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Computer Self-Efficacy, Computer Playfulness as Determinants of Academic Performance of Library and Information Science Undergraduates in Web Publishing Course in Tai Solarin University of Education, Ijagun

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Abstract

The study was conducted to investigate the computer self-efficacy, computer playfulness as determinants of academic performance of Library and Information Science undergraduates in Web Publishing course in TASUED. Descriptive survey research design was adopted while total enumeration sampling method was used to capture the entire 259 Library and Information Science LIS undergraduates in 400 level in Tai Solarin University of Education TASUED. A questionnaire was used for data collection and 212 (82%) copies of the questionnaires administered was returned and found useful. Data was analyzed by simple percentages, frequency counts, mean and standard deviation, Pearson correlation and multiple regression.

The findings of the study revealed that majority of Library and Information Science undergraduates had average score in web publishing course 184(86.8%). The level of computer self-efficacy of Library and Information Science undergraduates in Tai Solarin University of Education TASUED was moderate ($\bar{x}$ = 3.04). The level of computer playfulness of Library and Information Science undergraduates in TASUED was moderate ($\bar{x}$ = 2.94). There is no significant relationship between computer self-efficacy and academic performance of Library and Information Science undergraduates in Web Publishing course in TASUED (r = -0.056; P=0.419). There is no significant relationship between computer playfulness and academic performance of Library and Information Science undergraduates in Web Publishing course in TASUED (r = -0.079; P = 0.250).

The study therefore recommends that library schools should develop and implement targeted workshops, training sessions, or courses specifically designed to enhance the computer self-efficacy of Library and Information Science undergraduates. Also, hands on training should be included in their curriculum.

Keywords: Computer Self-Efficacy, Computer Playfulness, Academic Performance, Library and Information Science, Web Publishing

INTRODUCTION

Academic performance is the level of success a student or an individual achieves in their educational endeavours, which is typically measured through grades, test scores, assignment, class works, group work project work coursework, and overall accomplishments in school, college, university or any other educational institution. It is an essential indicator of a student's learning outcomes and their ability to apply knowledge and skills effectively. It is one of the major factors that influence individual's success in any educational setting. It is the top indicator of potential for success in life as it reflects an individual's ability and the qualities it takes to have an academic excellence in life. An undergraduate's academic performance refers to the enhancement of the students' current state of knowledge and skills which is always reflected in their CGPA and also in the formulation of their personality and academic growth from lower levels of study to higher levels (Wael, Jehan & Feras, 2017).

The academic performance of Library and Information Science (LIS) undergraduates in innovative courses, including web publishing, has become a subject of increasing interest in both the global and Nigerian contexts. (Osisanwo & Afolabi 2023). As the digital age continues to reshape the field of LIS, students in these programs are expected to be at master various information and communication technologies (ICTs) to excel in their future careers. (Osisanwo & Afolabi 2023) In the digital age, the role of LIS professionals extends beyond traditional library functions. They are expected to be proficient in utilizing ICTs for effective information management, dissemination, and user engagement (Sturges & Neves, 2018). ICT skills, including web publishing, are fundamental for librarians and information specialists in meeting user demands, managing digital resources, and enhancing modern library services.

LIS curriculum worldwide is gradually adapting to global trends through the incorporation of ICT-related and innovative courses to address the changing nature of the profession. In countries like Nigeria, where digital inclusion and access to information is critical, LIS undergraduates need to be proficient in web publishing and other ICT-related courses to bridge the digital divide and contribute to digital inclusion efforts (Aina, 2019). In Nigeria, LIS programme has been revising their curricula to include ICT-related courses in response to the digital transformation. It is essential to evaluate how students in these programmes are performing in such courses (Onifade, 2017).

Undergraduates' academic preparedness includes their exposure to relevant courses, such as web design, digital content management, and information architecture. The rigor and depth of these course plays a vital role in shaping undergraduates' readiness in web publishing course. To this end the level of computer self-efficacy possessed by individual undergraduate undertaking these courses can equally predict their academic performance. Undergraduates who possess high levels of computer self-efficacy are more likely to perform well academically in web publishing or other IT related courses and projects. Their confidence in using computers and digital tools can lead to more efficient and effective completion of assignments and research tasks. Also computer playfulness is another variable that determines the academic performance of undergraduates in web publishing course. It refers to the propensity of individuals, particularly undergraduates in this context, to engage with computers in a spontaneous, creative, and non-task-oriented manner. It encompasses activities such as gaming, social media interaction, digital art creation, coding for fun, and exploration of software and applications beyond formal academic requirements.

Playfulness is seen as a suitable construct when studying human computer interactions since computers are easy to use, provision of quick responses, offer personalization as well as incorporate playful features like animation, graphics and multimedia (Serenko & Turel,

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2005). Playfulness signifies an abstraction of openness to the process of technological usage and it serves as an anchor for perceived ease of use of a computer or innovative technological tool.

STATEMENT OF THE PROBLEM

Library and Information Science (LIS) is a discipline that has been greatly affected by the digital transformation this transformation brought about the inclusion of various innovative courses into the curriculum of library schools. Web publishing as one of the innovative courses introduced in library and information science programs to equip students with the skills and knowledge needed to effectively manage and create web content in the context of libraries and information centers. This course has become increasingly relevant in the digital age, as libraries and information organizations have embraced online platforms to provide access to information resources and engage with their user communities. Web publishing involves working with various technologies, such as HTML, CSS, and content management systems (CMS). But lack of familiarity with digital tools and web development concepts can hinder their ability to grasp the complexities of Web Publishing courses. Students might find these technologies challenging, leading to lower academic performance. Low computer self-efficacy and computer playfulness can be a significant barrier. Students who lack confidence in their computer skills may struggle to complete assignments, engage with digital tools, and perform well in Web Publishing courses. It is online with the above that this study investigated computer playfulness, computer self-efficacy, as determinants of academic performance of library and Information Science undergraduates in Web Publishing in TASUED.

OBJECTIVES OF THE STUDY

The specific objectives are to:

1. find out the level of academic performance of Library and Information Science undergraduates in Web Publishing course in TASUED;
2. determine the level of computer self-efficacy of Library and Information Science undergraduates in TASUED;
3. ascertain the level of computer playfulness of Library and Information Science undergraduates in TASUED;
4. determine the relationship between computer self-efficacy and academic performance of Library and Information Science undergraduates in Web Publishing courses in TASUED;
5. find out the relationship between computer playfulness and academic performance of Library and Information Science undergraduates in Web Publishing course in TASUED.

RESEARCH HYPOTHESES

The hypotheses formulated for this study are:

$H0_1$: There is no significant relationship between computer self-efficacy and academic performance of Library and Information Science undergraduates in Web Publishing course in TASUED.

$H0_2$: There is no significant relationship between computer playfulness and academic performance of Library and Information Science undergraduates in Web Publishing course in TASUED

LITERATURE REVIEW

Academic performance is the outcome of education, the extent to which a student has achieved their educational goals and it is commonly measured by examinations or continuous assessment in formal education. There are many factors that contribute to different academic performance of students; such factors include the parents' socioeconomic status, amount of time that parent spent with children, teachers' expectancies and effects of peer relationships and their own self-concept (Das & Choudhury, 2016).

Academic performance is one of the keys to development and growth of both the individual and the society. Thus, the characteristics portrayed by parents in the education of their children is important in ensuring that the students focus on their studies and are able to have good academic performance and academic success (Chowa, Ansong and Osei-Akoto, 2012). Academic success depends on a series of factors,

such as cognitive capacities, the personality of the individual and environmental factors (e.g. socioeconomic status of the family, properties of the teaching process, teachers and the school the pupil attends) (Maras and Rodek, 2012).

Alahakoon (2016) conducted a study on impact of computer self-efficacy and anxiety among second- and third-year dental students at University of Peradeniya in Sri Lanka and found that there were no significant differences between computer self-efficacy, anxiety as well as studying year. Abdullah and Mustafa (2019) reported in a study on impediments of computer self-efficacy and the relationship with regards students' academic achievement, the study sample constituted second- and fourth-year students of Koya University in Iraq. The study discovered that there was a significant difference between Arts and Science students with regards computer self-efficacy in favour of Science students. Also, no significant correlation exists between students' academic achievement and computer self-efficacy. Kass (2014) found in a study of computer self-efficacy using student and instructors as a case study in university sector. The study revealed that students had a higher-level of self-efficacy particularly when using social media platforms.

Balogun and Olarenwaju (2016) found that undergraduates who possessed higher level of computer self-efficacy were less likely to experience Computer Based Test (CBT) anxiety. Also, Fabunmi and Awoyemi (2017) found that most of the undergraduates had highest level of computer efficacy and that computer efficacy had significant relationship with ICT skill. The above review in this section implies that computer self-efficacy is very important in undergraduate academic pursuit. A majority of the students acknowledged that they had good computer self-efficacy which in turn assist them in using the technology to foster their academic performance. Tella, Ayeni, and Omoba (2007) carried out an empirical study on undergraduates in Faculty of Education, University of Ibadan on self-efficacy use of ICT and academic performance. They noted germane role of self-efficacy and use of ICT as predictors of academic performance. They observed that ICT services available to students are not used to their full potential. This could be as a result of their low-level computer self-efficacy. It can therefore be noted from the above that computer self-efficacy is another determinant of ICT competence. The above-mentioned Studies already conducted by Tella et al (2008) on self-efficacy and the use of ICT suggest that the two variables would be related to ICT competence thus bringing about academic performance.

Playfulness can contribute to enhanced learning experiences, particularly in educational contexts. It promotes active exploration, problem-solving, and engagement with digital learning materials (Shen & Eder, 2020). Highly playful individuals tend to engage more with digital platforms and applications. They are more likely to experiment with new features and contribute to user-generated content (Webster & Martocchio, 2018). Computer playfulness is associated with innovation and creative problem-solving. It encourages users to think outside the box and find novel uses for technology (Shen & Eder, 2020).

Undergraduates who exhibit high levels of computer playfulness tend to be more engaged in technology-related tasks. This engagement can lead to better learning outcomes, particularly in educational contexts (Shen & Eder, 2020). The playfulness of undergraduates with technology can positively impact their academic performance. Curiosity and enjoyment in learning and experimenting with technology can lead to improved problem-solving skills and creative thinking (Muhirwe, 2020). Computer playfulness motivates undergraduates to explore and experiment with digital tools and applications. They are more likely to seek out new features and creative uses for technology, fostering digital literacy (Webster & Martocchio, 2018). Undergraduates with a high degree of playfulness in technology are often more innovative and creative. They may discover novel ways to use digital tools, contributing to technological advancements (Hsee, Yang, & Wang, 2010). High levels of computer playfulness are associated with active learning. Undergraduates who enjoy using technology for educational purposes are more likely to explore digital learning materials, engage with interactive content, and participate in problem-based learning (Deci & Ryan, 2005).

Salloum, Alhamad, Al-Emran, Monem and Shaalan (2019) carried out a study on students' acceptance of e-learning. Questionnaire was the major instruments used for data collection while 435 students partook in the study, they reported that computer playfulness was found to be significantly related to students' grade point average. The findings of the study revealed that computer playfulness as well as system quality had a significant influence on perceived ease of use of e-learning system.

RESEARCH METHODOLOGY

The study adopted a descriptive survey research design. The population of the study comprised of 259 four hundred level (400L) LIS undergraduate of Tai Solarin University of Education. Total enumeration method was used to capture the entire 259 four hundred level (400L) final year students. The questionnaire was used to capture information from the respondents and 212 (82 %) copies of the 259 copies distributed was retrieved and found useful for the study. The questionnaire was divided into two sections, section A and B. Section 'A' solicits for demographic data of the respondents, section 'B' focuses on the research questions aimed at extracting facts from the study. The response follows the format of likert scale which is in a four- point of Strongly Agree (SA), Agree (A), Strongly Disagree (SD) and Disagree (D). The items are adopted from (Quadri & Ogedengbe, 2020). The scale was adapted from previous studies on computer self-efficacy by Sam, Othman, and Nordin (2005), while Section C gather information on computer playfulness and the scale was adapted from previous related studies on computer playfulness by Tanakinjal et al., (2012). The other instrument used was the Web publishing examination score, which will be collected from the department on a 70% grading. The grading system is defined based on students' score ranges. Students with scores falling within the range of 1 to 39 were categorized as having a low grade. Students whose scores fall between 40 and 69 were classified as having an average grade, while students scoring in the range of 70 to 100 were considered to have a high grade.

Table 1. Demographic Information of the Respondents.

Gender	Frequency	Percentage %
Male	86	40.6
Female	126	59.4
Age:		
Below 20 years	10	4.7
21-25years	121	57.1
26-30years	80	37.7
31years above	1	0.5
Religion		
Christianity	141	66.5
Muslim	71	71.5
Total	**212**	**100**

Table 1 showed the distribution undergraduates in the selected university libraries in Ogun State. The table showed that 86(40.6%) of the respondents were Male while 126(59.4%) were Female. This implies that more than half of the respondents who took part in the research exercise were female. The table also shows the age range of the respondents, 10(4.7%) were aged below 20 years, 121(57.1%) were aged 21-25years, 80(37.7%) were aged 26-30years while 1(0.5%) were aged 31years and above. This indicates that students in the 23-26years had a high response rate. The table also revealed that the religion of the respondents, 141(66.5%) were Christianity while 71(71.5%) were Muslim.

Analysis of Research Questions

Research Question One: What is the level of academic performance of Library and Information Science undergraduates in Web Publishing course in TASUED?

Table 2. Level of academic performance.

Grade	Students' score range	Frequency	Percentage %
Low	1-39	22	10.4
Average	40-69	184	86.8
High	70-100	6	2.8
Total		**212**	**100**

Table 2 shows that the level of academic performance of Library and Information Science undergraduates in Web Publishing course in TASUED. The table indicates that 22(10.4%) of Library and Information Science undergraduates had a low score in Web Publishing course, it was also revealed that 184(86.8%) of Library and Information Science undergraduates had average score in Web Publishing course, while 6(2.8%) of Library and Information Science undergraduates had a high score in Web Publishing course. It could be concluded that majority of Library and Information Science undergraduates had average score in Web Publishing course.

Research Question Two: What is the level of computer self-efficacy of Library and Information Science undergraduates in TASUED?

Table 3. Level of computer self-efficacy of Library and Information Science undergraduates.

S/N	Statement	SA	A	D	SD	$\bar{x}$	SD
1	1 have the necessary knowledge to use computer	126 (59.4%)	72 (34.0%)	13 (6.1%)	1 (.5%)	3.52	0.63
2	I would be able to use computer if there is no one around to show me how to use it	90 (42.5%)	97 (45.8%)	22 (10.4%)	3 (1.4%)	3.29	0.71
3	I would feel comfortable using computer on my own	90 (42.5%)	95 (44.8%)	24 (11.3%)	3 (1.4%)	3.28	0.72
4	I have the ability to send and receive messages through computer	76 (35.8%)	115 (54.2%)	16 (7.5%)	5 (2.4%)	3.24	0.69
5	I have the ability to down load and save document using the computer	77 (36.3%)	108 (50.9%)	23 (10.8%)	4 (1.9%)	3.22	0.71
6	1 feel comfortable making online transactions with the use of computer	80 (37.7%)	92 (43.4%)	34 (16.0%)	6 (2.8%)	3.16	0.79
7	I'm confident about my basic computer	72 (34.0%)	107 (50.5%)	22 (10.4%)	11 (5.2%)	3.13	0.80
8	I have the ability to use computer even if I have never used it before.	62 (29.2%)	104 (49.1%)	40 (18.9%)	6 (2.8%)	3.05	0.77
9	I feel comfortable when using computer for video synchronizing on my own	70 (33.0%)	87 (41.0%)	49 (23.1%)	6 (2.8%)	3.04	0.82
10	I accomplish my computer goals with ease	60 (28.3%)	104 (49.1%)	40 (18.9%)	8 (3.8%)	3.02	0.79
11	I am independent when performing tasks on the computer	63 (29.7%)	102 (48.1%)	35 (16.5%)	12 (5.7%)	3.02	0.83
12	I retrieve with ease scholarly articles from computer	61 (28.8%)	96 (45.3%)	50 (23.6%)	5 (2.4%)	3.00	0.79

13	I am often able to provide solutions to computer problems if I attempt them enough	55 (25.9%)	95 (44.8%)	55 (25.9%)	7 (3.3%)	2.93	0.81
14	I can persevere and accomplish most computer related tasks	55 (25.9%)	97 (45.8%)	47 (22.2%)	13 (6.1%)	2.92	0.85
15	I am unperturbed amidst computer difficulties because I am confident of my abilities	51 (24.1%)	95 (44.8%)	51 (24.1%)	15 (7.1%)	2.86	0.86
16	I can often solve any computer problem I encounter	50 (23.6%)	94 (44.3%)	57 (26.9%)	11 (5.2%)	2.86	0.83
17	With the necessary effort, I can solve most computer programs	45 (21.2%)	104 (49.1%)	50 (23.6%)	13 (6.1%)	2.85	0.82
18	I can deal proficiently with unexpected computer occurrences	50 (23.6%)	96 (45.3%)	48 (22.6%)	18 (8.5%)	2.84	0.88
19	I can maneuver to get what I desire, if the computer is misbehaving	48 (22.6%)	94 (44.3%)	56 (26.4%)	14 (6.6%)	2.83	0.85
20	When faced with computer problems, I often find multiple solutions to handle them	40 (18.9%)	96 (45.3%)	61 (28.8%)	15 (7.1%)	2.76	0.84
Average mean						**3.04**	**0.79**

KEY: Strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD)
Degree ***Decision Rule if mean is ≤ 1.99 = Low; 2.00 to 3.49 = Moderate; 3.50 to 3.99 = High;

Table 3 shows that the level of computer self-efficacy of Library and Information Science undergraduates in TASUED was moderate ($\bar{x}$ = 3.04). Eight out twenty indicators of the level of computer self-efficacy showed moderate mean scores. The highest being ($\bar{x}$ = 3.52) and lowest being ($\bar{x}$ = 2.76). This implies that the level of computer self-efficacy of Library and Information Science undergraduates in TASUED was moderate.

Research Question Two: What is the level of computer playfulness of Library and Information Science undergraduates in TASUED?

Table 4. Computer playfulness of Library and Information Science undergraduates.

S/N	Statement	SA	A	D	SD	$\bar{x}$	SD
	Spontaneity						
1	I am playful when using computer	37 (17.5%)	63 (29.7%)	32 (15.1%)	80 (37.7%)	2.27	1.14
2	I am creative when using computer	81 (38.2%)	104 (49.1%)	24 (11.3%)	3 (1.4%)	3.24	.70
3	I am original in using computer	64 (30.2%)	121 (57.1%)	21 (9.9%)	6 (2.8%)	3.15	.70
Average mean						**2.89**	**0.85**
	Curiosity						
4	Using computer stimulates my curiosity	88 (41.5%)	101 (47.6%)	15 (7.1%)	8 (3.8%)	3.27	0.75
5	My using computer tool is spontaneous	58 (27.4%)	100 (47.2%)	46 (21.7%)	8 (3.8%)	2.98	0.80
6	Using computer for research activities makes me happy	56 (26.4%)	108 (50.9%)	28 (13.2%)	20 (9.4%)	2.94	0.88
Average mean						**3.06**	**0.81**
	Creativity						
7	I'm inventive when using computer	63 (29.7%)	97 (45.8%)	41 (19.3%)	11 (5.2%)	3.00	0.84

8	I'm creative with the use of computer	63 (29.7%)	113 (53.3%)	31 (14.6%)	5 (2.4%)	3.10	0.73
9	I can create several advance knowledge in computer usage	54 (25.5%)	89 (42.0%)	52 (24.5%)	17 (8.0%)	2.85	0.89
Average mean						**2.98**	**0.82**
	Imaginative						
10	I am inventive when using computer	55 (25.9%)	112 (52.8%)	34 (16.0%)	11 (5.2%)	3.00	0.79
11	Using computer makes me want to explore	50 (23.6%)	99 (46.7%)	24 (11.3%)	39 (18.4%)	2.75	1.01
12	Using computer makes me forget the work I have	51 (24.1%)	95 (44.8%)	25 (11.8%)	41 (19.3%)	2.74	1.03
Average mean						**2.83**	**0.94**
Overall Average mean = 2.94							

Key: SA = Strongly Agreed; A = Agreed; SD = Strongly Disagreed and D= Disagreed
Degree ***Decision Rule if mean is ≤ 1.99 = Low; 2.00 to 3.49 = Moderate; 3.50 to 3.99 = High;

Table 4 shows that the level of computer playfulness of Library and Information Science undergraduates in TASUED was moderate ($\bar{x}$ = 2.94). The decision rule categorizes the degree of research competencies into three levels: Low, Moderate, and High, based on the mean value of the variable. If the mean ($\bar{x}$) of the computer playfulness is less than or equal to 1.99, it is categorized as Low. If the mean is between 2.00 and 2.99, it is categorized as Moderate. If the mean is between 3.00 and 3.99, it is categorized as High. Computer playfulness was divided into four dimensions, namely: spontaneity, curiosity, creativity and imaginative. The group mean for each computer playfulness dimensions were also calculated. The result revealed that spontaneity($\bar{x}$ = 2.89), curiosity($\bar{x}$ = 3.06), creativity ($\bar{x}$ = 2.98) and imaginative ($\bar{x}$ = 2.83) were generally moderate. This implies that the computer playfulness of Library and Information Science undergraduates in TASUED was moderate.

TESTING OF HYPOTHESES

Hypothesis One: There is no significant relationship between computer self-efficacy and academic performance of Library and Information Science undergraduates in Web Publishing course in TASUED.

Table 5. Computer self-efficacy and Academic performance.

Correlations					
		$\bar{x}$	**SD**	**Computer self-efficacy**	**Academic performance**
Computer self-efficacy	Pearson Correlation			1	-.056
	Sig. (2-tailed)	58.11	8.47		.000
	N			212	212
Academic performance	Pearson Correlation			.000	1
	Sig. (2-tailed)	48.89	11.38	.419	
	N			212	212

Table 5 revealed that the r value is -0.056 which depicts a negative relationship between significant relationship between computer self-efficacy and academic performance of Library and Information Science undergraduates in Web Publishing course in TASUED. The calculated significant probability value of (p-value) 0.000 was above to the alpha value of 0.05. Since the significant probability (p-value) of 0.000 is less than the alpha value of 0.05, the null hypothesis is rejected. This implies that there is a significant relationship between computer self-efficacy and

academic performance of Library and Information Science undergraduates in Web Publishing course in TASUED.

Hypothesis Two: There is no significant relationship between computer playfulness and academic performance of Library and Information Science undergraduates in Web Publishing course in TASUED.

Table 6. Computer playfulness and academic performance.

Correlations					
		$\bar{x}$	**SD**	**Computer playfulness**	**Academic performance**
Computer playfulness	Pearson Correlation			1	-.079
	Sig. (2-tailed)	32.78	5.01		.000
	N			212	212
Academic performance	Pearson Correlation			.000	1
	Sig. (2-tailed)	48.89	11.38	.250	
	N			212	212

Table 6 revealed that the r value is -0.079 which depicts on relationship between significant relationship between computer playfulness and academic performance of Library and Information Science undergraduates in Web Publishing course in TASUED. The calculated significant probability value of (p-value) 0.000 was above to the alpha value of 0.05. Since the significant probability (p-value) of 0.000 is less than the alpha value of 0.05, the null hypothesis is rejected. This implies that there is a significant relationship between computer playfulness and academic performance of Library and Information Science undergraduates in Web Publishing course in TASUED.

DISCUSSION OF THE FINDINGS

The finding shows that the majority of Library and Information Science undergraduates had average score in Web Publishing course. The finding is in line with the finding of Levin, Wasanga and Somerset (2011) assert that the academic performance of students is not only a pointer of the effectiveness of schools, but also a major determinant of the well-being of youths in particular and the nation in general. Other scholars, (Yusuf and Adigun, 2010; Lydiah and Nasongo, 2009; Achoka, Odebero, Maiyo, and Mualuko, 2007) noted that the performance of students in any academic task has always been of special interest to the government, educators, parents and society at large for higher personal incomes, higher rates of innovation, higher overall productivity and faster introduction of new technology (UNESCO, 2005). Several studies have been conducted to find out students' academic performance (Al-Rofo, 2010; Hijaz, 2018). Grade Point Average (GPA) was used by all these studies engaged as common indicator of students' performance. Kochhar (2017) confirmed that learners with difficulties such as lack of association between success and aptitude, defective approaches of learning, faulty study practice need proper guidance in their institutions. Many scholars and researchers have pointed out that the students' performances are affected by factors namely; gender differences, age and learning facilities.

The finding shows that the level of computer self-efficacy of Library and Information Science undergraduates in TASUED was moderate. This was in tandem with the studies by Oyewole and Oladepo (2017); Fabunmi and Awoyemi (2017) and Kass (2014) who noted that most of the undergraduate students had moderate degree of computer self-efficacy. Also, Balogun and Olarenwaju (2016) reported that undergraduates who possessed higher level of computer self-efficacy were less likely to experience CBT anxiety. In contrast however, Abdullah and Mustafa (2019) and Santoso (2013) reported that no positive correlation exist between computer

self-efficacy and cognitive actions among high school students in the United States of America.

The finding shows that the level of computer playfulness of Library and Information Science undergraduates in TASUED was moderate. This finding corroborates the positions of Salloum et al. (2019) who reported that, computer playfulness as well as system quality had a significant influence on perceived ease of use of e learning system. Also, Shen and Eder (2009) noted that computer playfulness has a significant antecedent to perceived ease of use of virtual world among students. As far as level of computer playfulness was concerned, undergraduates in the selected two universities in South-west, Nigeria were found to be high with the most emphasis on creativity and curiosity elements. Furthermore, the level of computer playfulness o f undergraduates of Bowen University was found to be highest in terms of creativity followed by spontaneity, while for undergraduates of OOU, had highest level of computer playfulness with regard spontaneity followed by imaginative. Generally, undergraduates of OOU possess relatively higher level of computer playfulness than their counterpart at Bowen University.

The finding shows that there is a significant relationship between computer self-efficacy and academic performance of Library and Information Science undergraduates in Web Publishing course in TASUED. This implies that the intricacies of this relationship may depend on various contextual factors. As educational technology continues to evolve, it becomes crucial to revisit and adapt instructional methods, integrate targeted interventions, and consider broader institutional and societal influences to enhance the overall educational experience for students in technology-centric courses. The moderate computer self-efficacy often leads to a greater willingness to adopt and use technology. This can result in more effective engagement with Web publishing tools and platforms (Kuo, Walker, Belland, & Schroder, 2013). Students who have confidence in their computer skills tend to perform better in courses that require the use of technology, such as Web publishing. This confidence can lead to more efficient and effective task execution (Bandura, 1997). High computer self-efficacy is linked to improved learning outcomes, including higher grades and a deeper understanding of course material. Students who believe in their abilities are more likely to engage with course content (Kuo, Walker, Belland, & Schroder, 2013). Computer self-efficacy can influence the readiness of LIS graduates for their careers.

The finding shows that there is a significant relationship between computer playfulness and academic performance of Library and Information Science undergraduates in Web Publishing course in TASUED. The finding is in agreement of Martinez and Johnson (2022) reported that the impact of playfulness on academic performance may vary depending on the type of course content and the learning objectives. In courses that emphasize technical skills and coding, for example, the relationship between playfulness and performance might differ compared to courses focused on creativity and design, such as web publishing. Wang and Garcia (2023) highlighted that cultural factors can influence students' attitudes towards technology and learning. In diverse educational settings like TASUED, cultural variations in the interpretation and expression of playfulness might contribute to the observed lack of a significant relationship. Ronnie (2012) reported that computer playfulness was found to be significantly related to students' grade point average. The findings of the study revealed that computer self-efficacy, computer playfulness as well as system quality had a significant influence on perceived ease of use of e-learning system. Undergraduates with a high degree of playfulness in technology are often more innovative and creative.

CONCLUSION AND RECOMMENDATIONS

The study was designed to investigate computer self-efficacy, computer playfulness as determinants of academic performance of Library and Information Science undergraduates in Web Publishing. The finding revealed that the majority of Library and Information Science undergraduates achieved an average score in the Web Publishing course. This suggests that, on average, students demonstrated a moderate level of proficiency in the course, indicating room for

improvement and targeted interventions to enhance learning outcomes.

Recommendations

Based on the findings of this study, the following recommendations are made:

1. Library schools should develop and improve here curriculum to include hands on training that will improve undergraduates experience and performance in the web publishing course
2. Library schools and curriculum developers should integrate playful and interactive elements into the Web publishing course and other IT related courses in the curriculum to encourage a more exploratory and creative approach to learning. Incorporate gamified elements or collaborative projects that leverage students' moderate level of playfulness to enhance engagement and understanding of web publishing concepts.
3. Library schools should identify students with average or low performance in the Web Publishing course and offer additional academic support services, such as tutoring, study groups, or peer mentoring and also create a supportive learning and conducive environment that fosters collaboration and peer-to-peer learning to help students improve their performance.
4. Library schools should encourage collaboration between the Library and Information Science program and relevant computer science or technology departments to develop interdisciplinary courses or joint initiatives. This collaboration can provide students with opportunities to strengthen both their technical skills and help improve their level of computer self-efficacy and computer playfulness.
5. Library schools should provide professional development opportunities through training and retraining, workshops, seminars etc., for faculty members to stay abreast of current and innovative trends in the library school curriculum.

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