

Learning Styles Via Interactive Digital Media: Malaysia History

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ABSTRACT: Interactive digital media refer to a product or service on the digital computer-based system, which responds to the user's action by presenting content inclusive of text, moving images, animations, and audio. This study aims to assess learner's perceptions and the feasibility of implementing interactive digital media (Malaysian History) and a guideline of designing interactive digital media to learning styles based on the Visual, Aural, Read or Write and Kinesthetic (VARK) model. This is a quantitative study which uses survey as a research design by distributing questionnaires to a total of 71 high school students residing in Kedah Darul Aman, Malaysia. Findings revealed that using interactive digital media in learning history is a significant digital tool in today's digital era, both in content and mechanics due to digital inclusion factor. This study justifies how digital and media research in the education landscape affects the learning styles and consequently instill interest in offering a deeper and more immersive learning experience. The discussion provided in this study adds on to the discussion of the current education and digital platform research to remain relevant in the era of rapid change and the era of the Industrial Revolution 4.0.

Keywords: *Malaysia history, interactive digital media learning, digital literacy, VARK model*

INTRODUCTION

The national education transformational stipulated in the Malaysia Education Blueprint 2013 - 2025 (Preschool to Post-Secondary Education) in shift 7 in relation to the leverage ICT, the quality of learning in Malaysia should be at the highest quality. Regardless of the geographical issues and students skill level, this inspiration stresses on maximizing the usage of ICT in encouraging self-paced learning and distance learning with high-quality teaching (Ministry of Education Malaysia, 2013). According to the Ministry of Education Malaysia (2013), learning in the 21st century is defined as a learning process that focuses on a student-centered approach based on elements of communication, collaboration, critical thinking, creativity, and values and ethical applications. Hence, this study is conducted to achieve a few objectives. The Ministry of Education Malaysia also introduced Elemen Merentas Kurikulum (EMK) which is an added value to teaching and learning . One of the elements from EMK is information technology and communication which requires creative interactive teaching materials to enhance the quality of learning process. However, the integration of technology should be appropriate and in line with the subject to maximize student's full comprehension towards the subject.

Based on the issues mentioned, the main objective of this study is to assess learner's perceptions and the feasibility of implementing interactive digital media for Malaysia History subject based on the learning styles of the students. The interactive digital media is proposed as a method to instill interest and make learning history more interactive and exciting among the 21st century learners today. This interactive digital media also aims to offer the community a deeper and more immersive learning experience since the moral value of the story plays a role in shaping the society and the future actions. This interactive digital media also adapts and utilizes the technology in today's digital age inline with the Malaysia's mission and vision. This study will also discuss the implementation of using VARK model as an effective learning style in generating the interactive digital media (Malaysia History).

1.1. Learning Style Using Interactive Digital Media

As stated by Honey & Mumford (1992), learning style is defined

as a way of acquiring information or knowledge where it is used as a learning strategy of technique to give knowledge to learners. Interactive digital media are a combination of electronic text, graphics, moving images, and sound, that has been integrated into a structured digital computerized environment that allows people to interact with the data. There are three characteristics involved with interactive digital media which are interactive multimedia content, networked interactivity and digital convergence based on underlying communication and technology concept (Jayanthi, 2016). Interactive multimedia content requires participants active engagement whereby the content needs to be simple for readability. Besides, the network interactivity is associated with those message qualities which invite people and make people gravitate to group learning. For digital convergence, it is based on digital technologies and digitized content which encompasses converged devices, converged applications and converged networks. Basically, all of the three characteristics are interconnected and useful in developing an interactive digital media.

1.2 An Overview of History Education in Malaysia

Learning history is fundamental since it offers a storehouse of information about a particular place, event, culture or even about prominent figures. History education has been taught in the Malaysian education system for more than six decades. Policies have changed from time to time, and the subject syllabus has been improvised (Lee Bih Ni, 2013). History is a fundamental subject for secondary schools learners. Starting from the year 2013, the history subject was enacted as one of the compulsory subjects and the students are required to achieve the passing mark to obtain Sijil Pelajaran Malaysia (SPM). SPM is a national examination which is taken by all form five secondary school students in Malaysia. Definitely, the history education is essential, as the subject allows us to understand the past, present and how to mold the future. Other than shaping patriotism among the students, it provides us with insights into our cultures of origin and a platform to understand the country, and the world.

In the year of digital technologies, educators (teachers) need to digitize their teaching materials instead of using the traditional textbooks.

According to Hazri Jamil (2003), learning history in school is less challenging for students' minds and intellectual development and learning by memorization also does not encourage students' analytical and critical thinking. This is also supported by Abdul Razaq (2009) as he mentioned that teachers are still using the traditional methods in delivering lessons in class probably due to the lack of expertise in implementing the latest digital tools. The one-way interaction and the memorizing technique such as "Chalk and talk" of facts only contributes the subject to be "the dead man curriculum". In the eleventh shift of Malaysian Education Blueprint 2013-2025, it is also mentioned to scale up the quality of learning which is leveraging on ICT in order to thrive the fourth industrial revolution IR4.0 (Star Online 2019). Therefore, the implementation of interactive digital media as an alternative method in learning history subject is a requirement in today's digital learning environment and definitely relevant for the IR4.0.

THEORETICAL BACKGROUND : VARK (VISUAL, AURAL, READING OR WRITE AND KINESTHETIC) MODEL

VARK (Visual, Aural, Reading or Write and Kinesthetic) Model was launched by Neil Flaming in 1987. This VARK model introduces four (4) primary types of learners : visual, auditory, and kinesthetic. Each learner learns and grasps the lesson in different ways. According to Muniandy et al (2016), visual learners learn the best ways by seeing pictures, posters, movies, and images. To understand the message conveyed to them, they use to take notes and observe their teachers' gestures. Different for auditory learners where they gain their knowledge by obtaining the information via listening especially with discussion or role-play activities whereas read and write learner kinesthetic learners are movement-oriented where they prefer enjoying physical action and touch-oriented. All of the learning styles explained, have been interpreted into one model which is the VARK model. Based on Virleen (2010), the characteristic of VARK learning style model can be used in developing a multimedia course such as interactive digital media. Hence, this VARK model is the framework and guideline for the development of the interactive digital media proposed. Table 1 below explains the learner styles, learning process and the focus of each learner.

Learner style Learning process Focus Visual Learner The design interface and storyline of the interactive digital media will be created as a method in learning history subjects. Color, design interface and layout, buttons and character design

Auditory Learner The uses of narrative voice in explaining the information for the interactive digital media Narrative voice for information and story of warrior with discussion

Reading Learner An observation will be used during pre test to see if there is read / write learner Student that taking notes, text and reading

Kinesthetic Learner To see there are kinesthetic learners, the use of the tablet as a sense, a flashcard/games or hand- on activities will be applied during the pre test research Use of the senses by using a tablet to overview the interactive digital media. Flashcard / games as medium to test either they were kinesthetic learners

Learner style	Learning process	Focus
Visual Learner	The design interface and storyline of the interactive digital media will be created as a method in learning history subjects.	Color, design interface and layout, buttons and character design
Auditory Learner	The uses of narrative voice in explaining the information for the interactive digital media	Narrative voice for information and story of warrior with discussion
Reading Learner	An observation will be used during pre test to see if there is read / write learner	Student that taking notes, text and reading
Kinesthetic Learner	To see there are kinesthetic learners, the use of the tablet as a sense, a flashcard/games or hand-on activities will be applied during the pre test research	Use of the senses by using a tablet to overview the interactive digital media. Flashcard / games as medium to test either they were kinesthetic learners

Table 1 : The guideline of designing the interactive digital media based on VARK Model for the learning process

As the model relates closely to learning styles, it is important to identify an individual's interaction and response towards the learning environment (Duff, 2000). According to Duff (2000), there are three dimensions involved in determining the learning style of an individual ; cognitive composite, affective and psychological.

a) Cognitive

The cognitive refers to a variety of mental processes that includes attention, perception, memory, reasoning, etc. Based on Piaget's stages of cognitive development years of 12 and above are more likely is on formal operational where the hypothetical events/situations from abstract reasoning.

b) Affective

For affective side, it's focusing on personal goals where it emphasizes the motivation to learn in how they view the learning environments. Also featuring with awareness, emotion, incentive, curiosity, boredom, concern and frustration.

c) Physiological

Related to the most directly into classroom design and learning environments are environmental, educational, human factors (engineering), and social psychology. It placing the most importance for course content will up chances that capture people's attention.

METHODOLOGY

This study uses the survey method as the main methodology. The questionnaire acts as the research instrument for data acquisition through sampling which was randomly selected to represent today's digital learners. The questionnaire is constructed based on the VARK model. A total of 71 students from secondary schools in Kedah, Malaysia were involved in this study. The questionnaire is conducted via Google Form with the aim of

providing insights into their interests and opinions for interactive digital media as an alternative method in learning.

FINDINGS & DISCUSSION

The data obtained from the questionnaire is analyzed using descriptive statistics which provides descriptive coefficients that summarize all the data collected. Descriptive statistics measures the variability of data. In this section, the study presents three types of results. Firstly, the researcher presented a descriptive analysis of the distribution of 71 questionnaires using google form to give an overview on the pattern of demographic characteristics of respondents. Secondly, the researcher provided insight of respondent's preference on history subject as well provided with the reasons of unfavorable of the subject. Lastly, the information about the exposure and usage of devices of assessing the information.

5.1 Demographic characteristics

Demographic data in Table 2 shows that the majority of respondents engaged in this study are female (91.5%) as compared to male respondents (8.5%) and most of them are in the age group of 16 - 21 years old (77.5%). However, the respondents are mostly from secondary institution (74.6%).

Item	Frequency	Percentage (%)
<u>Gender</u>		
Male	6	8.5%
Female	65	91.5%
<u>Age Group</u>		
12 - 15 years old	16	22.5
16 - 21 years old	55	77.5
<u>Institution</u>		
Secondary School	53	74.6
IPTA/IPTS	18	25.4

Table 2: Demographic characteristics

5.2 History Subject

Figure 1 shows the respondent's interest towards the Malaysia History subject. From the figure below, it can be concluded that the interest towards the subject led by 1.4% only. Even the percentage difference is small, this study has indicated that the respondents are communicating that the subject learned in school due to few factors.

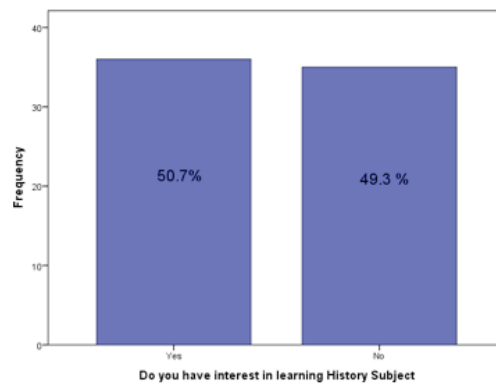


Figure 1: Interest towards History Subject

Based on Figure 2 below, there are seven factors that answers the reason why there is a lack of interest towards the subject. The respondents are allowed to provide multiple responses for this section. The highest percentage with a total of 38% stated that it is difficult to memorize the fact about history, and due to that, this is the main factor. This is followed by too much text used in learning (28.1%) this subject. While the remaining of the reasons contributed less than 20% responses in this question.

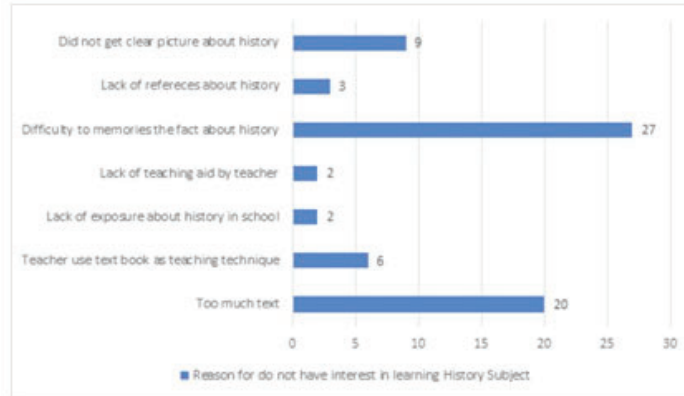


Figure 2: Factors of no interest in History Subject

The majority, or 75.0% of the respondents, reported that textbook is the main teaching technique used by their teachers in teaching this subject, followed by slide presentations (36.6%). While additional notes are reported the least teaching technique of the subject.

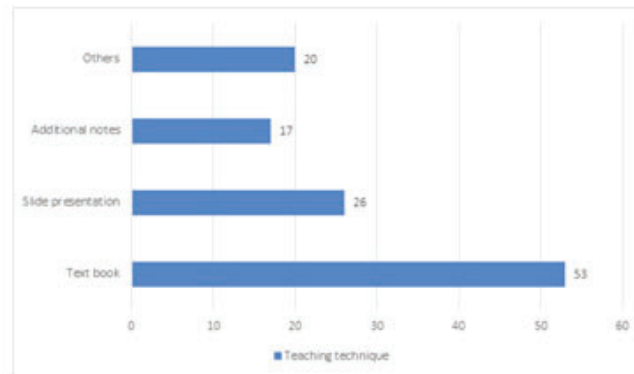


Figure 3: Teaching technique for History Subject

5.3 Exposure and frequency usage of devices

Based on the findings, majority of the respondents owned a device. A total of 80% of the respondents owned a computer or a laptop and less than 40% of the respondents reported owned an iPad/tablet.

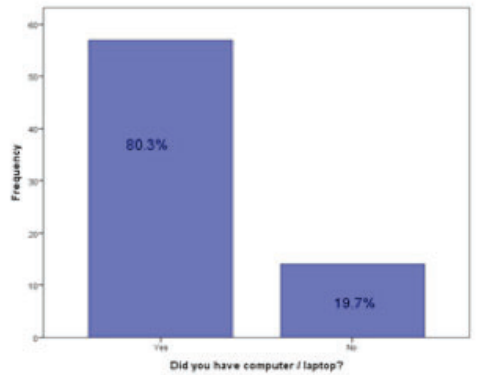


Figure 4: Frequency Usage of Device (computer/laptop)

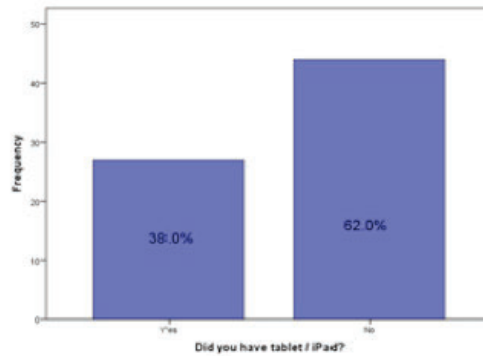


Figure 5: Frequency Usage of Device (Tablet/iPad)

As referred to the graph below, the majority of the respondents spend their time at least two to five hours per day in using computer or laptop in accessing information. Meanwhile, those who access information using a tablet or iPad reported the highest usage less than one hour.

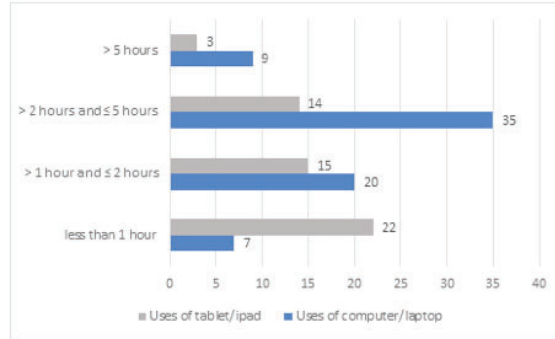


Figure 6: Time Consumption of Device Usage

5.4 Awareness of interactive learning

From the figure below, the majority of the respondents stated that their awareness regarding this particular interactive medium is just average, probably due to the lack of exposure of this medium in school. However, even the exposure is minimum, their interest and intention towards this interactive digital medium is high.

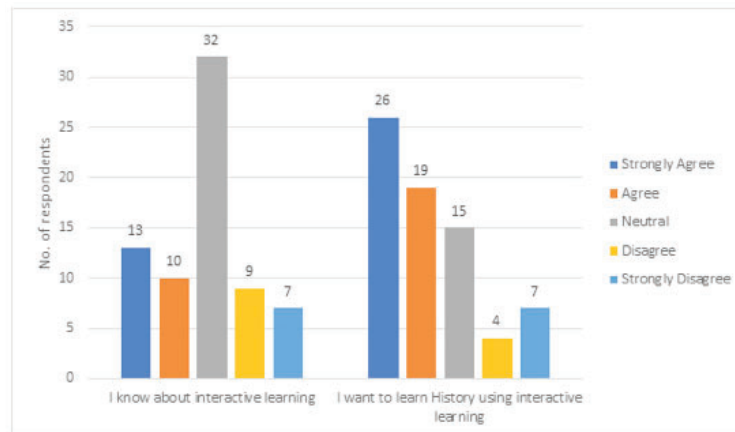


Figure 7: Awareness of interactive learning

CONCLUSION

This study has justified that educators should play a significant role in ascertaining the implementations of quality lessons, specifically in maximizing the usage of technology. The learners today look forward towards interactive and interesting lessons, and depends on technology to provide them with a creative learning process to stimulate interest in learning Malaysia history. The study also has proven that students are digital learners, and they utilize technology in their daily lives. In a media-driven world today, the use of the Integration of Information and Communication Technology (ICT) has been expanded and has a positive impact in life. The impact of technology has influenced the education system since various techniques and teaching styles need to be adapted to the latest development of the country. History has been indicated as a priority subject among most of the subject in Malaysian schools where The Deputy Prime Minister in 2013, Tan Sri Muhyiddn Yassin, stated that history has become a compulsory subject for Malaysian high school students starting from 2013 due to the decreased percentage of satisfactory results and interest. Empirical research justifies how technology plays an important role in increasing an individual's literacy (Potter 2010). Also, technology enhances the motivation, achievement, problem-solving skills of a student as well as fosters student-teacher and peer interaction which in turn will result in meaning teaching-learning process in the classroom (Mitchell 2003). Hence, this study justifies there is a significant relationship between secondary school students and interactive digital media towards the Malaysia history subject due to digital inclusion factor.

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