FACTORS AFFECTING THE E-LEARNING EXPERIENCE OF THE COLLEGE STUDENTS IN A GENERAL EDUCATION COURSE

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ABSTRACT

E-learning has emerged as the primary response for the continuity of education during the COVID-19 pandemic. This mode of learning relies on digital devices and emphasizes accessibility to the internet, the primary conduit for information. This research explores the impact of college students' gender, year level, scholarship status, monthly family income, and monthly internet expenditure on their e-learning experience in a general education course. Employing a descriptive methodology and quantitative research design, data was collected using a survey questionnaire based on the Demand-Driven Learning Model (DDLM) and a 4-point Likert scale, validated with Cronbach's Alpha. The sample size of 251 respondents was determined using Cochran's formula and selected through stratified random sampling. Results revealed significant differences in students' e-learning experiences based on gender (content, delivery, service, and outcome), year level (content, delivery, and outcome), scholarship status (service), and monthly internet expenditure (service). No significant difference was found in terms of monthly family income. The study recommends applying the collected data to enhance factors influencing the quality of students' e-learning experiences, encompassing content, delivery, service, and outcome. These findings contribute additional evidence, information, arguments, and perspectives. The paper's structure, design, and methodology can serve as a model for other e-learning courses offered at the university.

Keywords: education; pandemic; Demand-Driven Learning Model (DDLM); Likert scale; Philippines

INTRODUCTION

Evolutions in delivering quality education have always been a recurring theme in the academe. It is both a challenge and an opportunity for institutions to keep up with these evolutions. One of the recent innovations is the emergence of e-learning. E-learning is an amalgamated term derived from the idea of electronic learning, which entails the usage of electronic modalities to acquire and supply knowledge (Alkharang & Ghinea, 2013). These electronic modalities include using digital devices (e.g., computers, mobile phones, televisions) and maximizing teachers' and learners' accessibility to the internet, the primary host for information flow. E-learning has become a proactive measure in undertaking the challenges in education from the emergence of constant revolutionary changes in information and communication technology (ICT) and the byproducts of self-isolating global crises like the COVID-19 pandemic.

Compared to traditional learning, e-learning allows lessons to be taken anytime and anywhere, with teachers shifting from gatekeepers of knowledge to facilitators of the learning process (Oye et al., 2010). E-learning also fosters flexibility and learning independence among learners. The findings in the study conducted by Elfaki et al. (2019) say that e-learning produces significant improvements in the learners' academic performance and learning process.

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The study focuses on three learner demands in the Demand-Driven Learning Model (DDLM) — content, delivery, and service — and considers them as dependent variables to gauge the respondents' level of e-learning experience. As outlined by MacDonald et al. (2001), the model comprises five core components: the quality standards of structure, content, delivery, service, and learner outcomes. The inclusion of the quality standard is essential, as evaluating the course's content, delivery, and service inherently assesses the standard of the structure.

Comprehensive content, which is the first component, includes all the information learners are required to know in a manner that appropriately matches their level of understanding. The content should also have authenticity and be validated through research, according to MacDonald et al. (2001). In terms of authenticity, it should contain relevance to the learning environment, and that input should come directly from field professionals. Lastly, researched content should be validated by the academic institution to reinforce credibility.

The next component, delivery, emphasizes the interactivity of the web-based tools used in e-learning. MacDonald et al. (2001) state that the programs' user interface should be designed to allow efficient navigation. Delivery tools must ensure that the information flow of the learner to their fellow learners, instructor, and content remains free from obstructions. Incorporating these tools should also consider bandwidth limitations and time zone-related problems.

Service is defined by MacDonald et al. (2001) as the provision of the necessary learning resources and administrative and technical support. Resources should allow learners to gain multifaceted perspectives on concepts, supporting self-awareness in their learning process. The administrative and technical staff should possess qualifications that fit the learners' best interests. They should always be responsive to their needs and inquiries. Facilities to assist learning should always be accessible.

According to MacDonald et al. (2001), learner outcomes are oriented toward reducing costs and burdens regarding employability. Learners would no longer worry about financial risks, joblessness, moving away from their families to further their education, and the travel expenses that come with it should WBL programs be of quality standard. Employers of learners would gain an efficient set of employees whose new and relevant skills and knowledge are e-learning products. Regarding this study, the definition of outcomes would be modified according to the respondents. It would instead evaluate the amount and quality of knowledge the respondents acquired from the course's content, delivery, and service in the eLearn set-up.

Xavier University - Ateneo de Cagayan has also adopted the e-learning modality during the pandemic. According to the OVPHED Memorandum 1920-48, the university has utilized its already existing XU eLearn with the addition of the HUB for Transformative Teaching and Learning to assist both faculty and students in navigating the fundamentals of the new learning modality (Dalagan, 2020). Quarterly course evaluations are conducted to assess the students' e-learning experience. However, these evaluations need to explore how socio-economic factors affect the e-learning experience of the students. Thus, to address the gaps in e-learning and its relationship to factors less studied, like the financial capacity of the students to further in e-learning, this research study serves as a reference.

This research determines the factors influencing students' e-learning experiences in a general education course. To assess the efficiency of web-based education, the study examines the correlation between age, year level, and socio-economic factors—specifically, scholarship status, monthly family income, and monthly internet expenditure—with the respondents' e-learning experiences. More so, it aims to make a significant contribution to the understanding of e-learning and its associated components.

OBJECTIVES OF THE STUDY

This study aims to identify the factors that influence the e-learning experience in SOCECON 10 - The Contemporary World among students at Xavier University - Ateneo de Cagayan during the Second semester of the academic year 2021-

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2022. The specific goals of the study are as follows:

1. To determine the impact of year level on the e-learning experience of students.
2. To assess the influence of scholarship status on students' e-learning experience, examining disparities in e-learning outcomes between scholarship recipients and non-recipients.
3. To find out if there is a significant difference in the e-learning experience of students when grouped according to gender.
4. To explore the correlation between monthly family income and monthly internet expenditure in relation to the e-learning experience of students, investigating whether students from varying economic backgrounds face different challenges or advantages in terms of internet accessibility, online engagement, and overall academic performance.

METHODOLOGY

During the Second semester of the school year 2021-2022, a study was conducted to evaluate the factors influencing the e-learning experience in SOCECON 10 - The Contemporary World among selected Xavier University - Ateneo de Cagayan students. The study used a descriptive methodology and a quantitative research design to gather information. Descriptive research focuses on the population or problem being explored and summarizes the study's results. Meanwhile, quantitative research collects and presents numerical data with a series of analyses and interpretations.

The study collected the participants' characteristics, including their gender, year level, scholarship status, monthly family income, and monthly internet expenditure. It then determined which characteristics of the participants affected their e-learning experience in SOCECON 10 - The Contemporary World regarding content, delivery, service, and outcome. To quantify the e-learning experience of the respondents, survey questionnaires and a 4-point Likert scale were utilized, which are the most convenient tools to be used.

Stratified random sampling was the sampling technique being applied in the research study. We decided to use the stratified random sampling process as it covers critical population characteristics in the sample respondents. This method provides samples from stratified groups that are proportional to the population, and the strata are made while considering the variables involved to avoid bias in the results.

Respondent has met the following inclusion criteria for him or her to be subjected to the study: A Xavier University - Ateneo de Cagayan 1st year, 2nd year, or 3rd-year student who took the course SOCECON 10 - The Contemporary World during the 2nd semester of the school year 2021-2022. The study utilizes their e-learning experience according to their shared demographic and socio-economic characteristics. Stratification is necessary to gain greater precision on these characteristics. As a result, the collected data are identified using different subgroups or strata. These strata are compared in order to evaluate more quickly the entire population.

On the other hand, participants are excluded from the study if any of the following is present: participants who have or had physical impairments that restrict them from answering the survey questionnaire, participants who failed to sign the provided informed consent since the participation of the study is purely voluntary, as well as the participants who failed to answer the questionnaire within the specific number of days provided. In addition, the students who were not of legal age (below the age of 18) and those with mental health conditions were also not allowed to participate in the study since they belonged to the vulnerable group.

The total number of first- to 3rd-year students who took SOCECON 10 in the last 2nd semester of the school year 2021-2022 is 716. The ideal sample size was calculated using the general Cochran's formula, and the actual sample size n was calculated using the modified Cochran's formula. The total population is divided into three strata, namely, the 1st year level, 2nd year level, and the 3rd year level. Using Cochran's formula,

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we came up with 251 as a sample size concerning the 5% margin of error. The 251 samples were distributed proportionally to the three-year levels using the ratio proportion and percentile distribution concerning gender. The respondents per stratum were as follows: 78 with 33 males and 45 females for the 1st-year level, 163 with 42 males and 121 females for the 2nd-year level, and 10 with three males and seven females for the 3rd-year level students.

RESULTS AND DISCUSSIONS

In determining the factors affecting the e-learning experience of the students in a general education course, the study was patterned to an existing pedagogical framework, the Demand-Driven Learning Model (DDLM). The framework's components intend to evaluate learners' demands in a rapidly changing technological environment. The DDLM is a theoretical conceptualization establishing a premium standard for web-based learning (WBL) programs (MacDonald et al., 2001). The framework has emerged as a response to the need for a new WBL model that would address certain issues (i.e., subpar technical skills, unpreparedness in program planning, lower instruction quality) that teachers and learners face in the fast-paced evolution in the technological landscape. The development of the model was preceded by a set of characteristics, including defensibility, flexibility, interactivity, convenience, and collaboration. Thus, having met these standards, the DDLM was formed, providing a superior structure to meet learners' demands and recognize instructors' needs. The independent variables of this study are as follows: gender, year level, and socio-economic factors: scholarship status, monthly family income, and monthly internet expenditure.

The tables below used two types of statistical tests: the t-test and the F-test. The former is generally used to determine whether a significant difference exists between the means of the two groups involved. The t-test is used in Table 1 and Table 3 because their independent variables consist of two groups, male and female for the gender, and scholar and non-scholar for the scholarship status. On the other hand, F-test or ANOVA can be used to compare and analyze the means of more than two groups, which is why it is the appropriate test for the independent variables such as year level, monthly family income, and monthly internet expenditure that have more than two groups or categories.

1. The Impact of Gender on E-learning Experience

Gender differences have always been considered factors when it comes to learning processes. González-Gómez et al. (2012) state that male students perform better in solving spatial problems, while female students have better verbal skills than males. These variations suggest that instructors should consider gender as a factor in preparing their lessons and courses. In a different study by Ong and Lai (2006), the confidence, motivation, and capacity to use the computer are more evident in men using e-learning. Men's decisions in terms of usage are inclined to their assessment of the value of e-learning, whereas women are more influenced by the self-efficacy of the devices and their simplicity in terms of usage. We examine if gender plays a significant role in the perceived quality of e-learning.

Table 1
T-test results of the respondent's e-learning experience in content, delivery, service, and outcome when grouped according to gender.

Profile	Qualities of E-learning Experiences (Variables)							
	Content		Delivery		Service		Outcome	
Gender	Mean	p-value	Mean	p-value	Mean	p-value	Mean	p-value
Male	3.49	0.010 **	3.43	0.002 **	3.40	0.001 **	3.41	<0.001 **
Female	3.36		3.24		3.19		3.13	

*Legend: ns = Not Significant   * = Significant   ** = Highly Significant*

Table 1 shows the t-test results of the respondent's e-learning experience regarding content, delivery, service, and outcome when grouped according to gender. In terms of content, the mean average for males is 3.49 and 3.36 for females, which reveals that males have a higher rating than females in terms of the quality of the content in their e-learning experience. Regarding delivery, results show that the males have a higher rating of mean 3.43 compared to females with only

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3.24. Moreover, in terms of service, males also have a higher mean rating of 3.40 than females, with only 3.19. Lastly, regarding the outcome, males still have a higher rating, with a mean of 3.41, than females with only 3.13. Overall, males had a better e-learning experience.

A t-test produced p-values of 0.010 for content, 0.002 for delivery, 0.001 for service, and <0.001 for outcome. The variable is considered insignificant if the p-value is greater than 0.05, significant if the p-value is less than 0.05, and highly significant if the p-value is less than 0.01. The results show a highly significant difference in the quality of the e-learning experience of the respondents in terms of content, delivery, service, and outcome when grouped according to gender. Therefore, the respondent's e-learning experience in terms of the content, delivery, service, and outcome is highly, significantly affected by gender.

The results above contradicted the study by Alghamdi et al. (2020), wherein it was found that females have stricter self-regulation than males, leading them to have significantly better learning outcomes than males. However, Ong, C. and Lai, J. (2006) said that men have higher ratings than women regarding being confident and self-sufficient in using and studying e-learning. According to Ong and Lai (2006), men's decisions in terms of usage are more meaningfully influenced by their assessment of the value of e-learning, while the simplicity of use more significantly influences women. This finding means that women prefer to avoid the complexity of online learning.

2. The Impact of Year Level on E-learning Experience

The experience of learners per year level may vary, and we include this variable to identify any differences. The expectancy-value theory has been discussed in the study of Smith and Wertlieb (2005), wherein those students who give more importance to their college degree and set high anticipation and motivation for good grades have higher academic accomplishments than others. Upon reaching 2nd year, one challenge identified is the lessened enthusiasm for learning. In a study by Allen et al. (2008), academic self-discipline is a

factor that positively affects 3rd-year students' enrollment status and academic performance.

Table 2
F-test results of the respondent's e-learning experience in content, delivery, service, and outcome when grouped according to year level

Profile	Qualities of E-learning Experiences (Variables)							
	Content		Delivery		Service		Outcome	
Year Level	Mean	p-value	Mean	p-value	Mean	p-value	Mean	p-value
1st Year	3.57	<0.001 **	3.42	0.017 **	3.33	0.149 ns	3.37	0.004 **
2nd Year	3.33		3.24		3.23		3.15	
3rd Year	3.20		3.34		3.10		3.14	

*Legend: ns = Not Significant   * = Significant   ** = Highly Significant*

Table 2 presents the F-test results of the respondent's e-learning experience when grouped according to year level. In terms of content, the 1st year has the highest rating, with a mean of 3.57, followed by the 2nd year, with a mean of 3.33. The third year has the lowest rating, with a mean of 3.20. The same ranking of ratings can be observed for service and outcome. Regarding delivery, the 3rd year has a higher mean than the 2nd year. Overall, the 1st year has the highest ratings in the quality of their e-learning experience. The result implies that the 1st year students have the most positive rating towards the quality of course content, delivery, service, and outcome. The results also indicate that the 1st year students still have a low level of comparison and expectation towards the subjects compared to the other students from the higher level, who have taken more subjects than the 1st year students.

An F-test produced p-values of <0.001 for content, 0.017 for delivery, 0.149 for service, and 0.004 for outcome. The results show a highly significant difference in the quality of the e-learning experience of the students in terms of content, delivery, and outcome when grouped according to year level. On the other hand, the results also show no significant difference in the quality of e-learning experience in terms of service when grouped according to year level.

There is a significant difference between the year level and the quality of the e-learning experience among students in terms of content, delivery, and outcome. According to Merhi et al.

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(2018), the recent transformation and advancement of higher education increases new university achievement trials. The 1st year level in higher education has been acknowledged in the study as being a crucial year for the student's future accomplishments, recognition, and perseverance at the academy. In addition, the 1st year students not only grow in terms of their academic requirements that will reflect their future career in that particular program, but they also develop realizations of their personal development.

3. The Impact of Scholarship Status on E-Learning Experience

Scholarship status plays a significant role in an individual's educational attainment. Education subsidies from the government and private institutions are common to address inequality that students, especially from the lower-income bracket, face. The bases for subsidization are equality in terms of access to education and other opportunities, growth externalities where economic growth is dependent on the average educational level of the labor force, and investment in human capital (Caucutt & Kumar, 2003).

Table 3
T-test results of the respondent's e-learning experience in content, delivery, service, and outcome when grouped according to scholarship status

Profile	Qualities of E-learning Experiences (Variables)							
	Content		Delivery		Service		Outcome	
Scholarship Status	Mean	p-value	Mean	p-value	Mean	p-value	Mean	p-value
Scholar	3.43	0.566 ns	3.37	0.200 ns	3.39	0.018 *	3.22	0.978 ns
Non-scholar	3.39		3.28		3.22		3.22	

*Legend: ns = Not Significant   * = Significant*
*** = Highly Significant*

Table 3 exhibits the t-test results of the respondents' e-learning experience grouped by scholarship status. In terms of content, scholars exhibit a higher rating with a mean average of 3.43, while non-scholars have a slightly lower mean of 3.39. Similarly, for delivery, scholars score higher, with a mean of 3.37, compared to non-scholars, with 3.28. In terms of service, scholars also have a higher mean of 3.39, surpassing non-scholars with 3.22. Notably, scholars and non-scholars share the same mean average of 3.22 regarding the outcome. Overall, scholars demonstrate higher ratings in the quality of their e-learning experience across content, delivery, and service than non-scholars.

A t-test provided p-values of 0.566 for content, 0.200 for delivery, 0.018 for service, and 0.978 for outcome. The results show no significant difference in the quality of e-learning experience regarding content, delivery, and outcome when grouped according to their scholarship status. On the other hand, with a p-value of 0.018, the result implies that the respondent's e-learning experience is significantly affected by the service about their scholarship status. Ganem and Manasse (2011) emphasized the importance of scholarships on student performance. They found that it helped students afford a degree and influenced their persistence, progression, and graduation. The findings of this study suggest that the scholarship status only affects the quality of the e-learning experience in terms of service. The scholarship status influences the experience of e-learning services, which offer online libraries and hyperlinks to related resources. Hence, the scholars have a better e-learning experience in providing the necessary learning resources and administrative and technical support for the course.

4. The Impact of Monthly Family Income on E-Learning Experience

Monthly family income, much like scholarship status, is a determinant of one's access to education. Income may have a causal effect, especially if one is enrolled in a private institution. Chevalier et al. (2013) say that current income remains significant even when permanent income is included, implying that some children could be financially obstructed in their decision to attend tertiary education. In the context of e-learning, Alipio (2020) says that most Filipino lower-middle-income families enroll their children in private institutions, placing importance on education despite income constraints.

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Table 4

F-test results of the respondent's e-learning experience in content, delivery, service, and outcome when grouped according to monthly family income

Profile	Qualities of E-learning Experiences (Variables)							
	Content		Delivery		Service		Outcome	
Monthly Family Income	Mean	p-value	Mean	p-value	Mean	p-value	Mean	p-value
P5,001 to P20,000	3.58	0.325 ns	3.57	0.314 ns	3.40	0.476 ns	3.37	0.391 ns
P20,001 to P50,000	3.35		3.29		3.27		3.16	
P50,001 to P100,000	3.43		3.28		3.22		3.24	
P100,001 and above	3.40		3.39		3.35		3.31	

*Legend: ns = Not Significant   * = Significant*
*** = Highly Significant*

Table 4 exhibits the F-test results of the respondents' e-learning experience when grouped according to monthly family income. The table shows that the students who belong to the P5,001 to P20,000 income group have the highest ratings in the quality of e-learning experience regarding the course content, with a mean average of 3.58. On the other hand, the income group with the lowest rating in the course content is the P20,001 to P50,000 income group, with a mean of 3.35. Regarding delivery, the income bracket with the highest mean of 3.57 is also the P5,001 to P20,000 income group, while the lowest mean of 3.28 belongs to the income group of P50,001 to P100,000. Regarding service, the highest mean of 3.40 is also given by the P5,001 to P20,000 income bracket, and the lowest mean of 3.22 is given by the P50,001 to P100,000 group. Lastly, in terms of outcome, the highest mean average of 3.37 is given by the P5,001 to P20,000 income group, while the lowest mean of 3.16 is given by the P20,001 to P50,000 income bracket. Overall, those students who belong to the P5,001 to P20,000 monthly family income bracket have a better e-learning experience than the rest. According to Alipio (2020), most Filipino lower-middle-income families enroll their children in private institutions, emphasizing education despite income constraints. The results from Alipio's survey have shown that most respondents have given education such high priority despite having financial constraints after accounting for food and other necessities.

An F-test was conducted with a significance level of 0.05, and the results show that the content, delivery, service, and outcome all had p-values of 0.325, 0.314, 0.476, and 0.391, respectively. The findings indicate that when the students' e-learning experiences are being compared according to monthly family income, there are no significant differences in the content, delivery, service, or outcome quality. Therefore, the monthly family income has no significant effect on the quality of e-learning experiences of the students in terms of content, delivery, service, and outcome.

5. The Impact of Monthly Internet Expenditure on E-Learning Experience

The particularity of monthly internet expenditure is that it is more exclusive to e-learning than other education modalities. Internet access entails a periodical subscription that requires financing. In developing countries, ICT tools are more expensive than in developed countries, and financial limitations in meeting bandwidth requirements challenge e-learning among students, instructors, and institutions (Tarus et al., 2015). It investigated if the respondent's internet spending is a factor that affects their e-learning experience.

Table 5

F-test results of the respondent's e-learning experience in content, delivery, service, and outcome when grouped according to monthly internet expenditure

Profile	Qualities of E-learning Experiences (Variables)							
	Content		Delivery		Service		Outcome	
Monthly Internet Expenditure	Mean	p-value	Mean	p-value	Mean	p-value	Mean	p-value
Below P999	3.44	0.119 ns	3.33	0.108 ns	3.29	0.017 *	3.28	0.965 ns
P999 to P1,499	3.45		3.39		3.37		3.24	
P1,500 to P1,999	3.41		3.31		3.28		3.22	
P2,000 to P2,499	3.27		3.14		3.07		3.18	
P2,500 to P2,999	3.55		3.37		3.26		3.20	
P3,000 and above	3.28		3.38		3.10		3.10	

*Legend: ns = Not Significant   * = Significant   ** = Highly Significant*

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Table 5 summarizes the F-test results of the respondents' e-learning experience when grouped according to monthly internet expenditure. Regarding the respondent's e-learning experience in the course content, the monthly internet expenditure group with the highest mean average of 3.55 is the P2,500 to P2,999 group. In contrast, the group with the lowest mean average of 3.27 is the P2,000 to P2,499 monthly internet expenditure. Regarding delivery, results show that the students who spend P999 to P1,499 monthly for internet usage have the highest mean average of 3.39, while those who spend P2,000 to P2,499 monthly for the same purpose have the lowest mean with only 3.14. Moreover, the students with a monthly internet expenditure of P999 to P1,499 have the highest rating in the quality of their e-learning experience in terms of service, with a mean average of 3.37.

In contrast, those who belong to the P2,000 to P2,499 group have the lowest mean average of 3.07. Lastly, in terms of outcome, the students with a monthly internet expenditure of below P999 have the highest rating with a mean of 3.28, while the lowest are those who spend P3,000 above for internet usage with only 3.10 mean average. This situation tells us that there is no linear relationship between the e-learning experience of the students and their monthly internet expenditure.

An F-test was run and produced p-values of 0.119 for content, 0.108 for delivery, 0.017 for service, and 0.965 for outcome. The results show no significant difference in the quality of e-learning experience regarding content, delivery, and outcome when grouped according to monthly internet expenditure. However, a significant difference in service (p-value at 0.017) is observed across the monthly internet expenditure. Hence, monthly internet expenditure affects the e-learning experience of the students in terms of service.

The results imply that monthly internet spending influences the core resources, responsiveness, and technical support the students receive. According to a study by Wildana et al. (2020), internet packages and internet access set limitations to the efficiency of online learning. In another study by Mohd Basar et al. in 2021, the cost of internet packages and the availability of the internet are two factors that dictate whether online learning continues. Nevertheless, their survey discovered a significant relationship between the students' locations or lack of funds to afford internet packages and their internet access.

CONCLUSIONS

Significant differences were found in the e-learning experience quality when students were grouped by gender, year level, scholarship status, and monthly internet expenditure. However, no significant relationship existed between students' e-learning experience and their monthly family income. Regarding gender, males demonstrated significantly better e-learning experiences regarding content, delivery, service, and outcome than females. For year level, a significant difference was observed in content, delivery, and outcome, with 1st-year students having the highest ratings, reflecting lower comparison levels and higher enthusiasm for e-learning. Notably, the students' year level did not influence the e-learning experience in terms of service.

A notable disparity was observed solely in the service aspect concerning scholarship status, indicating that scholars had a superior e-learning experience compared to non-scholars. This highlights scholars' appreciation for the institution's learning resources and administrative and technical support. Conversely, there was no significant difference in e-learning experience based on the monthly family income of the respondents. However, the findings suggest that those in the lowest income bracket had the overall best e-learning experience, possibly due to their heightened prioritization of education. Additionally, a noteworthy association was found between monthly internet expenditure and e-learning experience in terms of service. Specifically, students spending below P999 (the lowest amount) demonstrated more pronounced accessibility to proper resources, conducive learning environments, and responsive administrative and technical support. In essence, the study discerned variations in e-learning services among students based on their monthly internet expenditure.

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RECOMMENDATIONS

The researcher recommends several crucial measures to advance the comprehension of factors influencing the quality of e-learning experiences in SOCECON 10 - The Contemporary World. Firstly, leverage the collected content, delivery, service, and outcome data to introduce novel findings, incorporating additional supporting evidence, fresh information, and diverse perspectives. Secondly, position the study as a foundational resource, assisting in establishing more refined research inquiries into how gender, academic year, scholarship status, monthly family income, and internet expenditure impact e-learning quality. Thirdly, refine the assessment process by adopting more reliable statistical tools tailored to specific research objectives, enhancing the accuracy of knowledge and concerns evaluation regarding the e-learning experience. Additionally, addresses gaps and overlooked aspects in data-gathering methods to comprehensively explore all factors affecting e-learning quality. Lastly, replicate the paper's structure, design, and methodology across other e-learning courses offered by Xavier University – Ateneo de Cagayan, fostering a broader understanding of e-learning dynamics within the institution.

REFERENCES

Alghamdi, A. et al. (2020). Online and face-to-face classroom multitasking and academic performance: Moderated mediation with self-efficacy for self-regulated learning and gender. *Computers in Human Behavior, 102*, 214–222. https://doi.org/10.1016/j.chb.2019.08.018.

Alipio, M. (2020). Education during the COVID-19 era: Are learners in a less-economically developed country ready for e-learning? *ZBW-Leibniz Information Centre for Economics.*

Alkharang, M. M., and Ghinea, G. (2013). E-learning in higher educational institutions in Kuwait: Experiences and challenges. *International Journal of Advanced Computer Science and Applications, 4(4).* http://dx.doi.org/10.14569/IJACSA.2013.040401.

Allen, J., Robbins, S. B., Casillas, A., and Oh, I. S. (2008). Third-year college retention and transfer: Effects of academic performance, motivation, and social connectedness. *Research in Higher Education, 49(7),* 647-664. http://dx.doi.org/10.1007/s11162-008-9098-3.

Caucutt, E. M., & Kumar, K. B. (2003). Higher education subsidies and heterogeneity: A dynamic analysis. *Journal of Economic Dynamics and Control, 27(8),* 1459–1502. http://dx.doi.org/10.1016/S0165-1889(02)00067–2.

Chevalier, A. et al. (2013). The impact of parental income and education on the schooling of their children. *IZA Journal of Labor Economics, 2(1),* 1-2.

Dalagan, J. (2020). OVPHED Memo 1920-48: HUB for Transformative Teaching and Learning. Xavier University - Ateneo de Cagayan.

Elfaki, N. K., Abdulraheem, I., and Abdulrahim, R. (2019). Impact of e-learning vs. traditional learning on student's performance and attitude. *International Journal of Medical Research and Health Sciences, 8(10*), 76-82.

Ganem, Natasha and Manasse, Michelle. (2011). The Relationship between Scholarships and Student Success: An Art and Design Case Study. *Education Research International, 2011(3).* http://dx.doi.org/10.1155/2011/743120.

González-Gómez, F. et al. (2012). Gender differences in e-learning satisfaction. *Computers and Education, 58(1),* 283-290. https://doi.org/10.1016/j.compedu.2011.08.017.

MacDonald, C. J. et al. (2001). The demand-driven learning model: A framework for web-based learning. *The Internet and Higher Education, 4(1)*, 9–30. http://dx.doi.org/10.1016/S1096-7516(01)00045–8.

Merhi, R., Sánchez-El Vira-Paniagua, A., and Palací, F. J. (2018). The role of Psychological Strengths, coping strategies, and Well-being in predicting academic engagement and burnout in first-year university students. *Acción Psicológica, 15(2)*, 51-68. http://dx.doi.org/10.5944/ap.15.2.21831.

Mohd Basar, Z. et al. (2021). The effectiveness and challenges of online learning for secondary school students – A case study. *Asian Journal of University Education, 17(3),* 119-129. http://dx.doi.org/10.24191/ajue.v17i3.14514.

Ong, C. S., & Lai, J. Y. (2006). Gender differences in perceptions and relationships among dominants of e-learning acceptance. *Computers in Human*

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Behavior, 22(5), 816-829. http://dx.doi.org/10.1016/j.chb.2004.03.006.

Oye, N. D., Salleh, M., and Iahad, N. A. (2010). Holistic e-Learning in Nigerian higher education institutions. *Journal of Computing, 2(11)*, 20-26.

Smith, J. S., and Wertlieb, E. C. (2005). Do first-year college students' expectations align with their first-year experiences? *Journal of Student Affairs Research and Practice, 42(2)*, 153-174. http://dx.doi.org/10.2202/1949-6605.1470.

Tarus, J.K., Gichoya, D., and Muumbo, A. (2015). Challenges of implementing e-learning in Kenya: A case of Kenyan public universities. *International Review of Research in Open and Distributed Learning, 16(1)*, 124. http://dx.doi.org/10.19173/irrodl.v16i1.1816.

Wildana, W. et al. (2020). Student's responses on learning in the early COVID-19 pandemic. *Tadris: Journal of Education and Teacher Training, 5(1)*, 141-153. https://doi.org/10.24042/tadris.v5i1.6153.

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