

Computer Self-Efficacy and Effectiveness of Quipper Learning Management System

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ABSTRACT

Blockchain is an advanced mechanism that allows transparent information for a business network. Normally databases in this technology are stored in blocks that are linked together in a chain. It is used as a facilitator for the process of recording transactions and tracking assets of a business network. It will help share data for a collective group. With blockchain, cloud service and transactional data from multiple sources can be easily collected, integrated, and shared. This technology concerning India presently is used by government banking institutions as well as the government storing and sharing data for a wider group. Blockchain is popular in finance, especially money and time. Recently India has made efforts to become a society with digitalized setup by building a large citizen-scale digital public infrastructure, which is a positive push for the government. The basic motive for introducing a high ended technology like blockchain is for maintaining transparency, and to increase the speed of interactions with individuals. This paper has made attempted to study the mechanism adopted by the Indian government under a blockchain and how well it has been utilized. It has also attempted to give a clear picture, of what all developments have made with blockchain and what sectors are much concentrated with blockchain

INTRODUCTION

In order to support As an extension of the traditional in-person approach to teaching and learning, most institutions have gradually adopted virtual learning. Most of these institutions use learning management systems, which have the capacity to turn students into active participants in the classroom by giving them access to instructional resources and creating an atmosphere that promotes fruitful interaction.. A few universities across the world have embraced it to help students and professors communicate outside of the traditional classroom. In this context, learning materials and resources are provided along with student learning interventions delivered through digital software (Adzharuddin, 2013).

Numerous Research has indicated that learning management systems (LMS) are beneficial for undergraduate education, especially in the fields of engineering (Kurata, 2017), English (Salahuddin & Saira, 2020), and information technology (Nel, 2010). Both Chaubey et al. (2015) and Vesin et al. (2009) emphasized the function of learning management systems (LMS) in promoting dynamic and collaborative learning as well as providing accessibility and adaptation in postsecondary education in specific programs, such as Java programming and vocational education. Furthermore, Lasmanawati and colleagues (2021) and Rahman Learning management systems (LMS) have the power to improve learning by offering a user-friendly interface, encouraging autonomous and creative learning, and making learning possible from anywhere at any time. This is according to et al. (2019). Other research, on the other hand, emphasize how little students use the features of LMS and offer contradictory views on its effectiveness. However, there are certain obstacles that students must overcome in order to fully engage in online learning. When using LMS, there are insufficient human interactions, depth of learning, and personalized feedback (Reed, 2014; Araka et al., 2021). The LMS utilization of students can be affected by how confident they are in their computer skills. Students who possess a high level of computer self-efficacy will find it easier and more intuitive to use computers. On the other hand, because they don't believe they can use computers effectively, pupils with low computer self-efficacy may be reluctant to use them (Binyamin et al., 2018). Given that computer self-efficacy is a key indicator of perceived learning, it makes obvious that it would have an effect on students' perceptions of e-learning (Alqurashi, 2019). Additionally, it predicts e-learning uptake significantly (Tarhini et al., 2015; Fathema et al., 2015). Furthermore, it was found that student satisfaction with LMS was significantly predicted by computer self-efficacy (Ghazal et al., 2018; Hammouri & Abu-Shanab, 2018). Pupils' perceptions of the system's usability rise in tandem with their computer self-efficacy. and, thus, how satisfied they are with the LMS (Ghazal et al., 2018).

Numerous investigations have looked into The effectiveness and benefits of the Quipper Learning Management System (LMS) for educators as well as learners. According to Morron (2015), Quipper LMS is a useful online tool for raising student achievement in the classroom. Ghilay's (2017) study demonstrates that users believe the learning management system (LMS) to be

helpful for on-the-go learning and helpful assistance during the learning process. According to Jamil et al. (2019), students view Quipper School as a helpful learning tool since it stimulates their interest in using and learning English more. Furthermore, Mahariyanti and Suyanto (2018) discovered that Quipper School gives students the ability to improve their comprehension and evaluate their ability and comprehension through the use of pre-made questions. It increased curiosity and motivation of the students to learn during their studies.

For students to succeed, choosing the right learning management system is essential. The goals of the online course and the requirements of the student must guide that decision. Components of the LMS that enable the instructor to design a course with an emphasis on Experiences with active learning are crucial (Lewis et al., 2005). Numerous studies have examined LMS effectiveness generally. Nevertheless, the researchers could not find any studies that were specifically related to Quipper LMS. Furthermore, the connection between computer self-efficacy and LMS effectiveness has not received much research. The investigators include therefore encouraged to continue their investigation, which could add to our current understanding of the learning management system. This could offer useful information to motivate the platform's developers to improve its quality to a level suitable for the needs of the pupils.

LITERATURE REVIEW

Theoretical Framework

The Davis (1986) Technology Acceptance Model functions as the foundation for the investigation. By elucidating the broad factors that contribute to computer adoption, TAM hopes to improve knowledge of user behavior with respect to a wide range of user-friendly computer technology and groups. Moreover, Lee's (2008) First Learning Effectiveness Model serves as the foundation for this investigation. According to the study, a student's propensity to engage in any kind of learning can be used to gauge how effective a platform for learning is. It also emphasizes the value of the instructional task content on the learning platform and the level of support provided by the company. Additionally, Yusoff's (2009) theory – which suggests the self-efficacy of computers, a The simplicity of usage of educational technology can be attributed to a crucial factor related to gaining information and computing literacy abilities.

Research Questions

This study examined the relationship between senior high school students' computer self-efficacy and the effectiveness of the Quipper learning management system in a non-sectarian private institution.

In particular, the following research questions were the focus of this study:

How confident are seniors in high school about using computers in terms of:

What are your basic computer skills

(1.), media-related skills

(2), and web-based skills

1. How successful is the Quipper learning management system for seniors in high school in terms of:

1. Self-efficacy perception;
2. Satisfaction perception;
3. Perceived utility;
4. Behavioural intention;
5. Quality of e-learning system;
6. Interactive learning exercises;
7. E-learning efficacy;
8. Multimedia instruction?

2. Do senior high school students' computer self-efficacy and the Quipper learning management system's effectiveness correlate? efficiency?

METHODOLOGY

Design

A quantitative, In this study, a descriptive-correlational design was used. To determine In research endeavors, correlational research is used to determine the strength of a relationship between two or more variables. Researchers characterize and quantify the degree of link (or relationship) between two or more variables or sets of scores using the statistical correlation test in the correlational study design (Creswell, 2012). Descriptive and correlational studies, in the opinion of Simon and Goes (2011), both look at variables in their natural settings and do not include researcher interventions. This study aimed to ascertain the relationship between senior high school students' computer self-efficacy and the Quipper learning management system related to each other.

Participants

For this study, a basic random sampling was employed to select the respondents. The replies in this kind of sampling are chosen at random and solely by chance. The selection procedure has little effect on quality because every member has an equal probability of being included in the sample. For highly homogeneous populations, this kind of sampling works well (Bhardwaj, 2019). In particular, 290 students studying accountancy, business, and management (ABM), science, technology, and mathematics (STEM), and humanities and social sciences (HUMSS) departments in grades 11 and 12 strands were the study's respondents.

Instrument

The researchers used a modified A variation of the computer self-efficacy survey questionnaire from Amankwah et al. (2017) was used to assess the connection between computer self-efficacy and the Quipper Learning management system's efficacy. The article's title was "Computer Self-Efficacy Among Ghanaian Senior High School Teachers and the Impact of Demographic Variables on Their Self-Efficaciousness." To assess the efficacy of the Quipper learning management system survey, the researchers also made alterations and modifications to the survey questionnaire from Liaw and Huang's 2007 study, "Investigating students' perceived satisfaction, behavioral intention, and effectiveness of e-learning: A case study of the Blackboard System."

Before To evaluate the survey's validity and reliability, the researchers conducted a pilot study in addition to distributing the questionnaire for the main investigation. The questionnaire's preparation for survey delivery and validation was also validated, and the researchers chose 50 participants to fill it out. The application of Cronbach's Alpha ensured this. With a 0.764 result for this category, eleven of the computer self-efficacy indicators are considered acceptable and dependable. Furthermore, the Quipper learning management system has an efficiency score of 0.959, indicating that it is outstanding, reliable, and internally consistent in terms of to the 26 questions that make up the system's effectiveness indicators.

Procedure

The researchers contacted the principal of the senior high school to get permission to conduct the study and also gave the respondents questionnaires to fill out.. Before beginning any survey, the researchers requested that the respondents complete an informed consent form indicating their willingness to be included as research study participants. The investigators made certain that the participants were aware of their rights and the consequences of taking part. The target respondents, senior high school students in grades 11 and 12, received the survey questionnaires. The next step for It was the researchers' responsibility to gather, arrange, and assess the questionnaire data. appropriately. To obtain high-quality data, the data collection method adhered to the correct protocols.

Data Analysis

To analyze and appraise the data, the researchers employed the following statistical tools:

Mean. This statistical notion, often known as the average, is helpful in determining the general trend of a collection of facts or in giving a brief synopsis of your information. This was employed to gauge how well-versed pupils were in the Quipper learning management system and computers.

Standard Deviation. According to Ilola (2018), it is the calculation of the variance between the mean and the determined values. Using the Quipper learning management system and the computed mean for the degree of students' computer self-efficacy, the study employed this technique to measure the dataset's dispersion. usage.

Pearson-r Correlation Coefficient (r-value). Using the Quipper learning management system and the computed mean for the degree of students' computer self-efficacy, the study employed this technique to measure the dataset's dispersion.

RESULT AND DISCUSSION

Level of Computer Self-Efficacy

Table 1 displays the level of senior high school students' computer self-efficacy in terms of media-related, web-based, and fundamental computer abilities.

Table 1. Level of Computer Self-Efficacy

Indicators	\bar{x}	<i>SD</i>
Basic Computer Skills	4.38	0.692
Media Related Skills	3.70	0.804
Web-based Skills	4.43	0.684
Overall	4.18	0.652

Table 1's results showed that students had a high degree of overall the mean score for computer self-efficacy was 4.18 with a standard deviation of 0.652. The students' confidence in their web-based skills was highest (M=4.43, SD=0.684) and lowest (M=3.70, SD=0.804) in relation to their media-related skills. The evaluation of basic computer skills was high (M=4.38, SD=0.692). These results corroborate earlier studies on computer self-efficacy. According to research by Binyamin et al. (2018), students who have a high degree of digital self-efficacy are more likely to use computers effortlessly, whereas those who lack confidence may choose not to. Hammouri and Abu-Shanab (2018) claim that people's opinions on the pros and cons of technology are influenced by their degree of comfort with it. Khan (2018) also pointed out that using a computer facilitates online learning and superior assessment.

Level of Effectiveness of Quipper Learning Management System

Table 2 presents the survey information regarding senior high school students' The quality of the e-learning system, interactive learning activities, e-learning effectiveness, behavioral intention, perceived self-efficacy, perceived satisfaction, perceived utility, and multimedia instruction in connection to the Quipper learning management system's effectiveness.

Table 2. Level of Computer Self-Efficacy

Indicators	\bar{x}	<i>SD</i>
Perceived Self-efficacy	4.09	0.762
Perceived Satisfaction	4.00	0.658
Perceived Usefulness	4.21	0.676
Behavioral Intention	4.14	0.691
e-Learning system quality	3.78	0.740
Interactive learning activities	3.82	0.752
e-Learning effectiveness	3.93	0.715
Multimedia Instruction	3.61	0.818
Overall	3.97	0.622

With a mean score of 3.97 (SD = 0.622), Table 2 demonstrated the Quipper LMS's overall high degree of efficiency. Every indicator has a high degree of descriptive language. The highest level was perceived usefulness, with a standard deviation of 0.676 and a mean of 4.21. The lowest level is

similarly found in multimedia teaching, with a mean of 3.61 and a standard deviation of 0.818. The measured measure of perceived self-efficacy had a standard deviation of 0.762 and a mean of 4.09. The mean and standard deviation of perceived satisfaction were 4.00 and 0.658, respectively. 4.14 as the standard deviation, the mean behavioral intention score was 0.691.

Additionally, the quality of the e-learning system obtained a 3.78 is the mean score, with a standard deviation of 0.740. The standard deviation was 0.752 and the mean was 3.82 for the interactive learning exercises. The results showed that the e-learning efficiency mean and standard deviation were 3.93 and 0.715, respectively. The most recent results show how the interactive tools and features of the Quipper LMS successfully improve student performance, engagement, and learning, which is in line with earlier research. Citing study by Morron (2015), the Quipper LMS is a useful online tool for enhancing students' academic success. Ghilay (2017) also observed that users think the LMS aids in advancing and facilitating learning. Furthermore, according to Jamil et al. (2019), Quipper School is a useful knowledge source. As a result, it piqued kids' curiosity about studying English. As stated to Quipper School and Mahariyanti and Suyanto (2018) uses resources and questions supplied by teachers to help students improve their subject-matter knowledge and gauge how well they comprehend the material.

Significant Relationship between Computer Self-Efficacy and Effectiveness of Quipper Learning Management System

According to Table 3, the Quipper learning system's computed r-value for computer self-efficacy and effectiveness is 0.414 (p-value=.000). This implies that, at the five percent significance level, there is a substantial association between the two. Additionally, the results of the Quipper learning management system are favorably correlated with computer self-efficacy, as indicated by the computed r-value of 0.414. This implies that there is a direct correlation between the two variables—that is, the effectiveness of the Quipper learning management system increases as computer self-efficacy does, and vice versa. Given that a major determinant of perceived learning is self-efficacy, the results corroborate Alqurashi's (2019) assertion that students' perceptions of the benefits of e-learning are influenced by their levels of computer self-efficacy. Additionally, Ghazal et al. (2018) discovered Students believe that the learning management system is user-friendly when their computer self-efficacy rises. Furthermore, the outcome supports Yusoff's (2009) theory that computer self-efficacy, a crucial component of information and computing literacy, might result in ease of use with instructional technology.

Table 3. Significant Relationship between Computer Self-Efficacy and Quipper Learning Management System

Variables	r – value	p-value
Computer Self-Efficacy	.414	.000
Effectiveness of Quipper Learning Management System		

CONCLUSION AND RECOMMENDATION

According to this study, Students in a private, non-sectarian senior high school exhibit high levels of overall computer self-efficacy. This requires some familiarity with media, the internet, and basic computer skills. Students often grasp the concepts and abilities of computing and find using computers to be simple. Furthermore, students rated the effectiveness of the Quipper learning management system as passable. They found the features, content, and multimedia training of Quipper LMS to be satisfactory. This suggests that the students possess the know-how and abilities needed to operate Quipper as a learning management system efficiently. Additionally, there is a marginally significant but statistically significant positive association between the Quipper learning management system's effectiveness and the computer self-efficacy of senior high school students. This suggests that the two have a direct association. variables, implying that the Quipper learning management system is more effective when computer self-efficacy increases, and vice versa.

FURTHER STUDY

This research still has limitations, so further research is needed related to the topic of Computer Self-Efficacy and Effectiveness of Quipper Learning Management System, in order to perfect this research and increase insight for readers.

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