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Knowledge Acquisition Determinants and Their Impact on EFL Students' Perceived Learning Performance with Mediating Effect of Student Satisfaction

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Abstract: The perceived learning performance becomes an integral component of a student's success which reflects how efficiently learners believe that they have acquired knowledge. Knowledge acquisition determinants play an important role in increasing the perceived learning performance through increased satisfaction of the students. Therefore, the study aimed to test the impact of knowledge acquisition determinants on the perceived learning performance of Saudi Arabian EFL students with the mediating effect of satisfaction. Data were collected from 390 EFL students using a purposive sampling technique. The research design was cross-sectional and the research approach was quantitative. The Partial Least Square (PLS)-Structural Equation Modeling (SEM) technique results show that all knowledge acquisition determinants namely e-learning content, website content, learning expectancy, facilitating conditions, and learning content quality have a positive and significant impact on perceived learning performance. Further indirect effect results also show that satisfaction is partially mediated among all knowledge acquisition determinants and perceived learning performance. The study with these significant findings confirms the importance of knowledge acquisition determinants in enhancing perceived learning performance. Practically, the study also contributed to helping educators and institutions focus on improving to boost student satisfaction, which in turn enhances learning performance. Additionally, enhancing student satisfaction serves as a key mediator, suggesting that educational strategies should address both content and user experience to optimize performance.

Keywords: e-learning content; website content; satisfaction; perceived learning performance; EFL; Saudi Arabia.

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1. Introduction

Students perceived learning performance becomes a critical factors in evaluating how students are able to understand the knowledge which is provided in their educational institutions (Zou, Li, & Jin, 2022). It directly effects to their motivations, engagements and future academic success which is creating a foundation for learning (Ferguson & DeFelice, 2010). When students perceive their learning experiences positively then it helps to enhance self-efficacy and boosts their confidence in acquiring new skills. This perception also plays a vital role in shaping their long-term educational and career

aspirations (Wei, Saab, & Admiraal, 2023). The satisfaction of the students becomes an important determinant for the perceived learning performance because it reflects how content students are with their learning environment and resources (Butt et al., 2023). Other researchers also enforced that a higher level of satisfaction leads to improve the student's perceived learning performance (Bazargan, 2023). Satisfaction enhances motivation and engagement, creating positive feedback that encourages students to actively participate in their education and strive for better outcomes (Qiao et al., 2023). Furthermore, satisfied students are more likely to retain information and perform better in assessments, reinforcing the connection between their educational experiences and perceived learning performance (Wei et al., 2023).

Furthermore, students' satisfaction to increase their performance could be influenced by various factors but one of the most significant is the way knowledge acquisition (Sureephong et al., 2023). Among these, e-learning content stands out as a key contributor to students (Zou et al., 2022). Esmaeili Givi, Keshavarz and Kargar Azad (2023) highlighted that high quality e-learning content which is characterized by interactivity, relevance, and accessibility caters to different learning styles which increases learning performance (Butt et al., 2023). Other studies also suggested that when students perceive e-learning content as valuable and aligned with their academic needs then their overall satisfaction with the learning process improves (Qiao et al., 2023). Additionally, website content also plays a critical role by providing a well-organized (Tawafak, Alyoussef, & Al-Rahmi, 2023) and intuitive platform for students to access learning materials (Butt et al., 2023). This ease of use reduces frustration and increases satisfaction, as students can focus more on learning rather than overcoming technical obstacles performance (Yousaf et al., 2023). On the other hand, learning expectancy also believes that students will achieve positive learning performance through increasing a proactive attitude toward their studies (Abd Aziz, Aziz, & Abd Rahman, 2023). When students have high learning expectancy then they are more likely to engage deeply with course materials which could lead to greater satisfaction (Yang et al., 2023) that could lead to enhanced performance.

Furthermore, facilitating conditions like the availability of reliable technology, and adequate support from the educators also played an important role to increase the student's satisfaction (Sewandono et al., 2023). For example, students who experience minimal distribution due to any technical issue and who receive prompt support when needed tend to feel more satisfied with their learning experience (Butt et al., 2023). These conditions create a conducive environment where students can focus on learning without being hindered by logistical barriers (Butt et al., 2023). Similarly, the quality of e-learning content and its clarity, depth, and alignment with learning objectives directly affect satisfaction (Buraimoh, Boor, & Aladesusi, 2023). When students engage with well-structured and thoughtfully designed e-learning materials, their ability to grasp complex concepts improves which helps to increase their perceived learning performance (Yousaf et al., 2023). As satisfaction improves through these various factors, it leads to enhanced perceived learning performance (Soesmanto, Vu, & Kariyawasam, 2023). Satisfied students are more likely to feel that their learning experiences are valuable, which in turn increases their belief in their academic abilities and enhances their actual performance (Soesmanto et al., 2023). These previous studies have shown that knowledge acquisition factors improve the student's perceived learning performance of EFL students through improving satisfaction.

Different empirical studies have been conducted on the relationship of knowledge acquisition factors namely e-learning content, website content, learning expectancy, facilitating conditions, and perceived learning performance but still have several gaps. Studies have demonstrated mixed effects results of these factors on student satisfaction and learning performance (Ali et al., 2024; Alqurashi, 2019; Gray & DiLoreto, 2016; Zou et al., 2022). These inconsistencies highlight the need for further investigation into the contextual variables that may moderate or mediate these relationships. The mediating role of satisfaction, particularly in educational contexts, has received limited attention in the literature (Febrian & Sani, 2023; Ginting et al., 2023; Martínez-Falcó et al., 2024). Therefore, a study has focused on the mediating effect of student satisfaction. On the other hand, previous studies also have limited focus on e-learning content, website content, and e-learning content quality on perceived learning performance along with two other knowledge acquisition factors namely learning expectancy, and facilitating conditions (Ali et al., 2024; Zou et al., 2022). Therefore, this study filled gaps in five knowledge acquisition factors that impact perceived learning performance. Furthermore, empirical extant studies also focus on student populations outside the context of Saudi Arabia, with much of the research centered on Western or East Asian countries (Ali et al., 2024; Zou et al., 2022). These studies often examine general student populations, such as university or high school students without addressing the unique challenges faced by English as a Foreign Language (EFL) learners (Oraif, 2024) especially in Saudi Arabia. Addressing these gaps is essential for understanding the factors that influence learning performance in this unique educational context. Therefore, the study aimed to test the impact of knowledge acquisition factors on the perceived learning performance of Saudi Arabian EFL students.

The study had different theoretical and practical implications for increasing the students' perceived learning performance among Saudi Arabia EFL students. From a theoretical perspective, the study highlighted the importance of e-learning content, website usability, learning expectancy, and facilitating conditions, while emphasizing student satisfaction's mediating role in shaping perceived learning outcomes. This extends existing educational theories by demonstrating how these variables interact to influence learning performance in a non-Western context, where the dynamics of e-learning are unique. The study could also help to other researchers to conduct their research in future to extend the study's conceptual model. While, on a practical perspectives, research emphasized the importance for educators and policymakers to focus on improving the quality of e-learning platforms, ensuring intuitive website design, and creating supportive learning environments to boost student satisfaction. Through increasing these aspects to meet the needs of Saudi EFL learners, institutions could significantly enhance students' satisfaction, which in turn leads to improved learning performance. This could lead to more effective e-learning strategies and better performance in EFL education within Saudi Arabia. The research paper was further divided into four chapters namely literature review where the main empirical studies, research methodology where the research anion, data analysis where the main hypothesis, discussion where the results and supported with relevant findings.

2. Literature Review and Hypothesis Development

Knowledge acquisition becomes a crucial factor for perceived learning as it enables

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students to internalize and apply new information which increases their confidence level. This process reinforces their perception of successful learning outcomes (Sureephong et al., 2023). There are various factors in knowledge acquisition. Among those, E-learning plays an important role in shaping learning in the online environment. High-quality context improves the student's engagement in English learning (Liaw & Huang, 2013). Eom (2023) also highlighted that e-learning content structured to match students' learning needs significantly enhances learning outcomes by providing clear instructions and interactive opportunities for engagement. E-learning content also has the flexibility to cater to different learning styles which helps to improve its effectiveness in boosting perceived learning performance (Yas et al., 2024). They also argued that e-learning content helps to fulfill the student needs which leads to an increase in engagement and overall performance. Hence, the study has the following hypothesis below,

H1: E-learning content significantly enhances students' perceived learning performance.

The accessibility of the online content also provides a platform for the student's learning. If the website material is well-designed then content make it easier for the students to navigate learning material which leads to improve student performance (Kuadey et al., 2024). Amiri et al. (2024) also showed that a well-organized website structure significantly enhanced students' learning performance by ensuring efficient access to resources. Similarly, Wei et al. (2023) found that website content optimized for user experience improved student satisfaction, which in turn enhanced learning performance. Additionally, Sun et al. (2023) emphasized that websites with intuitive navigation and relevant learning content lead to better cognitive absorption, making it easier for students to concentrate on the material and achieve better outcomes. Sewandono et al. (2023) supported this finding that students who accessed websites with well-organized learning resources exhibited higher engagement levels and better academic performance. They further argued that more learners move to digital platforms, it becomes clear that well-structured websites with content that is accessible and easy to navigate are essential for enhancing perceived learning performance. Hence, the following hypothesis has been formulated below,

H2: Website content significantly enhances students' perceived learning performance.

Learning expectancy refers to students' belief in their ability that they can succeed in their learning tasks (Sewandono et al., 2023). Other authors also enforced that students with high learning expectancy are more likely to engage in deep learning and persist in their studies which could lead to better learning performance (Sewandono et al., 2023). Tannady and Dewi (2024) also further found that students with higher learning expectancy utilized self-regulation strategies more effectively and achieved better academic performance. Kala and Chaubey (2023) also demonstrated that students with strong beliefs in their learning abilities were more persistent and performed better in their tasks. Further empirical evidence from Cai, Lin and Yu (2023), also demonstrated that high learning expectancy motivated students to set clear learning goals that positively influenced their academic performance. Fedorko, Bačik and Gavurova (2021) also emphasized that high learning expectancy fosters resilience in students, enabling them to overcome challenges more effectively, leading to improved learning outcomes. These previous relationships suggested that learning

expectancy is an important indicator that helps to increase the student's perceived learning experience. Therefore, a study has the following research hypothesis.

H3: Learning expectancy significantly enhances students' perceived learning performance.

Learning content quality is an important phenomenon that helps to increase the perceived learning performance of the students. In other words, if the content is relevant, accurate, and latest then it could lead to improving the student perceived learning performance (Esmaeili Givi et al., 2023). Chen et al. (2023) also found that students who engaged with high-quality e-learning content reported greater satisfaction and higher perceived learning success compared to those using less engaging materials. Zheng et al. (2023) also demonstrated that the relevance and accuracy of content significantly impacted student performance in various tasks. These findings support the hypothesis that e-learning content quality positively affects perceived learning performance. Additionally, Lin, Wang and Lee (2023) noted that students who interacted with well-organized and interactive e-learning content exhibited better performance in language acquisition and problem-solving tasks. Li and Liu (2023) supported this by showing that e-learning content quality particularly when it is interactive and allows for personalized learning paths could leads to an increase the perceived learning experience. Based on previous discussion, it is hypothesized that,

H4: Learning content quality significantly enhances students' perceived learning performance.

In other contexts, facilitating conditions like technical support, and administrative assistance are also important for increasing perceived learning performance (Li & Liu, 2023). This argument is further supported by another study by Lin et al. (2023) who also enforced providing the necessary infrastructure to support seamless learning performance. Camilleri and Camilleri (2023) also found that students who had easy access to technical support and well-maintained learning platforms reported higher perceived learning performance. Lin et al. (2023) further demonstrated that facilitating conditions, including reliable platforms and user-friendly interfaces directly influenced students' learning performance. Abbad, (2021) highlighted that when students feel supported by the learning infrastructure, including access to technical resources and assistance then they are more likely to succeed academically. Johnson, (2020) emphasized the critical role of facilitating conditions in maintaining student engagement and reducing frustration with online learning platforms which helps to improve perceived learning performance. As facilitating conditions is important for the perceived learning performance. Therefore, a study has the following research hypothesis below,

H5: Facilitating conditions significantly enhances students' perceived learning performance.

Furthermore, student satisfaction is also an important indicator to increase the perceived learning performance of students because satisfied students are more likely to engage in reading deep material related to their content. A prior study also found that personalized and adaptive e-learning content led to higher satisfaction that in turn improved students' perceived learning performance. Similarly, Martínez-Jiménez and Ruiz-Jiménez (2020) also demonstrated that students who were satisfied with their learning environment showed significantly better performance. Further empirical study by Haddad (2018) also showed that student satisfaction is directly tied to the

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learning environment through providing usability of online platforms and the quality of content provided. When students feel that their learning needs are being met and the platform is easy to navigate then they are more motivated to engage in their studies that could improve performance. These previous studies indicated that more satisfied students have more interest in their learning which helps to increase the perceived learning performance.

H6: Student satisfaction significantly enhances students' perceived learning performance.

Previous studies have shown that e-learning has a relationship with perceived learning performance. Extant studies also enforced that e-learning content learning not only effect perceived learning performance directly but also indirectly (Ali et al., 2024). This argument is further supported by the study of Bazargan (2023) who argued that satisfied students' performance could be increased because take an interest in learning. Therefore, satisfaction could be used mediating variable. Alenezi et al. (2023) demonstrated that students who used high-quality, interactive e-learning content reported higher satisfaction levels and better mastery of subject material. This aligns with the hypothesis that e-learning content enhances perceived learning performance through improved satisfaction. Igor et al. (2023) empirical findings also found that e-learning content that was visually engaging and interactive helped students maintain higher levels of motivation, leading to greater satisfaction with the learning process. Nikou and Maslov (2023) added that when e-learning content provides immediate feedback and increases interaction that could lead to a more satisfying learning experience which could improve perceived learning performance. The positive and significant mediating impact of satisfaction has been found in the study of Ali et al. (2024). Therefore, a study has formulated the following research hypothesis below,

H7: E-learning content significantly enhances students' perceived learning performance by improving satisfaction.

On the other hand, website content does not affect directly but also indirectly affects performance by increasing satisfaction (Guo, Zhang, & Xia, 2023). A well-designed and user-friendly website structure makes it easier for students to navigate learning materials, leading to greater satisfaction that could lead to improved performance (Guo et al., 2023). Venkatakrishnan, Alagiriswamy and Parayitam (2023) found that optimized website content significantly enhanced satisfaction, which in turn positively influenced their perceived learning performance. Esmaeili Givi et al. (2023) also highlighted that website content that is visually appealing, easy to navigate, and aligned with learning goals significantly increases student satisfaction, leading to better performance outcomes. Butt et al. (2023) also emphasized that well-structured websites reduce cognitive load, making it easier for students to focus on learning tasks, thereby improving both satisfaction and academic performance. It has been found in the extant literature the positive and significant mediating impact of satisfaction (Ali et al., 2024). Therefore, a study has formulated the following research hypothesis below,

H8: E-learning content significantly enhances students' perceived learning performance by improving satisfaction.

Learning expectancy also influences the student's motivations which not only improves their perceived learning performance but also improves the satisfaction in

their learning process (Zou et al., 2022). Abd Aziz, Kader and Ab Halim (2021) also showed that students with high learning expectancy were more likely to persevere in their studies, leading to both higher satisfaction and better learning outcomes. Wei and Chou (2020) also found that students who had clear learning goals, driven by high learning expectancy were more likely to experience satisfaction with their learning progress, as they saw their efforts translating into meaningful academic results (Sewandono et al., 2023). Ain et al. (2015) also found that students who believed in their ability to succeed were more satisfied with their learning environment, which contributed to better academic performance. In other studies, learning expectancy also has positive and significant impact on perceived learning performance (Chen, 2011; Sewandono et al., 2023). They also further argued that learning expectancy and perceived learning performance could be tested in other contexts. Therefore, a study has formulated the following research hypothesis,

H9: Learning expectancy significantly enhances students' perceived learning performance by improving satisfaction.

The learning quality improves the perceived learning performance of the individuals has been bee discussion. Literature also cited that when the E-learning content quality increases then the student motivations and satisfaction also improve which leads to improved perceived learning performance (Zou et al., 2022). Bossman and Agyei (2022) also showed that content designed with clear instructional strategies increased student satisfaction, which subsequently enhanced perceived learning performance (Babooram & Fowdur, 2024). The same findings are supported in the study of (Mamakou, Zaharias, & Milesi, 2024) who also emphasized that e-learning content quality needs to be dynamic and adaptable to student needs, as this personalization significantly enhances satisfaction levels. In another context, it has been also found the partial mediating effect satisfaction (Osman, Joarder, & Hoque, 2024). They further argued that the student satisfaction mediating effect could be explored on other countries and on other students. Therefore, current study has formulated the following hypothesis in the context of Saudi Arabia EFL student.

H10: E-learning content quality significantly enhances students' perceived learning performance by improving satisfaction.

In addition, facilitating conditions that access to technical support and also provide a reliable platform directly affects to student satisfaction. In another study, it was found that facilitating conditions also positively and significantly impact perceived learning performance with the mediating effect of student satisfaction (Zou et al., 2022). Kılınç et al. (2024) also concluded that reliable and user-friendly learning environments contributed to higher levels of student satisfaction, leading to better learning outcomes. Kılınç et al. (2024) further emphasized the importance of facilitating conditions in determining student satisfaction and success. Koca, Kılıç and Dadandı (2024) results also documented that providing facilitation relating to their content and knowledge then their satisfaction could improve their performance outcomes The ease with which students can navigate and interact with the learning environment has a direct impact on their satisfaction and perceived learning outcomes, underscoring the importance of facilitating conditions in online education. Reliable technical infrastructure is key to ensuring that students can focus on learning rather than dealing with platform-related

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frustrations which improve both satisfaction and performance (Butt et al., 2023). Therefore, a study has formulated the following research hypothesis below,

H11: Facilitating conditions significantly enhance students' perceived learning performance by improving satisfaction.

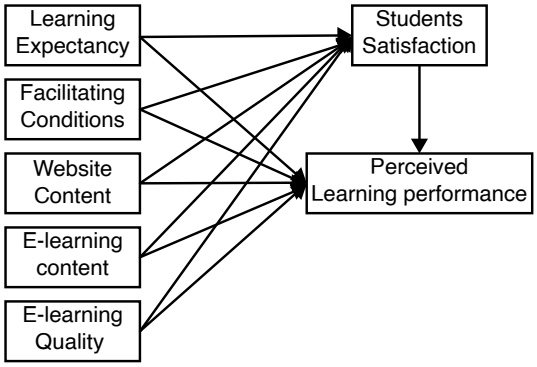
3. Research Methods

The research aimed to test the impact of Knowledge acquisition factors on EFL students' perceived learning performance in Saudi Arabia. The study also tested the mediating effect of student satisfaction. For this purpose, researchers adopt the quantitative research approach which consists of testing existing theories through hypothesis-driven data collection and analysis (Clark et al., 2021). Compared to qualitative research, which explores phenomena in depth but is often limited in scope, the quantitative approach offers objectivity, replicability, and scalability (Creswell & Creswell, 2017). Furthermore, this study employs a cross-sectional research design which is considered to be appropriate for survey-based studies, as it captures data at a single point in time. Compared to longitudinal designs, which are time-consuming and costly, cross-sectional designs offer efficiency in collecting data from a wide population and are effective for examining relationships between variables in a given moment (Rindfleisch et al., 2008). Therefore, researchers employed a cross-sectional research design.

3.1. Research Instrument

The survey instrument was adopted from the extant literature where it was already tested which showed the construct has more reliability. EFL students perceived learning performance is the dependent variable that was measured from 4 questions (Zou et al., 2022), learning expectancy was measured by 4 questions (Zou et al., 2022), and facilitating conditions measured from 4 questions (Zou et al., 2022). On the other hand, website content was also measured from 4 questions (Ali et al., 2024), learning quality was also measured from 4 questions (Ali et al., 2024), and E-learning content was also measured from 3 questions (Ali et al., 2024; Zou et al., 2022). Lastly, student satisfaction was also measured from 4 questions (Zou et al., 2022). The adopted questions were measured on a point Likert scale that was ranked 1 for strongly disagree, and 5 for strongly agree. The above variables are predicted in Figure 1 below,

Figure 1: Conceptual Framework.



3.2. Data collection Procedure

Data was collected using a self-administered survey instrument which was distributed among EFL students across Saudi Arabia's public sector universities. The questionnaires were distributed using a purposive sampling technique. The reason for choosing this sampling technique is that this approach ensured that only students actively engaged in e-learning platforms for English language courses participated, making the data highly relevant to the study (Nyimbili & Nyimbili, 2024). As the population was unknown, therefore a 500 students sample size was targeted, and 390 valid responses were received, representing a 78% response rate, which is considered sufficient for meaningful statistical analysis and provides a diverse set of student experiences (Edwards et al., 2024). Public sector universities were selected for their large EFL student populations, ensuring a representative sample. The distributed questionnaire was ranked on a point Likert Scale which ranked 1 for strongly disagree and 5 for strongly agree.

3.3. Data Analysis and Interpretations

3.3.1. Demographic Characteristics

This section shown the results of demographic characteristics of respondents. Among the demographics characteristics, majority of the respondents are belong to male which are (59%) and reaming (41%) belongs to females. Furthermore, with the largest proportion of students (56.4%) falling within the 18-22 age group which is showing that most participants are in the early stages of their academic careers. A significant majority (74.4%) were undergraduate students which is reflecting the high engagement of younger learners in e-learning platforms for English language courses. Most students (66.7%) used their university's Learning Management System (LMS) for e-learning, highlighting the central role of institutional platforms in delivering English language content. Additionally, 46.2% of respondents had 1-2 years of experience with e-learning, indicating that many students had moderate familiarity with online learning environments. All participants were drawn from public sector universities, ensuring the sample is representative of Saudi Arabia's public education system and relevant to the study's focus on EFL and e-learning in this context. The above results are predicted in Table.1 below,

Table 1: Demographic Characteristics.

Demographic Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	230	59.00%
	Female	160	41.00%
Age Group	18-22 years	220	56.40%
	23-26 years	130	33.30%
	27+ years	40	10.30%
Level of Study	Undergraduate	290	74.40%
	Graduate	100	25.60%
Type of E-Learning Platform	University LMS	260	66.70%
	Other Platforms	130	33.30%
Years of E-Learning Experience	Less than 1 year	140	35.90%
	1-2 years	180	46.20%
	More than 2 years	70	17.90%
University Type	Public	390	100%

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3.4. Inferential Statistics

3.4.1. Measurement Model

The researchers applied the Partial Least Square (PLS)-Structural Equation Modeling (SEM) to assess the proposed research model and to validate our hypothesis using Smart PLS 4. The measurement model was assessed from three key aspects namely internal consistency, convergent validity, and discriminant validity (Hair Jr, Howard, & Nitzl, 2020). In the assessment, internal consistency was examined by using Cronbach's alpha and composite reliability scores, which are commonly used indicators in PLS-SEM. As shown in Table 2 Cronbach's alpha values for the constructs are greater than 0.7, indicating strong internal consistency across all variables. Furthermore, composite reliability indices were also greater than 0.7 surpassing the minimum acceptable threshold of 0.7 (Hair Jr et al., 2017). These results signify that the items are reliable and consistently measure their intended constructs. On the other hand, for the convergent validity, we use the standardized outer loadings approach and average variance extracted (AVE). Convergent validity refers to the degree to which multiple items measuring the same concept agree with each other (Hair Jr et al., 2017). In this context, a common benchmark is that standardized outer loadings should exceed 0.5, and the AVE for each construct should be at least 0.5, meaning that more than half of the variance in the indicators is explained by the latent variable they are intended to measure (Hair Jr et al., 2020). In our analysis, both outer loadings and AVE values for all constructs exceeded these thresholds, confirming a high level of convergent validity across the model (Table 2). This suggests that the indicators used in the study reliably measure their respective constructs and capture a significant portion of the variance in the data.

Table 2: Reliability and Validity.

Variable	Alpha	Composite Reliability	Average Variance Extracted (AVE)	VIF
ELC	0.85	0.9	0.68	1.2
WC	0.83	0.88	0.65	1.15
LE	0.87	0.91	0.7	1.22
ECQ	0.86	0.89	0.69	1.18
FC	0.82	0.87	0.63	1.16
SS	0.89	0.92	0.74	1.19
PLP	0.88	0.91	0.72	

Note: ELC-E-learning content, WC-website content, LE-learning expectancy, ECQ-electronic content quality, FC-facilitating conditions, SS-students satisfaction, PLP-perceived learning performance.

The next measurement model criterion is the discriminant validity where we used two traditional approaches: examining the cross-loadings of each indicator and applying the Fornell-Larcker criterion, which compares the square root of AVE with the correlations between constructs (Hair Jr et al., 2020). The results showed that each indicator's outer loading on its associated construct was greater than its cross-loadings on other constructs, affirming that the constructs are distinct from one another. This ensures that our model meets the discriminant validity requirements, confirming the constructs' empirical uniqueness and strengthening the overall validity of the measurement model (Henseler, Ringle, & Sarstedt, 2015). All variance inflation

(VIF) factors values were less than 3.33 which shown there is no issue of discriminant validity. The discriminant validity results are predicted in Table.3.

Figure 2: Outer Loadings.

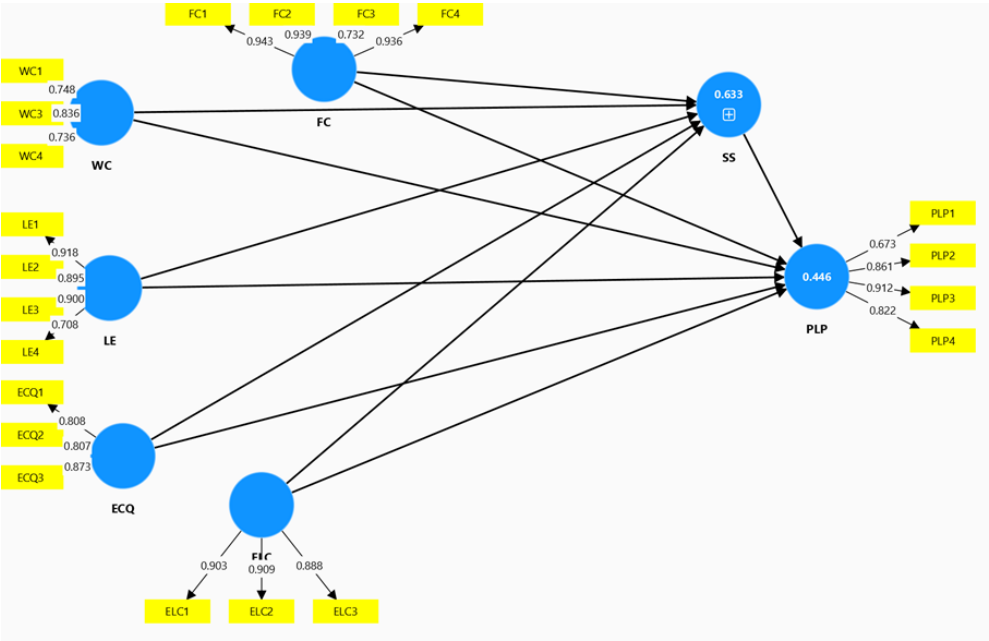

Table 3: Discriminant Validity.

	ELC	WC	LE	ECQ	FC	SS	PLP
ELC	**0.824**						
WC	0.612	**0.806**					
LE	0.583	0.550	**0.837**				
ECQ	0.621	0.572	0.610	**0.831**			
FC	0.592	0.542	0.561	0.550	**0.794**		
SS	0.651	0.612	0.646	0.632	0.623	**0.860**	
PLP	0.633	0.594	0.622	0.614	0.581	0.651	**0.849**

4. Hypothesis Results

After the assessment of the measurement model, the next step is to test the study hypothesis using a structural model. The PLS-SEM structural model results show that electronic learning content (ELC) has a positive and significant (β=0.350, t=5.380 impact on EFL student perceived learning performance (PLP) which supports proposed hypothesis 1. In another context, results showed that website content (WC) has a positive and significant impact on EFL student perceived learning performance (PLP) (β=0.270, t=4.909), which supports the proposed hypothesis 2. Also, learning expectancy (LE) established a positive and significant effect on PLP (β=0.420, t=7.000), supporting hypothesis 3. The findings also revealed that content quality (CQ) has a significant positive influence on PLP (β=0.390, t=5.571), confirming hypothesis 4. Facilitating conditions (FC)

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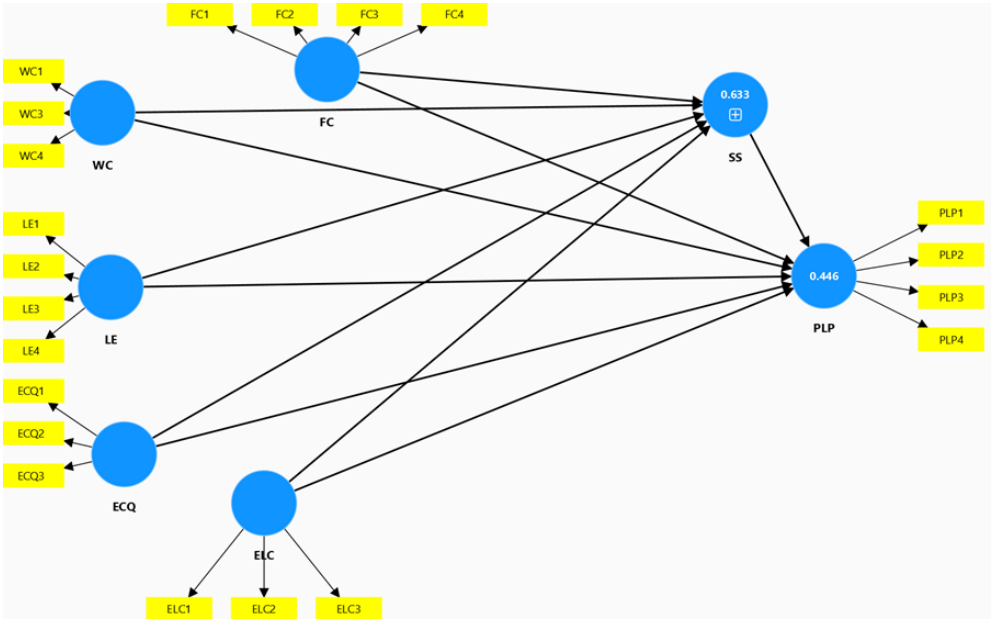
were found to positively impact PLP as well (β=0.310, t=5.082), supporting hypothesis 5. Furthermore, student satisfaction (SS) had a strong positive and significant effect on PLP (β=0.460, t=9.200), reinforcing hypothesis 6. Other factors like engagement with ELC (β=0.250, t=4.717), WC (β=0.220, t=3.860), and LE (β=0.320, t=5.161) also showed significant positive relationships with PLP with mediating effect SS, supporting hypotheses 7, 8, and 9, respectively. ECQ was found to positively affect PLP (β=0.290, t=5.000) with a mediating effect of SS, affirming hypothesis 10, while FC also demonstrated a positive impact (β=0.240, t=4.615) with a mediating effect of SS, supporting hypothesis 11. The above results are predicted in Table 4 below,

Table 4: Hypothesis Results.

Hypothesis	Coefficient	Standard Error	t-Statistic	Effect Size (f^2)	Result
ELC->PLP	0.350	0.065	5.38	0.15	Supported
WC->PLP	0.271	0.055	4.91	0.12	Supported
LE->PLP	0.420	0.061	6.88	0.18	Supported
ECQ->PLP	0.392	0.072	5.44	0.17	Supported
FC->PLP	0.313	0.061	5.13	0.14	Supported
SS->PLP	0.465	0.051	9.21	0.21	Supported
ELC->SS->PLP	0.250	0.053	4.72	0.13	Supported
WC->SS->PLP	0.220	0.057	3.86	0.09	Supported
LE->SS->PLP	0.320	0.062	5.16	0.13	Supported
ECQ->SS->PLP	0.291	0.058	5.00	0.11	Supported
FC->SS->PLP	0.242	0.052	4.62	0.14	Supported

Figure.3: R Square.



5. Discussion

In the context of English as a Foreign Language (EFL) education, knowledge acquisition

factors like e-learning content, website content, learning expectancy, e-learning content quality, facilitating conditions, and student satisfaction play a critical role in shaping perceived learning performance. Given Saudi Arabia's focus on improving English proficiency through digital education, these variables are highly relevant. Therefore, research aimed to test the impact of knowledge acquisition indicators on EFL students' perceived learning performance in Saudi Arabia. The results shown that e-learning content has positive and significant impact on EFL student's perceived learning performance. These findings show the significance of well-designed digital resources for Saudi Arabian EFL students because Interactive e-learning platforms with language-specific exercises and multimedia content can significantly enhance the learning experience. The findings are further in line with the study (Ali et al., 2024), which also showed that EFL students who engaged with e-learning platforms designed with relevant language activities demonstrated improved language acquisition and higher perceived learning performance. These findings indicate that e-learning content tailored for EFL learners is essential for enhancing students' language skills and perceived performance of Saudi Arabian university students. On the other hand, website content also positively and significantly impacts EFL students learning performance of Saudi Arabian EFL university students. These findings show that providing website content for learning English is more appropriate for Saudi Arabian students' perceived learning performance. The findings are supported by the study of Ali et al. (2024) and Sung, Chang and Liu (2016), who also argued that EFL learners benefited from websites that were designed to support language acquisition, with easy-to-use interfaces and access to various resources, including English reading materials, quizzes, and audio-visual aids which increase their perceived learning performance. These findings emphasize that Saudi Arabia universities should emphasize on high quality, user friendly website content to enhances perceived learning performance by making learning more accessible and engaging for EFL students.

Furthermore, the depicted results show that learning expectancy as a knowledge acquisition tool also positively and significantly influences to perceived learning performance of Saudi Arabian EFL students. These results show that in Saudi Arabia learning expectancy is reflecting students' confidence in achieving their academic goals, which is essential in language learning. The results is similar to the findings of Oyewole (2018) and Zou et al. (2022), who also argued that Saudi EFL students who have high expectations of success, reinforced by clear learning outcomes and structured language activities, performed better and reported higher levels of perceived learning. The e-learning quality and EFL students' learning performance indicated results also have a positive and significant association. This relationship shows that in Saudi Arabia EFL students require content that is not only accurate but also engaging and interactive which is supporting to increase their perceive learning performance. The results are consistent with the findings of Ali et al. (2024) and Rahmawati, Ahmadi and Daryono (2024), who also emphasized that students who used high-quality e-learning content, such as multimedia-rich lessons and interactive exercises, exhibited better engagement and improved language performance. These findings emphasized that Saudi Arabian universities should focus on content quality because superior e-learning content quality could contribute to better-perceived learning performance which could increase the competitive advantage of universities, especially for international students.

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Further, facilitating conditions also positively and significantly influence the EFL students' perceived learning performance in Saudi Arabia's public sector universities. These findings show that facilitating conditions such as access to reliable technology and support services, significantly influence perceived EFL learning performance. The results are further supported by the findings of Ali et al. (2024) and Cabellos, Siddiq and Scherer (2024) who also found that students who had access to better technological infrastructure and immediate technical support reported higher satisfaction and better language learning performance. Therefore, based on these findings it is argued that in Saudi Arabia facilitating conditions improve perceived EFL learning performance by ensuring that students can focus on their studies without being hindered by technical difficulties. In another context, student's satisfaction also has a positive and significant impact on the EFL student's perceived learning performance. This shows that in Saudi Arabia universities have a greater focus on student satisfaction which is significantly improving their perceived learning performance. The results align with the findings of Contrino et al. (2024) and Loder, Brandweiner and Maia de Oliveira Wood (2024), who also highlighted that when EFL students are satisfied with their learning experiences, they are more likely to engage with the material and perform better in their language studies. Satisfaction comes from factors such as ease of use, content relevance, and supportive learning environment and is this regard Saudi Arabian universities should focus on higher student satisfaction leads to enhanced perceived EFL learning performance that could increase competitive advantage in the international market.

E-learning content also positively and significantly increases the perceived learning performance with the mediating effect of EFL student satisfaction. This mediating effect indicates that while e-learning content is important, it is the experience of the learners with the content that drives performance improvements. Satisfaction increases students' willingness to consistently engage with the content which is leading to better language acquisition. The findings align with the finding of Ali et al. (2024) who also supported that students who found the e-learning content engaging and relevant were more satisfied and, consequently, reported higher perceived learning outcomes. The findings shown that higher motivation and performance in language-related tasks, which reinforces that satisfaction plays a critical role in converting the benefits of e-learning content into measurable learning performance. Further mediating effect results of student satisfaction also partially mediated between website content and perceived learning performance of Saudi Arabian EFL students. This indicated that the quality of website content enhances perceived EFL learning performance through its impact on student satisfaction. Well-designed websites that are easy to navigate and provide accessible language learning resources directly improve students' ability to engage with the material. However, the findings indicate that satisfaction with the website experience is what ultimately influences their perceived learning outcomes. The results are supported by the findings of Ali et al. (2024) who also found that students who were satisfied with the interface and structure of their learning platforms reported higher language proficiency which increases their learning performance.

Learning expectancy and perceived learning performance relationship are also partially mediated from the student satisfaction. This mediating role of satisfaction suggests that students who have clear goals and are satisfied with their progress are more likely to engage deeply with their studies, leading to better outcomes because learning expectancy plays a crucial role in motivating them to engage with their language

studies. The results are supported by the findings of Dweikat (2024) and Zou et al. (2022), who also found that Saudi EFL students with high learning expectancy, combined with satisfaction in their learning environment, demonstrated better engagement and higher perceived language performance. These results reinforced that Saudi Arabian universities should focus on learning expectancy to increase student satisfaction that could more significantly increase the student's learnings performance which strengthens students' commitment to their studies. In another context, E-learning content quality and perceived learning performance relationship are partially mediated by EFL student's satisfaction. This results indicated that in Saudi Arabia ELF students are satisfied from the content quality which is significantly improving their perceive learning performance. The findings are similar with the result of Ali et al. (2024) who also found that when students were satisfied with the quality of their e-learning content were more likely to perceive their learning experience positively and achieve better outcomes. Further indirect effect results shown that facilitating conditions and EFL students perceived learning performance relationships are partially mediated by student's satisfactions. The results are in the same context as Zou et al. (2022) where they also found that students who were satisfied with the reliability of their e-learning platforms and the support available showed higher engagement and better learning outcomes. Thus, based on the findings it is suggested that it is through student satisfaction with these facilitating conditions that their impact on learning performance is fully realized.

5.1. Implications

The study has both theoretical and practical which are contributed based on the extended model of the study in the context of Saudi Arabian EFL students. Theoretically, the study contributed significant findings on knowledge acquisition factors and perceived learning performance relationship in the context of Saudi Arabian EFL students which has limited attention to previous literature. Because previous studies were mainly focused on other countries while ignoring Saudi Arabia's EFL public sector students. In addition, the study extends the existing literature by highlighting the crucial mediating role of student satisfaction in the relationship between knowledge acquisition factors such as e-learning content, website content, learning expectancy, content quality, facilitating conditions, and perceived learning performance. This unique context emphasizes the importance of considering cultural and educational dynamics specific to Saudi Arabia. The findings reinforce the idea that satisfaction is not merely an outcome but an integral component that amplifies the effects of educational tools and resources on EFL students' learning performance. On the other hand, this study also opens a new line of inquiry for future researchers to explore how different types of knowledge acquisition factors such as culturally relevant materials or specific language exercises affect satisfaction and learning performance in a regional context. Therefore, the study contributed to providing a theoretical framework for future researchers in digital language learning, focusing on how satisfaction mediates the effectiveness of various educational interventions.

Along with theoretical implications, the study also has some practical implications that offer valuable insights for educators, policymakers, and e-learning platform developers in Saudi Arabia. The study findings could help educators focus on enhancing student satisfaction through well-structured e-learning content, intuitive website designs, and robust facilitating conditions that can significantly improve students' language learning

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performance. The research also implies that teachers should consider aligning their e-learning strategies with student expectations and goals, ensuring that content and learning environments are perceived as satisfying and supportive. The study could also help policymakers to force them should invest in developing and supporting digital learning platforms that cater to the needs of EFL students, ensuring high-quality content and infrastructure. Additionally, ongoing monitoring of student satisfaction could serve as a key metric to measure the effectiveness of e-learning systems, providing actionable insights for continuous improvement. Therefore, this study could help to increase their attention to knowledge acquisition factors to increase the perceived learning performance of EFL students.

6. Conclusions and Future Directions

The study aimed to test the impact of knowledge acquisition determinants on the perceived learning performance of Saudi Arabian EFL students with the mediating effect of satisfaction. Data were collected from 390 EFL students using a purposive sampling technique. The research design was cross-sectional and the research approach was quantitative. The Partial Least Square (PLS)-Structural Equation Modeling (SEM) technique results show that all knowledge acquisition determinants namely e-learning content, website content, learning expectancy, facilitating conditions, and learning content quality have a positive and significant impact on perceived learning performance. Further indirect effect results also show that satisfaction is partially mediated among all knowledge acquisition determinants and perceived learning performance. The study with these significant findings confirms the importance of knowledge acquisition determinants in enhancing perceived learning performance. Practically, the study also contributed to helping educators and institutions focus on improving to boost student satisfaction, which in turn enhances learning performance. Additionally, enhancing student satisfaction serves as a key mediator, suggesting that educational strategies should address both content and user experience to optimize performance.

The study with significant findings still have some limitations that could be addressed in future to increase the study's generalizability. Study limited to public sector universities, further research could be explored on both public and private universities to increase research generalizability. In other words, the study was limited to mediating effect with knowledge acquisition factors which limited the scope of this study. Further research could be explored with a moderating effect to increase predictive power of the model. Furthermore, the study is limited to a cross-sectional research design which results could be biased, therefore further research could be explored on longitudinal research to increase the scope of the study. Lastly, the study employed a quantitative research approach where data on a survey questionnaire, and further research could be conducted on a mixed method study to increase research generalizability.

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References

Abbad, M. M. M. (2021). Using the UTAUT model to understand students' usage of e-learning systems in developing countries. *Education and Information Technologies, 26*(6), 7205-7224. https://doi.org/10.1007/s10639-021-10573-5

Abd Aziz, N. N., Aziz, M. A., & Abd Rahman, N. A. S. (2023). The Mediating Effects of Student Satisfaction on Technostress–performance Expectancy Relationship in University Students. *Journal of Applied Research in Higher Education, 15*(1), 113-129. https://doi.org/10.1108/JARHE-03-2021-0117

Abd Aziz, N. N., Kader, M. A. R. A., & Ab Halim, R. (2021). The Impact of Technostress on Student Satisfaction and Performance Expectancy. *Asian Journal of University Education, 17*(4), 538-552. https://myjms.mohe.gov.my/index.php/AJUE/article/view/16466

Ain, N., Kaur, K., & Waheed, M. (2015). The influence of learning value on learning management system use: An extension of UTAUT2. *Information Development, 32*(5), 1306-1321. https://doi.org/10.1177/0266666915597546

Alenezi, S., Bahathig, A., Soliman, M., Alhassoun, H., Alkadi, N., Albarrak, M., et al. (2023). Performance and satisfaction during the E-learning transition in the COVID-19 pandemic among psychiatry course medical students. *Heliyon, 9*(6), e16844. https://doi.org/10.1016/j.heliyon.2023.e16844

Ali, N., Ahmad, N., Shakeel, A., & Ahmad, F. (2024). An application of the PLS-SEM model for evaluating e-learning user satisfaction during the COVID-19 pandemic. *SN Social Sciences, 4*(6), 106. https://doi.org/10.1007/s43545-024-00912-x

Alqurashi, E. (2019). Predicting Student Satisfaction and Perceived Learning Within Online Learning Environments. *Distance Education, 40*(1), 133-148. https://doi.org/10.1080/01587919.2018.1553562

Amiri, F., Quraishi, T., Hakimi, M., & Fazil, A. W. (2024). Assessing The Efficiency of Web-Hosted E-Learning Platforms in Afghanistan Academic Settings: An Exploration at Herat University. *EDUTREND: Journal of Emerging Issues and Trends in Education, 1*(1), 39-56. https://doi.org/10.59110/edutrend.309

Babooram, L., & Fowdur, T. P. (2024). Performance analysis of collaborative real-time video quality of service prediction with machine learning algorithms. *International Journal of Data Science and Analytics*, 1-33. https://doi.org/10.1007/s41060-024-00548-3

Bazargan, K. (2023). Relationship between Studentsâ Readiness for e-Learning, Learner Satisfaction and Student Performance: The case of a post-graduate education program. *Quarterly Journal of Research and Planning in Higher Education, 27*(3), 113-141. https://journal.irphe.ac.ir/article_703036.html

Bossman, A., & Agyei, S. K. (2022). Technology and instructor dimensions, e-learning satisfaction, and academic performance of distance students in Ghana. *Heliyon,*

8(4). https://doi.org/10.1016/j.heliyon.2022.e09200

Buraimoh, O. F., Boor, C. H. M., & Aladesusi, G. A. (2023). Examining Facilitating Condition and Social Influence as Determinants of Secondary School Teachers' Behavioural Intention to Use Mobile Technologies for Instruction. *Indonesian Journal of Educational Research and Technology, 3*(1), 25-34. https://ejournal.upi.edu/index.php/IJERT/article/view/44720

Butt, S., Mahmood, A., Saleem, S., Murtaza, S. A., Hassan, S., & Molnár, E. (2023). The Contribution of Learner Characteristics and Perceived Learning to Students' Satisfaction and Academic Performance during COVID-19. *Sustainability, 15*(2), 1348. https://doi.org/10.3390/su15021348

Cabellos, B., Siddiq, F., & Scherer, R. (2024). The moderating role of school facilitating conditions and attitudes towards ICT on teachers' ICT use and emphasis on developing students' digital skills. *Computers in Human Behavior, 150*, 107994. https://doi.org/10.1016/j.chb.2023.107994

Cai, Q., Lin, Y., & Yu, Z. (2023). Factors Influencing Learner Attitudes Towards ChatGPT-Assisted Language Learning in Higher Education. *International Journal of Human–Computer Interaction*, 1-15. https://doi.org/10.1080/10447318.2023.2261725

Camilleri, M. A., & Camilleri, A. C. (2023). Learning from anywhere, anytime: Utilitarian motivations and facilitating conditions for mobile learning. *Technology, Knowledge and Learning, 28*(4), 1687-1705. https://doi.org/10.1007/s10758-022-09608-8

Chen, C.-J., Tsai, H.-J., Lee, M.-Y., Chen, Y.-C., & Huang, S.-M. (2023). Effects of a Moodle-based E-learning environment on E-collaborative learning, perceived satisfaction, and study achievement among nursing students: A cross-sectional study. *Nurse Education Today, 130*, 105921. https://doi.org/10.1016/j.nedt.2023.105921

Chen, J.-L. (2011). The effects of education compatibility and technological expectancy on e-learning acceptance. *Computers & Education, 57*(2), 1501-1511. https://doi.org/10.1016/j.compedu.2011.02.009

Clark, T., Foster, L., Bryman, A., & Sloan, L. (2021). *Bryman's Social Research Methods*. Oxford University Press. https://global.oup.com/ukhe/product/brymans-social-research-methods-9780198796053

Contrino, M. F., Reyes-Millán, M., Vázquez-Villegas, P., & Membrillo-Hernández, J. (2024). Using an adaptive learning tool to improve student performance and satisfaction in online and face-to-face education for a more personalized approach. *Smart Learning Environments, 11*(1), 6. https://doi.org/10.1186/s40561-024-00292-y

Creswell, J. W., & Creswell, J. D. (2017). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Sage Publications. https://edge.sagepub.com/creswellrd5e

Dweikat, K. A. (2024). Students' Perceptions of Smartphone Use in Palestinian Higher

Education: The Case of Al-Quds Open University. In R. K. Hamdan & A. Buallay (Eds.), *Artificial Intelligence (AI) and Customer Social Responsibility (CSR)* (pp. 165-186). Springer. https://doi.org/10.1007/978-3-031-50939-1_14

Edwards, B. A., Kolodisner, J., Youngblood, J., Cooper, K. M., & Brownell, S. E. (2024). Students Respond Positively to an Instructor Collecting and Sharing Aggregated Class Demographic Data From a Survey in a High-enrollment Physiology Course. *Advances in Physiology Education.* https://doi.org/10.1152/advan.00126.2024

Eom, S. (2023). The effects of the use of mobile devices on the E-learning process and perceived learning outcomes in university online education. *E-Learning and Digital Media, 20*(1), 80-101. https://doi.org/10.1177/20427530221107775

Esmaeili Givi, M., Keshavarz, H., & Kargar Azad, Z. (2023). Quality assessment of E-learning website using asymmetric impact–performance analysis and Kano's customer satisfaction model: a case study based on WebQual 4.0. *Information Discovery and Delivery, 51*(1), 35-46. https://doi.org/10.1108/IDD-08-2021-0083

Febrian, W. D., & Sani, I. (2023). Analysis of Work Environment, Attitude, Coaching, and Servant Leadership on Job Satisfaction Mediated by Career Development (Literature Review Study). *Indonesian Journal of Business Analytics, 3*(4), 1089-1104. https://doi.org/10.55927/ijba.v3i4.5031

Fedorko, I., Bačik, R., & Gavurova, B. (2021). Effort Expectancy and Social Influence Factors as Main Determinants of Performance Expectancy Using Electronic Banking. *Banks and Bank Systems, 16*(2), 27-37. https://doi.org/10.21511/bbs.16(2).2021.03

Ferguson, J. M., & DeFelice, A. E. (2010). Length of Online Course and Student Satisfaction, Perceived Learning, and Academic Performance. *International Review of Research in Open and Distributed Learning, 11*(2), 73-84. https://doi.org/10.19173/irrodl.v11i2.772

Ginting, Y., Chandra, T., Miran, I., & Yusriadi, Y. (2023). Repurchase Intention of E-commerce Customers in Indonesia: an Overview of the Effect of E-service Quality, E-word of Mouth, Customer Trust, and Customer Satisfaction Mediation. *International Journal of Data and Network Science, 7*(1), 329-340. https://doi.org/10.5267/j.ijdns.2022.10.001

Gray, J. A., & DiLoreto, M. (2016). The Effects of Student Engagement, Student Satisfaction, and Perceived Learning in Online Learning Environments. *International Journal of Educational Leadership Preparation, 11*(1), 98-119. https://files.eric.ed.gov/fulltext/EJ1103654.pdf

Guo, J., Zhang, W., & Xia, T. (2023). Impact of Shopping Website Design on Customer Satisfaction and Loyalty: The Mediating Role of Usability and the Moderating Role of Trust. *Sustainability, 15*(8), 6347. https://doi.org/10.3390/su15086347

Haddad, F. S. (2018). Examining the effect of learning management system quality and perceived usefulness on student's satisfaction. *Journal of Theoretical and*

Applied Information Technology, 96(23), 8034-8044. https://www.jatit.org/volumes/Vol96No23/28Vol96No23.pdf

Hair Jr, J. F., Howard, M. C., & Nitzl, C. (2020). Assessing measurement model quality in PLS-SEM using confirmatory composite analysis. *Journal of Business Research, 109*, 101-110. https://doi.org/10.1016/j.jbusres.2019.11.069

Hair Jr, J. F., Matthews, L. M., Matthews, R. L., & Sarstedt, M. (2017). PLS-SEM or CB-SEM: updated guidelines on which method to use. *International Journal of Multivariate Data Analysis, 1*(2), 107-123. https://doi.org/10.1504/IJMDA.2017.087624

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A New Criterion for Assessing Discriminant Validity in Variance-Based Structural Equation Modeling. *Journal of the Academy of Marketing Science, 43*, 115-135. https://doi.org/10.1007/s11747-014-0403-8

Igor, R., Marija, R.-R., Tijana, S. T., Vilmoš, T., & Momčilo, B. (2023). The Effects and Effectiveness of An Adaptive E-Learning System on The Learning Process and Performance of Students. *International Journal of Cognitive Research in Science, Engineering and Education, 11*(1), 77-92. https://doi.org/10.23947/2334-8496-2023-11-1-77-92

Johnson, C. A. (2020). Black Male Student Success in Historically Black Colleges and Universities (HBCUs). https://digitalcommons.acu.edu/etd/283

Kala, D., & Chaubey, D. S. (2023). Examination of relationships among technology acceptance, student engagement, and perceived learning on tourism-related MOOCs. *Journal of Teaching in Travel & Tourism, 23*(1), 39-56. https://doi.org/10.1080/15313220.2022.2038342

Kılınç, A. Ç., Polatcan, M., Turan, S., & Özdemir, N. (2024). Principal Job Satisfaction, Distributed Leadership, Teacher-student Relationships, and Student Achievement in Turkey: A Multilevel Mediated-effect Model. *Irish Educational Studies, 43*(2), 281-299. https://doi.org/10.1080/03323315.2022.2061567

Koca, F., Kılıç, S., & Dadandı, İ. (2024). Attitudes Towards Distance Education and Academic Life Satisfaction: The Mediation Role of Academic Self-Efficacy and Moderator Role of Gender. *Technology, Knowledge and Learning, 29*(2), 713-734. https://doi.org/10.1007/s10758-023-09645-x

Kuadey, N. A., Ankora, C., Tahiru, F., Bensah, L., Agbesi, C. C. M., & Bolatimi, S. O. (2024). Using Machine Learning Algorithms to Examine the Impact of Technostress Creators on Student Learning Burnout and Perceived Academic Performance. *International Journal of Information Technology, 16*(4), 2467-2482. https://doi.org/10.1007/s41870-023-01655-3

Li, M., & Liu, L. (2023). Students' perceptions of augmented reality integrated into a mobile learning environment. *Library Hi Tech, 41*(5), 1498-1523. https://doi.org/10.1108/LHT-10-2021-0345

Liaw, S.-S., & Huang, H.-M. (2013). Perceived satisfaction, perceived usefulness and

interactive learning environments as predictors to self-regulation in e-learning environments. *Computers & Education, 60*(1), 14-24. https://doi.org/10.1016/j.compedu.2012.07.015

Lin, G.-Y., Wang, Y.-S., & Lee, Y. N. (2023). Investigating Factors Affecting Learning Satisfaction and Perceived Learning in Flipped Classrooms: the Mediating Effect of Interaction. *Interactive Learning Environments, 31*(9), 5759-5780. https://doi.org/10.1080/10494820.2021.2018616

Loder, A. K. F., Brandweiner, A. C., & Maia de Oliveira Wood, G. (2024). Parallel Enrollments: Associations Between College Student Satisfaction and Performance. *Journal of College Student Retention: Research, Theory & Practice*, 15210251241232683. https://doi.org/10.1177/15210251241232683

Mamakou, X. J., Zaharias, P., & Milesi, M. (2024). Measuring customer satisfaction in electronic commerce: The impact of e-service quality and user experience. *International Journal of Quality & Reliability Management, 41*(3), 915-943. https://doi.org/10.1108/IJQRM-07-2021-0215

Martínez-Jiménez, R., & Ruiz-Jiménez, M. C. (2020). Improving students' satisfaction and learning performance using flipped classroom. *The International Journal of Management Education, 18*(3), 100422. https://doi.org/10.1016/j.ijme.2020.100422

Martínez-Falcó, J., Sánchez-García, E., Marco-Lajara, B., & Millan-Tudela, L. A. (2024). Do organizational commitment and consumer satisfaction mediate the relationship corporate social responsibility-sustainable performance? Assessing happiness management in Spanish wineries. *Management Decision, 62*(2), 643-664. https://doi.org/10.1108/MD-02-2023-0217

Nikou, S., & Maslov, I. (2023). Finnish university students' satisfaction with e-learning outcomes during the COVID-19 pandemic. *International Journal of Educational Management, 37*(1), 1-21. https://doi.org/10.1108/IJEM-04-2022-0166

Nyimbili, F., & Nyimbili, L. (2024). Types of Purposive Sampling Techniques with Their Examples and Application in Qualitative Research Studies. *British Journal of Multidisciplinary and Advanced Studies, 5*(1), 90-99. https://doi.org/10.37745/bjmas.2022.0419

Oraif, I. (2024). Education for Sustainable Development: The Use of a Competence-Based Approach in an English as a Foreign Language (EFL) Writing Course at a University in Saudi Arabia. *Sustainability, 16*(14), 6069. https://doi.org/10.3390/su16146069

Osman, A. R., Joarder, M. H. R., & Hoque, M. K. (2024). Student Engagement, Brand Image and Loyalty Relationships: The Mediating Role of Student Satisfaction. *Journal of Education and e-Learning Research, 11*(2), 311-321. https://doi.org/10.20448/jeelr.v11i2.5553

Oyewole, O. (2018). Performance expectancy, effort expectancy, and facilitating conditions as factors influencing smart phones use for mobile learning by postgraduate

students of the University of Ibadan, Nigeria. *Interdisciplinary Journal of e-Skills and Lifelong Learning, 14*, 095-115. https://doi.org/10.28945/4085

Qiao, S., Yeung, S. S. s., Zainuddin, Z., Ng, D. T. K., & Chu, S. K. W. (2023). Examining the effects of mixed and non-digital gamification on students' learning performance, cognitive engagement and course satisfaction. *British Journal of Educational Technology, 54*(1), 394-413. https://doi.org/10.1111/bjet.13249

Rahmawati, M. N., Ahmadi, A., & Daryono, R. W. (2024). Exploring The Influence of Implementing an Independent Curriculum and Learning Quality on Learning Effectiveness: Does the Mediation of School Infrastructure Matter? *Jurnal Tarbiyah, 31*(1), 174-185. https://doi.org/10.30829/tar.v31i1.3466

Rindfleisch, A., Malter, A. J., Ganesan, S., & Moorman, C. (2008). Cross-Sectional Versus Longitudinal Survey Research: Concepts, Findings, and Guidelines. *Journal of Marketing Research, 45*(3), 261-279. https://doi.org/10.1509/jmkr.45.3.261

Sewandono, R. E., Thoyib, A., Hadiwidjojo, D., & Rofiq, A. (2023). Performance expectancy of E-learning on higher institutions of education under uncertain conditions: Indonesia context. *Education and Information Technologies, 28*(4), 4041-4068. https://doi.org/10.1007/s10639-022-11074-9

Soesmanto, T., Vu, X.-B. B., & Kariyawasam, K. (2023). Evaluation of the Mixed-mode Teaching Design Upon Students' Learning Satisfaction and Academic Performance in an Introductory Economics Course. *Studies in Educational Evaluation, 77*, 101253. https://doi.org/10.1016/j.stueduc.2023.101253

Sun, W., Hong, J.-C., Dong, Y., Huang, Y., & Fu, Q. (2023). Self-directed Learning Predicts Online Learning Engagement in Higher Education Mediated by Perceived Value of Knowing Learning Goals. *The Asia-Pacific Education Researcher, 32*(3), 307-316. https://doi.org/10.1007/s40299-022-00653-6

Sung, Y.-T., Chang, K.-E., & Liu, T.-C. (2016). The Effects of Integrating Mobile Devices With Teaching and Learning on Students' Learning Performance: A Meta-analysis and Research Synthesis. *Computers & Education, 94*, 252-275. https://doi.org/10.1016/j.compedu.2015.11.008

Sureephong, P., Chernbumroong, S., Intawong, K., Jansukpum, K., Wongwan, N., & Puritat, K. (2023). The effect of virtual reality on knowledge acquisition and situational interest regarding library orientation in the time of Covid-19. *The Journal of Academic Librarianship, 49*(6), 102789. https://doi.org/10.1016/j.acalib.2023.102789

Tannady, H., & Dewi, C. S. (2024). Exploring Role of Technology Performance Expectancy, Application Effort Expectancy, Perceived Risk and Perceived Cost On Digital Behavioral Intention of GoFood Users. *Jurnal Informasi Dan Teknologi, 6*(1), 80-85. https://doi.org/10.60083/jidt.v6i1.477

Tawafak, R. M., Alyoussef, I. Y., & Al-Rahmi, W. M. (2023). Essential Factors to Improve

Student Performance Using an E-Learning Model: Review Study. *International Journal of Interactive Mobile Technologies, 17*(3), 160-176. https://doi.org/10.3991/ijim.v17i03.35727

Venkatakrishnan, J., Alagiriswamy, R., & Parayitam, S. (2023). Web design and trust as moderators in the relationship between e-service quality, customer satisfaction and customer loyalty. *The TQM Journal, 35*(8), 2455-2484. https://doi.org/10.1108/TQM-10-2022-0298

Wei, H.-C., & Chou, C. (2020). Online learning performance and satisfaction: do perceptions and readiness matter? *Distance Education, 41*(1), 48-69. https://doi.org/10.1080/01587919.2020.1724768

Wei, X., Saab, N., & Admiraal, W. (2023). Do learners share the same perceived learning outcomes in MOOCs? Identifying the role of motivation, perceived learning support, learning engagement, and self-regulated learning strategies. *The Internet and Higher Education, 56*, 100880. https://doi.org/10.1016/j.iheduc.2022.100880

Yang, H., Cai, J., Yang, H. H., & Wang, X. (2023). Examining Key Factors of Beginner's Continuance Intention in Blended Learning in Higher Education. *Journal of Computing in Higher Education, 35*(1), 126-143. https://doi.org/10.1007/s12528-022-09322-5

Yas, H., Dafri, W., Sarhan, M. I., Albayati, Y., & Shwedeh, F. (2024). Universities Faculty's Perception of E-learning Tools: Filling the Gaps for Enhanced Effectiveness. In A. Al-Marzouqi, S. A. Salloum, M. Al-Saidat, A. Aburayya, & B. Gupta (Eds.), *Artificial Intelligence in Education: The Power and Dangers of ChatGPT in the Classroom* (pp. 573-588). Springer. https://doi.org/10.1007/978-3-031-52280-2_36

Yousaf, H. Q., Rehman, S., Ahmed, M., & Munawar, S. (2023). Investigating Students' Satisfaction in Online Learning: the Role of Students' Interaction and Engagement in Universities. *Interactive Learning Environments, 31*(10), 7104-7121. https://doi.org/10.1080/10494820.2022.2061009

Zheng, H., Qian, Y., Wang, Z., & Wu, Y. (2023). Research on the Influence of E-Learning Quality on the Intention to Continue E-Learning: Evidence from SEM and fsQCA. *Sustainability, 15*(6), 5557. https://doi.org/10.3390/su15065557

Zou, C., Li, P., & Jin, L. (2022). Integrating smartphones in EFL classrooms: Students' satisfaction and perceived learning performance: An evidence on saudi arabia. *Education and Information Technologies, 27*(9), 12667-12688. https://doi.org/10.1007/s10639-022-11103-7

Appendix: Survey Instrument

Learning Expectancy	1.	Using E-learning platforms in English class would improve my English learning performance.
	2.	Using E-learning platforms in English class would enhance my effectiveness in English learning.
	3.	Using E-learning platforms in English class would make it easier to learn English.
	4.	I would find using E-learning platforms in English class useful in my English learning.
Facilitating Conditions	1.	I have a E-learning platforms adequate to use in English class.
	2.	Guidance is available to me in using E-learning platforms in English class.
	3.	A specific person or group is available for assistance with difficulties When using E-learning platforms in English class.
	4.	Internet speed is appropriate for using E-learning platforms in English Class.
Satisfaction	1.	I am satisfied with the integration of E-learning platforms in English class.
	2.	Using E-learning platforms in English class meets my learning expectancy.
	3.	I love the experience of using E-learning platforms in English class.
	4.	I am satisfied with the skills acquired during English class thanks to using E-learning platforms.
Perceived Learning Performance	1.	Using E-learning platforms in English class had a positive impact on my English learning performance in general.
	2.	Using E-learning platforms in English class was an important and valuable aid to me in improving my learning processes.
	3.	I gained better understanding of some language points thanks to Using E-learning platforms in class.
	4.	Using E-learning platforms in English class helped me perform Academically.
E-learning Content	1.	We have access to enough learning material through the e-learning system.
	2.	The e-learning platform frequently offers up-to-date material.
	3.	The learning materials we require are provided via the e-learning system.
Website Content	1.	The website makes effective use of audio and video components.
	2.	The website effectively makes use of animation, graphics, and multimedia capabilities.
	3.	The course website includes pertinent course details and learning resources.
	4.	The course website is simple to use and navigate, and it offers reliable information
Learning Quality	1.	Learning is often of high quality (poor-excellent).
	2.	The educational website appears to be current.
	3.	The educational website functions properly.
	4.	There are clear instructions on the instructional website.