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Perception, Academic Resilience, Challenges and Opportunities in Online Learning of Graduate Students Among Higher Education Institutions in Mimaropa: Basis for Best Practices Framework

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ABSTRACT

Online education has emerged as one of the most common modes of delivery for graduate programs in education, driven by factors such as increased accessibility and flexibility. This study assessed the perceptions, academic resilience, challenges, and opportunities in online learning of the graduate students and faculty members among HEIs in MIMAROPA. The results informed a framework of best practices for online graduate programs. The study utilized descriptive-correlational and descriptive-predictive research designs. The respondents of this study were 323 graduate students, and 141 faculty members enrolled during the first semester of A.Y. 2024-2025 who were identified using proportional random sampling. Results reported that students and faculty members in graduate studies have high level of perception relating to self-efficacy, ease of use, and advantages. In addition, the findings reported a high degree of academic resilience among the respondents, in relation to their mindset, social support, and personal control. Furthermore, the respondents experienced moderate challenges in online learning regarding learning resources, learning environment, technological literacy and competence, and flexible scheduling. Generally, results indicated that perceptions, academic resilience, and challenges in online learning were significantly and positively related. Overall, perception emerged as a significant predictor of academic resilience; however, it did not significantly influence the extent of challenges experienced by the respondents. Moreover, mindset, as an indicator of academic resilience, significantly influences the extent of challenges in online mode of learning. Integrating the best practices and opportunities of online learning such as a positive attitude, academic resilience, flexibility, accessibility, continuous feedback, personalized learning, and digital literacy is crucial for successful online graduate programs.

INTRODUCTION

The emergence of new online learning tools has changed graduate education radically by providing advanced courses to students from different backgrounds and locations. This change, brought about by technology and social transformation, requires us to reflect on the distinct issues and possibilities that online learning technologies pose for graduate students.

Graduate education stands as an apex of academic achievement in higher education. This level of study demands student professionals to broaden their knowledge, refine their skills, and participate in advanced research. Education, at this level, focuses on mastery of competency and meaningful contribution. It empowers students not only to assume leadership positions in their fields, but also to address emerging challenges that require innovative thinking and solutions. Today, online learning is a prominent mode of instructional delivery in graduate programs, fostering the development of the next generation of professionals and leaders in various fields of specialization.

The prevalence of institutions providing online degree programs is a subject of widespread global discussion and it has become firmly established as prevalent methods for higher education students and it is widely seen as a more affordable and practical substitute for traditional

education, providing many students with more chances to continue their education in a variety of environments (Yang & Ghislandi, 2024; Kent *et al.*, 2019), as cited by Bali *et al.* (2024).

The major shift of online education in higher education system, brought by the recent pandemic, presented unique challenges and opportunities for graduate students, demanding a high degree of academic resilience and adaptability. This research explores graduate students' perceptions, issues and opportunities in e-learning modality. A thorough understanding of these relevant aspects will enable us to effectively support graduate students as they adapt to the dynamic nature of online education. This study will examine various areas such as technological access and proficiency, time management and self-directed learning, and social collaboration in virtual settings.

As mentioned by Omar *et al.* (2021), graduate students' experience with distance/online learning in the aspect of engagement during online learning, perceived ease of communication, and overall online experience, is statistically significantly correlated with their academic achievement. Additionally, as cited by Benning and Davis (2023), the results of the study revealed varied and mixed perspectives of graduate students on the quality of online instruction to promote feedback. The inconsistency in

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the perspectives of the students on the construct of feedback may be due to the interplay of factors that support effective classroom interaction (Bansah & Agyei, 2022).

This research highlights the policies and guidelines for graduate programs as reflected in “CMO No. 15, Series of 2019 – Policies, Standards and Guidelines for Graduate Programs,” issued by the Commission on Higher Education, indicated that the landscape and perspectives in offering graduate programs have dramatically changed in the past decades and these changes demand new or enhanced competencies among students to meet the requirements set by globalization, regional integration, internationalization of higher education, and the Fourth Industrial Revolution; thus, students must be able to optimally use 21st century skills in their daily work and professions thereby strengthening the nation’s innovation, research, and development (CHED, 2019).

As cited in CHED Memorandum Order No. 4, Series of 2023, “Updated Guidelines on Onsite Learning in Higher Education,” in recognition of the efforts undertaken to adopt flexible learning, public HEIs may deliver 25% of the total number of courses per degree program through appropriate offsite, online or self-paced flexible learning provisions and at least 75% of the total number of courses per degree program should be conducted onsite, however, for private HEIs, which have invested their own financial resources for facilities, resources, and training of faculty members for flexible learning, they may deliver 50% of the total number of courses per degree program through appropriate offsite, online, or self-paced flexible learning provisions (CHED, 2023).

This research assesses how institutional practices, resources, and support systems influence graduate student experiences in online learning among HEIs in the MIMAROPA region. Likewise, this is concerned with graduate level programs because of their challenges and opportunities, intending to design appropriate practices and other forms of support. It also investigates faculty online teaching perceptions related to curriculum delivery in graduate programs, analyzing their utilization of educational technologies and methods aimed to cultivate students’ academic success. The research seeks to fill knowledge gaps in the literature on online learning while also aiming to provide an effective framework tailored for students and faculty members in graduate programs.

Moreover, Achuthan *et al.* (2024) cited that the post-pandemic era has witnessed a swift surge in distance learning modalities and with the escalating number of research publications and reviews on the topic within a short span, there emerges a pressing need to comprehensively explore this vast corpus of academic literature. Existing literature has explored online learning during the COVID-19 pandemic (Turnbull *et al.*, 2021), however, issues concerning to the post-pandemic perceptions, and experiences more broadly, remain underexplored. Moreover, much of the literature focuses on single higher education institutions. This research

attempts to bridge this gap by covering eight higher education institutions (HEIs) within the MIMAROPA region and by proposing a best practices framework for online graduate education. Therefore, understanding the difficulties met by the respondents, including inadequate digital skills and insufficient access to online resources, is vital for developing effective supportive measures to enhance academic outcomes.

Examining the interplay of the factors included in this study will aid higher education institutions, faculty members, and graduate students, and consequently help build better online learning frameworks for graduate education. Recommendations stemming from the findings will focus on improving online program design, pedagogical strategies, and student support services. This aims to foster adequate standard and efficiency in the online delivery of instruction among students in the graduate level. Higher education institutions with graduate studies may find these findings useful when crafting distance learning programs. Emphasizing high student participation, active communication, and positive experiences can strengthen a more successful e-learning environment. It is the researcher’s sincere hope that the outcomes of this study will serve as a valuable reference to foster improvements on online distance learning that would enhance graduate students’ and faculty members’ academic resilience. Takeaways from this study regarding the perception, academic resilience, challenges, and opportunities of online education provides shape to a best practices framework which is valuable in designing an engaging and supportive online graduate education.

LITERATURE REVIEW

Perception in Online Learning

As mentioned by Besele (2021), the factors that encouraged the demand for online learning include the wide spread of diseases that required serious mitigations, advancements in technological tools, increased demand for information and technology (IT) skills and as far as many colleges and universities are concerned, online learning comes with a number of benefits and challenges to both the school and learners.

In addition, Baczek *et al.* (2021) cited that online teaching is commonly used in the training of undergraduates—not as a sole method, but combined with the traditional teacher-led approach and the success of e-learning depends on many factors, including accessibility, usage of appropriate methods, course content, and assessment criteria.

Furthermore, Mather and Sarkans (2018) cited that “online program/course offerings in higher education are becoming an integral part of educational delivery for post-secondary institutions.” Moreover, Stec *et al.* (2020) indicated that online teaching has three main approaches, namely, enhanced, blended learning, and online approach; enhanced learning uses the intensive use of technology to ensure innovative and interactive instruction, blended learning mixes both face-to-face and online education

and the online approach indicates that the course content is delivered online.

Academic Resilience

A study by Yildirim and Arslan (2020) focusing on the impact of resilience on subjective well-being in 220 students in Turkey showed that resilience has a direct effect on psychological health and subjective well-being. Additionally, Shaws (2020) states that resilience is a dynamic process of adapting and managing the difficulties that occur so that resilience can improve the quality of subjective well-being during this pandemic. Likewise, Nashori and Saputro (2020) found that resilience is needed during the COVID-19 pandemic to maintain psychological well-being and to empower amid existing limitations, as cited by Safitri and Nugraha (2021).

In addition, Ang *et al.* (2021) emphasized that resilience training should be integrated into higher education curriculum to support students' academic journey and there is increasing evidence that being resilient negates the deleterious impacts of stress and promote academic success; they concluded that, to develop an insight into how important resilience is, it is vital to explore how higher education students perceive and develop resilience. However, contemporary perspectives acknowledge that resilience is not solely an inherent trait but rather a dynamic process shaped by the interaction between individual attributes and environmental factors (Shen *et al.*, 2024).

Challenges in Online Learning

According to Basar *et al.* (2021), online learning is effective in certain places; however, obstacles and challenges in the implementation of online learning remain, such as poor internet access in schools, campuses and residential areas, the cost of internet packages, issues with technological facilities, and students' attitudes, also, it was recommended in their study that existing infrastructures should be upgraded to enhance the effectiveness of online learning for students and all stakeholders, particularly educators and students, need to adapt to this new norm.

As supported by Sobradil *et al.* (2023), online learning weaknesses are the critical communication gap between students and teachers, lack of focus, lack of social support, unhealthy online learning environment, lack of social support, technological constraints, and lack of time management, meanwhile they argued that the challenges of online learning are slow and no internet connection, self-discipline, unhealthy online learning environment, fewer interactions with teachers and classmates, heavy workloads, dealing with subjects with laboratories, resistance to online learning, mental health, emotional and psychological anxieties, depression and financial constraints are found to be the challenges and barriers in online learning.

Opportunities in Online Learning

As emphasized by Sobradil *et al.* (2023), opportunities

for online learning are enhanced technical skills; avail learning resources from anywhere in the world, developed self-discipline, improved virtual classroom interaction, flexibility and time management, reduced educational cost, drive for self-motivation and lenient quality education were deemed to be beneficial.

Statement of the Problem

The research aimed to examine the perception, level of academic resilience, extent of challenges and opportunities in online learning of the students and faculty members in the graduate programs among HEIs in MIMAROPA that served as framework for best practices. Specifically, it answered the following questions:

1. What is the perception in online learning of the graduate students and faculty members in terms of:
 - 1.1 self-efficacy;
 - 1.2 ease of use; and
 - 1.3 advantages?
2. What is the level of academic resilience in online learning of the graduate students and faculty members in terms of:
 - 2.1 mindset;
 - 2.2 social support; and
 - 2.3 personal control?
3. What is the extent of challenges in online learning of the graduate students and faculty members in terms of:
 - 3.1 technology literacy and competency;
 - 3.2 learning resource; and
 - 3.3 learning environment;
 - 3.4 flexible scheduling
4. Is there significant relationships between: (a) perception and academic resilience in online learning, (b) perception and challenges in online learning, and (c) academic resilience and challenges in online learning of the students and teachers in the graduate programs?
5. Which among the factors of the perception in online learning best predict the level of academic resilience of the graduate students?
6. Which among the factors of the perception in online learning best predict the challenges in online learning of the graduate students and faculty members?
7. Which among the factors of academic resilience in online learning significantly influence the challenges of the graduate students and faculty members?
8. What are the opportunities on using online learning among graduate students and faculty members?
9. What best practices framework needs to be proposed to enhance online learning experience among graduate students and faculty members in higher education institutions?

MATERIALS AND METHODS

The study utilized quantitative and qualitative methods to assess the challenges and perceptions of the graduate students and faculty members among HEIs in the MIMAROPA region. The quantitative part used descriptive-correlational design to describe the connections between the different variables. The research

utilized a qualitative design, utilizing interviews as a crucial method to identify possibilities and potential expansion of online education in graduate studies. The interview process effectively elicits insights on how to boost online instructions, resulting in an in-depth understanding of the respondents' viewpoints. Lastly, to establish a best practices framework in online learning, explanatory sequential mixed-methods design was utilized.

The participants of this research were graduate students and faculty members from the eight (8) public and private colleges and universities in MIMAROPA, enrolled during the first semester of academic year 2024-2025. The participants were comprised of 141 faculty members and 323 students in the graduate programs. It was determined that a sample size of 323 out of a total population of 2022 graduate students was sufficient to conclude with a 95% confidence level using Raosoft. The number of respondents per institution was concluded using proportional allocation, which considered the total population of respondents for each institution.

The study utilized an adapted and open-access research questionnaire to assess the perception, level of academic resilience and extent of challenges of the graduate students and faculty members. To assess the perception of the respondents, the Perception of Students towards E-learning (PSEL) Scale by Khan *et al.* (2020) was utilized; it consists of three dimensions such as self-efficacy, ease of use, and advantages of e-learning. In determining the level of academic resilience of the respondents, the Academic Resilience Scale by Shannon (2020) was utilized; it is comprised of three dimensions such as self-

efficacy, social support and personal control. To gauge the extent of difficulties, the Extent of Students' Challenges in Online Learning Scale by Barrot *et al.* (2021) was used. This scale covers three areas: technological literacy and competency, learning resources, and the learning environment.

Weighted mean, Multiple Linear Regression Analysis, and Pearson Product Moment Correlation were the descriptive statistics used to analyze the data collected. The weighted mean was utilized to determine the perception of online learning, level of academic resilience, and extent of challenges experienced by the respondents. To test the relationship among the variables, Pearson Product Moment Correlation was employed. Finally, to analyze what factors of perception significantly influence the level of academic resilience and extent of challenges, Multiple Linear Regression Analysis was utilized.

RESULTS AND DISCUSSION

Perception in Online Learning

As reflected in Table 1, the perception of graduate students and faculty members in online learning is high (overall mean = 4.35). Ease of use gained the highest overall mean (4.46). This implies that the respondents perceive online education as easy to navigate and access online tools and resources. Meanwhile, the advantages attained the lowest overall mean (4.18). This suggests that providing additional advantages of online learning should be given consideration.

The high perception of graduate students and faculty

Table 1: Summary of Perception in Online Learning

Items	Students			Faculty Members			Overall			
	Mean	SD	Description	Mean	SD	Description	Mean	SD	Rank	Description
Ease of use	4.46	0.57	High	4.40	0.63	High	4.46	0.58	1	High
Self-efficacy	4.43	0.57	High	4.34	0.64	High	4.42	0.57	2	High
Advantage of e-learning	4.18	0.68	High	4.18	0.73	High	4.18	0.68	3	High
Overall Mean	4.36	0.55	High	4.30	0.60	High	4.35	0.55		High

members regarding online learning, evidenced by an overall mean of 4.35 across ease of use, flexible scheduling, self-efficacy, and the advantages of e-learning, signifies a notable endorsement of this educational modality. Giray (2021) noted that this collective positive outlook suggests that online learning environments are increasingly meeting the expectations and needs of advanced learners and educators alike, fostering a conducive atmosphere for academic engagement and achievement. Consistently, as cited by Weerathunga *et al.* (2021), when users perceive a system to be easy to use, they are more likely to accept it.

Level of Academic Resilience in Online Learning

As presented in the summary, personal control obtained the highest score (4.60). This manifests that the respondents are accountable and responsible for the outcomes of their academic undertakings in the online mode of learning. In terms of mindset, the respondents also expressed a very high degree of academic resilience. This signifies their competence to overcome hindrances in their studies. This indicates a positive perception toward challenges, along with the ability to recover from difficulties.

Table 2: Summary of Level of Academic Resilience in Online Learning

Items	Students			Faculty Members			Overall			
	Mean	SD	Description	Mean	SD	Description	Mean	SD	Rank	Description
Personal Control	4.61	0.51	Very High	4.55	0.46	Very High	4.60	0.51	1	Very High
Mindset	4.57	0.50	Very High	4.57	0.46	Very High	4.57	0.50	2	Very High
Social Support	4.29	0.60	High	4.34	0.65	High	4.29	0.60	3	High
Overall Mean	4.49	0.45	High	4.49	0.44	High	4.49	0.45		High

However, among all the indicators of academic resilience, social support attained the lowest mean (4.29). This means that the respondents received less social support in the online learning environment, and this recommends that additional social support should be given consideration. In summary, the finding reveals that the respondents' level of academic resilience is high (overall mean = 4.49). This indicates a strong tendency to overcome challenges and setbacks in their academic pursuits in an online setting. This is consistent with Cho *et al.* (2021), their findings suggest that instructors and teaching staff should continue providing help and build a supportive environment for students to feel less stressed and even though the help is not necessarily academic in nature, any thoughtful actions of instructions such as just listening to students' personal

difficulties to stay on track in the course could help ease students' stress and could support students in achieving their academic goals.

Extent of Challenges in Online Learning

As presented in Table 3, the highest score is obtained in flexible scheduling, (overall mean = 4.43). This signifies that flexible scheduling, regardless of its potential benefits, is viewed as a considerable barrier in online learning. An issue with flexible scheduling indicates that learners may not possess self-discipline and time management skills necessary to function optimally in an asynchronous environment. They may require assistance in formulating their learning pathways and establishing achievable objectives.

Table 3: Summary of the Extent of Challenges in Online Learning

Items	Students			Faculty Members			Overall			
	Mean	SD	Description	Mean	SD	Description	Mean	SD	Rank	Description
Flexible Scheduling	4.44	0.52	High	4.31	0.65	High	4.43	0.53	1	High
Learning Environment	2.90	1.06	Moderate	3.09	1.12	Moderate	2.91	1.07	2	Moderate
Learning Resources	2.78	0.96	Moderate	2.97	1.06	Moderate	2.80	0.97	3	Moderate
Technological Literacy and Competency	2.34	0.98	Moderate	3.05	1.03	Moderate	2.40	1.00	4	Moderate
Overall	3.12	0.66	Moderate	3.36	0.82	Moderate	3.14	0.68		Moderate

In contrast, among all the indicators of challenges, TLC attained the lowest mean score (2.40). This implies that the students are encountering hardship integrating various technology. There is a need for a more focused effort to strengthen the skills and competencies of both students and faculty to fully operate online systems. In summary, there is a moderate extent of challenges among the respondents (overall mean = 3.14). This means they encountered various distractions at home as their learning environment. Moreover, they indicated moderate challenges related to accessing learning materials and digital platforms. However, some respondents demonstrated competence to comprehend instructions and succeed in the online setting. This is supported by Gillett-Swan (2017) which revealed that online environment also presents challenges for

many academic staff who increasingly require higher levels of technological competency and proficiency on top of their regular academic workload.

Relationship Between: (a) Perception and Academic Resilience in Online Learning, (b) Perception and Challenges in Online Learning, and (c) Academic Resilience and Challenges in Online Learning Based on Table 4, the different aspects of perception in online learning are correlated with the dimensions of academic resilience. Self-efficacy is significantly related to mindset, social support, personal control, as indicated by the p-values that are less than .05. This implies that improving our perception about online learning as the primary method of delivery in graduate education may enhance the mindset, social support and personal control.

Table 4: Relationship Between Perception and Academic Resilience in Online Learning

Perception	Academic Resilience	Correlation Coefficient	Significance	Description
Self-efficacy	Mindset	.369**	.000	Significant
	Social Support	.309**	.000	Significant
	Personal Control	.381**	.000	Significant
Ease of use	Mindset	.380**	.000	Significant
	Social Support	.349**	.000	Significant
	Personal Control	.383**	.000	Significant
Advantage of e-learning	Mindset	.363**	.000	Significant
	Social Support	.347**	.000	Significant
	Personal Control	.335**	.000	Significant
Overall	.443**	.000	Significant	

Overall, the results in Table 4 reveals a significant positive relationship between perception and level of academic resilience in online learning, as indicated by the correlation of .443 and a p-value less than .05. This signifies that perception improves the level of academic resilience. Particularly self-efficacy, ease of use, and advantages are significantly and positively related to the level of academic resilience. This implies that improvement on these indicators may increase the academic resilience of the students and faculty members in the graduate programs. It also shows that students who have positive perception of e-learning tend to have high level of academic resilience. They can be resilient to the

challenges accompanied by online learning. Thus, the null hypothesis stating that there is no significant relationship between perception and academic resilience in online learning is rejected.

This correlates with the study of Kumalasari and Akmal (2021) wherein their findings highlight the significance of academic resilience in dampening the effects of academic stress on the satisfaction of students with online learning formats; in practical terms, the outcome of their study suggests that academic resilience should be inculcated and encouraged in students to facilitate an ameliorated handling of education-related stress and to increase their contentment with online learning methods.

Table 5: Relationship Between Perception and Challenges in Online Learning

Perception in Online	Challenges	Correlation Coefficient	Significance	Description
Self-efficacy	Technological Literacy and Competency	-.190**	.000	Significant
	Learning Resources	-.137**	.001	Significant
	Learning Environment	-.187**	.000	Significant
	Flexible Scheduling	.521**	.000	Significant
Ease of use	Technological Literacy and Competency	-.197**	.000	Significant
	Learning Resources	-.170**	.000	Significant
	Learning Environment	-.190**	.000	Significant
	Flexible Scheduling	.526**	.000	Significant
Advantage of e-learning	Technological Literacy and Competency	-0.071	.069	Not Significant
	Learning Resources	-.118**	.003	Significant
	Learning Environment	-.123**	.002	Significant
	Flexible Scheduling	.515**	.000	Significant
Overall	-.161**	.000	Significant	

In general, based on the analysis in Table 16, it shows that there is significant relationship between perception and extent of challenges, as indicated by the correlation coefficient of -.161 and a p-value less than .05. This indicates that positive perception of e-learning supports the respondents to handle the difficulties encountered in online mode of learning. Specifically self-efficacy,

ease of use, and advantages are significantly correlated to the extent of challenges. This suggests that students who have positive perception tend to easily navigate the difficulties of online learning related to technological literacy and competency, learning resources, learning environment, and flexible scheduling. Thus, the null hypothesis stating that there is no significant relationship

between perception and the extent of challenges in online learning is rejected.

This finding associates with the study of Khan *et al.* (2021) where in it revealed the opinions and perceptions of Delhi's school students towards virtual learning as it increased the technological literacy of students, traveling

time can be saved in the online classes and it is more flexible in time and space, whereas it is not comfortable when compared with the offline classes; additionally the majority of the respondents said there is a lack of interaction with teachers in online classes and low motivation for study due to a lot of distractions at home.

Table 6: Relationship Between Academic Resilience and Challenges in Online Learning

Academic Resilience	Challenges	Correlation Coefficient	Significance	Description
Mindset	Technological Literacy and Competency	-.215**	.000	Significant
	Learning Resources	-.214**	.000	Significant
	Learning Environment	-.158**	.000	Significant
	Flexible Scheduling	.293**	.000	Significant
Social Support	Technological Literacy and Competency	-.095*	.016	Significant
	Learning Resources	-.155**	.000	Significant
	Learning Environment	-.089*	.026	Significant
	Flexible Scheduling	.322**	.000	Significant
Personal Control	Technological Literacy and Competency	-.193**	.000	Significant
	Learning Resources	-.195**	.000	Significant
	Learning Environment	-.117**	.005	Significant
	Flexible Scheduling	.330**	.000	Significant
Overall	-.183**	.000	Significant	

As reflected in Table 6, it shows the connections between academic resilience and challenges in online education. Mindset is significantly associated to different areas of challenges in online learning such as technological literacy and competency, learning resources, learning environment and flexible scheduling, as indicated by the p-values that are less than .05. This indicates that having a positive growth mindset aids graduate students to effectively manage the difficulties faced in online learning related to technical issues, home set-up, learning tools and time flexibility.

Generally, as presented by the correlation coefficient of $-.183^{**}$ and a p-value less than .05., Table 6 reveals that there is significant positive relationship between challenges and level of academic resilience in online instruction. Particularly technological literacy and competence, learning resources, learning environment and flexible scheduling are significantly correlated to the level of academic resilience in e-learning. The improvement on these indicators may increase the respondents' level of academic resilience. This indicates that graduate students are more likely to deal with hindrances and succeed academically in online learning when they have a conducive learning environment, self-regulated schedule, technological skills and sufficient learning materials. Thus, the null hypothesis stating that there is no significant relationship between academic resilience and challenges in online learning is rejected.

This analysis is supported by of Sarmiento *et al.* (2021), wherein they found out that students living alone or with

people other than their parents also perceived themselves as more resilient; additionally based on their study, the students from the health sciences evinced a higher ability to adapt to change, to deal with the challenges posed by the confinement, to see the bright side of things, and to perceive themselves as capable of rebounding from difficult situations.

Factor of the Perception in Online Learning Best Predicts the Level of Academic Resilience

As revealed in Table 7, the factors of perception such as self-efficacy, ease of use, and advantage of e-learning significantly predict the level of academic resilience in online learning. Based on the results, self-efficacy significantly predicts the level of academic resilience, as shown by the beta coefficient of .226 and supported by the p-value of .008. This implies that students with high degree of confidence in their academic undertakings tend to maintain positive perceptions regarding their ability to perform well despite different challenges in online learning.

Overall, the results reveal that the indicators of perception, particularly, self-efficacy, ease of use, and advantages significantly predict the level of academic resilience of the respondents with beta coefficient of .226, .190, and .222 respectively and supported by the p-value less than .05. Based on the standardized beta coefficient, the best predictor of academic resilience is self-efficacy. This factor can increase academic resilience by approximately 22.6%. This implies that graduate students with high level

Table 7: Factor of the Perception in Online Learning Best Predicts the Level of Academic Resilience

Perception	Beta Coefficient	Significance	Description
Self-efficacy	.226	.008	Significant
Ease of use	.190	.037	Significant
Advantage of e-learning	.222	.001	Significant

of self-efficacy are more likely to remain positive in their academic work, despite hindrances encountered in online learning. The substantial r -square of 33.4% indicates that the variables of perception in online learning explain well the variation in academic resilience of the graduate students. The significant high F -value of 54.193 indicates that the factors of perception in online learning collectively improve the construct's ability to predict the respondents' academic resilience. The null hypothesis stating that no factor of the perception in online learning best predicts the level of academic resilience of the graduate students and faculty members is rejected.

This result supports the analysis of Butnaru *et al* (2021), whose research has proven that advances regarding information technology and the evolution of computers positively affect the approach of university/high school students on learning in contemporary educational

environments, thus considering the advantages of online learning helps the students to be resilient despite the learning challenges they encounter.

Factor of the Perception in Online Learning Best Predicts the Extent of Challenges

Based on Table 8, the analysis reveals that none of the factors of perception significantly predict the extent of challenges in online learning. Based on the findings, self-efficacy is not a significant predictor of the extent of challenges (beta coefficient = -.041 & p -value = .695). Additionally, ease of use is not significantly predicting the extent of challenges, as indicated by the negative beta coefficient of -.131 and a p -value of .238. Furthermore, the advantages of e-learning is not a significant predictor of the extent of challenges (beta coefficient = .113 & p -value = .238)

Table 8: Factor of the Perception in Online Learning Best Predicts the Extent of Challenges

Perception	Beta Coefficient	Significance	Description
Self-efficacy	-.041	.695	Not Significant
Ease of use	-.131	.238	Not Significant
Advantage of e-learning	.113	.151	Not Significant

In general, the findings in Table 8 reveal that among the factors of perception, none significantly influence the challenges in online learning of the graduate students, as indicated by the p -value greater than .05. The r -square of 1.4% evaluates how well the variables of perception in online learning explain the variation in challenges in online learning. This means that even if students feel confident using online platforms, find them easy to utilize, and recognize their advantages, they might still encounter e-learning challenges. Thus, the null hypothesis stating that no factor of the perception in online learning best predicts the extent of challenges of the graduate students and faculty members is accepted.

This contradicts the findings of Xhaferi & Xhaferi (2020), whose research indicates that benefits of online coursework outweigh the challenges that students face during the online classes, and their study emphasizes

the need to consider the impact of online teaching on student motivation and their paper raises important questions about how to best support students enrolled in online courses.

Factors of Academic Resilience Significantly Influence the Challenges in Online Learning

The regression analysis in Table 9 shows that among the factors of academic resilience, mindset significantly influences the challenges in online learning of the graduate students (beta coefficient = -.167 & p -value = .029). This suggests that mindset is a relevant factor influencing the difficulties faced by the respondents. Therefore, fostering a positive and growth-oriented mindset is crucial in helping graduate students navigate and overcome different challenges in online learning.

Table 9: Factors of Academic Resilience Significantly Influence the Challenges in Online Learning

Academic Resilience	Beta Coefficient	Significance	Description
Mindset	-.167	.029	Significant
Social Support	.078	.252	Not Significant
Personal Control	-.062	.402	Not Significant

Based on Table 9, it shows that among the dimensions of academic resilience, mindset is the factor influencing the challenges in online learning; however, personal and

social support are not significant factors. The negative beta coefficient indicates that a more positive mindset will reduce challenges in online learning by approximately

16.7%. This implies that the presence of social support and self-regulation in learning does not mitigate the obstacles faced in online learning. The r-square of 3.2% evaluates how well the variables of academic resilience explain the variation in challenges in online learning. The significant f-value of 3.556 indicates that the factors of academic resilience collectively improve the construct's ability to predict the challenges in online learning of the respondents. The null hypothesis stating that none of the factors of academic resilience significantly influence the extent of challenges of the students and faculty members in the graduate studies is rejected.

This links with the study of Permatasari *et al.* (2021), wherein the findings show that family support is the support element that dominant contributes to students in online learning during the process and gives the highest contribution to academic resilience in the online learning process. Therefore, individuals' perception of peers, family, and teachers who can help, support, and care when students experience difficulties in the academic field can increase academic resilience.

Opportunities in Online Learning

Online learning offers numerous opportunities for graduate students and faculty, as highlighted by several themes in the study. One of the advantages is flexibility with which students can access materials. Unlike traditional formats, online learning does not bind students and faculty to a specific time or place; they can interact with the materials and participate in discussions at their own time and pace. This is critical for those who have jobs, families, or other commitments to juggle.

In addition, the online environment enhances digital literacy and IT skills. Students and faculty become proficient at using various digital tools and platforms, which is fundamental in modern societies. Not only does this enhance learners' experiences in online education but it also prepares graduates for an evolving professional environment. With respect to academic and professional advancement, online learning facilitates learning from a wider audience, enhances expert access, and provides collaborative opportunities. Graduate students can communicate with researchers and professionals from across the world, while faculty can reach out to a wider audience and engage in online professional development. Moreover, personalized and self-directed learning systems are especially effective. Online platforms allow learners to customize their programs by concentrating on specific areas of interest or areas that require improvement. Instructors can just as well build courses that cater to different levels and preferences of students.

In general, online learning creates a dynamic and evolving environment that provides many opportunities for graduate students and faculty to improve their learning, teaching, and professional growth.

CONCLUSION

Graduate students and faculty members in the graduate

programs view online learning as effective, easy to use, and beneficial. They show strong academic resilience but face moderate challenges in adapting to online environments and resources. Their positive perception of online learning enhances resilience, which in turn improves their ability to cope with and adapt to challenges. Overall, higher resilience strengthens their capacity to handle difficulties in online learning.

Based on the emerging conclusions presented above, several recommendations are proposed. Higher education institutions offering graduate programs should continue to offer online learning modalities and adapt it as a permanent mode of learning in the graduate program, due to its efficacy and advantages among students and faculty members. Implement effective strategies for digital personnel training and instruction, as well as equip the institution with suitable technology infrastructure. In addition, it is recommended to provide comprehensive training programs on digital tools, and a robust technological infrastructure and establish preventative maintenance to reduce downtime and increase the reliability of the technology. Lastly, HEIs are encouraged to develop comprehensive training programs which go beyond basic tutorials and support the advocacy of the provided framework and actively participate in training facilitators for its implementation.

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