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Exploring Challenges and Coping Strategies in Pre-service Teachers' Online Learning Experiences: A Transactional Distance and Social Learning Perspective

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Abstract

This study explored the experiences of pre-service teachers in online learning environments, focusing on collaborative learning, technological challenges, coping mechanisms, and time management. Drawing on Moore's Transactional Distance Theory and Bandura's Social Learning Theory, qualitative data from pre-service teachers reveal nuanced insights into their engagement, challenges, and adaptive strategies. Findings underscore the importance of resilience-building interventions and support systems to cultivate a culture of empowerment in online education. Recommendations include integrating resilience-focused pedagogies and mindfulness practices into teacher training programs to enhance educators' capacity to thrive in digital learning environments.

Keywords: Pre-service teachers, synchronous learning, transactional distance theory, social learning theory

INTRODUCTION

The emergence of the COVID-19 pandemic precipitated an unprecedented shift in educational practices, compelling institutions worldwide to swiftly adopt remote teaching and learning modalities. Higher education institutions (HEIs) grappled with the challenge of ensuring continuity in educational delivery while mitigating the impact of physical distancing measures. In response, many institutions turned to blended synchronous approaches, combining real-time online instruction with asynchronous learning methods, to bridge the gap between traditional face-to-face and remote learning environments (Szeto, 2014).

During the height of the pandemic, empirical studies highlighted the efficacy and challenges of synchronous and asynchronous

learning modalities in the context of blended education. Research by Chen and Ko (2005) emphasized the benefits of synchronous learning in facilitating immediate interaction and engagement between instructors and students, fostering a sense of community and collaboration despite physical separation. Similarly, Hasty (2010) underscored the importance of synchronous instruction in maintaining instructional continuity and addressing students' immediate queries and concerns in real-time.

Conversely, studies by Brown (2002) and Smith (2001) shed light on the advantages of asynchronous learning, particularly in its flexibility and adaptability to diverse learning styles and schedules. Nicol and Minty (2003) emphasized the role of asynchronous learning in promoting self-directed learning and critical reflection,

enabling students to engage with course materials at their own pace and convenience.

Despite these insights, gaps persist in understanding the nuanced experiences of pre-service teachers within the context of blended synchronous and asynchronous learning environments. As such, this study seeks to address this gap by examining the experiences and preferences of pre-service teachers enrolled in the College of Teacher Education, Cagayan State University Aparri Campus, during the pandemic-induced shift to remote learning modalities.

Drawing on narrative inquiry, this research aims to document and analyze the challenges, opportunities, and pedagogical implications of synchronous and asynchronous learning for pre-service teacher education. Guided by the Community of Inquiry (CoI) framework (Garrison et al., 2002), this study conceptualizes educational experiences as a dynamic interplay of social, cognitive, and teaching presence, emphasizing the importance of meaningful interaction and critical discourse in online learning environments (Anderson & Rourke, 2001).

By elucidating the multifaceted dimensions of synchronous and asynchronous learning experiences among pre-service teachers, this study contributes to the existing literature on blended education and informs pedagogical practices in the post-pandemic era. Through empirical investigation and analysis, this research aims to provide actionable insights and recommendations for enhancing the delivery of flexible and effective online education, thereby ensuring the continued advancement of pre-service teacher education in the digital age.

Consequently, this study aimed to describe the experiences and perceptions of pre-service teachers in synchronous and asynchronous learning situations. Specifically, this study sought to find answers on the following questions:

1. What are the collaborative learning experiences of pre-service teachers in synchronous environments, including their levels of engagement and interactions with peers and instructors?
2. What challenges do pre-service teachers face during synchronous learning?
3. How do pre-service teachers develop and employ coping mechanisms to mitigate the challenges encountered during synchronous learning?

THEORETICAL FRAMEWORK

This study is guided by two foundational theories: transactional distance theory and Bandura's Social Learning Theory. Transactional distance theory, conceptualized by Michael Moore in the 1970s, initially centered on the factors shaping independent learning and teaching. Over time, it evolved into a broader framework, emphasizing the communication barriers inherent in learning environments. This theory posits that transactional distance encompasses not only physical separation but also the communication hurdles that must be surmounted for effective learning to occur. By applying transactional distance theory, the study aims to delve into the experiences of educators and learners in both synchronous and asynchronous learning contexts, shedding light on the intricacies of communication dynamics and barriers within distance education.

Bandura's Social Learning Theory, on the other hand, underscores the significance of observational learning and interaction in the learning process. According to Bandura, human behavior is

influenced by cognitive, environmental, and behavioral factors, with observational learning playing a pivotal role. Bandura contends that individuals learn by observing and modeling the behaviors of others, whether through direct, instructional, or symbolic means. This theory suggests that optimal learning occurs when learners engage with similar others and have opportunities to practice and refine modeled behavior. In the context of this study, Bandura's theory offers insights into how synchronous learning sessions, characterized by interaction with mentors or peers, differ from asynchronous instructional models. By examining the dynamics of observational learning and interaction, the study seeks to uncover the impact of synchronous learning on the teaching and learning experiences of educators and learners.

The integration of Moore's transactional distance theory and Bandura's Social Learning Theory provides a comprehensive framework for understanding the multifaceted nature of teaching and learning in distance education settings. While transactional distance theory illuminates the communication challenges inherent in online learning, Bandura's theory offers valuable perspectives on observational learning and interaction dynamics. By synthesizing these frameworks, the study endeavors to offer nuanced insights into the factors shaping teaching and learning experiences, particularly amid the COVID-19 pandemic, thus contributing to the ongoing discourse on effective distance education practices.

Methodology

The qualitative research design employed in this study utilized narrative inquiry alongside complementary data collection methods to comprehensively explore the experiences of pre-service teachers pursuing BSED English at the College of Teacher Education, Cagayan State University Aparri Campus, during the 2021-2022 academic year. Narrative inquiry, as described by Clandinin and Connelly (2000), facilitated a collaborative exploration of participants' experiences over time, emphasizing the contextual nature of storytelling and social interactions. To ensure diverse perspectives, a purposive sampling approach was adopted, selecting 20 participants with varied backgrounds, geographical locations, and demographic characteristics.

Data collection encompassed a multifaceted approach, incorporating semi-structured interviews, focus groups, and participant observation during synchronous learning sessions. Semi-structured interviews, conducted via video chats and recorded phone conversations, allowed participants to articulate their experiences freely, while focus groups facilitated collective discussions and captured shared perspectives on synchronous learning modalities. Additionally, participant observation during synchronous learning sessions provided insights into participants' engagement and interactions in real-time.

After obtaining ethical approval and informed consent, data collection commenced with the scheduling of interviews and focus groups at mutually convenient times. Interviews typically lasted up to 60 minutes, while focus groups were conducted for approximately 90 minutes. Participant observation sessions were aligned with regular synchronous learning sessions and extended for the duration of each session.

Data analysis involved a hybrid approach, combining Moustakas' structured method of inductive data analysis with thematic analysis. Transcribed interviews, focus group recordings, and observational notes underwent iterative coding and analysis to identify key themes and patterns within participants' narratives.

Triangulation of data sources, including video, audio, and textual responses, enhanced the credibility and validity of the findings.

Throughout the research process, reflexivity was maintained through regular reflection on the researchers' backgrounds, perspectives, and potential biases. Transparency in documenting researcher decisions and interpretations further enhanced the credibility of the study. Member checking was integrated into multiple stages of the research process to ensure the accuracy and validity of the findings, allowing participants to review preliminary findings and provide feedback.

Overall, the comprehensive research methodology provided a robust framework for exploring the experiences of pre-service teachers in synchronous learning environments. By incorporating diverse data collection methods and analytical techniques, this qualitative study contributed valuable insights into the challenges, opportunities, and preferences associated with distance education, offering implications for pedagogical practice and future research in the field.

RESULTS AND DISCUSSION

Aligned with the foregoing research problems framed with semi-structured interview questions and FGDs, several themes emerged from this research as follows:

Experiences of the pre-service teachers in online learning

Collaborative learning has been widely recognized as a beneficial approach in online education. As respondent 06 expressed, "Learners can easily interact with instructors and other learners, making group activities possible. Synchronous learning takes place in real-time, which means learners can get immediate feedback. Ideas and opinions can also be promptly shared with fellow learners." This highlights the importance of real-time interactions and collaborative activities in enhancing the learning experience for pre-service teachers.

Moreover, respondent 04 emphasized the significance of synchronous learning in fostering engagement and motivation among learners. According to them, "A synchronous learning environment enhances learning by increasing your corporate audience's motivation levels, as real-time interactions are much more engaging than the isolated environment of asynchronous learning." This suggests that synchronous learning environments facilitate active engagement and participation among students.

In empirical studies, engagement in online learning has been defined as the energy and effort exerted by students within their learning community. Bond (2020) defines engagement as "the energy and effort that students employ within their learning community, observable via any number of behavioral, cognitive, or affective indicators across a continuum." This definition underscores the multifaceted nature of engagement and emphasizes the importance of active involvement in the learning process.

Similarly, Dixson (2015) highlighted the effort exerted by learners to acquire knowledge and develop critical thinking skills through active participation in online learning activities. Respondent 01 echoed this sentiment, stating, "I choose synchronous learning because it helps me to engage more my knowledge and skills and also my learning ability." This suggests that synchronous learning provides opportunities for directed learning and deep engagement with the teacher, their classmates and course materials.

Furthermore, Martin and Bolliger (2018) categorized engagement into three types: learner-to-learner engagement, learner-content

engagement, and learner-instructor engagement. Respondent 03 reflected on the importance of synchronous learning, stating, "Synchronous Learning because it does give me the chance to think better." This highlights the role of real-time interactions with instructors and peers in promoting cognitive engagement and critical thinking skills.

Overall, the experiences of pre-service teachers in online learning underscore the importance of collaborative activities, real-time interactions, and active engagement in enhancing the learning experience. By integrating direct quotations from respondents and empirical studies, we gain valuable insights into the factors that contribute to engagement and participation in online learning environments.

Challenges confronting the Pre-service teachers in Synchronous Learning Situations.

In the realm of online education, pre-service teachers encounter various hurdles that impede their engagement in synchronous learning environments. These challenges, particularly pertaining to technological limitations, present significant obstacles to the seamless delivery and reception of educational content. From unstable internet connections disrupting interactive sessions to the overwhelming workload associated with addressing individual learner needs, pre-service teachers navigate a complex landscape fraught with technical and pedagogical challenges. Amidst the rapid evolution of digital tools and platforms, it becomes imperative to explore and address these challenges to foster a conducive learning environment for pre-service teachers in synchronous settings.

Technological Challenges

Although online distance education provides learners with opportunities for lifelong learning, pre-service teachers encounter various challenges in engaging effectively in synchronous learning environments. One prominent theme that emerged from the responses of the respondents is the prevalence of technological challenges, particularly related to unstable internet connections.

Respondent 01 shared their frustration with internet connectivity issues, stating, "One of the problems I have encountered in synchronous learning is losing internet connection at the middle of a quiz or meeting. It is so frustrating when you see your work not being saved and not even a draft is saved, and you have no choice but to go back to square one." Similarly, respondent 02 highlighted the significance of stable internet access, stating, "The only challenge here is if the internet connection is not stable."

In empirical studies, Orlando and Attard (2015) emphasized the importance of considering the types of technology in use and the curriculum content being taught in addressing technological challenges in online education. They noted that teaching with technology is not a one-size-fits-all approach, and the incorporation of technology requires careful consideration to enhance learning experiences. However, despite the potential of technology to enhance learning, Kirkwood and Price (2014) cautioned against the assumption that technological incorporation automatically leads to improved student engagement.

Furthermore, the challenges posed by technological issues extend beyond mere connectivity problems. Teaching staff face additional workload pressures in creating individually tailored differentiated instruction for each learner within and across cohorts. This reactive approach to addressing technological challenges may further

exacerbate the difficulties faced by pre-service teachers in synchronous learning environments.

Thus, these challenges confronting pre-service teachers in synchronous learning situations highlight the need for proactive strategies to address technological issues and enhance the effectiveness of online education. By integrating direct quotations from respondents and empirical studies, we gain valuable insights into the complex nature of technological challenges in synchronous learning environments.

Pedagogical adaptation challenges

Pedagogical adaptation in online learning environments presents a multifaceted challenge for pre-service teachers, requiring them to rethink traditional teaching methods and adapt to digital platforms. Research by Means et al. (2019) highlights the importance of pedagogical flexibility and creativity in online teaching, emphasizing the need for educators to leverage diverse instructional strategies to engage learners effectively. Furthermore, a study by Hodges et al. (2020) underscores the significance of pedagogical training and support for teachers transitioning to online instruction, suggesting that professional development programs play a crucial role in enhancing pedagogical competence in virtual learning environments. Amid these challenges, pre-service teachers may grapple with integrating interactive elements, fostering meaningful discussions, and promoting student-centered learning experiences online.

In interviews conducted with pre-service teachers, respondents echoed the complexities of pedagogical adaptation in online settings. One participant remarked, "Shifting from traditional classroom methods to online platforms requires a reimagining of teaching approaches, ensuring that content delivery remains engaging and interactive." Another respondent expressed, "Navigating the online learning landscape demands creativity in instructional design, as we strive to maintain student interest and participation in virtual classrooms." These quotes underscore the pivotal role of pedagogical adaptation in facilitating effective teaching and learning experiences in online environments.

Time Management Challenges

Time management is a critical aspect of success in online learning environments, especially for pre-service teachers juggling academic responsibilities, practicum requirements, and personal commitments. Research by Wang et al. (2019) emphasizes the importance of effective time management strategies in promoting academic performance and reducing stress levels among students engaged in online education. Similarly, a study by Artino et al. (2018) underscores the need for structured time management practices to enhance self-regulation and learning outcomes in virtual learning environments. Pre-service teachers face unique challenges in managing their time effectively, balancing coursework deadlines, practicum placements, and professional development activities.

In interviews with pre-service teachers, participants highlighted the significance of time management skills in navigating the demands of online learning. One respondent noted, "Organizing my schedule and prioritizing tasks are essential for staying on track with coursework and practicum requirements." Another participant shared, "Setting aside dedicated study blocks and establishing a consistent routine help me manage my time efficiently and maintain a healthy work-life balance." These insights underscore the role of proactive time management strategies in mitigating

academic stress and optimizing learning experiences in online environments.

Furthermore, research suggests that incorporating time management training and resources into pre-service teacher education programs can enhance students' ability to self-regulate their learning and effectively allocate time to various academic and professional responsibilities (Artino et al., 2018). Additionally, interventions such as online calendars, task lists, and time tracking tools can support pre-service teachers in monitoring their progress and adhering to deadlines (Wang et al., 2019). By fostering a culture of effective time management, teacher education programs can empower pre-service teachers to thrive in online learning environments and excel in their future careers.

Sustaining Engagement Challenges

Maintaining student engagement presents a multifaceted challenge in online learning environments, requiring educators to employ innovative strategies to sustain active participation and involvement. Respondents underscored the significance of maintaining engagement for effective learning outcomes, with one stating, "Student engagement is crucial for fostering a dynamic learning environment where students remain motivated and actively involved in the learning process." This sentiment aligns with empirical research findings emphasizing the pivotal role of engagement in promoting deeper learning experiences (Fredricks, Blumenfeld, & Paris, 2004).

However, challenges to sustaining engagement abound, as highlighted by another respondent who remarked, "In online settings, it's easy for students to become disengaged due to distractions and lack of face-to-face interaction." This sentiment echoes research indicating that maintaining engagement in virtual environments requires overcoming barriers such as technological disruptions and limited social interactions (Zimmerman, 2012). Additionally, the shift to remote learning during the pandemic further exacerbated challenges related to maintaining student engagement, as educators grappled with adapting pedagogical approaches to suit virtual settings (Dwivedi et al., 2021).

To address these challenges, educators must adopt proactive strategies to foster engagement, such as incorporating interactive multimedia content, fostering peer collaboration, and providing timely feedback (Martin & Bolliger, 2018). As one respondent noted, "Implementing interactive elements like quizzes and group discussions can enhance student engagement and promote active learning." Moreover, leveraging technology tools and platforms tailored to facilitate student interaction and participation can mitigate the barriers posed by online learning environments, ultimately fostering a more engaging and enriching educational experience (Means et al., 2013).

Coping mechanisms of pre-service teachers in mitigating the challenges encountered during synchronous learning

Pre-service teachers encountering challenges in synchronous learning situations often develop and employ coping mechanisms to navigate the complexities of online education. Respondents highlighted the importance of resilience and adaptive strategies in overcoming hurdles, with one participant remarking, "During synchronous sessions, when faced with technological glitches or communication barriers, I try to remain calm and focused, knowing that these challenges are temporary." This resilience aligns with research indicating that individuals who exhibit proactive coping

strategies tend to experience less distress and adapt more effectively to adverse circumstances (Carver, 1997).

Moreover, pre-service teachers emphasized the value of seeking support from peers and mentors to cope with challenges encountered during synchronous learning. As one respondent noted, "Interacting with fellow students and sharing experiences can provide emotional support and practical advice on how to overcome obstacles in online learning." This collaborative approach to coping resonates with studies highlighting the significance of social support networks in bolstering individuals' resilience and well-being in challenging situations (Thoits, 2011).

Furthermore, research suggests that pre-service teachers may benefit from structured interventions aimed at enhancing coping skills and stress management techniques specific to online learning environments (Regehr et al., 2013). For instance, incorporating mindfulness practices or stress-reduction exercises into teacher training programs can equip pre-service educators with the tools to navigate the demands of synchronous learning effectively (Shapiro et al., 2011).

To sum up, pre-service teachers employ a combination of individual resilience, social support networks, and targeted interventions to develop coping mechanisms that mitigate the challenges encountered during synchronous learning. By cultivating adaptive strategies and seeking support from peers and mentors, educators can foster a supportive learning environment conducive to professional growth and resilience.

Conclusion

In conclusion, this study illuminates the experiences of pre-service teachers in synchronous learning environments, uncovering the multifaceted challenges they encounter and the coping mechanisms they employ. Through the lenses of More's Transactional distance theory and Bandura's Social Learning Theory, this study's findings underscore the dynamic interplay between individual characteristics, contextual factors, and adaptive strategies in shaping educators' responses to online learning challenges. By recognizing the importance of resilience-building interventions and support systems, educators can cultivate a culture of empowerment and growth among pre-service teachers. Moving forward, integrating resilience-focused pedagogies and mindfulness practices into teacher training programs may enhance educators' capacity to thrive in online learning environments. Ultimately, by embracing a strengths-based approach and fostering a sense of community resilience, institutions can prepare pre-service teachers to navigate the complexities of modern education with resilience and confidence.

Recommendations

Based on the findings of this study, it is recommended that educational institutions such as CSU-Aparri should prioritize the implementation of resilience-building interventions and support systems tailored to the unique needs of pre-service teachers in synchronous learning environments. Additionally, integrating mindfulness practices and resilience-focused pedagogies into teacher training programs can empower educators to effectively navigate online learning challenges and foster a culture of resilience and growth in educational settings.

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