

Practices and challenges of preservice teachers on flexible learning modality

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ABSTRACT

This study examined the level of the preservice teachers' practices in terms of adaptability and time management and the extent of the challenges in terms of internet connectivity and learning environment on flexible learning modality in the post-pandemic time. The study further looked into the relationship between preservice teachers' practices and their challenges. The study employed a descriptive-correlational approach to comprehensively understand the practices utilized by preservice teachers and the challenges they encounter in adapting to flexible learning modalities. The results reveal that the level of the practices the preservice teachers apply in flexible learning modality is high, and the extent of challenges is also high. Furthermore, the results indicate a significant relationship between the practices and preservice teachers' challenges in flexible learning. This study contributes to the field of education by providing insights into the adaptability and resourcefulness of preservice teachers navigating flexible learning modalities in the post-pandemic context. Moreover, the findings gave educational institutions and policymakers a glimpse of possible support strategies to improve flexible learning frameworks.

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1. INTRODUCTION

The United Nations Educational, Scientific, and Cultural Organization (UNESCO) asserted that the COVID-19 outbreak has significantly impacted education, resulting in considerable modifications to teaching methods and learning environments [1]. With the closure of schools and a need for social distancing, there has been an immediate trend towards online learning and incorporating technology into education, requiring the shift to online modes of instruction [2]. This change has presented problems and possibilities for students and teachers as they adjust to new styles of teaching participation, instructional practices, and communication [3]. In this context, it is vital to look into how the pandemic has impacted the educational landscape and the learning experiences of individuals affected [4], [5].

In light of this, the educational institution promptly protects students, faculty, and other stakeholders from the virus by implementing preventative measures and significant changes in the educational system [6]. Through memorandum order (CMO) No. 04, Series 2020, higher education institutions (HEIs) establish a learning delivery strategy that permits all academic institutions to use online platforms. For this reason, most colleges and universities have been using flexible learning since AY 2020–2021 [7]. In the post-pandemic time, flexible learning modes have still been in use, allowing preservice teachers to be active in online and offline learning and teaching processes. Flexible learning integrates digital and non-digital technologies to

provide inclusive, accessible, high-quality education through online, offline, or blended approaches. It meets students' needs for greater flexibility and autonomy in managing their learning process, often using online technologies within a blended learning framework [8], [9]. Blended learning environments are not associated with poorer learning outcomes but are equivalent to conventional classroom instruction. In the post-pandemic era, students' interest in blended learning, catering to their needs, and safety contributed to decreasing their challenges. Thus, higher education should offer students flexibility regarding time and place in their study, thereby making quality education accessible to a broader section of society [10]. Only the use of technology increased following the switch to online learning, with motivation, self-efficacy, and cognitive engagement decreasing [11]. Therefore, one possible reason for the difficulties preservice teachers faced was the implementation of flexible learning. In addition, one of the difficulties preservice teachers face in the flexible learning modality is their tendency to procrastinate because they find the online environment comfortable, resulting in rushed and incomplete tasks and challenges with limited opportunities for interaction in the online setting [12]. Therefore, understanding their practices is essential to determining whether or not these practices significantly impact the difficulties they encounter in the post-pandemic flexible learning modality.

In response to evolving post-pandemic demands, the researchers aim to highlight promising practices and innovative ways to overcome challenges to enable preservice teachers to reach their full potential. The researchers believe this study will offer valuable insights into the practices and challenges of preservice teachers engaging with flexible learning modalities in the post-pandemic period. The study allows instructors to better understand and empathize with students struggling academically. For university administration, the findings can highlight the challenges preservice teachers face, potentially leading to the creation of comprehensive intervention materials across all year levels in the College of Education. For parents, this study will raise awareness of their children's obstacles in flexible learning environments. Lastly, future researchers may use this study as a reference to further validate and explore similar topics, contributing to the body of knowledge on flexible learning.

2. METHOD

This study uses a descriptive-correlational approach to examine post-pandemic issues and practices among preservice teachers, emphasizing flexible learning. It uses a descriptive approach as the researchers collect data from the College of Education, specifically in the Bachelor of Elementary Education (BEd) program at Caraga State University-Main Campus, Philippines, to identify the challenges faced by preservice teachers and the practices they employ on flexible learning modality, whereas correlational approach that will look into the relationship of practices and challenges of preservice teachers on flexible learning modality in the post-pandemic time.

This study used simple random sampling, which determined the size by applying Cochran's formula. This method involved the selection of a smaller subset from the population of BEd students at Caraga State University-Main Campus. It is widely used in quantitative studies with survey questionnaires [13]. The study's respondents constituted 158 BEd students from first to fourth year, ensuring a representative and unbiased representation of participants throughout the academic year levels.

The study utilized a survey questionnaire using Google Forms as the research instrument. The checklist survey has two parts; the first part tackles the practices of preservice teachers on flexible learning modality in post-pandemic time, and the second part tackles the challenges of preservice teachers on flexible learning modality in post-pandemic time. Experts in the field validated the questionnaire. After retrieving the comments and suggestions from the experts, the survey checklist was revised. It was tried out to 25 preservice teachers with a Bachelor of Secondary Education major in English. The data was tallied and analyzed. As computed, the Cronbach alpha was 0.945, indicating a reliable survey tool.

3. RESULTS AND DISCUSSION

3.1. What is the level of the practices of the preservice teachers on flexible learning modality in the post-pandemic time in terms of?

3.1.1. Adaptability

Table 1 presents the level of the practices of the preservice teachers on flexible learning modality in the post-pandemic time in terms of adaptability. The results indicate that the level of practice of the preservice teachers' adaptability to flexible learning modality is high. It can be gleaned that the statement, "I am open-minded and willing to adopt various learning environments and approaches," got the highest mean score of 3.73, which is interpreted as the level of practice is very high. On the other hand, the statement "I ask mentor teachers, peers, and instructors for feedback to enhance my teaching methods and flexibility," got the lowest mean score of 3.28, which is interpreted as the 36 level of practice being high. The overall weighted mean score of 3.44 further supports this interpretation.

Table 1. Mean distribution of the level of the practices of the preservice teachers on flexible learning modality in post-pandemic in terms of adaptability

No	Indicators	Level of readiness		Interpretation
		Mean	Description	
1	I am open-minded and willing to adapt to various learning environments and approaches.	3.73	Strongly agree	The level of preservice teachers' practices is very high.
2	I can effectively learn new concepts, skills, or technology, even if unfamiliar.	3.36	Agree	The level of preservice teachers' practices is high.
3	I regularly reflect on my learning experiences, recognizing areas for growth and adapting strategies accordingly.	3.39	Agree	The level of preservice teachers' practices is high.
4	I actively seek opportunities to participate in hands-on instructional experiences, like practice or seminars, to improve my adaptability.	3.44	Agree	The level of preservice teachers' practices is high.
5	I ask mentor teachers, peers, and instructors for feedback to enhance my teaching methods and flexibility.	3.28	Agree	The level of preservice teachers' practices is high.
	Overall weighted mean	3.44	Agree	The level of preservice teachers' practices is high.

Range of means: 1.00-1.49 (strongly disagree); 1.50-2.49 (disagree); 2.50-3.49 (neutral); 3.50-4.49 (agree); 4.50-5.00 (strongly agree)

This implies that preservice teachers are willing to adopt various learning environments and approaches where the common goal is to teach and guide them on what they are expected to learn. As things change constantly, students learn in a variety of ways. Their ability to adapt indicates that they can overcome obstacles and carry on. It prepares individuals for whatever comes next, such as technological advancements or fresh opportunities. Additionally, students can tailor their educational experiences by focusing on their areas of interest and learning at their speed through flexible learning. This method increases participation and fosters a love of learning that lasts a lifetime. Adaptable learners will better deal with uncertainty and contribute to their communities as society develops.

Similarly, flexible learning is an educational approach that allows students to control certain aspects of their learning, such as the time, place, and pace of their studies [14]. Also, it gives students the freedom to interact with course materials and activities at their own pace and convenience, frequently incorporating components of independent study and self-directed learning. This approach ensures that education continues even when universities close, which is especially helpful in the COVID-19 pandemic setting [15].

3.1.2. Time management

Table 2 presents the level of the practices of the preservice teachers on flexible learning modality in the post-pandemic time in terms of adaptability. The results indicate that the level of practice of the preservice teachers' time management on flexible learning modality is high. It can be gleaned that the statement, "I set aside enough time for rest, relaxation, and self-care activities to prevent burnout and preserve my general health," got the highest mean score of 3.39, which is interpreted as the level of practice is high. On the other hand, the statement "to increase productivity during study sessions, I get rid of distractions to increase productivity during study sessions," got the lowest mean score of 3.18, which indicates that the level of practice is high. The overall weighted mean score of 3.26 further supports this interpretation.

Table 2. Mean distribution of the level of the practices of the preservice teachers on flexible learning modality in the post-pandemic time in terms of time management

No	Indicators	Level of readiness		Interpretation
		Mean	Description	
1	I efficiently manage my time by prioritizing my tasks and responsibilities.	3.23	Agree	The level of preservice teachers' practices is high.
2	I break larger assignments or projects into smaller, achievable tasks to promote better time management.	3.24	Agree	The level of preservice teachers' practices is high.
3	I reflect on my time management skills and identify areas for improvement to increase my overall efficiency and productivity.	3.28	Agree	The level of preservice teachers' practices is high.
4	I set aside enough time for rest, relaxation, and self-care activities to prevent burnout and preserve my general health.	3.39	Agree	The level of preservice teachers' practices is high.
5	To increase productivity during study sessions, I get rid of distractions.	3.18	Agree	The level of preservice teachers' practices is high.
	Overall weighted mean	3.26	Agree	The level of preservice teachers' practices is high.

Range of means: 1.00-1.49 (strongly disagree); 1.50-2.49 (disagree); 2.50-3.49 (neutral); 3.50-4.49 (agree); 4.50-5.00 (strongly agree)

This implies that ensuring preservice teachers' holistic health and longevity necessitates the deliberate allocation of time for self-care practices, mitigating the risk of burnout and preserving their overall well-being. Furthermore, these preservice teachers can significantly amplify their productivity levels by strategically minimizing distractions and fostering conducive study environments, particularly in flexible learning modalities. This concerted effort bolsters their academic pursuits and propels them toward realizing their full potential in their educational journey.

Effective time management has become essential for education students in the post-pandemic era as they navigate diverse learning modalities. Educational institutions are motivated to promote learning through online mediums to maintain the flow of education [16]. With a shift towards remote or blended learning, students manage their time to combine their obligations, online lectures, and schoolwork. Students with good time management skills may complete coursework on time, participate in worthwhile learning activities, and strike a healthy work-life balance. Students' ability to adapt to online learning and their ongoing motivation to engage are two crucial factors that impact the success of online education systems [17]. Additionally, it helps students maintain discipline and self-control in dealing with the difficulties brought about by asynchronous learning environments. Time management techniques give students the resilience and adaptability they need to excel in their academic endeavors as they strive to balance their academic responsibilities with their personal lives in the post-pandemic dynamic educational context, allowing them to achieve and complete courses throughout the academic year [18].

Students' capacity to prioritize their studies, establish specific goals, and take initiative in fulfilling their academic obligations is strongly associated with successful time management and educational accomplishment. Time management is regarded as a vital component for effectively handling tasks and responsibilities [19], [20]. Students can successfully discourage procrastination and keep their attention on their learning goals by stressing these strategies. This emphasizes how crucial it is to develop proactive habits and an organized learning style, both of which are necessary for academic success in flexible learning modality. Thus, encouraging effective time management for preservice teachers gives them the advantage of adequately dividing their academic tasks with a certain amount of time to cater to their learning needs [21].

3.2. What is the extent of the challenges faced by preservice teachers on flexible learning modality in post-pandemic time in terms of?

3.2.1. Internet connectivity

Table 3 presents the extent of challenges preservice teachers face regarding flexible learning modality in the post-pandemic time in terms of internet connectivity. The results indicate that the extent of challenges of the preservice teachers' internet connectivity on flexible learning modality is high. It can be gleaned that the statement, "I get worried, upset, or frustrated when difficulties with internet connectivity interfere with my ability to learn or perform academically," got the highest mean score of 3.36, interpreted as a high extent of the challenge. On the other hand, the statement, "I occasionally miss deadlines, updates, or significant announcements due to internet access problems," got the lowest mean score of 2.70, indicating the challenge's extent is high. The overall weighted mean score of 3.04 further supports this interpretation.

Table 3. Mean distribution of the extent of the challenges faced by preservice teachers on flexible learning modality in post-pandemic time in terms of internet connectivity

No	Indicators	Extent of realizations		Interpretation
		Mean	Description	
1	The internet speed is enough for me to participate in online activities.	3.05	Agree	The extent of preservice teachers' challenges is high.
2	My internet connection has frequent disturbances or interruptions.	3.25	Agree	The extent of preservice teachers' challenges is high.
3	I have difficulty getting secure internet connectivity in certain areas.	3.06	Agree	The extent of preservice teachers' challenges is high.
4	I get worried, upset, or frustrated when difficulties with internet connectivity interfere with my ability to learn or perform academically.	3.36	Agree	The extent of preservice teachers' challenges is high.
5	I occasionally miss deadlines, updates, or significant announcements due to internet access problems.	2.70	Strongly agree	The extent of preservice teachers' challenges is high.
	Overall weighted mean	3.04	Agree	The extent of preservice teachers' challenges is high.

Range of means: 1.00-1.49 (strongly disagree); 1.50-2.49 (disagree); 2.50-3.49 (neutral); 3.50-4.49 (agree); 4.50-5.00 (strongly agree)

Preservice teachers' academic performance is heavily affected by the dependability of internet connectivity. Internet connectivity dramatically impacts students' ability to use flexible learning modes post-pandemic. Reliable internet access is essential for using online resources, participating in remote

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learning, and submitting assignments. Access to internet-connected devices has become crucial for students to engage fully in their new learning environments [22]. Students with reliable connectivity can participate entirely in interactive classes, access various learning resources, and collaborate with classmates easily. However, the lack of reliable internet access can isolate students from valuable online resources and collaborative learning opportunities, limiting their ability to fully engage in modern educational practices. This digital divide impacts academic performance and hampers the development of essential digital literacy skills crucial for success in today's interconnected world. The pandemic is likely to widen achievement gaps, as variations in schools' and parents' engagement with online resources affect their ability to offset lost in-person learning time [23]. Addressing this issue requires concerted efforts from policymakers, educators, and communities to ensure equitable access to technology and internet infrastructure for all students, regardless of their socioeconomic background and literacies. Additionally, ensuring equitable access to technology and resources has become vital for the success of remote education [24]–[26].

Among the disadvantages of flexible learning modalities are the relatively high cost of internet connectivity and the difficulty of participation and collaborative thinking in an online environment. Additionally, for students who rely on data connections, the cost of accessing the internet can be considerable, especially when downloading documents that can empty their load balance. Since not all places have a strong internet and data connection, accessing an internet connection will make it challenging to participate in blended classes and submit their outputs through online platforms [27].

3.2.2. Learning environment

Table 4 presents the extent of challenges preservice teachers face regarding flexible learning modality in the post-pandemic time in terms of learning environment. The results indicate that the extent of challenges faced by the preservice teachers' learning environment in terms of flexible learning modality is high. It can be gleaned that the statement, “external factors like temperature, light, and noise interfere with my ability to focus and interact with the course materials,” got the highest mean score of 3.23, interpreted as a high extent of the challenge. On the other hand, the statement “in my learning environment, I have access to the tools and materials I need, like laptops, textbooks, and dependable internet,” got the lowest mean score of 2.98, indicating that the extent level is high. The overall weighted mean score of 3.13 further supports this interpretation.

This implies that students using flexible learning modalities significantly influence how they view their educational experiences. A supportive learning environment substantially impacts students' capacity to concentrate, pay attention, and remember real or virtual knowledge. It is defined by relationships of trust and respect between students and teachers and among students themselves. In such an environment, students feel motivated, supported, and challenged, fostering a positive attitude toward their learning [28]. An orderly, distraction-free atmosphere that promotes focus and productivity benefits students. Geographical location also plays a role in the challenges faced by students in flexible learning. The challenges of preservice teachers in flexible learning also include the tendency towards procrastination due to the comfort of the online environment, leading to rushed and incomplete activities [29]. Challenges with the learning environment, like light, noise, and temperature, greatly influence how well children learn in flexible learning modalities. Noise disruptions, whether from outside sources or within a student's home, can impair focus and comprehension, making it challenging for them to interact with the course materials. Cognitive performance is negatively influenced by noise pollution [30].

Table 4. Mean distribution of the extent of the challenges faced by preservice teachers on flexible learning modality in post-pandemic time in terms of learning environment

No	Indicators	Extent of realizations		Interpretation
		Mean	Description	
1	My learning environment is comfortable and favorable to study.	3.09	Agree	The extent of preservice teachers' challenges is high.
2	Distractions in my learning environment interfere with my ability to study or concentrate.	3.15	Agree	The extent of preservice teachers' challenges is high.
3	My learning environment generates an inclusive atmosphere that makes me feel welcome and appreciated.	3.19	Agree	The extent of preservice teachers' challenges is high.
4	I can access the necessary tools and materials in my learning environment, like laptops, textbooks, and dependable internet.	2.98	Agree	The extent of preservice teachers' challenges is high.
5	External factors like temperature, light, and noise interfere with my ability to focus and interact with the course materials.	3.23	Strongly agree	The extent of preservice teachers' challenges is high.
	Overall weighted mean	3.13	Agree	The extent of preservice teachers' challenges is high.

Range of means: 1.00-1.49 (strongly disagree); 1.50-2.49 (disagree); 2.50-3.49 (neutral); 3.50-4.49 (agree); 4.50-5.00 (strongly agree)

3.3. Is there a significant relationship between the practices and challenges of preservice teachers with flexible learning modalities?

Table 5 illustrates the correlation analysis of the significant relationship between the practices and challenges of preservice teachers with flexible learning modalities in the post-pandemic time. The results revealed that the level of the practices of the preservice teachers (p-value: 0.000) and the extent of the challenges of the preservice teachers (p-value: 0.000) with flexible learning modalities have a significant relationship. Moreover, the r-value, 0.357, indicates moderate to strong correlations between the variables. These results suggest that the practices of preservice teachers on flexible learning modality in the post-pandemic time have a significant relationship with the challenges they face.

Table 5. Correlation analysis of the significant relationship between the practices and challenges of preservice teachers with flexible learning modalities in the post-pandemic time

Variable 1	Variable 2	r-value	p-value	Decision	Significant
Level of the practices	Extent of the challenges	0.357	0.000	Reject Ho	Significant

Correlation is significant at 0.05 level (2-tailed)

The results show that the practices of preservice teachers in terms of adaptability and time management tend to increase the extent of challenges they face in flexible learning modality in the post-pandemic time; specifically, internet connectivity and learning environment also tend to increase. The positive correlation suggests that as preservice teachers engage more in certain flexible learning practices, they may encounter additional challenges. This could imply that the demands or expectations associated with flexible learning practices intensify their challenges. Understanding the relationship between these essential practices and the challenges they encounter can inform targeted interventions and support systems to enhance the adaptability and success of preservice teachers in navigating challenges on flexible learning modalities.

Adaptability and resilience are crucial for preservice teachers, allowing them to navigate challenges and sustain educational quality effectively. These qualities empower them to enhance student learning despite stressors such as deadlines and unreliable internet connectivity [31]. Despite possible disruptions to the learning environment, teachers can effectively plan virtual learning sessions and attend to the various demands of their studies by using effective time management techniques. Knowing how to use learning management system (LMS) platforms effectively gives preservice teachers the tools they need to promote smooth communication and resource distribution, reducing issues with device accessibility and guaranteeing that all students have fair access to instructional resources regardless of possible financial constraints. In essence, the relationship between preservice teachers' practices and the challenges of flexible learning modality in post-pandemic times underscores the importance of good practices to lessen their challenges.

4. CONCLUSION

The study's findings highlight the adaptability and resilience of preservice teachers as they navigate the complexities of flexible learning modalities in a post-pandemic educational environment. The correlation analysis revealed a significant positive relationship between the level of practices they engage in and their challenges. It suggests that while they increasingly adopt flexible learning approaches, the challenges associated with these practices also rise. This emphasizes that, despite facing hurdles, preservice teachers have shown a commendable capacity to adapt to new educational technologies and methodologies. Their adaptability enables them to embrace each new learning environment as a meaningful opportunity for growth, skill enhancement, and professional development.

Moreover, the data supports the observation that preservice teachers are well-prepared for technological advancements and demonstrate a proactive approach to incorporating new tools into their learning routines. Equipped with effective time management skills, they can balance academic coursework with other personal and professional responsibilities. This balance allows them to engage fully in coursework and collaborative activities. It provides room for self-care, essential for maintaining their well-being and fostering long-term resilience in their educational journeys.

However, despite their adaptability and skills, preservice teachers face significant challenges that impact their academic performance and engagement. These challenges include internet connectivity issues and environmental factors such as temperature, noise, and space limitations. These external factors can create distractions, reduce concentration, and inhibit effective participation in online or blended learning environments, ultimately impacting their academic performance. Addressing these issues will require institutional support, such as ensuring access to stable internet connections, promoting quiet and conducive study environments, and possibly offering flexible learning spaces within educational institutions.

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C : Conceptualization

M : Methodology

So : Software

Va : Validation

Fo : Formal analysis

I : Investigation

R : Resources

D : Data Curation

O : Writing - Original Draft

E : Writing - Review & Editing

Vi : Visualization

Su : Supervision

P : Project administration

Fu : Funding acquisition

CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest regarding this research article.

DATA AVAILABILITY

The derived data supporting the findings of this study can be obtained from the corresponding author [LLCJ] upon request.




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