



## An investigation to students' satisfaction with a university's web portal

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### ABSTRACT

This study examined the factors related to system and users that affect satisfaction with the web portal of the University of Ibadan undergraduates. Out of 14,384 undergraduate students, the study used the proportionate to size sampling technique to choose 388 as the sample size. Participants were chosen by convenience selection from each faculty. A validated instrument was used to collect the data, and a significance level of 0.05 was applied to the analysis. The results revealed that computer anxiety, computer literacy skills, faculties, information literacy skills, service quality, sex, student level, and system quality were significant predictors of students' satisfaction. Conversely, information quality and age were not significant predictors. Given the results, it is advised that the University of Ibadan's web development unit should prioritize improvements to the undergraduate web portal, focusing on ease of use, fast loading speed, easy navigation, and flexibility. Computer literacy skills should be integrated into the student curriculum to improve computer usage skills and reduce anxiety.

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## INTRODUCTION

Rapidly revolving technologies and its extensive use within the higher education spaces has resulted in a notable shift in the way universities deliver quality services to students (Maphalala & Adigun, 2021). As a result, university web portals have emerged as a vital tool for students to access various academic and administrative services. In this context, research on student satisfaction with digital educational tools has attracted a lot of attention lately. According to a study by Alkhalaf et al. (2018), student satisfaction with digital learning platforms was significantly predicted by perceived utility, perceived ease of use, and behavioral intention. Hence, Alkhalaf et al. (2018) in their study highlighted the importance of considering the user experience and functionality of digital educational tools when designing online learning environments. Building on findings advanced by Alkhalaf et al. (2018), several other research have also examined the influence of instructor support on student satisfaction with digital educational tools. For instance, Raman et al. (2020) assert that instructor support and course design were significant predictors of student satisfaction with online learning environments. Moreover, earlier research by Martin et al. (2019) revealed that instructor feedback and interaction were critical factors influencing student satisfaction with digital educational tools. Recently, Lee et al. (2022) affirm that digital educational tools can enhance student learning outcomes by providing personalized feedback and assessment. Prior to the study of Lee et al. (2022), Kim et al. (2020) observed that the application of digital educational tools was linked better student engagement and motivation. Thus, the findings of Lee et al. (2022) provided a support for earlier report of Kim et al. (2020).

Regardless of existing studies on online learning environments and or the use of digital educational tools, some studies have indicated the interference of demographics and individual differences as a factor that have a potential of shaping student satisfaction with digital educational tools. For instance, Wang et al. (2020) observed that age, gender, and prior experience with digital educational tools influenced student satisfaction with online learning environments. Gender differences exist in students' satisfaction, with female students reporting lower satisfaction than male students (Patel et al., 2019; Singh et al., 2022). Similarly, Chen et al. (2019) asserts that individual differences in learning style and personality influenced student satisfaction with digital educational tools. However, despite these findings, the effectiveness of university web portals in meeting students' needs remains a subject of ongoing debate which is yet unresolved in existing academic literature. In addition to the plausible implication of demographic variables on students' satisfaction with online learning environments, some recent studies have also highlighted the importance of various factors that may determine students' satisfaction with university web portals. Such factors include but not limited to including system quality, service quality, information quality, computer literacy skills, information literacy skills, and computer anxiety (Al-Mubarak et al., 2021; Al-Rashidi et al., 2022; Oyedele et al., 2023; Al-Shammari et al., 2024).

Findings of the resent studies on elements that affect how satisfied students are with university web portals have revealed that information quality, service quality, and system quality are significant influence of students' satisfaction (Alam et al., 2017; Rahman et al., 2020; Kumar et al., 2020). While computer literacy skills were discovered to have a beneficial impact on students' satisfaction (Al-Fadhli et al., 2021 & Khan et al., 2022), the findings in the studies of Oladele et al. (2020) and Singh et al. (2024) affirmed that information literacy skills remain a significant factor to influence students' satisfaction with webpages and institutional web portals. Also, service quality is a important influence of students' satisfaction, with responsiveness, reliability, and empathy being the most significant predictors (Afolabi et al., 2020). Additionally, computer anxiety has a significant negative effect on students' satisfaction (Al-Rashidi et al., 2022). Despite the existing reports on students' satisfaction with online learning, extensive research gaps exist on studies that have reported the effect of university web portals on students' satisfaction within Nigerian context. Hence, there is a need for more research on the impact of information literacy skills and computer literacy skills on satisfaction with university web portals particular from the perspective of Nigerian undergraduates. Therefore, this current study investigated students' satisfaction with the University of Ibadan undergraduate student web portal, utilizing DeLone and McLean's (2003) Information Systems Success Model as a theoretical structure. Specifically, the research investigates the relationships between computer anxiety, computer literacy skills, information literacy skills, information quality, service quality, and system quality on students'

satisfaction with a university's web portal which provides diverse services to students, including online information, admission modalities, course registration, and payment of school fees.

### **Problem statement**

The global usage of technology in higher education has led to a significant shift in the way universities deliver services to their students. University web portals have emerged as a vital tool for students to access various academic and administrative services, such as online course registration, grade checking, and payment of tuition fees (Alam et al., 2017; Oyedele et al., 2020). However, the effectiveness of these web portals in meeting students' needs remains a concern. In spite of the expanding corpus of research on university web portals, there is a paucity of research activities and reports on students' satisfaction with the web portals of universities particularly from the perspective of Nigerian undergraduates. Although, some studies such as Kumar et al. (2020) and Oladele et al. (2020) have previously examined undergraduates' web portal usage, such as information quality or system quality, but there is yet empirical evidence that provides holistic understanding of the factors that influence students' satisfaction with web portal. Furthermore, the impact of computer anxiety, computer literacy skills, and information literacy skills along with some specific aspects of web portal usage such as information quality, service quality, and system quality of the web portal on students' satisfaction with university web portals remains understudied.

### **Significance of the study**

This study's goal is to address the knowledge void by investigating the elements that affect students' satisfaction with university web portals. This study will analyze the connections between system quality, service quality, information quality, computer literacy skills, information literacy skills, and computer anxiety, and their impact on students' satisfaction. The findings of this research will offer insightful information regarding university administrators and decision makers attempting to increase the efficiency of their web portals. By identifying the key factors that influence students' satisfaction, universities can design and implement web portals that meet the needs of students, resulting in enhanced academic achievement, student retention, and general satisfaction. Furthermore, the research will add to the corpus of knowledge already available on the topic, providing a framework for future research on university web portals.

### **Objective of the study**

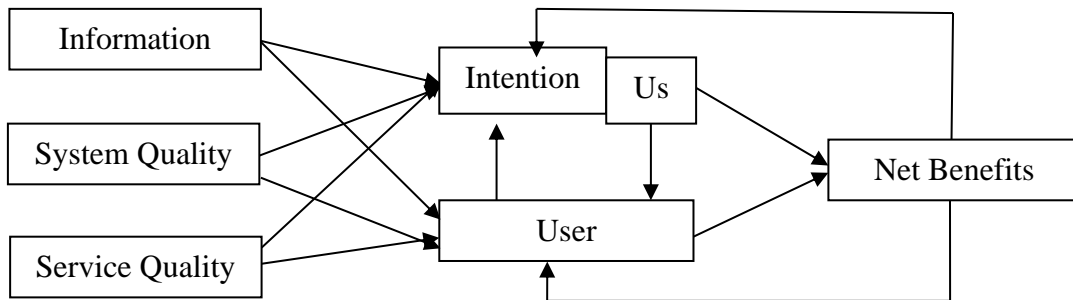
1. Examine the relationship between system factors (information quality, service quality, and system quality, and students' satisfaction with the undergraduates' web portal.
2. Find out if there would be a significant relationship of user factors (computer literacy skills, information literacy skills and computer anxiety) and students' satisfaction with the undergraduates' web portal.
3. To find out the significant impact of demographic variables on students' satisfaction with the undergraduates' web portal.

### **Research Hypothesis**

1. System factors (information quality, service quality, and system quality) will not significantly influence students' satisfaction with the undergraduates' web portal.
2. User factors (system quality, information quality and service quality) will not significantly influence students' satisfaction with the undergraduate web portal.
3. There will be no significant difference in students' satisfaction with the undergraduates' web portal based on demographic factors (age, sex, faculty, and academic level).

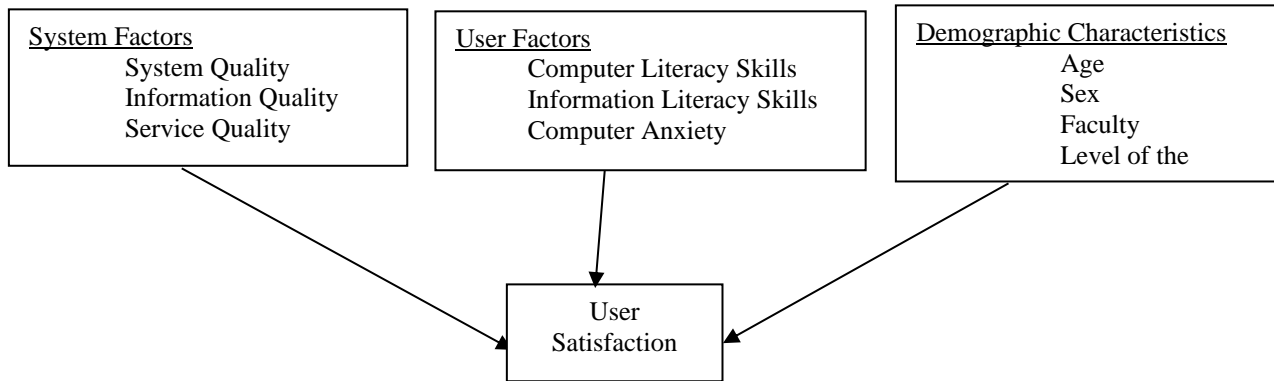
**Theoretical framework**

This study used 2003 Information Systems Success Model which was developed by DeLone and McLean as a theoretical framework to investigate the relationships between information quality, service quality, and system quality and user satisfaction. The study retained some constructs from the original model, including information quality, service quality, as well as system quality and user satisfaction. Additional constructs were added, such as information literacy skills, computer literacy skills, computer anxiety, and demographic factors. The study merged "use" and "user satisfaction" as using the university portal is mandatory for the undergraduate students of University of Ibadan.



*Figure 1: Updated 2003 Information Systems Success Model by DeLone and McLean*

**Conceptual Framework**



*Figure 2: Research Model Adapted from 2003 Information Systems Success Model by DeLone and McLean*

**Methodology**

The research design used in the study was descriptive which also adopted a purposive sampling approach to select the University of Ibadan, Nigeria. The university was established in 1948 and it is the premier university which is publicly funded. Further, the methodology adopted in this current study entails the methodical gathering of information from the university web portal user who are undergraduate students. Total population for this study was 14,384 students' population which is the total number of undergraduate students at University of Ibadan, Nigeria based on the 2023 report of the University's Academic Planning Unit. Since  $n$  is the required sample size,  $N$  is the estimated population (14,384), and  $e$  is the degree of error tolerance (5%), the sample size for this study was calculated using Yamane's formula (1967):  $n = \frac{N}{1 + N(e)^2}$ . This yielded a sample size of 388. Yamane's formula is used when the population is finite and the sample size is relatively small compared to the population. This formula provides a more accurate estimate of the sample size required for a finite population, unlike other formulas that assume an

infinite population. This formula has been used by various scholar, Al-Fadhli et al. (2021) employed Yamane's formula to calculate the required sample size for their investigation into the relationship between computer literacy skills and students' satisfaction with university web portals. This study employed proportional to size stratified sampling technique to select participants from among University of Ibadan undergraduate students. This technique was chosen because it allows for the division of the population into distinct strata (faculties), ensuring that each stratum is adequately represented. The use of proportional to size sampling technique ensures that the same percentage of elements from each stratum is drawn, providing a reliable representation of the population. Convenience sampling was also used to select respondents from each stratum, allowing for easy access to participants. Questionnaire was used for data collection. The instrument was subjected to pilot study at The Polytechnic Ibadan which is about two kilometres away from the University of Ibadan with sample size of 40 students. The Cronbach Alpha Co-efficient value gotten are information quality = 0.80, service quality = 0.89, and system quality = 0.78, information literacy skills 0.69, computer literacy skills 0.86, computer anxiety 0.82, students' satisfaction 0.82. The results showed that the Cronbach Alpha Co-efficient values ranged from 0.69 to 0.89, indicating good reliability for all constructs. These findings suggest that the instrument is reliable and can be utilized to gather information for the main study.

**Data Analysis**

The data from the copies of the instruments were entered into Statistical Package for the Social Sciences (SPSS) version 20 due to its advanced data management and statistical capabilities, user-friendly interface, and reliability in producing accurate results, making it an ideal choice for comprehensive analysis and interpretation of data. The analysis further made use of descriptive statistics which provide answers to the participants' demographic information. Also, multiple regression analysis was employed to examine the relationships between the independent variables (computer anxiety, computer literacy skills, information literacy skills, information quality, service quality, and system quality) and the dependent variable (students' satisfaction). ANOVA was used to examine the significance of the connections between some demographic variables (age, sex, faculty and academic level) and the dependent variable. Male and female means were compared using an independent t-test, allowing for the examination of any significant differences between the two groups.

**Results**

Table 1 illustrate the demographic information of the participants. It shown in the table that 59.0% of the respondents were on the age range of 15-20 years, 38.1% were 21-25 years while 2.8% were above 26. The age shows that 54.6% of the participants were female while 45.4% were male. Furthermore, on the respondent faculty, it shows that larger percentage of the respondents 15.5% were in sciences, 13.7% were in Education, 12.9% of the respondents were in faculty of Art, 11.6% were in Agricultural Science, 9.8% were in Technology, while the least of the respondents 1.0% were in Public Health. While level of education shows the larger percentage of the respondents 50.0% were in 300 level, 26.05% were in 200 level, 16.2% were 400 level, 7.0% were in 100 level while 0.8% were in 500 level.

Table 1: illustrate the demographic information of the respondents

<b>Age</b>	<b>Frequency</b>	<b>Percent (%)</b>
15-20 years	229	59.0
21-25 years	148	38.1
Above 26 years	11	2.8
<b>Total</b>	<b>388</b>	<b>100.0</b>
<b>Gender</b>		
Male	176	45.4
Female	212	54.6
<b>Total</b>	<b>388</b>	<b>100.0</b>

<b>Faculty</b>		
Art	50	12.9
Education	53	13.7
Social science	38	9.8
Pharmacy	11	2.8
Law	20	5.2
Veterinary	13	3.4
Dentistry	6	1.5
Public health	4	1.0
Basic medical sciences	16	4.1
Technology	38	9.8
Science	60	15.5
Agriculture	45	11.6
Clinical science	34	8.8
Total	388	100.0
<b>Level of Education</b>		
100 level	27	7.0
200 level	101	26.0
300 level	194	50.0
400 level	63	16.2
500 level	3	.8
Total	388	100.0

### Test of hypotheses

**H<sub>01</sub>:** System factors (system quality, information quality and service quality) did not significantly influence students' satisfaction with University of Ibadan undergraduate web portal.

Table 2: Model Summary

<b>Model Summary</b>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.317 <sup>a</sup>	.101	.094	4.02131

Table 2 shows an R<sup>2</sup> of 0.101 showing that about 10% students' satisfaction is accounted for by system quality, information quality and service quality of the University of Ibadan undergraduate web portal.

Table 3: Multiple Regression Analysis on the Predictors showing the Analysis of Variance (ANOVA)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	693.966	3	231.322	14.305	.000 <sup>b</sup>
	Residual	6193.476	383	16.171		
	Total	6887.442	386			

As presented in Table 3, the ANOVA table with the Friedman ratio of 14.305 and the significant value at 0.000 revealed that the null hypothesis model is a good fit and we can say that the model specified is a good fit and can be used to predict and see how the predictors predict the dependent variable in the model. Thus, the independent variables influence the dependent variable.

Table 4: Multiple Regression Analysis on the Predictors showing the Coefficients

Model		Unstandardised Coefficients		Standardised Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	12.656	1.304		9.705	.000
	Student perception on system quality of school web portal	.146	.035	.259	4.158	.000
	Student perception on Information quality of school web portal	-.019	.056	-.021	-.342	.733
	Student perception service quality of school web portal	.147	.062	.126	2.371	.018

Table 4 shows that system quality ( $\beta = .259$ ,  $t_{cal} = 4.158$ ;  $p < 0.05$ ) and service quality ( $\beta = .126$ ,  $t_{cal} = 2.371$ ;  $p < 0.05$ ) were significant predictors of students' satisfaction with the undergraduates' web portal, while information quality ( $\beta = -.021$ ,  $t_{cal} = -.342$ ;  $p > 0.05$ ) did not significantly predict students' satisfaction with the undergraduates' web portal. This implies that system quality and service quality have significantly predicts students' satisfaction with the undergraduate web portal service. This finding implies that students' ability to conveniently interact with the university's web portal service as well rapid response of technical personnel who are at the back-end are major factors that shapes students' level of satisfaction with the use of the university's web portal. In other words, the findings suggest that system quality and service quality play a significant role in determining students' satisfaction with the undergraduates' web portal of the university of Ibadan.

**H<sub>02</sub>:** User factors (system quality, information quality and service quality) did not significantly influence students' satisfaction with University of Ibadan undergraduate web portal.

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.519 <sup>a</sup>	.269	.263	3.62104

Table 5 shows an R<sup>2</sup> of 0.269 showing that 27% students' satisfaction with University of Ibadan undergraduate web portal by perception on computer anxiety, computer literacy skill and information literacy skill.

Table 6: Multiple Regression Analysis on the Predictors showing the Analysis of Variance (ANOVA)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1853.052	3	617.684	47.108	.000 <sup>b</sup>
	Residual	5034.989	384	13.112		
	Total	6888.041	387			

The enter method was used for the multiple regression analysis. As presented in table 6, the ANOVA table with the Friedman ratio of 47.108 and the significant value at 0.000 showed that the null hypothesis model is a good fit and we can say that the model specified is a good fit and can be used to predict and see how the predictors predict the dependent variable in the model. Thus, the independent variables predict the dependent variable.

Table 7: Multiple Regression Analysis on the Predictors showing the Coefficients

Model		Unstandardised Coefficients		Standardised Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	18.627	.951		19.588	.000
	Student perception on information literacy skills	.268	.038	.358	7.094	.000
	Student perception on computer literacy skills	.122	.038	.156	3.162	.002
	Student perception on computer anxiety	-.100	.012	-.373	-8.321	.000

Table 7 above shows that information literacy skill ( $\beta=.358$ ,  $t_{cal} = 7.094$   $p < 0.05$ ), computer literacy skill ( $\beta =.156$ ,  $t_{cal} =3.162$ ;  $p<0.05$ ) and Computer Anxiety ( $\beta = -.373$ ,  $t_{cal} = -8.321$ ;  $p < 0.05$ ) were significantly influence students’ satisfaction with University of Ibadan undergraduate web portal. This finding therefore implies that information literacy skill, computer literacy skill are necessary skills that are valuable for comprehensive interaction with university’s web portal. Advanced information literacy skill and computer literacy skill would be needed for efficient front-end web portal interactions. In other words, for utmost satisfaction with web portal use, students must be able to understand the information available on the web portal and have required computer skills to navigate the interface of the portal.

**H<sub>03</sub>:** There is no significant difference in students’ satisfaction with University of Ibadan undergraduate web portal based on demographic factors (gender, faculty, age and academic level).

Table 8: Summary Table of Independent Sample T-test showing the Influence of Gender on Satisfaction on School Web Portal

	Gender	N	$\bar{X}$	SD	Df	T	P
Satisfaction on school web portal	Male	176	20.50	3.85	386	3.127	<.05
	Female	212	19.17	4.42			

Table 8 shows that gender has significant influence on students’ satisfaction with University of Ibadan undergraduate web portal ( $t_{cal} = 3.127$ ;  $df = 386$ ;  $p < .05$ ). This means that male respondents ( $\bar{X} = 20.50$ ;  $SD = 3.85$ ) reported high level of satisfaction compare to female respondents ( $\bar{X} = 19.17$ ;  $SD = 4.42$ ) who reported low level of satisfaction with University of Ibadan undergraduate web portal.



Table 9: One-way ANOVA showing the Effect of Faculty, Age, Level of Students on Satisfaction of School Web Portal as stated in hypothesis three

	Source	SS	Df	MS	F	Sig.
Effect of Faculty on Satisfaction of School Web Portal	Between Groups	405.589	12	33.799		
	Within Groups	6482.452	375	17.287	1.955	.027
	Total	6888.041	387			
Effect of Age on Satisfaction of School Web Portal	Between Groups	60.528	2	30.264		
	Within Groups	6827.513	385	17.734	1.707	.183
	Total	6888.041	387			
Effect of Level of Students on Satisfaction of School Web Portal	Between Groups	297.140	4	74.285		
	Within Groups	6590.901	383	17.209	4.317	.002
	Total	6888.041	387			

Table 9 shows that there was significant influence of faculty on students' satisfaction with University of Ibadan undergraduate web portal. ( $F_{(12,375)} = 1.955, p < .05$ ). Also, there was no significant influence of age on students' satisfaction with the undergraduates' web portal ( $F_{(2,385)} = 1.707, p > .05$ ). The result revealed that there was no significant difference in respondents' satisfaction with the web portal across different age groups. Meanwhile, level of education (academic years) had significant influence on the respondents' satisfaction with university's web portal ( $F_{(4,383)} = 4.317, p < .05$ ) and gender difference of the respondents' as well was found to have a significant influence on students' satisfaction ( $t_{cal} = 3.127; p < .05$ ), with male respondents reporting higher satisfaction levels. The findings showed that faculty, gender and level of education were significantly independent influence of students' satisfaction with University's web portal, while age had no significant influence on students' satisfaction with University of Ibadan undergraduate web portal. The implication of the findings remain that increase in level of education across the (first to final) years among the students may influence advanced understanding and interactive ability of students with the university's web portal.

## Discussion

*H<sub>01</sub>: System factors (information quality, service quality, and system quality) did not significantly influence students' satisfaction with the undergraduates' web portal.*

The results of this study shed important light on the variables affecting satisfaction of undergraduates with the web portal of the University of Ibadan. According to the findings of hypothesis one, students' satisfaction with the online portal was significantly predicted by the quality of the system and the services provided. This result aligns with earlier research carried out by Kumar et al. (2020), Maphalala and Adigun (2021) as well as Rahman et al. (2020) whose studies assert that system and service quality had a significant positive impact on students' satisfaction with university web portals. Similarly, our finding also align with the research of Abdel, Hamza, and Abuhamad (2015), who reported that information quality, service quality, and system quality influence students' satisfaction, with service quality being the major determinant. However, the current study's results diverged from those of Abdel et al. (2015) in that information quality did not significantly predict students' satisfaction with the undergraduate web portal of the University of Ibadan. In contrast, the findings of this study opposed those of Nair et al. (2023), who reported that information quality had a significant impact on student satisfaction and academic performance. This discrepancy may be attributed to differences in the research context, methodology, or population. The findings of the present study, however, emphasize how crucial system and service quality are in influencing how satisfied students

are with university web portals. These findings have important ramifications since they indicate that in order to increase students' satisfaction with web portals, university administrators and web developers should give priority to improving system and service quality. By doing so, universities can provide a more user-friendly and effective online experience for their students, ultimately contributing to improved academic outcomes and overall student satisfaction.

***H<sub>02</sub>: User factors (system quality, information quality and service quality) did not significantly students' satisfaction with the undergraduates' web portal.***

The finding from hypothesis two provides a nuanced understanding of how personal characteristics influence students' satisfaction with the undergraduate web portal of the university considered in this study. Specifically, the results reveal that information literacy skill, computer anxiety and computer literacy skill were respectively significant predictors of students' satisfaction with the web portal. This suggests that students who possess higher levels of information literacy skill and computer literacy skill tend to be more satisfied with the web portal, while those who experience higher levels of computer anxiety tend to be less satisfied. The finding that information literacy skill and computer literacy skill were significant independent predictors of students' satisfaction with the undergraduate web portal has important implications for university administrators and web developers. It suggests that investing in initiatives that enhance students' information literacy skill and computer literacy skill, such as training programs or workshops, may lead to increased student satisfaction with the web portal. The results of the study are in line with earlier investigations in this area. For example, Oladele et al. (2020) reported that information literacy skill and computer literacy skill had a significant positive impact on students' satisfaction with university web portals. Similarly, Al-Rashidi et al. (2022) and Khan et al. (2022) found that computer anxiety was a significant predictor of students' satisfaction with university web portals. The convergence of these findings suggests that individual differences play a critical role in shaping students' experiences with university web portals. Additionally, the study's findings emphasize the significance of considering the psychological and cognitive factors that influence students' interactions with technology. By recognizing and addressing these differences, universities can design online spaces that are more welcoming and encouraging to meet the various needs of their students. By recognizing the impact of computer anxiety on students' satisfaction with the web portal, universities can develop targeted interventions to mitigate this anxiety and promote more positive online experiences. Overall, the findings from hypothesis two contribute to a deeper understanding of the complex factors that shape students' satisfaction with university web portals. By exploring the interplay between individual differences, technological proficiency, and online experiences, this study provides valuable insights for university administrators, web developers, and educators seeking to create more effective and engaging online learning environments.

***H<sub>03</sub>: There is no significant difference in students' satisfaction with undergraduate web portal based on demographic factors (age, sex, faculty, and academic level).***

The findings from hypothesis three offer a nuanced understanding of the demographic factors that influence students' satisfaction with the University of Ibadan undergraduate web portal. Specifically, the results reveal that gender, faculties, and academic level have a significant influence on students' satisfaction with the web portal, while age has no significant influence. This suggests that certain demographic characteristics play a crucial role in shaping students' experiences with the web portal. The finding that gender has a significant influence on students' satisfaction with the web portal is consistent with previous research. For example, Patel et al. (2019) reported that female students reported lower satisfaction with university web portals compared to male students. This discrepancy may be attributed to various factors, including differences in technological proficiency, online behaviour, or expectations. The finding highlights the importance of considering gender differences when designing and evaluating university web portals. Yet, the results run counter to Sook-Hyun and Se-Joon's (2013) study, which found no statistically significant gender difference in the relationship between satisfaction and information and navigation quality. This discrepancy may be attributed to differences in the research context, methodology, or population. Nonetheless, the current study's results indicate that gender differences play a significant role in shaping students' satisfaction with university web portals. The finding that faculties and academic level have a significant influence on students' satisfaction with the web portal is also noteworthy. This suggests that students from different faculties and academic levels may have distinct needs,

expectations, and experiences with the web portal. University administrators and web developers should consider these differences when designing and evaluating the web portal to ensure that it meets the diverse needs of students. In contrast, the finding that age did not significantly predict students' satisfaction with the web portal is surprising, given the widespread assumption that younger students are more tech-savvy and likely to be more satisfied with online platforms. However, this finding suggests that age may not be a significant factor in shaping students' experiences with the web portal. Overall, the findings from hypothesis three contribute to a deeper understanding of the demographic factors that influence students' satisfaction with university web portals. Universities may build more welcoming and encouraging online communities that meet the various requirements of their students by recognizing and resolving these discrepancies.

## **Conclusion**

Nigerian universities need to develop world-class web portals that meet international best practices. However, the study found that some students were dissatisfied with the services provided by the University of Ibadan's web department unit, citing difficulties with the portal and poor staff attitude. To succeed, universities must carefully plan and maintain their portals, considering the needs of students and the institution as a whole. Key drivers for sustainability include technology enhancement, institutional changes, and administrative support. The study's conclusions have important ramifications for how Nigerian university web portals are developed and implemented. The results highlight the need for universities to prioritize student satisfaction and experience when designing and maintaining their web portals.

## **Recommendation**

The conclusions and findings lead to the following recommendations:

1. The University of Ibadan's web development unit should prioritize improvements to the undergraduate web portal, focusing on ease of use, fast loading speed, easy navigation, and flexibility.
2. The university should ensure that web portal support staff are reliable, responsive, and empathetic in addressing student complaints.
3. Information literacy skills training should be organized for undergraduate students to optimize their use of technology and enhance their awareness of web portal usage.
4. Computer literacy skills should be integrated into the student curriculum to improve computer usage skills and reduce anxiety.

## **Contribution to Knowledge**

The study's findings contribute to the corpus of knowledge already available on student satisfaction with university web portals, and they offer suggestions for improving web portal design and user experience, which will ultimately improve academic performance and student satisfaction. They also offer insightful information about the factors that influence student satisfaction. Furthermore, this study fills a knowledge gap in the Nigerian context, providing a framework for future research on university web portals. The study's contributions have implications for university administrators, policymakers, and web portal designers seeking to improve the effectiveness of their web portals.

## **Limitations and Future Research Directions**

Despite providing useful information, this study has drawbacks about how satisfied students are with university web portals. The following topics could be investigated in future research:

1. Investigating the potential influence of web portal design and interface on student engagement and its relationship with academic performance.

2. Examining the role of faculty and staff in promoting web portal adoption and usage among students.
3. Developing a comprehensive framework for evaluating student satisfaction with university web portals.

Future research can build on the outcome of the current study and offer additional information on the intricate linkages between academic achievement, student satisfaction, and university online portals by addressing these constraints and investigating new research avenues.

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