THE STUDENT ACCEPTANCE TOWARD PAPERLESS CLASSROOM TO ENHANCE GREEN EDUCATION IN THE UNIVERSITY

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DECLARATION

'I declare that thesis entitle The Student Acceptance Toward Paperless Classroom to Enhance Green Education in University is the result of my own research except as cited in the references'

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DEDICATION

For my beloved father Mr. Mazli Bin Badawi and my caring mother Mdm. Alimah Binti Mohd. Said who is my backbone, and my family that being the great supporter in my lifetime.

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ABSTRACT

This research is approaching on the study of the student acceptance toward paperless classroom to enhance green education in University. The scope of this study is at the public university in Melaka which is University Technical Malaysia Melaka (UTeM). Fundamentally, there are three main objectives for this research. 1) To identify the factors influencing student acceptance towards going green through paperless classroom. 2) To identify the highest factor influencing student acceptance toward going green through paperless classroom. 3) To determine the impact on student acceptance when paperless classroom is applied in the universities. Green education is one of the efforts to save the world by proposed to apply paperless classroom in university. This is due to the impact of deforestation and increase of climate change in the world. Reducing the consumption of paper in classroom is one of the green initiatives to save the world. But in order to apply, the researchers do not know the student acceptance toward the changes. It may influenced by many factor such as economical factor, social factor, technological factor, legal factor and environmental factor. Next, the method use by the researcher in this research is survey by conducting 370 questionnaires to the student in seven faculties in UTeM. The respondent for the distribution is involving the number of respondents that being calculated using sampling data table. The data is analyzed by using the descriptive statistics and inference. Thus, the result shows the hypothesis is accepted and all objectives are achieved for this research.

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ABSTRAK

Kajian ini adalah mengenai penerimaan pelajar kearah bilik darjah tanpa kertas untuk meningkatkan pendidikan hijau di universiti. Skop kajian ini merujuk kepada university awam di Melaka seperti Universiti Teknikal Malaysia Melaka. Pada dasarnya, terdapat tiga objektif utama kajian ini. 1) Untuk mengenal pasti factor-faktor yang mempengaruhi penerimaan pelajar kearah hijau melalui bilik darjah tanpa kertas. 2) Untuk mengenal pasti factor apakah yang paling mempengaruhi penerimaan pelajar kearah hijau melalui bilik darjah tanpa kertas. 3) Untuk mengkaji kesan kepada penerimaan pelajar apabila bilik darjah tanpa kertas dilaksanakan di universiti. Sepertinya, pendidikan hijau adalah salah satu usaha yang dibuat untuk selamatkan alam sekitar melalui cadangan pelaksanaan kelas tanpa kertas di universiti. Hal ini disebabkan kesan pembakaran hutan dan aktiviti penebangan pokok telah meningkatkan perubahan klimaks di dunia ini. Dengan mengurangkan penggunaan kertas di dalam kelas adalah salah satu iniatiatif untuk selamatkan alam sekitar. Tetapi, sebelum dilaksanakan, pengkaji tidak tahu sejauh mana penerimaan pelajar terhadap perubahan ini. Penerimaan ini mungkin disebabkan oleh beberapa factor seperti faktor ekonomi, faktor teknologi dan faktor persekitaran yang mempengaruhi penerimaan pelajar terhadap sesuatu perubahan. Seterusnya, kaedah yang digunakan dalam kajian ini adalah menggunakan kaedah kaji selidik dengan menggunakan borang soal selidik untuk diedarkan kepada 370 responden di tujuh buah fakulti di UTeM. Pemilihan responden adalah berdasarkan jumlah sample dan populasi yang diambil kira menggunakan kaedah Krejcie & Morgan. Data yang diambil telah dianalisa menggunakan kaedah penjelasan. Hasilnya, hipotesis yang diuji diterima dan objective yang diuji dalam kajian ini telah dicapai.

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CHAPTER 1

INTRODUCTION

1.1 Background of the study

The aim of this research is to study the student acceptance toward paperless classroom to enhance green education in university. The researcher will focused on green education in public university in Melaka which is UTeM. In this research, the researcher will identify the factor and the most influences factor that influences student acceptance toward going green through paperless classroom. Next, the researchers will determine the impact on student acceptance when paperless classroom is applied in the universities.

In life, education is important to transform a person from knowing nothing to know something that turn their life into a good person with full of knowledge before they face their real life in future. Education was built since in home which is through family. As time pass by, people are growth and gain the education through the process of teaching and learning in college and school. In Malaysia, Prime minister of Malaysia said that education has been the key to Malaysian rapid development. It has provided the citizens with the knowledge, skill, and competency to increase the quality of higher education in Malaysia before achieving the goal of becoming a developed nation by 2020.

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When education system growing up, technology also growing up rapidly these day. The growth of technology had changed the way we learn, interact, work, spend our spacious time and react to one another differently. Based on the previous researcher said that both student and parent have reached the point where the use of technology is expected. As technology changed, the student learning styles also changed from gen X to gen Y to millennial generation and gen Z. For most of millennial generation, life without using technology is hard to survive in the daily life.

Technological device such as laptop, tablet and smart phones are one of the main sources for them to be used in their learning process in the university. Technology helps to prepare student for a future and better lifestyle where they will compete with the best people around the world. Thus, the impact of adoption technology has shaped the history of educational technology.

Educational technology refers to the use of technology in the learning and teaching process such as the usage of laptop, projector, smart board and etc. in the classroom. Todays, most of university in the world was applied technology in their classroom usually for teaching process especially for lecturer and student. In the learning process, student still use the book and slide note to write the note from the teaching process.

This is because lecturer will explain each point that pointed in the lecture note to make the student easy to understand on what they have learnt. They will only use the technological devices such as laptop and tablet when they have an assignment to finished and submit. Besides, they will only use the laptop in the campus when they are asking to go to laboratory for doing some project that related to the software that they need to learn.

At the same time, the world facing an environmental crisis such as the Earth‟s global temperature have been rising for over a country, accelerating in the past 30 years, and are now the highest on record. This is because the release of carbon dioxide into the atmosphere by fossil fuels for energy, farming and destroying forest. These carbon emissions are causing the greenhouse effect trapping heat and making the Earth warmer. The researcher will explore more

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on the land disturbance by logging operation activity that affected on environment and how to reduce the problem with applying green education in universities.

Nowadays, land disturbance drives climate changes where cut the forest will resulting in damage to the quality of the land and environment. Forest still covers about 30 percent of the world‟s land area but every year the size of forest is reduced due to the deforestation. Trees play a critical role in absorbing the greenhouse gases that fuel global warming. Reducing of forest leads the larger amount of greenhouse gas entering the atmosphere and increased speed and severity of global warming. Forest cut for many reason. One of the reasons is to provide the world‟s wood and paper products. The usage of paper product is important especially in education system from the management, lecturer and also the student.

In education, usually the lecturer will use the paper for making the quiz and exam sheet. For student, paper is important for them to print out the document from the internet, to print out the assignment and report that they need to submit, to print out the lecture note, to print the online text book and many more. Beside of print, paper also used to write, finished the tutorial, to paint and make a short note from the lecture note trough the learning from the class. But, the previous paragraph have been stated where land disturbance by deforestation and logging operation activity is one of the global climate changed that give a bad impact to the world ecosystem and environment. Although producing of paper from the wood gives many beneficial to the people and community but in order to reduce the environmental impact, land disturbance must be stopped.

The concern is how we can reduce the usage of paper in the education system especially for student and how about the self-awareness of student itself toward the global climate change and how they react with that problem. Based on the previous article suggest that the world are introducing going green in education by applied paperless technology in the classroom. According to the U.S. Environmental Protection Agency, printing and writing papers typically used in a school or office such as copier paper, computer printout and notepads, ant it comprise the largest category of paper product consumption. This show that the advancing technology

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today is specifically designed to help office and school go paperless. Meaning that all students will use the technological device such as laptop, tablet, notebook or phone device in the classroom to reduce the usage of paper in order to create the green education and reduce the earth global climate.

Paperless classroom is not eliminate all the usage of paper but researcher is focusing on reduced the usage of paper by transfer the technology tools to the paperless classroom. The paperless classroom gives many beneficial to the student and environment. It also has challenges for student acceptance toward the changes due to the several factors. Thus, the researcher will identify the several factors influencing student acceptance when education nowadays changed to paperless classroom and researcher also will determine the impact on student acceptance when paperless classroom is applied in the universities.

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1.2 Problem Statement

In the earth, water cover 70 percent of water area while forest still cover about 30 percent of the world‟s land area. In facts, forest is one of the ecosystems that affect almost every species on the planet. Forest in the world was disappearing at a critical rate today. The loss of forest is affected by the deforestation. Deforestation occurs around the world and one of the contributing factors to global climate change. According to GRID-Arendal, a United Nations Environment Program states that countries that most contributed in deforestation included Brazil, Indonesia, Thailand, the Democratic Republic of Congo and other part of Africa and part of Eastern Europe. Besides, according to the United Nations‟ Food and Agriculture Organization (FAO), states that an estimated 18 million acres which is 7.3 million hectares of forest are lost each year.

For the production of paper, estimated the size of 20 football field of forest area will be lost for paper production use alone. Logging operation in the Southeastern U.S. resulted in a loss of land about the size of New Jersey which is five million acres. This is not just an American problem, Lafcadio Cortesi, Boreal Forest campaign Director with Forest Ethics said that “some brand of school notebook, copy paper, and filler paper come directly from rainforests in Indonesia, temperate Boreal forest in Canada and other sensitive ecosystems”. Logging of paper production has been identified as one of the primary reasons for losing of animal habitat.

In Malaysia, forest cover 29 percent in peninsular Malaysia, 22 percent in Sabah and 49 percent in Sarawak of forest land area. All logging operation in Malaysia is greater than 500 hectares in addition to pulp and producing the paper mills is more than 50 tons per day that must complete an Environmental Impact Assessment (EIA) to operate. In 2010, Malaysia‟s national forest cover was 20.47 million ha is about 62 percent of its total area but within the years Malaysia‟s forested area dropped to nearly 18.5 million ha which consist of 56.4 percent of land area. Reportedly, over 80 percent of Sarawak‟s forest and over 60 percent of Peninsular Malaysia‟s forest have been cleared. Every month, nearly 57,000 tons of paper fulfilling 456,000 square meter landfill throughout the Malaysia. The total equivalent is about 680,000 trees on marketable sizes. Paper recovery rate in this country is only 40 percent from the consumption

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and production of paper. The total of paper disposed is equivalent with 2.55 million of tree were felled.

Based on the statistic shows the big impact of deforestation and logging operation on the environment such as increasing greenhouse gases, animal will be lost their species and habitat, soil erosion, effect on water cycle and many more. This problem happens from the deforestation whether in legal and also illegal logging operation. While applied to education system, as a student, researcher observed that many students are still dependent on paper in their study even technology is applied in the university. Moreover, student are not fully utilized the usage of technology in their learning process. Thus, the researcher concluded that logging operation from deforestation is occurred to produce the paper. From the paper, people around the world will used based on their usage and needed. Thus, the result of consumption and production of paper will increase the climate change that will harm the environment. The researcher observed that loss of trees is not only give an impact to the environment but also give an impact to the education system.

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1.3 Research Question

Research question was designed based on the research problem. In this research, the researcher have been stated in research problem where the global climate change in the world leads to the awareness to going green in every aspect of the field including the education system. The researcher is focus on reducing the paper consumption and production due to the increasing in deforestation that give a big impact to the ecosystem and suggested to applied paperless classroom toward going green in education.

The concerns have been described in problem statement where are the student satisfied when the paperless classroom is applied in the university? This is because, even though student are more focusing in the technological device but still student are dependent on the paper in the learning process. Thus, to apply the paperless classroom, it is important to know the how the student accepted toward the changes because the impact of paperless classroom is affect largely on the student beside of lecturer and administration staff in university.

Thus, the research explored the following key questions:-

1. What is the factors influencing student acceptance towards going green through paperless classroom?

2. What is the highest factor influencing student acceptance toward going green through paperless classroom?

3. What is the impact on student acceptance when paperless classroom is applied in the universities?

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1.4 Research Objectives

The research objective was designed based on the research topic and research problems. Research objective playing an important role in the research to make sure the research is always on the track. In this research, student also playing an important role in order to applied the green education in the university.

Nowadays, the use of technological device gives many advantages to the student in their learning process. The beneficial of technological device like laptop and tablet also can give a benefit on environment by the use of paperless classroom that can reduce the impact on environment and also ecosystem. Besides, the use of technological device in education also gives benefit in the learning process. Thus, the transformation of technology in the education can help the student for the future and also it give the benefit to the environment by going green in education. The researcher will explain more in the next chapter.

Thus, the objectives of the study are stated below:-

1. Influencing factors of student acceptance towards going green through paperless classroom was identified.

2. The highest factor which influences student acceptance towards going green through paperless classroom was identified.

3. The impact of student acceptance when paperless classroom is applied in the universities was determined.

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