н	0	18	14	0	7	10	0	7	6	0	0	9	1	8	7	0	8	3	1	11	5	0	4	9	0.1	0.3
		(0.0)	(14.1)	(10.9)	(0.0)	(5.5)	(7.8)	(0.0)	(5.5)	(4.6)	(0.0)	(0.0)	(7.0)	(0.8)	(6.3)	(5.5)	(0.0)	(6.3)	(2.3)	(0.8)	(8.6)	(3.9)	(0.0)	(3.1)	(7.0)	•••	0.0
9.	I	0	17	15	1	10	6	0	5	8	0	0	9	0	7	9	0	7	4	0	12	5	0	5	8	01	03
	-	(0.0)	(13.3)	(11.7)	(0.8)	(7.8)	(4.7)	(0.0)	(3.9)	(6.3)	(0.0)	(0.0)	(7.0)	(0.0)	(5.5)	(7.0)	(0.0)	(5.5)	(3.1)	(0.0)	(9.4)	(3.9)	(0.0)	(3.9)	(6.3)	0.1	0.5
10.	J	0	17	15	1	8	8	0	6	7	0	0	9	1	9	6	0	8	3	1	12	4	0	4	9	0.4	0.6
		(0.0)	(13.3)	(11.7)	(0.8)	(6.3)	(6.3)	(0.0)	(4.7)	(5.5)	(0.0)	(0.0)	(7.0)	(0.8)	(7.0)	(4.7)	(0.0)	(6.3)	(2.3)	(0.8)	(9.4)	(3.1)	(0.0)	(3.1)	(7.0)	••••	0.0
11.	K	0	17	15	1	6	10	0	6	7	0	0	9	0	10	6	0	8	3	0	10	7	0	4	9	0.1	0.3
		(0.0)	(13.3)	(11.7)	(0.8)	(4.7)	(7.8)	(0.0)	(4.7)	(5.5)	(0.0)	(0.0)	(7.0)	(0.0)	(7.8)	(4.7)	(0.0)	(6.3)	(2.3)	(0.0)	(7.8)	(5.5)	(0.0)	(3.1)	(7.0)	•••	0.0
12.	L	0	17	15	2	8	7	0	4	9	0	0	9	0	8	8	0	8	3	1	11	5	0	3	10	04	0.6
	-	(0.0)	(13.3)	(11.7)	(1.6)	(6.3)	(5.5)	(0.0)	(3.1)	(7.0)	(0.0)	(0.0)	(7.0)	(0.0)	(6.3)	(6.3)	(0.0)	(6.3)	(2.3)	(0.8)	(8.6)	(3.9)	(0.0)	(2.3)	(7.8)	0.4	0.0
13.	М	0	17	15	1	9	7	0	6	7	0	0	9	0	7	9	0	9	2	1	9	7	0	8	5	0.2	0.5
		(0.0)	(13.3)	(11.7)	(0.8)	(7.0)	(5.5)	(0.0)	(4.7)	(5.5)	(0.0)	(0.0)	(7.0)	(0.0)	(5.5)	(7.0)	(0.0)	(7.0)	(1.6)	(0.8)	(7.0)	(5.5)	(0.0)	(6.3)	(3.9)		
14.	Ν	1	20	11	2	13	2	2	11	0	4	3	2	4	12	0	11	0	0	2	13	2	2	8	3	29	17
	- •	(0.8)	(15.6)	(8.6)	(1.6)	(10.2)	(1.6)	(1.6)	(8.6)	(0.0)	(3.1)	(2.3)	(1.6)	(3.1)	(9.4)	(0.0)	(8.6)	(0.0)	(0.0)	(1.6)	(10.2)	(1.6)	(1.6)	(6.3)	(2.3)	2.7	1.1
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Short forms	Meaning
WSTPs	Web Storage Technology Platforms
A.S.S.E	Arts and Social Science Education
E.F.C	Educational Foundations and Curriculum
E.P.C	Educational Psychology and Counseling
H.E	Home Economics
H.K.H.E	Human Kinetics and Health Education
L.I.S	Library and Information Science
S.E	Science Education
V & T	Vocational and Technical Education
U	Utilise
RU	Rarely Utilise
UN	Undecided
F	Frequency
А	Amazon Web Services (AWS)
В	Micrsoft Windows Azure
С	IBM Bluemix
D	Google cloud (google docs, gmail)
E	Digital Ocean
F	VM ware
G	Alibaba Cloud
Н	Hadoop
Ι	Rackspace
J	Softlayer
K	Backblaze
L	Engrade
М	Eucalyptus
Ν	Drop box

**Keys:** This key is provided in order to guide the reader on Table 2

Table 2 presented the extent of utilisation of the WST Platforms for academic activities by Faculty Members in the Faculty of Education, A.B.U., Zaria. Based on the average mean scores of 3.0 benchmark adopted for interpretation and decision making of the responses, Table 3 revealed that only Google cloud (google docs, gmail) was the most common WST Platform that Faculty Members utilise for their academic activities with average mean scores of 4.6. On the other side, the less common WST Platforms the respondents utilise for their academic activities were: drop box, Microsoft Windows Azure, Amazon Web Service (AWS), Digital Ocean, IBM Bluemix, Engrade, Softlayer, VM ware, Alibaba Cloud, Eucalyptus, Backblaze, Hadoop and Rackspace. Similarly, the least among the less common WST Platforms utilise by the respondents for their academic activities were Hadoop and Rackspace with average mean scores of 0.1 each. It can therefore be deduced that, Google cloud (google docs, gmail) was the only common type of WST Platform that Faculty Members were utilising for their academic activities in the Faculty of Education. This finding support Educause (2012) which stated that "majority of the Higher Educational Institutions have more and more embraced and are utilising the services provided by WST Platforms especially Amazon Web Services and Goggle Cloud with the aim of taking advantage of the opportunities they offer". The implication of this finding is that Faculty Members can't take full advantages of other WST Platforms for their academic activities because only Google cloud (google docs, gmail) was common for utilisation and therefore they cannot deliver their academic activities effectively and efficiently to meet the International standard.

# **Summary of the Findings**

- 1. Google cloud (google docs, gmail) was the most common type of Web Storage Technology Platform the Faculty Members were aware of for their academic activities in the Faculty of Education, A.B.U., Zaria.
- Google cloud (google docs, gmail) was the most common type of Web Storage Technology Platform that Faculty Members utilise in the Faculty of Education, A.B.U., Zaria, for their academic activities.

# Conclusion

Despite the fact that, the WST Platforms are newly developing paradigm of Information and Communication Technology in the 21<sup>st</sup> century, its utilisation in an educational settings and especially for academic activities will make a serious impact in all aspect of academic circle. However, it is apparent that Faculty Members most commonly utilise Google cloud (google docs, gmail) as the type of WST Platform for their academic activities in the Faculty of Education A.B.U., Zaria and partially utilise drop box. The researcher concluded that, WST Platforms will no doubt solve the pressing problems of Faculty Members in the Faculty of Education, A.B.U., Zaria, in terms of handling outrageous number of students in the Faculty and data loss among others.

# Recommendations

Based on the findings of this study, the following recommendations were proffered:

- 1. The A.B.U. Zairia, management through the ICT Department Unit should put more efforts in creating awareness on different types of WST Platform available for Faculty Members to use for their academic activities.
- 2. WST Platform service providers should provide more concise, clear and understandable steps to facilitate the high use of the technology for academic activities.

# References

- Alsufyani, R., Safdari, F., & Chang, V. (2015). *Migration of Cloud Services and Deliveries to Higher Education*. 86–94. <u>https://doi.org/10.5220/0005528500860094</u>
- Almazroi, A. A. (2017). An Empirical Study of Factors that Influence the Adoption of Cloud Computing Applications by Students in Saudi Arabian Universities. Thesis, College of Science and Engineering. Flinders University, South Australia.
- Cieplak, T., & Malec, M. (2014). Applications of Cloud Computing Services in Education Case Study. Advances in Science and Technology Research Journal, 8(24), 55–60. https://doi.org/10.12913/22998624/568
- Educause (2012). What Campus Leaders Need to Know About MOOCs. *Educause*: 1–3. <u>http://agb.org/sites/agb.org/files/report\_2013\_MOOCs.pdf\nhttp://www.educause.edu/li</u> <u>brary/resources/what-campus-leaders-need-know-about-MOOCs</u>
- Hazreeni, N. H., Maziah, M., Shamsunarnie, M. Z., Wan Fairos, W. Y., & Jusoh, Y. (2017). The Awareness and Challenges of Cloud Computing Adoption on Tertiary Education in Malaysia. *Journal of Physics: Conference Series*, 892(1). <u>https://doi.org/10.1088/1742-</u>

6596/892/1/012014

- IBM, (2011). Tech Trends Report Deep Dive, <u>https://www.ibm.com/developerworks/mydeveloperworks/groups/service/html/communi</u> <u>tyview?communityUuid=ff67b471-79df-4bef-9593-</u> <u>4802def4013d#fullpageWidgetId=W90e0c88370ed\_487f\_9118\_c24512493b8f&file=a9</u> 1dcf57-15c0-48c5-b0fa-21872b1365ff
- Irshad, M. B. M., & Gapar, M. J. (2017). The Study on Awareness and Adoption of Cloud Computing by Academics in Sri Lankan Universities. *International Journal of Advanced Research in Computer Science and Software Engineering*, 7(5), 6–10. <u>https://doi.org/10.23956/ijarcsse/SV7I5/0206</u>
- Jiehui, J., Jiyi, W., Jianqing, F., & Zhijie, L. (2011). A Survey on Cloud Storage. *Journal* of Computer Engineering, Vol. 6, No. 8.
- Matthew, F. T. (2015). Cloud Computing in Education: A Study of Trends, Challenges and an Archetype for Effective Adoption in Nigerian Universities, Information communication technology (ICT) integration to educational curricula: a new direction for Africa p. 296: University Press of America.
- McCrea, B. (2009). IT on Demand: The Pros and Cons of Cloud Computing in Higher Education Campus Technology.
- Munjal, M.N. (2015). Cloud Computing in Higher Education: Opportunities, Challenges and Counter Measures. 8354(APRIL): 659–668.

Spreeuwenberg, P. (2012). Cloud Computing and learning Environment. Pp 67-85.

- Srinivas, J., Venkata, K., & Moiz A.Q. (2012). International Journal of Advanced Research in Computer and Communication Engineering. Vol. 1.
- Thomas E., Zaigham, M. & Ricardo, P. (2015). Cloud Computing Concepts Technology & Architecture - The Prentice Hall Service Technology Series", pp. 26.
- Toutcha, N. Y. (2017). *The impact of cloud computing on the role of an IT Department : A case study of a higher education*. Cape Peninsula University of Technology.