STUDENTS' PREFERENCES ON THE DESIGN OF ELECTRONIC TEACHING PRESENTATION AND THEIR LEARNING STYLE

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ABSTRACT

The purpose of this research is to find out the most annoying about electronic teaching presentation specifically for delivery techniques and visual design among the final year students. The researcher investigated the final year students' preferences on the visual design of electronic teaching presentation. In addition, the researcher identified the students' preferences learning style, in order to determine whether there is any relationship between final year students' learning style and their preferences on the visual design of electronic teaching presentation. There are 150 respondents among the final year students from SPI, SPK, SPL, SPP, SPS, and SPT of Faculty of Education, Universiti Teknologi Malaysia. The learning style model used in this research was Kolb's Learning Style Inventory. A set of questionnaire used as the research instrument consisted of 56 items. There were four sections in the questionnaire. The reliability of research instrument had been determined through a pilot study with the alpha value 0.719 for Section C and 0.754 for Section D. The data had been analysed descriptively by using Statistical Package for the Social Science (SPSS) version 13 for Windows software and had been presented in the form of percentage, mean or Eta value. The findings showed the most annoying about electronic teaching presentation on the visual design was the text small in size which cannot be read (28.7%) and on delivery method was the instructors read the slide to the students (21.3%). Besides that, students preferred image background, image or picture as the main element to deliver the content of presentation, san-serif font type, and the title to be always on top of the slides than at the bottom. The students' learning style preferred was feeler (converger) with 32%. Finally, there was a weak relationship between the final year students' learning style and their preferences on the visual design of electronic teaching presentation with Eta value 0.166.

ABSTRAK

Kajian tersebut dijalankan dengan tujuan untuk mengenalpasti elemen yang paling mengganggu tentang persembahan pengajaran elektronik mengikut perspektif reka bentuk visual dan kaedah penyampaian di kalangan para pelajar. Selain itu, kami mengkaji tentang reka bentuk visual persembahan pengajaran elektronik yang digemari oleh para pelajar. Tambahan pula, kajian tersebut mengenalpasti gaya pembelajaran para pelajar, dan seterusnya menentukan sama ada wujud hubungan di antara gaya pembelajaran dengan reka bentuk visual persembahan pengajaran elektronik yang digemari oleh para pelajar. Seramai 150 orang pelajar tahun akhir sebagai responden dalam kajian tersebut dan mereka terdiri daripada pelajar SPI, SPK, SPL, SPP, SPS, and SPT di Fakulti Pendidikan, Universiti Teknologi Malaysia. Model gaya pembelajaran yang telah digunakan adalah *Kolb's Learning Style Inventory*. Borang soal selidik digunakan sebagai instrumen kajian dengan sebanyak 56 item. Borang soal selidik ini dibahagikan kepada 4 bahagian. Kebolehpercayaan instrumen kajian telah ditentukan melalui kajian rintis dengan nilai alfa adalah 0.719 bagi Bahagian C dan 0.754 bagi Bahagian D. Data dianalisis secara diskriptif dengan menggunakan perisian *Statistical Package for the Social Science (SPSS) version 13 for Windows* dan dapatan kajian dipersembahkan dalam bentuk peratus, min atau nilai Eta. Dapatan kajian menunjukkan bahawa elemen yang paling mengganggu dalam persembahan pengajaran elektronik dari perspektif reka bentuk visual adalah saiz teks yang terlalu kecil dan tidak boleh dibaca (28.7%) manakala dari perspektif kaedah penyampaian adalah pensyarah membaca kandungan persembahan kepada pelajar (21.3%). Selain itu, pelajar lebih mengemari latar belakang persembahan dengan imej, imej atau gambar sebagai elemen utama untuk menyampaikan maklumat persembahan, bentuk tulisan san-serif dan tajuk persembahan diletakkan di atas slaid berbanding di bawah slaid. Gaya pembelajaran yang lebih digemari oleh pelajar adalah *feeler (converger)* dengan 32%. Akhirnya, terdapat hubungan yang lemah di

antara gaya pembelajaran para pelajar akhir tahun dengan kecenderngan reka bentuk visual persembahan pengajaran elektronik dengan nilai Eta 0.166.

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NOMENCLATURE

SPK	-	Analyze, Design, Development, Implementation,
AC	-	Abstract Conceptualization
AE	-	Active Experimentation
CE	-	Concrete Experience
CD	-	Compact Disc
CDROM	-	Compact Disc-Read Only Memory
N	-	Number of Respondent
RO	-	Reflective Observation
SD	-	Standard Deviation
SPI	-	Bachelor of Science and Education (Islam)
SPK	-	Bachelor of Science and Computer with Education (Chemistry)
SPL	-	Bachelor of Science and Education (TESL- Teaching English as Second Language)
SPN	-	Bachelor of Science and Education (Science)
SPP	-	Bachelor of Science and Computer with Education (Physics)
SPS	-	Bachelor of Science and Education (Sport Science)
SPSS	-	Statistical Package for the Social Science
SPT	-	Bachelor of Science and Computer with Education (Mathematics)

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CHAPTER 1

INTRODUCTION

1.1   Introduction

The use of computer in education has started to gain foot in most schools in our beloved country, Malaysia. From *The Chicago Handbook for Teachers: A Practical Guide to the College Classroom*, Brinkley et al. (1999) stressed out the usefulness of the computer and related electronic resources have come to play a central role in education. He stated the five promising uses of the technology including administration, resources or readings, presentation, lectures, and discussion. For administration purpose, computers can help us with the routine administration to manage the students' information, arrange the timetable, provide copies of the syllabus, promote courses, and spread the news.

Moreover, Malaysian Government has undertaken major initiatives to boost the use of computer. Ministry of Education took a few strategies in enhancing the use of Information Communication Technology (ICT) in education such as the preparation of sufficient and up-to-date tested ICT infrastructure and equipment to all educational institutions, the roll-out of ICT curriculum and assessment and the emphasis of integration of ICT in teaching and learning. The government provided the computers and projectors for the schools.   They even provided the software and compact disc (CD) for the teachers.

Let's us take a close-up on the use of computer in a classroom. As known, teachers used to project the transparencies by over-head projector before instructors had the computer. After all, when the computer had been introduced and provided in the schools, most of the teachers used electronic teaching presentation as teaching aid for the teaching and learning process. As the five promising uses of the computer have been discussed, the computer with presentation software can provide a single tool for augmenting lectures with outlines, slides, statistical charts and tables, images, music, and even video clips (Brinkley et al., 1999).

In addition, the internet is widely used in the education field, yet there are still a great number of teachers using the electronic teaching presentations. This is due to the internet also plays a role as a medium to help the instructors to spread their electronic presentation. Most of the instructors are familiar with the electronic teaching presentations but the focus of this research is on the characteristic of electronic teaching presentation; Do they really understand and able to use the technology smartly?

1.2   Background of Problem

It is clearly shown that the use of computer is significant in our routine even in the educational field. The researcher focused on the usage of computer as teaching aids in the classroom especially as a tool to present the content of lessons. Research showed good feedback from the students which the use of technology such as PowerPoint (one of the presentation software) did tell us about the students' liked the PowerPoint. Anderson and Sommer (1997) had pointed out that students liked PowerPoint because of the use of visual content and the easiness to see the visual; they can perceive organization more easily.

However, there were some findings or articles stated that the problems occurred when the improper use of PowerPoint had happened. The problems meant

including the delivery method of the instructor which failed to gain the students' attention and some even with the poor visual design which make the students find the slides difficult to be read. In other words, students complained the presentation material and the way of instructors delivered their presentations. Therefore, the most annoying about electronic teaching presentation would be determined specifically on its' visual design and delivery methods among the students' perspective.

Furthermore, the instructors did not sure about the characteristics of electronic teaching presentation although they had used for several years. Some of the presentation really annoying the audience and even caused the distraction of learners' attention. Do the instructors keen on the characteristics of the electronic presentation which can help them to attract the attention of the students and then to achieve the learning outcomes? Therefore, the researcher found out the characteristics of the visual design preferred by most of the students.

Students have different levels of motivation, different attitudes about teaching and learning, and different responses to specific classroom environments and instructional practices (Felder & Brent, 2005). Students are characterized by different learning styles, preferentially focusing on different types of information and tending to operate on perceived information in different ways (Corno & Snow, 1986). To reduce attrition and improve skill development, instruction should be designed to meet the needs of students (Stice, 1987). Therefore, it is important for instructors to determine the students' learning styles and in succession to help the students to achieve the learning outcomes. The electronic teaching presentations are widely used by the instructors as they try to attract the students' attention, that's why the researcher figured out is there any relationship between the between students' learning style and their preferences on the visual design of electronic teaching presentation

1.3   Statement of Problem

There is a great number of electronic teaching presentation have been used in education. There are some annoying about electronic teaching presentation which will distract the learners' attention. Yet, the purpose of having electronic teaching presentation is to help the instructors' delivery and also attract and further more to help them in their understanding in the certain lesson.

Electronic teaching presentation can be an effective visual tool to present content of the lesson. At the same time, it can be a distraction to the students when it was used improperly. Therefore, the most annoying about electronic teaching presentation for both the design and also the delivery method used by instructors would be determined. Furthermore, the researcher found out the students' preferences on the visual design of the electronic teaching presentation. This is to figure out the preferences of students in order to guide the instructors to improve their electronic presentations from the students' point of view.

Moreover, the researcher studied on the relationship between students' preferences on the visual design of electronic teaching presentation and their learning styles. With such findings, instructors can have an idea on how to improve their electronic teaching presentation in the visual design aspect. In other words, the instructors should take the students' learning styles in their consideration during the planning of the lesson. According to Johnson & Johnson (1978), there can be a strong relationship between learning styles and attitudes towards learning, including motivation to learn, involvement in learning activities, attitudes towards instructors, and self-efficacy.   As a result, the students will pay more attention and perform much better.

1.4   Objective of the Research

There are four main objectives of the research, namely:

a. To find out the most annoying about electronic teaching presentation specifically for delivery methods and visual design among the final year students.

b. To investigate the final year students' preferences on the visual design of electronic teaching presentation.

c. To identify the learning styles among the final year students based on Kolb's Learning Style.

d. To identify whether there is a relationship between final year students' learning style and their preferences on the visual design of electronic teaching presentation.

1.5   Research Questions

The research questions include:

a. What are the most annoying about electronic teaching presentation specifically for delivery methods and visual design among the final year students?

b. What are the final students' preferences on the visual design of electronic teaching presentation?

c. What are the learning styles among final year students based on Kolb's Learning Style?

d. What are the relationship between final year students' learning style and their preferences on the visual design of electronic teaching presentation?

1.6   Significance of the Research

The importance of this project is to help instructors to determine the most annoying about electronic teaching presentation especially for delivery methods and visual design. With the findings, the instructors can have a better presentation by avoid having the annoying elements in their presentation. Hence the instructors can improve their teaching qualities. With these, the students can attain better result or understand better during the lessons.

Besides that, the electronic teaching presentation can be improved by including the students' preferences especially on the visual design of electronic teaching presentation. The students will pay more attention and then gain better understanding in the lessons. Hence the students can perform better in their curricular achievement.

1.7   Rationale of the Research

The computer plays a helpful role in our daily life. Taylor (1980) described three modes of using computers in education which included tutor, tool and tutee. Taylor framed potential uses of the computer as (a) tutor, computer assisted instruction in which the computer teaches the students, (b) tool, in which the computer amplifies ability to address academic tasks, and (c) tutee, in which students learn by programming (tutoring) the computer. The researcher highlighted computer as a tool in the classroom with the electronic teaching presentation as the centre of attention.

The main purpose to use the electronic teaching presentation is to draw the students attention and furthermore to increase the effectiveness on students' achievement after the lesson. The problems occurred when the students felt boring and unattractive during the lesson. The researcher specified the problems due to the

electronic teaching presentation. In addition, the electronic teaching presentation is widely used in the lessons regardless the sizes of classes. This happened because of the easiness to use the electronic teaching presentation. Besides that, the presentation materials are reusable and portable. Therefore, the researcher determined the most annoying about electronic teaching presentation specifically for delivery methods and visual design among the final year students. The instructors can avoid the annoying about electronic teaching presentation.

Electronic teaching presentation can be an effective visual tool to present material during the lesson. At the same time, it can be a distraction to students' attention when it was used improperly. Consequently, it is important to understand some basic principles of the electronic teaching presentation in order to make the lesson become more effective and understandable. There is information on basic principles of the electronic teaching presentation from the internet or book. However, there is no specific reference about the students' preferences on the visual design of electronic teaching presentation particularly for the Malaysia. In the auxiliary, this research would find out the students' preferences on the visual design of electronic teaching presentation.

This research would study on students' learning style in order to determine the relationship between students' preferences on the visual design of electronic teaching presentation and their learning style. This is due to each individual learns differently but the students would be categorized according to their learning styles. This research tried to help the instructors to make more efficient decision on the design of the electronic teaching presentation if there is some possible relationship between the students' preferences on the visual design of electronic teaching presentation and their learning style.

1.8 **Scope and limitation of the Research**

The focus of this research is to figure out the most annoying about electronic teaching presentation specifically for delivery methods and visual design. The research determined the visual design of electronic teaching presentation according to the final year students' preferences. The findings from this research can be used as the reference for the instructors especially lecturer involved in tertiary education. Therefore, the targeted respondents in this research are the final year students from Faculty of Education in Universiti Teknologi Malaysia. This population had been chosen with the reason they have better experience in the instructors' electronic teaching presentations. Besides that, most of them are taking the courses minor computer which they have the basic about the visual design of digital application such as electronic teaching presentation.

The electronic teaching presentation in this research specially referred to the Microsoft PowerPoint presentation. This is due to this software can be obtained easily. On the other hand, it has been widely used in the Faculty of Education in Universiti Teknologi Malaysia. The instructors can make use of the findings from this research as guideline or references about the visual design of electronic teaching presentation which are according to the students' preferences.

1.9 **Operational Definition**

1.9.1 **Electronic Teaching Presentation**

From Answer.com, teaching refers to the act, process or art of imparting knowledge and skill. The Word Tutor defines teaching as the activities of education or instructing. Basically, electronic teaching presentation refers to the digital presentation materials used in the classroom for the educational purposes. Besides

that, the researcher specifically investigates the electronic teaching presentation as the Microsoft PowerPoint presentation in this research.

1.9.2 Visual Design

Benson et al. (2002) stated that a good visual design is about communication. A well-designed application will make it easy for the user to understand the information that is being presented, and show them clearly how they can interact with that information. In this research, visual design of the electronic teaching presentation referred to the background and layout of the slides, font face being used and the multimedia elements being integrated.

1.9.3 Learning Style

According to Wikipedia (2008), learning style is the method of learning particular to an individual that is presumed to allow that individual to learn best. There are a number of learning styles. In this research, Kolb's learning style had been chosen as the guideline to categorize the students according to their learning styles.

Kolb's model works on two levels through a four-stage cycle which includes Concrete Experience - (CE), Reflective Observation - (RO), Abstract Conceptualization - (AC) and Active Experimentation - (AE). With this four-stage cycle, there is a four-type definition of learning styles which include Diverging (CE/RO), Assimilating (AC/RO), Converging (AC/AE) and Accommodating (CE/AE). The definition of each learning styles as below:

  a. Watcher (Diverger)   - views situations from many perspectives and rely heavily upon brainstorming and generation of ideas.

b. Thinker (Assimilator)   - uses inductive reasoning and have the ability to create theoretical models.

c. Feeler (Converger)   - relies heavily on hypothetical-deductive reasoning.

d. Doer (Accommodator) - carries out plans and experiments and adapt to immediate circumstances.

1.10   Conclusion

In this chapter, a brief discussion had been done about the electronic teaching presentation and some of the related issues. A survey would be carried out according to the research objectives. The literature review would be discussed in the following chapter.

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