

Utilization of Web Application for Education and Academic Interests among Senior High School Students

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Abstract— In the traditional teaching and learning process, the student has to go to educational institutions, attend lectures and acquire personal knowledge from the teachers. However, with the extensive use of ICT, online technology, e-publishing, and open access advancements in scholarly communication in higher education throughout the globe, the education system has transitioned from conventional to distance and e-learning. In the wake of COVID-19 epidemic, online learning and courses are increasingly being more integrated into the educational sector. Educational boards have mandated the delivery of online courses at the basic education, college and university levels. As a result, the number of people using the web application has increased. The participants of the study will be the Senior High School students studying at Davao City. The researcher will use quota sampling in selecting the respondents. 60 students will be the quota in gathering the data. The results shows strong positive relationship between the usage of web application and academic interest of the students. This implies that when the level of usage of web application increase, the level of academic interest also increases. The researcher would like to recommend that the teacher should determine that at what level students utilization on web application, and recommend new methods such as work in pairs to expand their knowledge.

Keywords: Utilization of Web Application, Education, Academic Interests

I. INTRODUCTION

In the traditional teaching and learning process, the student has to go to educational institutions, attend lectures and acquire personal knowledge from the teachers. However, with the extensive use of ICT, online technology, e-publishing, and open access advancements in scholarly communication in higher education throughout the globe, the education system has transitioned from conventional to distance and e-learning. In the wake of COVID-19 epidemic, online learning and courses are increasingly being more integrated into the educational sector. Educational boards have mandated the delivery of online courses at the basic education, college and university levels. As a result, the number of people using the web application has increased.

According to Morgil (2021), Web technology is only one of several media options for assisting individuals in their learning. It's a tool for student engagement that's becoming

more common in educational settings. Due to this substantial developments in communication and information technology over the last decade, education has experienced several important changes. As a result, the move from old educational techniques to contemporary ones centered on e-learning programs was followed by a true reform of the traditional model of education, transforming it into a more modernized manner including sophisticated educational technology.

Following the development of the World Wide Web, various open-source and free-to-use apps such as Sky Drive, Drop Box, Google Apps, and Google Drive were created. They exhibit a user-friendly design as well as a powerful set of functions. Furthermore, since they have gained digital abilities, young instructors are more likely to employ technology resources in the instructional process. For example, by spreading school events, Facebook enhanced communication and involvement among students. Web applications have a significant impact on student involvement throughout the educational process and encourage creative approaches to learning. Sensors, smart gadgets, mobile applications, and Internet services may all help to improve the educational experience.

In the classroom, the use of web applications has a favorable impact on the teaching-learning process. Because of technology improvements, teachers now have access to a broad selection of instructional software over the Internet. Interactive multimedia systems and smartphone applications, for example, encourage learners to participate actively in the learning process. Additionally, utilizing a web application may have an impact on an individual's interest. Individual interests are said to be made up of valences associated with feelings and values. Feelings associated with an item or activity, such as engagement, stimulation, or flow, are referred to as feeling-based valences. The attribution of personal meaning or importance to an object or activity is referred to as value-related valences. Additionally, these programs enable students to acquire enough educational assistance. Provides excellent support to students in the administration and direction of educational activities both within and outside of the classroom.

There are a few factors to consider while testing the efficacy of a web application: functionality, user interface design, and accessibility.

In a nutshell, web application functionality refers to what your app can do and how it works. It encompasses everything a learner may do, from exercises to dynamic material and interaction.

User interface design (UID) involves interaction from students/users with any devices such as mouse and keyboard. It is the primary and replaceable component of any software. The aim is to produce the interface that is easy to use and easy to understand, which also meet the desires of the future users and provision users in the chores they wish to undertake. UID describes what users need and what software engineers understand based on user requirements in terms of the look and feel of a software system (Jiancheng, 2007).

Moreover, web application is essentially intended to work for all individuals, regardless of their hardware, software, language, location, or ability. It must be open to people with a diverse range of hearing, movement, sight, and cognitive capacity.

The researcher come up with this study because the researcher wants to explore the impact of the utilization of web applications for education and academic interest among senior high school students in Davao City.

Theoretical Lens

To have a clearer understanding of this matter, a brief discussion about the following approaches in accordance with the theoretical work This claim was supported by John Dewey (1859- 1952). [3] Dewey had his own beliefs to expresses his thoughts about constructivism theory. Additionally, he believed that construct and learns new things will not happen if the learners do not have old related experience to complete the learning process. Also, he believed that the learners learn better in groups because human nature is social, so when they working together they build their knowledge. This theory was used in this study to evaluate the student’s academic interest when it comes to learning new things in their own way. Learning is an active method of generating meaning or interpretation of what is learned by students.

Figure 1 above presents the conceptual model that will be used in this study. The diagram shows the relationship of the usage of web application and academic interest among senior high school in Davao City. The standard graph shows about what will be the process to answer the research problem. The first box in the left side represents the independent variable that contains its indicators: User Interface Design, Functionality, and Accessibility. Meanwhile, to the right side represents the dependent variable and its indicators are Feeling-related valences and Value-related valences.

II. METHODOLOGY

Research Design

In this study, the researcher employed a correlational research methodology to evaluate the relationship between utilization of web application and academic interest. . A correlational study design examines a link between two variables without requiring the researcher to manipulate either of them. It seeks to ascertain whether or not there is a positive association. The factors in this research were the utilization of web application and academic interest. The goal is to determine the relationship between two variables.

Research Locale and Sampling

The participants of the study will be the Senior High School students studying at Davao City. The researcher will use quota sampling in selecting the respondents.

Quota sampling is characterized as a method of non-probability sampling in which a sample involving individuals who represent a population is generated by researchers. This sampling was chosen because of researchers limited budget and time-frame. 60 students will be the quota in gathering the data.

Data Collection Procedure

The data collection will be carried out by the use of questionnaires in the form of online surveys and test materials. In order to collect information from respondents, a questionnaire is a study method consisting of a set of questions and other prompts. The above materials were the key sources of knowledge to address research problems. In conducting this study, the researcher will explain to the respondents that the data gathered will be for educational purposes only. Research questionnaires will be distributed to respondents via Google forms after the permission letter was addressed, to test their learning process in this new normal.

In order to investigate the research question, a researcher-made questionnaire related to variables was used. The research questionnaire refers to the method to be used in a study prepared or produced by the researcher himself or herself. The first part is usage of web application, and the second part is the academic interest. This was used to assess the insights and experiences of the senior high school students of Davao City.

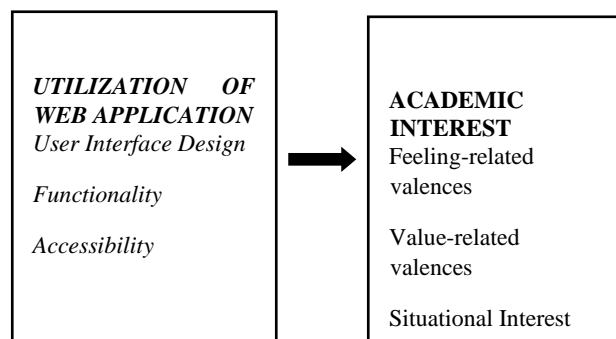


Figure 1. Conceptual Framework of the study

III. RESULTS AND DISCUSSIONS

The Presentation of data are the following sequence: What is the level of Utilization of Web Application in terms of User Interface Design, Functionality, and Accessibility, what is the level of Academic Interest in terms of Feeling-related Valences, Value-Related Valences, and Situational Interest, and last is there a significant relationship between the level of the utilization of web application and the level of academic interest of students.

The results shows strong positive relationship between the usage of web application and academic interest of the students. This implies that when the level of usage of web application increase, the level of academic interest also increases. Since p -value is $0.000 < 0.05$, then we reject the null hypothesis. There is a significant relationship in the user interface design of the web application and academic interest of senior high school students in Davao City. The outcome infers that utilization of web application is associated with the academic interest of students.

As the number rises for schools using online class as learning environment, understanding how the utilization of web application affects students' academic interest is essential. There are 78 senior high school students who participated in this study. The conclusions are as stated below:

Research question number 1 talked about the level of utilization of web application, the result has shown high. It implies that students are more engaged in learning since they can quickly obtain information about the subject they are interested in.

Meanwhile, research question number 2 talked about the level of academic interest. The results have shown that the level of academic interest of the student is high. Based on the results obtained from the questionnaire, there are three factors affecting students' academic interest: feeling-related valences, value-related valences, and situational interest. It implies that web applications play an essential role in influencing students' academic interests. It showed that students are more engaged in learning when using the internet. Moreover, such web applications made students more motivated to feed their interest in a particular topic.

In general, the last question talked about the relationship between the utilization of web application and academic interest, results have shown that there is a strong positive relationship between the two variables. It implies that web applications positively influence the participation of students during the educational process and encourage new ways to achieve the learning.

Constructivism theory believed that learners construct and learns new things if they continue to explore. It is proven that through the utilization of web applications, students are more interested to learn and explore.

IV. RECOMMENDATION

Web application helps students in learning. It also allows teachers to promote learners' contribution to the learning and boost their motivation and performance.

The researcher would like to recommend that the teacher should determine that at what level students utilize web application, and recommend new methods such as work in pairs to expand their knowledge. Activities using web application can be analyzed in paired or group activities. Teachers might encourage students to create blogs, or other activities using web application in order to enhance their skills using web application. Educators would ask students to note down conflicting information in different sources and evaluate the reliability of the information.

Students must make sure to utilize web application in a good way. They must make it a priority to learn. Students might evaluate their work, which they have done individually, in pairs, or as a group, by sharing overall results in their activities.

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