THE ACCEPTANCE OF CLOUD STORAGE TECHNOLOGY AMONG UNIVERSITY STUDENTS IN MELAKA

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APPROVAL

I hereby confirm that I have examined this project paper entitled:

The Acceptance of Cloud Storage Technology among University Students

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DECLARATION OF ORIGINAL WORK

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I declare that the work I am submitting for assessment contains no section copied in whole or in part from any other source unless explicitly identified in quotation marks and with detailed, complete and accurate referencing.

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DEDICATION

I dedicate this thesis to my family especially to my parent Mr. Ayop Bin Mamat and my loving mother Mdm. Kamariah Binti Ismail for nursing me with affections and love; lecturer at UTeM especially for my supervisor Dr Murzidah Binti Ahmad Murad, friends and those people who have guided and inspired me throughout my journey of education.

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May ALLAH bless you all.

Thank you.

ABSTRACT

Malaysia is now a developing country in terms of its economy and technology. There are many of new technologies are brought from outside countries that are helpful in many sectors of this country especially in education.Cloud storage is one of technology that helps students, especially university students in their learning in terms of storing their tasks or assignment and important files using internet connection. So the student no longer need to use traditional way to store their important data or file such as using thumb drive or CD-ROM disk. Researchers have chosen the Melaka state as a location to conduct research on the acceptance of cloud storage technologies among university students. Thus, this study provides many benefits to university students and improvements in technology education in the state of Melaka.The objective of this study are (1)To investigate the factors that influencing student to accept the cloud storage in their learning process, (2) To examine the factor that influencing student acceptance of cloud storage the most, and (3) To identify the benefits of cloud storage to students.A total of 400 questionnaires were distributed to respondents and 382 questionnaires were collected which involve students from three higher education institutions which is Universiti Teknikal Malaysia Melaka (UTeM), Universiti Teknologi Mara (UITM) and Politeknik. Quantitative method was used in this research to collect data from respondents.Researchers have used the software application which is Statistical Package for Social Science (SPSS) version 23 for analyzing and interpreting the data to useful information.

Keywords: Education, Cloud Storage, University Students, Acceptance, Objective

ABSTRAK

Malaysia kini adalah sebuah Negara yang sedang membangun dari segi ekonomi dan teknologi. Terdapat banyak teknologi baru yang dibawa dari luar negara yang membantu dalam banyak sektor di negara ini terutamanya dalam pendidikan. Penyimpanan awan adalah salah satu teknologi yang membantu pelajar, terutamanya pelajar universiti dalam pembelajaran mereka dari segi menyimpan tugasan atau tugasan mereka dan fail penting menggunakan sambungan internet. Oleh itu pelajar tidak lagi perlu menggunakan cara tradisional untuk menyimpan data atau fail penting mereka seperti menggunakan cakera keras atau cakera CD-ROM. Penyelidik telah memilih negeri Melaka sebagai lokasi untuk menjalankan penyelidikan mengenai penerimaan teknologi penyimpanan awan di kalangan pelajar universiti. Oleh itu, kajian ini memberikan banyak manfaat kepada pelajar universiti dan peningkatan dalam pendidikan teknologi di negeri Melaka. Objektif kajian ini adalah (1) Untuk mengkaji faktor-faktor yang mempengaruhi pelajar untuk menerima penyimpanan awan dalam proses pembelajaran mereka, (2) Untuk mengkaji faktor yang mempengaruhi penerimaan pelajar terhadap penyimpanan awan yang paling banyak, dan (3) faedah penyimpanan awan kepada pelajar. Sebanyak 400 soal selidik telah diedarkan kepada responden dan 382 soal selidik telah dikumpulkan yang melibatkan pelajar dari tiga institusi pengajian tinggi iaitu Universiti Teknikal Malaysia Melaka (UTeM), Universiti Teknologi Mara (UITM) dan Politeknik. Kaedah kuantitatif digunakan dalam kajian ini untuk mengumpul data daripada responden. Penyelidik telah menggunakan aplikasi perisian iaituStatistical Package for Social Science (SPSS) version 23 untuk menganalisis dan menafsirkan data kepada maklumat berguna.

Kata Kunci: Pendidikan, Penyimpanan Awan, Pelajar Universiti, Penerimaan, Objektif

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CHAPTER 1

INTRODUCTION

1.1 Background of the study

Cloud storage can be defined as a cloud computing model that works to store data on remote servers that can be accessed from the internet.Cloud storage services provide facilities such as file hosting, file sharing, and remote data backup.Nowadays, due to the advance of technology cloud storage has place itself to something that could be added the value.There are some examples of cloud storage service using pc or mobile such as Dropbox, iCloud, SkyDrive, and Google Drive.Students in the 21st century no longer need to rely on lecturing and tutoring that commonly used in universities which is traditional teaching-learning methods.(Tahir, 2016)points out that cloud storage defined as digital data that stored in logical pools, the physical storage spans multiple servers, and the physical environment is typically owned and managed by a hosting company.(Ferdiana, 2017)stated that cloud storage defined as storage method that can store and manage the data on the internet (cloud). According to (He, Li and Zhang, 2010)stated thatcloud storage can be defined as a way that let you using the storage facilities available on the internet and the product of the integration of distributed storage and virtual technologies.

Cloud storage has a close connection with cloud computing.Generally, cloud computing can be defined as a set of hardware and network resources that merge the power of many servers to send variety of services via the internet(Tahir, 2016). Cloud computing covering all of cloud storage system.Cloud computing defined as a specimen for allowing network access available anywhere, convenient, on demand that is required to share configured computing resources such as networks, servers, storage, applications, and services that can be set up quickly and removed with

management efforts or services which minimizes supplier interaction(Mell and Grance, 2011).

There are three different levels of service provided by Cloud computing namely Infrastructure as Service (IaaS), Platform as Service (PaaS), and Software as Service (SaaS)(Arpaci, 2016). IaaS offers users with the capability to control the underlying cloud infrastructure, including operating systems, network, servers, storage, and applications. While the PaaS offers users with the capability to deploy applications produced using programming languages and tools supported by service providers on the cloud infrastructure and SaaS also provides users with the capability to use applications provided bycloud service providers on the cloud infrastructure.

Cloud storage can be interpret as utility storage which is a phrase depending on differentiation where it rely on real implementation and service delivery. (Meske, 2014)states the cloud storage technologysuch as Dropbox enabling their users to store and to synchronize them over multiple devices.

1.2 Problem Statement

There are times when students use files like word processing, spreadsheets, and so on using different computers they need to store their files on thumb drive or CD-ROM discs.Nowadays, in teaching and learning environment, students need to keep a lot of the necessary information and data in a safe and easy place to recover what's kept safer. (Atchariyachanvanich, Siripujaka and Jaiwong, 2015)conducted a study which revealedcloud storage can be a solution for the problem of scalability or storage barrier issues on e-learning.The management of e-learning materials and semantic is a pattern of cloud storage usage shown in some research.(Malini, Mala and Karuppaiah, 2013), storing a classroom quiz(Cheng and Wang, 2013), or even simulator on a classroom(Tam, Yi and Lam, 2013). “The drive or disk will then travel around with the students to ease them to load the information onto other computers to actually be retrieved”(Tahir, 2016). These are really tedious and time consuming task.

Things that make situation worse are students may lose information stored in thumb drives or computers.The student might losing the device, damaged CD, or have not proper information loading.“These unexpected incidents do happen especially when facing problems with sudden electricity failures or when the computers corrupt without warnings” (Tahir, 2016). Every student has gone through the feeling of losing hours of his or her time due to unexpected problems, and this can really be a tiresome.

Besides that, students and teachers also tend to spend more time spent printing, filing, and distributing tasks. These matter led to an increase in expenses including buying, leasing, and maintaining photocopiers and printers, ink cartridges, and paper.

1.3 Research Questions

With the rapid growth in the modernization era, information can get on fingertips. Each method or technique keep chancing and improving to the new level. Same goes to the new way of teaching and learning process. Hence, this research focuses on acceptance of cloud storage among students to enhancing teaching and learning process.

Thus, the purpose of the Research Question constructed as below:

1.3.1 What are the factors that influencing student to accept the cloud storage in their learning process?

1.3.2 What is the factor that influencing student acceptance of cloud storage the most?

1.3.3 What are the benefits of cloud storage to students?

1.4 Research Objective

The main objective of this study is to examine the acceptance of cloud storage technology among tertiary students in Melaka. Furthermore, this study also will investigate the most significant factor that influencing student to accept the cloud storage. Thus, the research objectives of this study are stated below:

1.4.1 To investigate the factors that influencing student to accept the cloud storage in their learning process.

1.4.2 To examine the factor that influencing student acceptance of cloud storage the most.

1.4.3 To identify the benefits of cloud storage to students.

1.5 Scope of the study

The scope of this study is to investigate the acceptance of cloud storage among students in Melaka in enhancing the teaching and learning process. Thus, the researchers were chosen the four variables that are being used are perceived security, perceived usefulness, perceived ease of use and perceived privacy.

The researcher were chosen these four variables because these four dependent variables were most related factor to be consider with the cloud storage technology. Thus the target respondents in this research are the students from all state of Melaka. They can give the response whether the acceptance of cloud storage do give the impact, enhance and do added value the on learning process.

Besides, throughout the study will also be provide the answer does this technology do facilitatestudent complete assignments and save their documents safely.In addition, this study also will provide what factors influence the acceptance of cloud storage among student. They can give the response, whether the teaching and learning process through cloud storage does add value and enhance the method of teaching among the lecturers.

1.6 Limitation

There are several limitations occurring to in the research study.First, this research is to investigate the acceptance of cloud storage technologyamong student only, thus people who is not a student are not going to discuss. So the key problem with this explanation is that the result cannot be over generalized.Furthermore, one question that needs to be asked, is to justify whether the researcher assume that the respondent has an equivalent knowledge to be a part of primary data provided to help in this studies.

On the other hands, it will always be their own competitive advantages for their competitors.Secondly, the researcher will assume all respondents are answering with honestly. To make sure it clearly stated here that this research it only adopted a quantitative approach through survey.Third, this study are only focused on students whom use the cloud storage and does not take into account environmental or economic factors that may influence a student acceptance towards cloud storage.At same time, the personalized experience and understanding individual student perception of cloud storage technology is another limitation that could be considered.

Next, this study aims to discuss the intention of continuing to use cloud storage at the individual level.Future studies may be similar to current studies at the organizational level and further discuss possible conflicts between organizational intentions and individual intentions.Lastly, as the final year project researcher have a limited time to do research. The researcher only do this in a short time line. The longer time needed to make the better research in future.

1.7 Significance and Contribution

The study will benefit to all of student in Melaka states. It is important to identify how the acceptance of cloud storage could add value on the learning process of student. Besides, the project also provides a deeper study on the key factor that will impact or enhance the learning process of student.A part of that, the important of the research also could be categorized as a moderating factor on the government education structure where it well aligned the uses of technologies in education.

To strengthen the facts, according to Prime Minister Datuk Seri Najib Bin Abdul Razak (in presentation of the 2018 budget) have discussed about education for TN50 (Transformasi Nasional 2050) generation, where an allocation of RM250 million is spent on the following. First, develop the latest learning methods to train STEM specialist teachers utilizing existing facilities at teachers training institute in collaboration with academy of science Malaysia through set up a science, technology, engineering and mathematics (STEM) Centre. Second, implement coding programs in the primary and secondary curriculum that has been implemented on form one and form three students through the improvement in computer science modules. Third, enhancing creative-based learning and innovative thinking through a RM190 million allocation to upgrade 2,000 classes into the 21st Century Intelligence Class.This clearly showed how beneficial technology could bring to the humanity.

Success in the study will give the direction to implement to design and make improvement on cloud storage technology for education purpose.Furthermore, the research will provide valuable feedback to students from all of higher education institution, in order to offer a more self-independent study and make use of the facilities provided by higher education institution to student and lecturer.

1.8 Summary

Cloud storage technology are supreme model should practically usefor busy students because they provide many unique benefits that will keep their work organized. This technology is widely used in higher education that is redefining the manner in which learn takes place and instruction is delivered. The technology acceptance of cloud storage is a new medium of a ways to enhance the learning process for student in the future. It does believe it could make the learning process become more interactive and innovative. The existence of mobile cloud technology has made it a reality. Flexibility for students to learn, acquire and saving information to make mobile cloud storage learning is very popular.

Thus, further study on this topic will make readers clear about the benefit of accepting the cloud storage technology among student for education purpose. Moreover, the results show that students are using their mobile cloud storage technology to improve studying outside of the classroom. The benefit that can clearly been obtained with the use of cloud storage technology can be used as motivation on the success of this new teaching method. In Malaysia, we should grab the opportunities available in the cloud storage technology to produce students who are competitive and able to master genetic skills that should be available in the students.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter will discuss about the acceptance of cloud storage in education among students. According to (Ashtari and Eydgahi, 2015) stated that it is suggested that an individual intention to use a technology, which relates to user acceptance is determined primarily by two beliefs of perceived usefulness of the application and its perceived ease of use.From the observation also we can see that technology that used in education are changing continually from time to time.The technology developed today has helped and facilitated the students in their learning process.Students are easy to adopt cloud storage as there are many advantages to this technology that facilitate them.

Nowadays, cloud storage comes with more advanced technology which is people or student can use the technology through their mobile. It will make it easier for students to use it.According to (Zenuni *et al.*, 2014) cloud storage servers are capable to store and access different important files, such as music, video, pictures, documents and other files via the network, based on specific service requests and quality (QoS).Students those perceive bigger social impact encouraged them to be positively and have intention to use the cloud storage services(Arpaci, 2016). The advantages that cloud computing can provide to educators and students make it an

attractive option in university environments which is the ability to collaboratively share, edit, process, and store huge amounts of data have obvious applications within the research and educational communities and another distinct advantage to users of cloud computing is the availability and ease of access using their own equipment, mobile devices, university equipment, or some combination of these options at whatever time or place they find most beneficial (Ashtari and Eydgahi, 2015).

2.2 Theory Determinant That Affect Acceptance of Cloud Storage among Student

2.2.1 Technology Acceptance Model (TAM)

The technology acceptance model (TAM) was derived from the theory of reasoned action where TRA illustrates behavioral theories while TAM is more "information systems" specific. Figure 2.1 illustrates an outline of TAM through its main constructs. TAM identifies and predicts user acceptance attributes before they actually experience it. The present study proposes a research framework based on the Technology Acceptance Model (TAM), which is one of the most widely used adoption models in predicting studentacceptance of cloud storage technology.

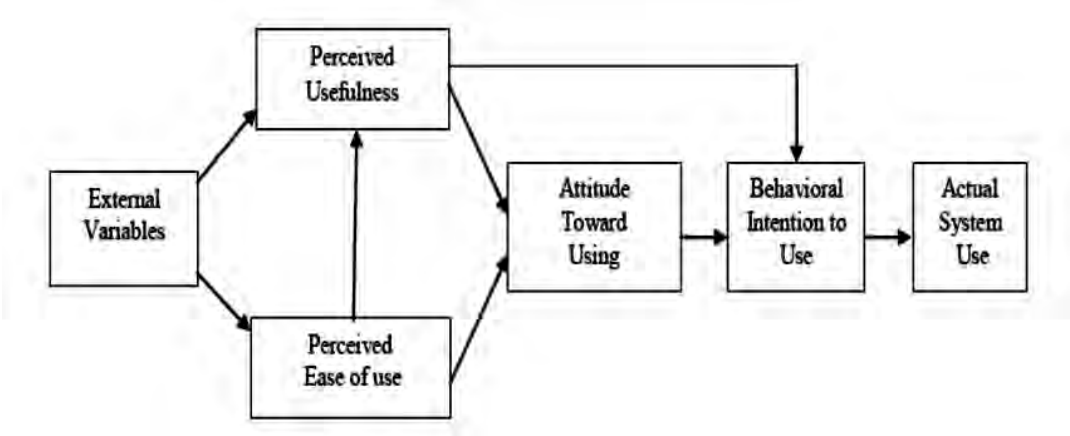

Figure 2.1Technology Acceptance Model (Davis, Bagozzi & Warshaw, 1989)

However, the TAM put forward that two particular beliefs, the perceived usefulness and perceived ease of use, are the main determinants of attitudes toward