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VIRTUAL TOUR CONCEPT: INTRODUCTION OF UNDERSTANDING AND CONDUCTING IN PRINTMAKING STUDIO

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ABSTRACT

The virtual tour concept is a great way to learn. This idea of touring is used to help students grasp the materials and machinery in the printmaking studio by utilizing virtual concepts to improve teaching and learning. The purpose of this virtual tour concept is a practical process to understand and operate equipment and machines in a printmaking studio for teaching and learning activities. The objectives of this innovation project are to facilitate the teaching and learning process using technology in the department as well as a reference source for lecturers, technical assistants, students, and auditors. The method used is the use of Pano2Vr software in producing an accessible virtual tour. As a result of this innovation, students can get clearer information using this virtual tour concept through the use of technology based on current developments to facilitate the teaching and learning process. This research can provide facilities to all parties such as students, lecturers, and support staff to launch the education process in this modern and sophisticated world.

Keywords: Conducting; Virtual Tour; Printmaking Studio; Understanding; System

1. INTRODUCTION

Virtual tour concept is a good way to learn. By showing how students organize their ideas with graphs, it is possible to see how they think. A concept map will help people learn and remember what they have learned. Therefore, a concept map can be used to figure out how well a student understands a certain idea. Concept maps are made up of statements. Each proposition has two ideas, or nodes, and a link between them. There is a hierarchical relationship between the ideas. The top layer is where the general ideas are, and the bottom layer is where the specific ideas are (Chen & Liu, 2009). This concept mapping is used in the learning process in the printmaking studio to clearly understand the materials and machines found in the printmaking studio using the virtual touring method through a software that is run virtually to facilitate the teaching and learning process for students.

The instructional staff will have an easier time conveying information regarding the requirements of the printmaking studio, such as the equipment that students use to produce printed artwork, by making use of software like *Pano2Vr* in the process of virtual tour concept as part of this innovation project. This will improve clarity and even determine the purpose of a printmaking studio machine. Once students can access this virtual tour on a smartphone, they'll understand it better. Pano2Vr's 360 panoramic views can help students understand

material more clearly and accurately. To improve educational approaches, educators should explore their classes' environment (Kallonis & Sampson, 2010).

2. FINDINGS

The findings from this innovation project created three locations that have been mapped for students to use virtually while in the printmaking studio to get information via smartphone by scanning the QR code provided. The mapping process was done using *Pano2Vr* software as a mapping medium for students to get information and can be observed in a 360 interactive panoramic view. In addition, among the things mapped in the printmaking studio are the following:

2.1 Printmaking Art Equipment (Intaglio)

The following is a listing of the printmaking equipment for the Intaglio technique, which has been mapped out for each piece of equipment that is necessary for the manufacturing process. The process of mapping was completed for each of these devices, which are referred to as "nodes"; active buttons that can be used to receive information about the many types of printmaking equipment and the functions that they perform for the Intaglio printmaking technique.



Figure 1 The Mapping Process of Equipment in the Printmaking Studio.

Equipment mapping needs to be done in this research so that students can repeatedly learn and memorize the types and functions of the equipment. This is because of the variety of various equipment such as brushes, gloss black tire paint, plate (zinc, copper), printmaking etching & drypoint toolkit, aerosol paint, printmaking roller, scraper, linseed oil, oil-based inks, etc.

2.2 Printmaking Art Machines

The machines in the printmaking studio were also mapped. Its purpose is for students, lecturers, and technicians to know how to use it more effectively and safely. In addition, there are several machines that are used as tools to produce printmaking artworks. The machines that were mapped in this virtual tour concept are Aquatint box, portable stove, spray etching machine and etching press.



Figure 2 The Mapping Process for Printmaking Art Machines

2.3 Rules and Safety

The rules and safety of the printmaking studio were also mapped out before entering the studio. Students need to be aware and be able to follow the guidelines in the studio in order to protect themselves from injuries. Consequently, by means of this investigation, information provided to all relevant parties based on the concept of a virtual tour, with the goal of offering appropriate assistance.

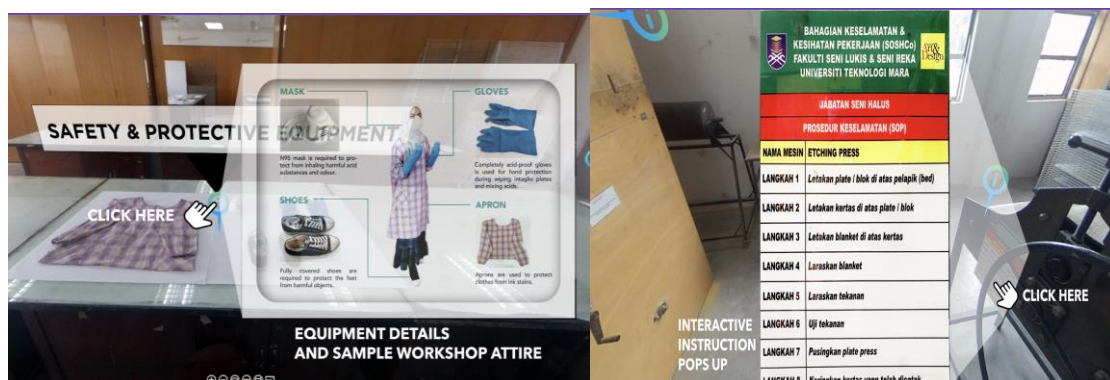


Figure 3 The Mapping Process for Rules and Safety of Printmaking Studio.

3. METHODOLOGY

In this innovation research, the researchers used several methods to obtain information about the functioning and use of the virtual tour concept in teaching and learning process in the printmaking studio of the fine arts department. Primary and secondary data methods were used in this study to obtain more in-depth information about this innovation. Among the methods used were:

3.1 Development Material of Research

This research innovation used various hardware and software, such as database operating systems. Among the software used in this innovation was Pano2Vr as a medium for mapping in the printmaking studio. This software had been tested and was found to be very effective.

Using this software provided convenience to all individuals involved in the teaching and learning process, especially students because it was easy to obtain information on the use of a systematic and quick printmaking studio by watching it in a three-dimensional (3D) concept.

3.2 Data Collection Techniques and Instruments

3.2.1 Development Questionnaire Method

The researcher prepared several questions to be used as data material and related sources in this project. The questionnaire contains ten questions with four response options, namely: disagree, disagree, agree, and strongly agree. The questions about students' understanding of using the virtual mapping concept in the printmaking studio were designed to get feedback on the use of equipment and machines that. This project is an initial preparation before and during the learning process using the virtual mapping concept in the printmaking studio.

3.3 Data Analysis Technique

Based on this method, the findings analysis of this study was carried out using a mapping device; Pano2Vr software, which will be completed earlier during this project. Documentations of equipment and machines must be recorded to be entered into the Pano2Vr software to make it easier for students to access with just one 'click' via a desktop, laptop, or smartphone.

4. CONCLUSION

In this innovation project, we propose a learning model that is influential in the use of technology to facilitate the teaching and learning process while in or out of class. The concept mapping technique is used to facilitate students' learning to get faster, accurate, and systematic information about the equipment and machines found in the printmaking studio. This project can build a virtual map concept and is easy to access. Students nowadays are influenced by the use of technology and have a mature level in accepting new media in the learning process. Educators can provide teaching materials that suit the characteristics of influential students. So, the goal of teaching students according to their abilities can be achieved and developed. Therefore, this innovation can help students, lecturers, and support workers launch the increasingly challenging modern education process and respond to the government's challenge of achieving Industry Revolution 5.0 (IR 5.0).

REFERENCES

- Chen, R. C., & Liu, S. C. (2009, August). Applying concept mapping on the influent learning invirtual classroom. In *2009 Ninth International Conference on Hybrid Intelligent Systems Vol. 1*. pp. 266-270

Kallonis, P., & Sampson, D. (2010, November). Implementing a 3D virtual classroom simulation for teachers' continuing professional development. In *Proceedings of the 18th International Conference on Computers in Education* (pp. 36-44).

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