International Journal of Education and Development using Information and Communication Technology (IJEDICT), 2016, Vol. 12, Issue 1, pp. 53-70

An analysis of the use of cloud computing among university lecturers: a case study in Zimbabwe

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ABSTRACT

Cloud computing is a novel model of computing that may bring extensive benefits to users, institutions, businesses and academics, while at the same time also giving rise to new risks and challenges. This study looked at the benefits of using Google docs by researchers and academics and analysing the factors affecting the adoption and use of the technology by Lecturers at a university in Zimbabwe. The researchers used a mixed method research design approach where qualitative research and quantitative research were integrated. The literature review of cloud computing and Google docs was conducted to get an understanding of the usefulness of cloud computing and factors affecting its adoption and use. Interviews were used to get an in-depth insight into the issues affecting the adoption and use of this novel technology. On qualitative approach after choosing the first interviewee on the basis of extensive ICT knowledge, a snowball technique was used to select the other participants. The target population was the lecturers at a university in Zimbabwe who were 492 in number. 100 lecturers were chosen using simple random sampling and out of the 100 questionnaires distributed to them 91 were returned and 3 were discarded because they were not completed. The findings indicated there was a knowledge gap and that there was need to conduct workshops to try and enlighten the Lecturers on the value of this technology.

Keywords: *Cloud computing, Google docs, Google drive, Lecturers, Zimbabwe. Digital citizens, Digital immigrants*

INTRODUCTION

Cloud computing concept is a nascent type of distributed computing which is still in its formative years. Cloud computing is an up-and-coming computing paradigm for delivering computing services that aims to provide scalable and inexpensive on-demand computing infrastructures with good quality of service levels (Lamba & Singh, 2011). The term cloud computing is habitually used in the present day with an assortment of connotations and elucidations. Recent literature is awash with examples which demonstrate that cloud computing may possibly bring about cost reductions and make possible ground-breaking online services (Taylor, Young, Kumar, & Macaulay, 2011; Alizadeh, Hassan, Behboodian, & Karamizadeh, 2013; Alizadeh et al, 2013). However, it is the same literature which indicates that barricades to adopt cloud computing are diverse (Lamba & Singh, 2011).

Cloud computing is provided in four forms as are listed below:

a. Cloud computing is provided as a service and it takes different forms. These forms are; Infrastructure as a service (IaaS) whereby hardware resources like storage facilities, large capacity memory and processing power are offered as services to customers on demand, usually at a cost.

b. Database as a service (DaaS) which is almost like IaaS, but is more of a kind of dedicated storage which offers database capability as a service.
c. Platform as a service (PaaS) is the provision of facilities to support the whole application development lifecycle including design, implementation, and debugging. Programming software applications are provided with compilers all on the internet.
d. Software as a service (SaaS)**,** this is where software applications like Google web-based office applications, popularly known as Google docs, are offered as services on the Internet rather than as software packages.

Out of these categories, Google docs fall under the SaaS category. Google docs are a type of cloud computing service provided by Google and its deployment model is public cloud model. In this paper we looked at the benefits of using Google docs to researchers and academics and explored the factors affecting the effective adoption and use of Google docs by university Lecturers in Zimbabwe. Google docs was chosen because of its prevalence, security and cost effectiveness among cloud facilities available.

PURPOSE OF THE RESEARCH

This study looked at the benefits of using Google docs to researchers and academics and analysed the factors affecting the adoption and use of Google docs by Lecturers. To gather the required information the researchers carried out a case study of lecturers at a university in Zimbabwe. Qualitative and quantitative techniques were used in the research approach. The data collection tools used were interviews and a survey questionnaire. The researchers were guided by insightful interviews to get an eye opener into the issues affecting the embracing and exploitation of this unsullied technology. This helped in the design of the questionnaire that was used to draw out information from the subjects. In his book 'The Economics of Cloud Computing' Williams (2011) stated that;

> …the technology behind cloud computing is by and large the easy part. Frankly, the hardest part of cloud computing is the people.

This is a clear indication that it is the users who are impediments to the adoption and use of cloud computing. Therefore it is paramount that these users are supposed to be investigated to establish the factors affecting the adoption side.

LITERATURE REVIEW

What is Cloud Computing

The National Institute of Standards and Technology (NIST) defined Cloud computing as *"a model for enabling 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 cloud provider interaction"*(Badger, Grance, Patt Corner, & Voas, 2011). Looking at this definition one can easily note that it requires some unpacking. In the context of this definition it is important to note that the word model is used as a noun and not as a verb. In this case a model can be seen as a pilot work or creation with the purpose of serving as a sketch from which an ultimate product is to be made. The model serves as a guiding replica to all those who desire to produce something of that kind. Therefore it becomes imperative that whoever harbours an aspiration to provide cloud computing services has to be guided by this definition. Google docs are a fitting illustration of this model.

Cloud computing is an internet-based model of computing, where the shared information, software and resources are provided to computers and other devices upon demand (Chandran, S. and Angepat, 2010). Cloud computing technologies can be implemented in a wide variety of architectures, under different services and deployment models, and can coexist with other technologies and software design approaches (NIST, 2011).

In practice Google docs is very easy to use as was found in a study done at the Open University in Israel that all the 118 participants had never used Google docs before the experimental research but they all agreed it is easy to use after using it in the study (Blau & Caspi, 2009). In a study conducted by Jarris, Saunders, Gatti, & Weissinger in 2012, it was found that students were conversant with Google docs as they all managed to carry out all their assigned tasks with ease.

Google docs

Google Docs is a free online program that allows users to create documents, spreadsheets and presentations online and share them with others for collaboration. This facility enables academics and researchers from all walks of life to share their work with others, collaborate on assignments, and save documents online for access at school or at home.

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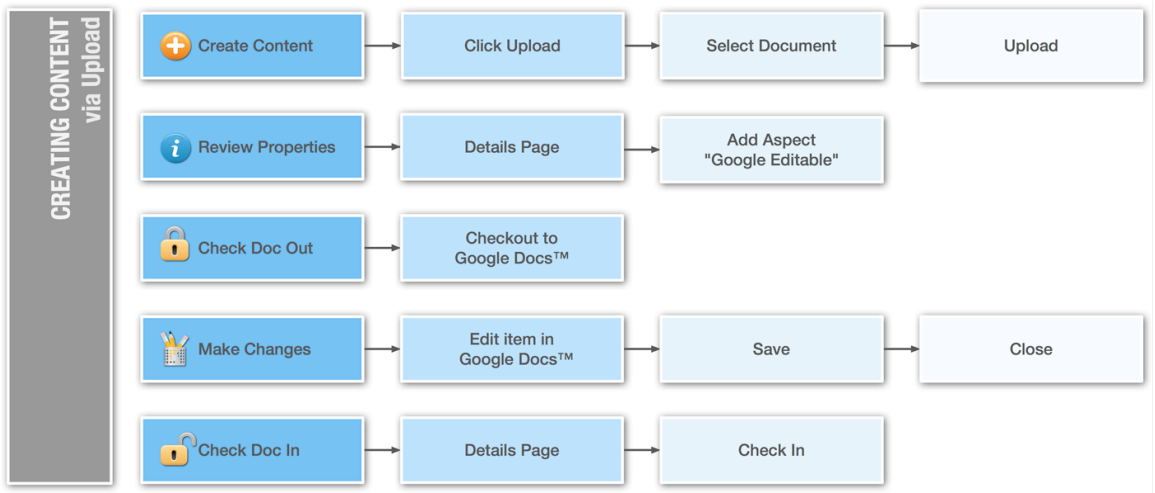

Fig 1: Process of using Google documents

Benefits of cloud computing

One of the major characteristics of cloud computing is its capability to be accessed anywhere where there is an unfailing Internet link. It is so versatile so as to promote on-demand self service which enables an end user to have computing capabilities devoid of the need of human interaction with a service provider. Google Docs can be used by academics in a series of ways, to cover a multitude of tasks in academia. These academic household tasks range across the academia strata commencing with the ability to work on files anywhere, anytime, and the provision of quick feedback from numerous people concurrently and asynchronously. Google docs contains an incorporated scripting and reference kit entrenched in it and it is in synch with Microsoft office denoting that documents can be interchanged with ease. Google docs can also assemble digital resources for the user in tandem with the user's research areas of interest. It also makes the full writing process visible including revision history. This not only enables users to correct errors of today but errors that are as old as the document as well. This application goes as far as creating bibliography entries as well as developing collaborative diagrams and mind

maps. These points based on the Google doc use experience accumulated over time by the writers of this research paper.

Because all the data is automatically backed up on Google servers, use of Google docs ensures that when uncertainties do happen, that is if a computer crashes, gets stolen or any other form of adversity strikes there won't be much outcry beyond the gadget value lost as one can be up and running again in seconds on any other machine with internet connection. In addition Google have a promised 99.9% uptime depending on internet connectivity and built-in robust disaster recovery, which ensures that one does not even have to worry about natural disasters.

Google drive in education

Google drive can be used in a number of ways by educators across the academia strata. It provides users with the ability to share files online with anyone any time. It enables one to build a self-grading quiz and this has very far reaching effects because it reduces the amount of paper used in one's classroom hence there are a superfluity of raisons d'être to start taking into consideration using Google drive for one's classroom needs. It is a very handy means for project-based scholarship where scholars can work together in a coordinated way, hold chats, and even complete a project from diverse sites.

Google drive enables the creation of mind maps using a presentation and this enables researchers to work on the presentation with others concurrently. Google drive is also attuned with Microsoft Office products so there is interchange of documents with ease. One simply needs to drag and drop various file types into Google drive, and they will be able to share and cooperate with others on their documents. Google drive syncs with one's desktop and as a result the folders that appear on Google drive are the same as those on the desktop. Because of this one can simply drag and drop files from their internet to their Google drive, and those files will be copied to their desktop.

Google drive can be used by educators for creating an assignments folder where scholars and parents can view what assignments they have, watch videos explaining concepts and hear audio related to the assignments. Today's online students have very different thinking styles and ways of processing information from their predecessors (Al-Zoube, Abou El-Seoud, & Wyne, 2010). This facilitates group work whereby students can work on a particular assignment, updating it from different locations simultaneously with all the changes being preserved in a revision history.

Files shared on Google drive are stored in the cloud and therefore available on any computer where there is internet connection and, therefore, Lecturers can access these resources from home, school and on the go. New and innovative opportunities for teaching and learning are offered by MUVEs "What is a Virtual World? Definition and Classification," (2012). With all these positive benefits attributed to Google drive the rate of uptake is very insignificant and hence this has prompted these writers to look into the issue.

Research aim

The aim of this research paper was to ascertain the benefits of using Cloud computing in general and, in particular, Google docs to researchers and academics and we explored the factors affecting the adoption and use of this technology by Lecturers at a university in Zimbabwe.

In order to accomplish the research aim the researchers first explored literature on Cloud computing, particularly Google docs, to establish the benefits of adopting this technology and further used the questions stated in the following section under the heading research questions to establish the factors affecting the adoption of Cloud computing by researchers and academics in Zimbabwe.

Research Questions

In this study the researchers' specific questions were:

a. What are the benefits of Cloud Computing to Academics?
b. What are the issues affecting the adoption and use of Cloud computing by Lecturers and academics in Zimbabwe?
c. How can these factors best be addressed so as to increase the rate of uptake and use of cloud computing?
d. What measures need to be put in place to ensure the success of adoption and utilisation of this technology?

In the course of addressing the above questions latest practical knowledge was availed which is added to the repository of academic knowledge in Zimbabwe and the world at large. This information is of paramount importance to all academics and Institutions of higher learning.

Research methodology

In this piece of work the researchers used both qualitative approach and quantitative approach. On qualitative approach after choosing the first interviewee on the basis of extensive ICT knowledge, a snowball technique was used to select other participants. The target population was all the lecturers at a university in Zimbabwe who happened to be 492 in number. A sample of 100 lecturers was chosen using simple random sampling. The quantitative approach involves the collection of quantitative data, which are put to rigorous quantitative analysis in a formal and rigid manner. In the qualitative approach the researchers used the technique of skewed evaluation of opinions, behaviour and attitudes. The researchers initially used interviews to gain an insight and guidance which enabled them to carefully craft a well structured questionnaire to elicit valuable data from subjects on Google docs. On the issue of interviews the researchers carefully selected three people. The first interviewee was the IT Director at the University where the research was conducted, the second interviewee was a senior Lecturer and a Professor at the same University and the last Interviewee was a junior lecturer at the same University who was studying for a PhD.

The participants were subjected to the same set of questions, which the researchers believed to enhance the comparability of responses by respondents. The interviews also allowed for further probing into the responses, which inevitably greatly enriched the data collection. The interviews were conducted in a beneficial environment as each interview took place in the interviewee's office and all in general averagely lasted for twenty five minutes

The in-depth interviews were used to collect data for qualitative enquiry while the questionnaire was used to collect quantitative data. This was done because the researchers felt that in order to reach out to the respondents' mind-set, philosophy and feelings on the issues of adoption and use of Cloud computing, the questionnaire would be most suited for this purpose. A questionnaire is a research instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents ("A Discursion on the Issues of Questionnaire Design for Sample Survey," 2009)

RESULTS

Stage one: Interviews

A total of three (3) in-depth interviews were conducted.
The interviewees corroborated the review on the benefits of Google docs. The major benefits of Google docs are that: it is a free facility for anyone with a Gmail account, the facility enables

better collaboration amongst peers in academia, and whatever tool an academic may need is found on Google docs. Google is also considered to be one of the most secure platforms in the internet world with a solid track record so what the lecturers need is assurance.

All the interviewees concurred that there is need to educate academics on the benefits of cloud computing. They highlighted the fact that most of these academics are more of digital immigrants than natives hence most of these technological issues are alien to them. They further stated that academics are mixed bags as some are more open and prepared to learn new things while others have pride and hence they do not want to learn new things. They feel like they are exposing themselves when they indicate that they don't know certain things.

On the issue of what needs to be done to ensure the rapid uptake and use of cloud computing by academics there was a unanimous position. The first interviewee indicated the need to hold workshops where the myth of cloud computing is demystified. The interviewee said lecturers were frequenting his office with various problems which could be addressed by the introduction of cloud computing workshops to try and educate the lecturers on how best to use cloud computing. A good number of lecturers are pursuing PhD studies and from time to time a good number approached the interviewee seeking assistance on trying to recover their manuscripts that would have gone missing for various reasons. Some manuscripts are lost when the gadgets used are taken for repairs after malfunctioning or when their laptops are affected by viruses which, when cleaned, the corrupted documents are also wiped away and, there being no backup, the lecturer is left to rue the wasted time. All this could be a thing of the past if cloud computing is adopted and fully utilised. The remaining interviewees echoed the sentiments of the first interviewee.

The workshops should be conducted to give a thorough explanation of what cloud computing is. There is need for educating lecturers on how to use this tool. Lecturers should be taken through a step by step process whereby they create Google accounts and then go through the process of storing documents in the Google cloud, retrieve the documents and update them. After that then there is need for educating lecturers about the benefits of this tool and appraise them on the benefits of using cloud computing in research work. There are issues like organising one's work, safe storage, collaboration with fellow lecturers and administering work for students.
The other issue requiring attention is the need for demystifying the security concerns about this tool. Just how secure is the information stored in the cloud? How safe is it? On this issue there was concern on the issue of examination material which the interviewees concurred should not be stored in the cloud for the sake of integrity of the examination system. All current examination material for the period should not be placed in the cloud except when the material becomes history, when the examination has been written.

Stage two: Questionnaire

The researchers distributed a total of 100 questionnaires and 91 were returned giving a response rate of 91%. However of the 91 returned 3 were not completed well and therefore were not considered for further processing, so only 88 were considered for further processing. Out of the 88 valid responses, 36 indicated that they were using cloud computing, 46 were not using the technology at all, while 6 respondents were not sure.

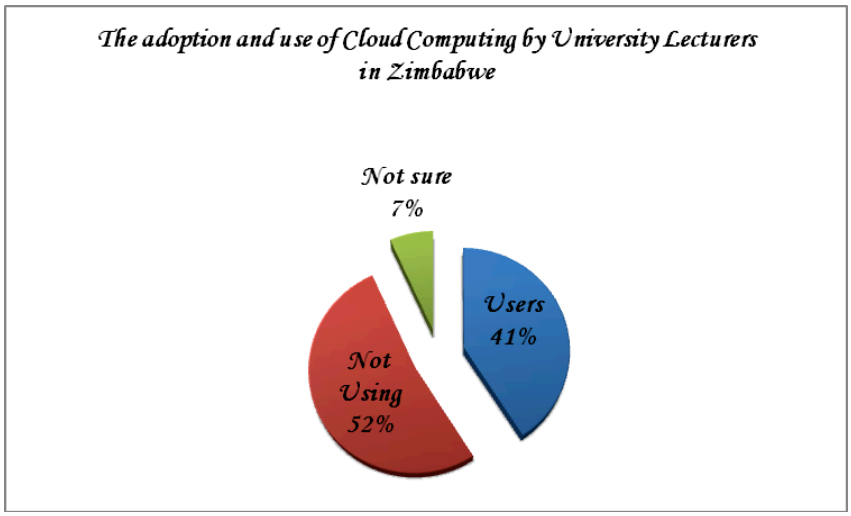

Fig 2: *Pie Chart representing users, non-users and those not sure.*

Table 1: *Demographic data of participants*

Variables		Users		Non Users		Skeptical	
		No	%ge	No	%ge	No	%ge
Sex	Male	22	61.11%	36	78.26%	2	33.33%
	Female	14	38.89%	10	21.74%	4	66.67%
Age	<25						
	25-34	16	44.44%	14	30.43%	2	33.33%
	35-44	8	22.22%	16	34.78%		
	45-54	8	22.22%	10	21.74%	2	33.33%
	55-64	4	11.11%	6	13.04%		
	64+					2	33.33%
Qualification	Bachelors						
	Masters	24	66.67%			6	100%
	PhD	8	22.22%	32	69.57%		
	Professor	4	11.11%	14	30.43%		
Period	Below 5	10	27.78%	4	8.7%		
Worked in a	5-10 Years	20	55.56%	30	65.22%	6	100%
University	10+Years	6	16.67%	12	26.1%		

The data in the table above shows demographic profiles of respondents. The respondents are grouped according to those who use cloud computing, those who don't use and those classified as skeptical. Generally there were more males in this research than females. Male users of cloud computing accounted for 61.11% against females' 38.89%, on the non-users males again dominated with 78.26% with females accounting for 21.74%. However, there were more females on those who were classified as skeptical with 66.67% against males'33.33%.

On the issue of age there were more users among the 25-34 age group with the number of participants declining as we go up age wise, which can be explained by the fact that this is the group closest to digital citizens among respondents, hence the saying you can't teach old dogs new tricks. The age group categories 35-44 and 45-54 accounted for the same percentage 22.22% of users while the 64+ group accounted for nil percentage. However, this group also accounted for zero percent nonusers with 33.33% skeptical. Although this was the case the researchers noted this and inferred that this group is unlikely to use cloud computing, as the technology came when they were in their advanced age. The researchers believe that the furthest the age from the digital natives the more unlikely the chances that one can use the digital facilities like cloud computing.

On the issue of education level, the researchers found out that the level of education has no bearing on the adoption and use of cloud computing as all non users had either a PhD or Professorship. All those skeptical were found to be holders of a Masters degree and they all had worked in a university set up for an average of 5-10 years. Most respondents had actually served in a university set up for a reasonable time with 55.56% of users having served for the same period while non-users for the same period accounted for 65.22%. However, we believe that the issue of education remains important because specific subject domain on Google docs will possibly result in massive uptake of Google docs.

Those who use cloud computing

36 participants indicated that they use cloud computing and, of these, 16 indicated that they used cloud computing frequently, 10 used it once in a while, whilst 10 used it whenever necessary.

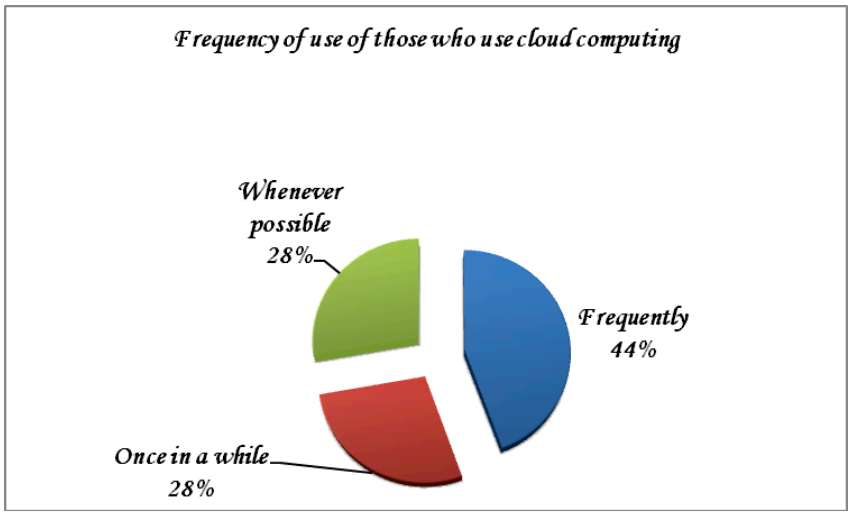

Fig 3: *Pie Chart representing frequency of use by users.*

Different users indicated different reasons for using cloud computing, the highest number of participants being 22 indicating they used cloud computing for storing their academic documents, 12 used for collaborating with their academic peers, 14 used it for education and learning while 6 gave other uses.

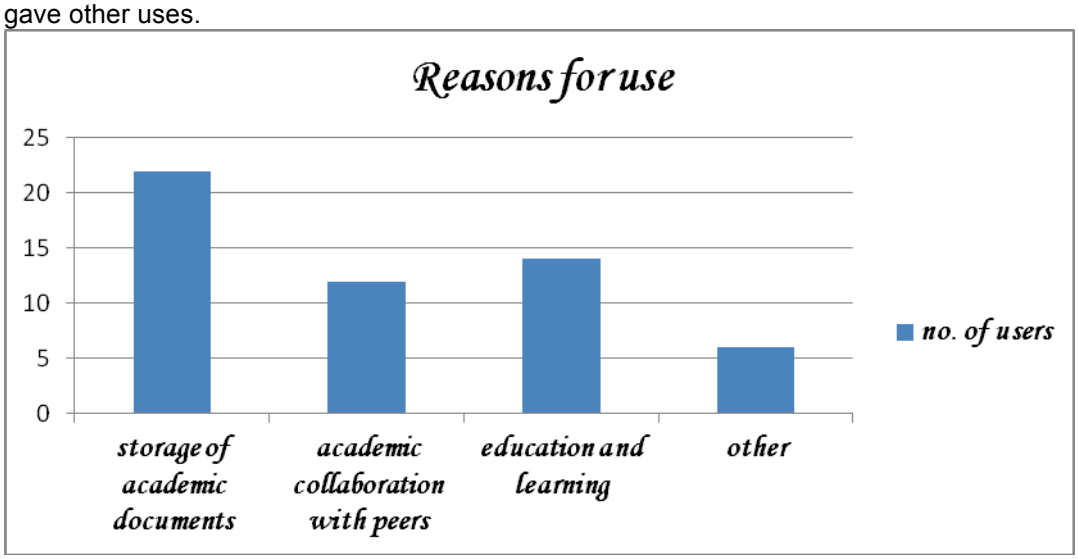

Fig 4: *Bar graph representing reasons for use users.*

Different reasons were given by the participants that would encourage a massive uptake of cloud computing. These include the need to educate lecturers about how this tool can be used, the benefits associated with using the tool, and the need to demystify the security concerns associated with this tool.

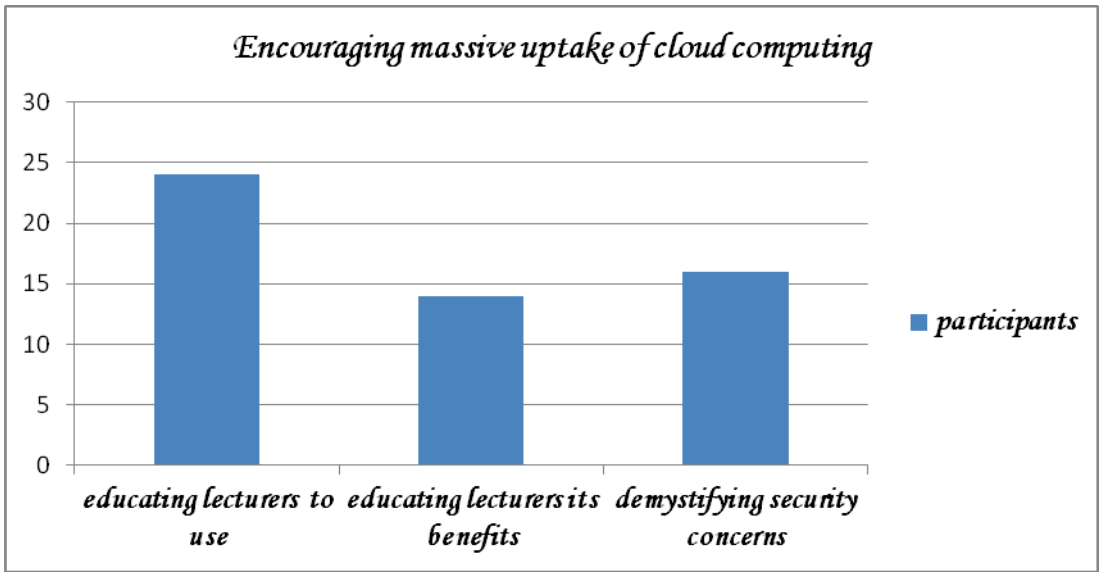

Fig 5: *Bar graph representing reasons for what need to be done to ensure adoption and use users.*

Of the 36 participants who indicated that they are using cloud computing 22 of them where male and 14 were female. Their ages were varying from 25 years to 64 years. On the graph below is the chart to represent the number of participants according to their ages.

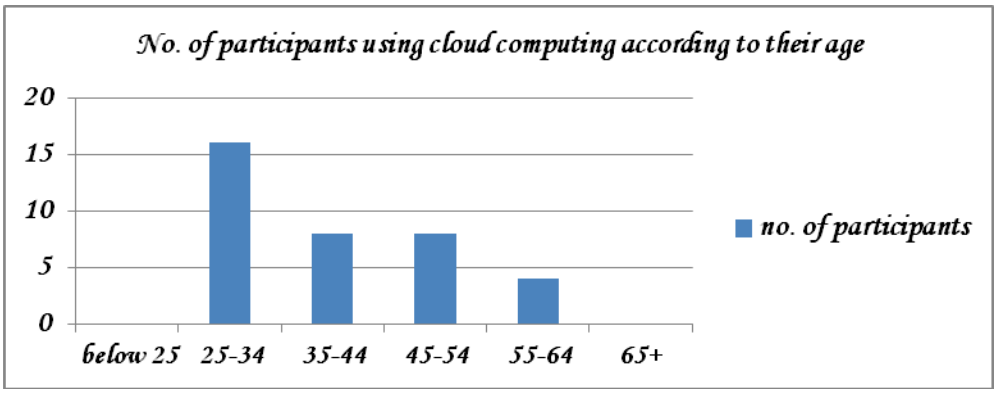

Fig 6: *Bar graph representing users according to their age groups.*

Of the 36 participants 24 have acquired a masters degree, 8 a PhD degree and 4 professorship status. In terms of work experience 20 members have worked at a university for a range of 5-10 years, 10 worked below 5 years and 6 worked for 10 or more years.

Those who do not use cloud computing

46 participants indicated that they do not use the cloud computing tool. These participants gave different reasons for not using it; and the reasons are displayed in the chart below.

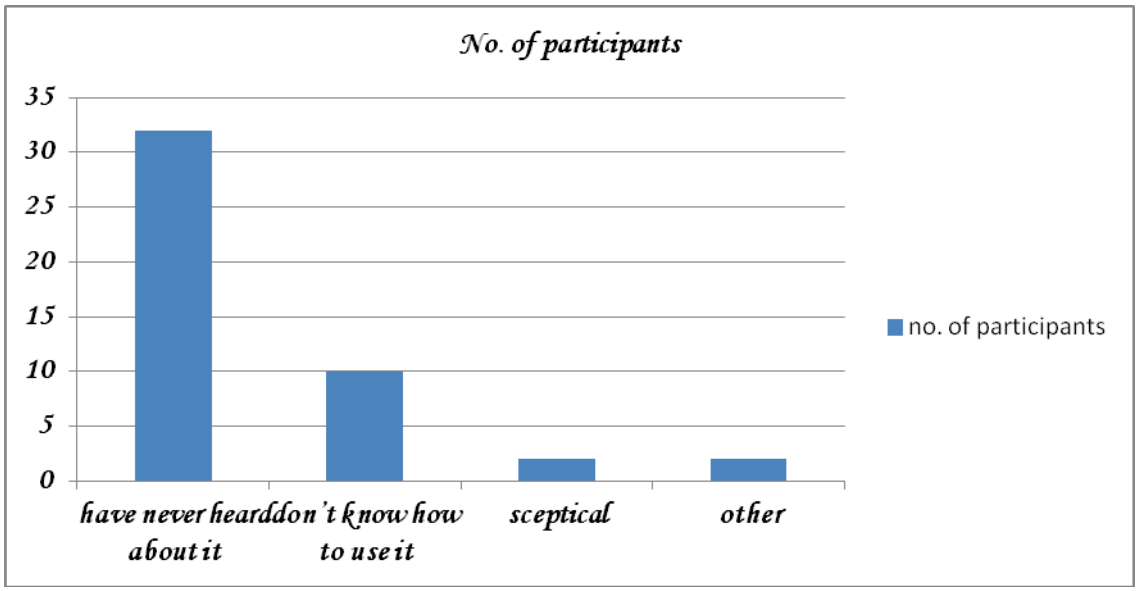

Fig 7: *Bar graph representing non-users's reasons why they were not using cloud computing.*

Although they did not use the cloud computing tool, the respondents managed to advise on the way in which it could be used by many people. Figure 8 shows what the respondents had to say.

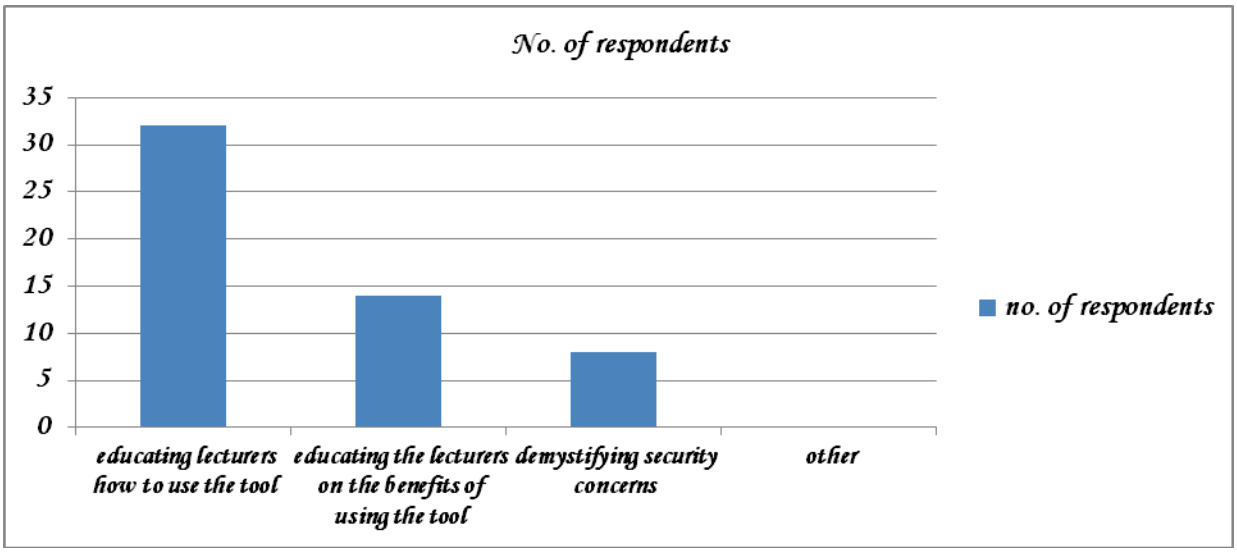

Fig 8: *Bar graph representing non-users's reasons on what need to be done to ensure successful adoption and use of cloud computing.*

Of the 46 participants who said they do not use cloud computing 14 were of the age group 25-34 and 16 male and 10 were female. The chart in Figure 9 indicates more on the participant's age.

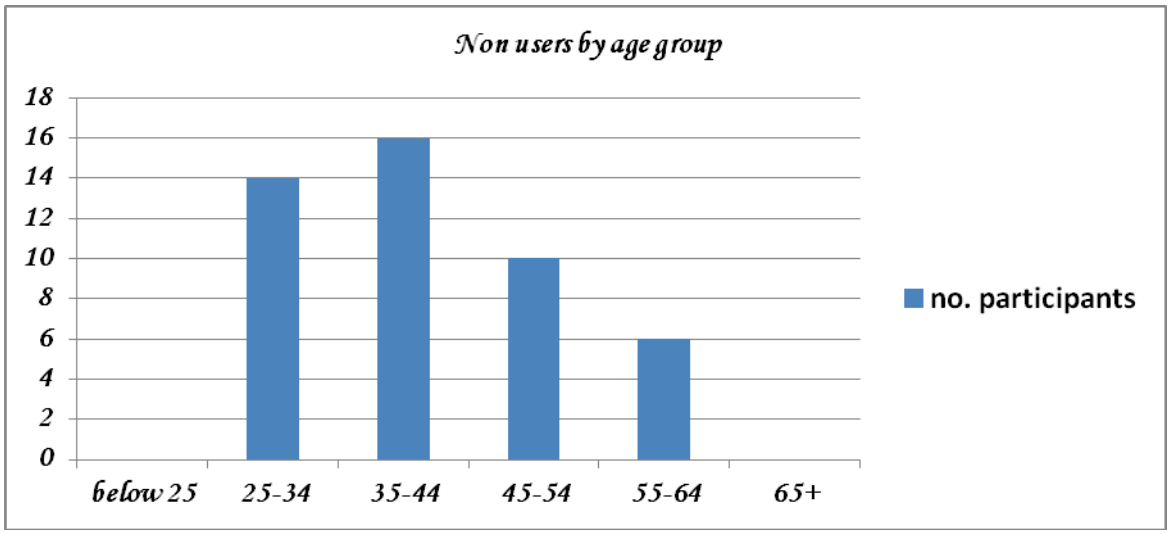

Fig 9: *Bar graph representing non-users's according to age group.*

Of these participants 32 had a master's degree and 14 had a PhD degree, in which 4 of them had below 5 years experience, 20 of them had an experience of 5-10 years and 12 had at least 10 years experience.

Those who are not sure about cloud computing

Six participants indicated that they were not sure of cloud computing, and 4 of them gave the reason that they did not know how to use it while 2 said they were skeptical about it. The participants also indicated what they think should be done in order for cloud computing technology to have a massive uptake.

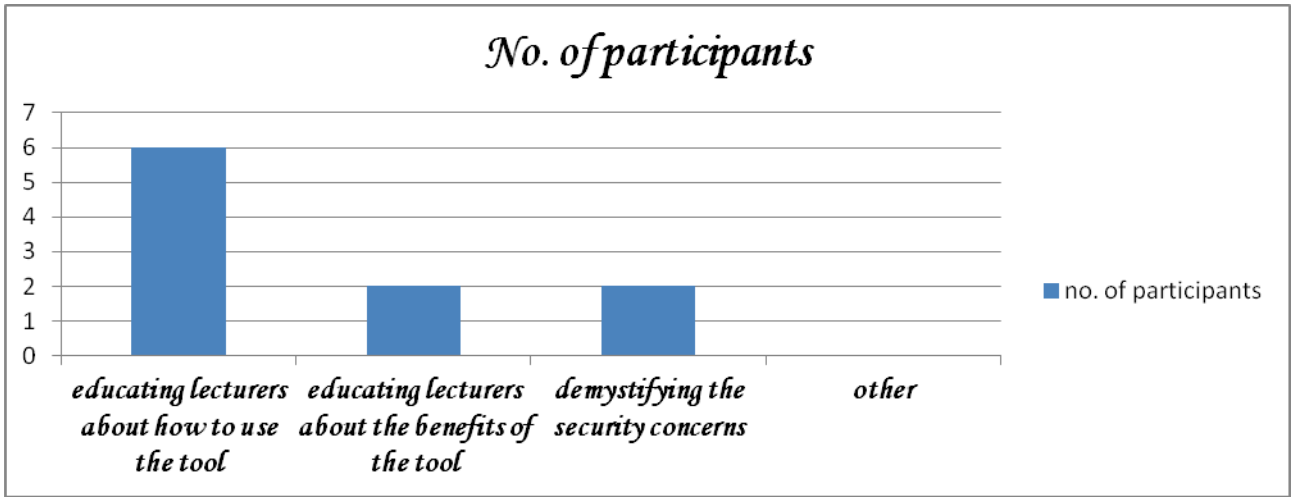

Fig 10: *Bar graph representing those who were sceptical reasons on what need to be done to ensure successful uptake and use of cloud computing.*

Two of the participants were male and 4 of them were female and of theses participants 2 were aged between 25-34 years, 2 were between 45-54 years, 2 were aged 60 and above and they had all attained a masters degree with an experience of 5-10 years.

DISCUSSION

The findings from this research showed that there are a number of benefits of Google docs to Lecturers and these benefits are that; Google docs is a free facility for anyone with a Gmail account. What is only required is internet connectivity. The facility enables better collaboration amongst peers in academia. Lecturers working on a research project can easily share knowledge and ideas on the platform. The most critical tools an academic may need is found on Google docs. Google is one of the most secure platforms in the internet world with a solid track record so what the lecturers need is to be educated and these writers believe workshops are necessary to accomplish this (Armbrust, M., Fox, A., Griffith, R., Joseph, A. D., Katz, R., Konwinski, A., & Zaharia, 2010).

There is lack of knowledge about the existence and how to use cloud computing among university lecturers in Zimbabwe with only 41% of respondents indicating that they were using it. Among those not using it seven (7) indicated that they would be interested in using cloud computing if they are enlightened on how to use it. Maybe this is due to the fact that a good number of the lecturers are digital immigrants hence they are not well acclimatised to the digital world. Because they are alien to the digital world they are bound to be sceptical to some digital issues such as cloud computing unlike their students who are the digital citizens. This can be

observed from the point that out of the 46 respondents not using cloud computing 32 have never heard about it, while 10 don't know how to use it. This tallies with the arguments raised by the interviewees, who pointed out lack of knowledge as the major hindrance to the adoption and use of cloud computing. This tallies with findings by (Armbrust, M., Fox, A., Griffith, R., Joseph, A. D., Katz, R., Konwinski, A., & Zaharia, 2010; Barać, Radenković, & Jovanić, 2014; Bogdanović, Milić, & Labus, 2014; Gwendolyn & Maxmillan, 2014; Karim & Goodwin, 2013; C. W. Taylor, 2011).

There was an interesting trend observed which is worth mentioning although it was not part of the research questions. The younger age group belonging to the 25-34 years and 35 to 44 years age group categories was dominant among lecturers participating in this research. This was attributed to the fact that Zimbabwe experienced a period of economic meltdown from 2000 to 2008 which did not spare higher education. There was brain drain that culminated in the university Lecturers exploring avenues for survival leaving universities depleted. On the issue of qualifications those with a Masters degree accounted for a major group.

The questionnaire was designed in such a way that the demographic information questions were provided at the end. The researchers decided to do this on the understanding that in certain cases these demographic questions influence the answering pattern hence the decision to try and allow respondents to answer the critical cloud computing questions first and then answer the demographic questions last.

CONCLUSION

The objectives of this paper were to establish the benefits of using cloud computing, particularly Google docs, to researchers and academics and to investigate the factors affecting the adoption and use of Google docs by Lecturers in universities in Zimbabwe. The researchers conducted literature review which resulted in outlining of benefits. Interviews were conducted which culminated in the design of a questionnaire which was used for data collection. The findings from interviews were supported by the findings from the questionnaires after results were collated. The researchers made the following conclusions:

There is need for workshops to be conducted to give a thorough explanation of what cloud computing is to all lecturers. Lecturers should be taken through a step-by-step process whereby they create Google accounts and then go through the process of storing documents in the Google cloud, retrieve the documents and update them. Then there is the need for educating lecturers about the benefits of this tool and appraise the lecturers on the benefits of using cloud computing in research work. The other issue requiring attention is the need for demystifying the security concerns about this tool and explain how secure the information stored in the cloud is. While cloud computing is beneficial to adopt and use there is need to be prudent on the material to be posted on the cloud.

ACKNOWLEDGEMENT

The researchers are grateful for and would like to thank the management of the university which was used this research in Zimbabwe for their cooperation in carrying out this research. The researchers would like to thank all those who participated in this research for making it possible for the research to succeed. The researchers would like to highly applaud them for their valuable contribution in this work.

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Samuel Musungwini is a Lecturer in the Department of Computer Science and Information Systems at Midlands State University. Samuel is carrying out a research on **adoption and use of cloud computing among University lecturers in Zimbabwe**.
You are kindly requested to complete this questionnaire. Please note that this research is purely for academic purposes. Your responses will be treated with a high degree of confidentiality and the data will be presented in such a way that your identity can not be connected with specific published data.

APPENDIX

"cloud computing is 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."
Google Docs is a free online program that allows users to create documents, spreadsheets and presentations online and share them with others for collaboration. These files are shared on Google Drive, are stored in the cloud and therefore available on any computer where there is internet connection

1) Have you ever used Google docs/Drive?
Yes **No** **Not sure**

2) If you are not using Google docs/Drive, why are you not using it?
I have never heard about it
I don't know how to use it.
I am sceptical about it.
Other

3) If you use Google docs/Drive how often do you use it?
Frequently Once in a while. Whenever necessary

4) What do you use Google docs for?
Storage of academic documents.
Academic collaboration with peers.
Education and learning.
Other

5) What do you think needs to be done to ensure that there is massive uptake and use of Google docs/Drive successfully?
There is need for educating lecturers about how to use this tool.
There is need for educating lecturers about the benefits of this tool.
There is need for demystifying the security concerns about this tool.

Other (Please specify if possible) …… … …
……
……

6) **What is your gender?** Male Female

7) **What is your age?**
Below 25 Years
25-34 Years
35-44 Years
45-54 Years
55-64 Years
65+ Years

8) **What is the highest qualification you have attained to date?**
Bachelor degree
Masters degree.
PhD degree.
Professorship.

9) **How long have you worked as a Lecturer in a University system?**
Below 5 years
5- 10 years
10+ years

Thank you very much for participating in this survey, I fully appreciate the valuable time you spent on this activity. If you have any query please feel free to contact me on 0713495594, 0772117443 or musungwinis5@gmail.com.

Interview Questions

a) What do you understand by the term Cloud Computing?
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……
……
……

b) Give any five (5) common examples of cloud computing facilities you know?
……
……

c) What is Google docs?
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d) How does Google docs work?
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e) How applicable is Google docs to the work of an Academic/Lecturer?

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……

f) Why are some Lecturers not using Cloud Computing/Google docs?

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……
……
……

What can be done to increase the rate of uptake and use of Cloud computing/Google docs?

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