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Learning in a Borderless Classroom: A Phenomenological Study of Learning During Education Disruption

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Abstract. This phenomenological study explores the multidimensional digital learning experiences of students at Camarines Sur Polytechnic Colleges, Philippines, during the transition to remote learning prompted by the COVID-19 pandemic. While numerous studies have examined online learning, there remains a gap in understanding how students in resource-constrained, multilingual contexts cope with digital education, particularly in provincial state colleges. Conducted during the academic year 2022–2023, this study aimed to (1) decipher how students coped with the digital divide and diverse learning styles and (2) understand the strategies they employed in adapting to educational shifts. Using a qualitative phenomenological approach, purposive sampling was employed to select college students who had undergone prolonged digital learning. Data were gathered through in-depth interviews. Four kev themes emerged: Adaptation and Resilience in Digital Learning, Digital Divide and Access Challenges, Social Interaction and Community Building, and Enhanced Understanding Through Multilingual Approaches. Findings revealed that despite technological limitations, students demonstrated resilience and proactive learning attitudes. However, access to digital tools and stable connectivity posed significant barriers. The study also highlighted the role of virtual social interactions in fostering community and the effectiveness of multilingual approaches in promoting inclusivity and cultural relevance. The study addresses a crucial gap by bringing to light the lived experiences of digitally marginalized students in multilingual communities. It recommends that educators and policymakers promote equitable digital access, strengthen digital literacy programs, and adopt linguistically and culturally responsive teaching strategies to create an inclusive, interactive, and equitable borderless learning environment.

Keywords: Digital Divide; Digital Learning; Multilingual Education; Online Education; Phenomenological Study

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1. Introduction

Today, education is undergoing a significant transformation driven by rapid technological advancements and the growing global accessibility of information. This convergence has introduced the concept of the borderless classroom, wherein traditional barriers dissolve, allowing students to access educational resources regardless of time, location, or physical presence (Anderson & Dron, 2011). However, this shift toward digital learning environments was accelerated under chaotic circumstances, particularly during the COVID-19 pandemic, which disrupted educational systems worldwide. Hodges et al. (2020) argue that such global disruptions have highlighted the urgent need to understand students' learning experiences better and how they adapt to change. While digital education opens new opportunities, it also presents substantial challenges, including unequal access to technology and the need to accommodate diverse learning styles. Barbour (2013) emphasizes that understanding these complexities is essential for developing inclusive pedagogical practices and equitable education policies.

This study is grounded in established theoretical models that help frame the nature of online learning. Garrison et al.'s (2000) Community of Inquiry model outlines the core elements of digital education: cognitive presence, social presence, and teaching presence. Complementing this, the works of Bates et al. (2016) and Ally (2004) provide insights into the philosophical and instructional foundations of online learning, helping educators and researchers better understand student experiences in the virtual environment. In addition, this study highlights the relevance of multilingual education, which refers to the use of two or more languages as mediums of instruction or support within educational settings. In the borderless classroom, multilingual approaches promote inclusivity, affirm cultural identities, and bridge language gaps that may hinder comprehension and participation, especially in linguistically diverse regions like the Philippines. This research aims to examine the lived experiences of students in borderless classrooms to gain deeper insights into their realities. Specifically, the study seeks to explore how students cope with the digital divide and diverse learning styles and to determine the strategies they use in adapting to the abrupt shifts in education delivery brought about by the pandemic. In line with these objectives, the study is guided by two central research questions: How do students experience and cope with the digital divide in a borderless classroom environment? What learning strategies do students adopt to manage various learning styles and sudden educational transitions?

The research was conducted among students at Camarines Sur Polytechnic Colleges who experienced the shift to remote and flexible learning during the COVID-19 outbreak. It is important to note that the study does not attempt to address all factors influencing digital learning but focuses on the main challenges and coping mechanisms expressed by the participants. Additionally, because this is a qualitative study, it does not involve quantitative metrics of academic performance, and therefore, the results cannot be generalized to all contexts. Instead, it provides rich, contextualized insights into students' subjective

experiences, contributing a much-needed qualitative perspective to a field largely dominated by quantitative research (Jaggars & Bailey, 2010).

To achieve this, the study employs a phenomenological approach, a qualitative research design that focuses on capturing and interpreting the lived experiences of individuals. In this context, phenomenology allows the researcher to understand how students perceive, interpret, and assign meaning to their experiences in the borderless classroom (Garrison et al., 2000). One of the major concerns surrounding borderless classrooms is the risk of social disconnection. Unlike traditional classrooms, where social bonds and a sense of belonging emerge naturally, the virtual classroom requires intentional efforts to foster community and engagement. The issue of the digital divide also remains a persistent barrier. As Zhao and Frank (2003) note, students from economically disadvantaged backgrounds are less likely to have access to the necessary devices, internet connectivity, and digital tools required for effective participation in online education. Furthermore, students exhibit varied learning preferences and cognitive styles, which must be accommodated in digital settings.

In response to these challenges, students in borderless classrooms develop and employ diverse strategies to succeed. Technological adaptability allows them to navigate various platforms and tools. At the same time, self-regulation skills such as time management, goal setting, and progress monitoring play a crucial role in improving learning outcomes (Jaggars & Bailey, 2010). Collaborative learning also emerges as a vital element, as group tasks and peer interaction help minimize feelings of isolation and enhance engagement (Palloff & Pratt, 2013). As the digital learning landscape continues to evolve, the ability to thrive in such environments becomes an essential skill for learners. This study, through a multiple-case qualitative design, provides insights into the ways students manage, adapt, and grow within the context of a borderless classroom.

Ultimately, this research contributes to the expanding field of online learning by illuminating the resilience and adaptability of students as they navigate digital education. The findings are expected to inform educators, instructional designers, and policymakers in crafting pedagogical strategies that promote equitable digital access, support diverse learning needs, and ensure meaningful participation for all learners. In doing so, this study envisions a future where no student is left behind, regardless of background, circumstance, or setting.

2. Literature Review

The rapid advancements in technology and the forces of globalization have significantly transformed the educational landscape, giving rise to the concept of the borderless classroom. This virtual learning environment allows students to access educational resources and engage in learning without physical boundaries, a shift that became particularly crucial during disruptions like the COVID-19 pandemic. This literature review examines various facets of borderless classroom learning, focusing on the challenges faced by learners, adaptive strategies employed, and the theoretical foundations that underpin these educational transformations. Challenges within the borderless classroom are multifaceted, encompassing issues such as the digital divide, social segregation, and the diversity of learning styles and needs. Zhao (2003) underscores how the digital divide, exacerbated during crises, hinders equal access to technology and educational resources. Additionally, the absence of face-to-face interaction in virtual classrooms necessitates deliberate efforts to foster social presence, as highlighted by Garrison and Archer (2000). The diversity in learning preferences calls for innovative and inclusive pedagogical approaches to ensure that all students can effectively participate in the education process (Palloff & Pratt, 2013). Moreover, Erstad and Silseth (2023) underscore that boundaries – both digital and social – continue to shape learning in virtual spaces. Their study stresses the importance of understanding how digital technologies alter learning contexts and demand new conceptualizations of boundaries in education.

To navigate the challenges of the borderless classroom, students adopt various adaptive strategies. Siemens and Tittenberger (2009) emphasize the importance of technological adaptability for successfully navigating digital platforms. Jaggars and Bailey (2010) argue that self-regulated learning skills, such as time management and goal setting, are crucial for academic success in online environments. Moreover, collaborative learning, as suggested by Palloff and Pratt (2013), helps build a sense of community, which can mitigate the isolation often associated with online education. Fallin (2023) provides a comprehensive analysis of how the Learning Development (LD) community in higher education adapted to the challenges posed by the pandemic, emphasizing the long-term redesign of courses and the value of reflective practice. In addition, Hamid et al. (2023) highlight collaborative pedagogy and adaptive teaching as crucial for supporting global learners in borderless educational contexts.

The theoretical framework supporting the concept of the borderless classroom is well-articulated through models like the Community of Inquiry, developed by Garrison, Anderson, and Archer (2000), which integrates cognitive, social, and teaching presence in online learning. Bates et al. (2016) offer practical guidelines for teaching in digital environments, while Ally (2004) expands on the theoretical foundations of the borderless classroom. Meinokat and Wagner (2024) and Konieczna (2022) explore the disruptions in digital teaching, focusing on the adaptation of classroom management strategies to virtual learning. Erstad and Silseth (2023) also offer a broader sociocultural lens, examining how the blurring of online and offline boundaries impacts learners' identities and participation across various learning spaces.

Further research emphasizes the administrative and managerial aspects of digital learning environments. Milakovich and Wise (2019) explore global online education models and their implications for governance, access, and digital policy. Similarly, Andrin et al. (2024) examine borderless learning environments in the Philippine context, identifying key institutional strategies and the emerging responsibilities of educational leaders in managing flexible learning systems. Abdullah et al. (2020) contribute to the discourse through the lens of Society 5.0,

recognizing the need to reimagine teaching roles and school structures in an increasingly digitized world.

In terms of adaptive technologies, Huda et al. (2019) discuss how big data can be used to personalize digital learning, while Rincon-Flores et al. (2024) present strategies that leverage adaptive learning systems to enhance teaching effectiveness and learner engagement. Doswell (2006) introduces a mobile augmented reality (AR) framework, promoting context-aware, immersive learning that supports diverse educational needs. Dalgarno and Lee (2010) further highlight the potential of AR and virtual reality (VR) technologies in creating rich, personalized learning experiences. Morschheuser et al. (2016) identify gamification as another tool to increase motivation and engagement. Likewise, Tucker (2012) emphasizes the flipped classroom model as a strategy to promote learner-centered, interactive experiences online.

Despite these advancements, significant gaps remain in the current literature. While theoretical frameworks such as the Community of Inquiry and Society 5.0 offer valuable insights, they often lack integration with sociocultural perspectives that account for learners' complex identities and transitions across digital and physical learning spaces. Methodologically, many existing studies are quantitative, focusing on access, engagement rates, or system usability, which limits understanding of students' lived experiences. There is a scarcity of phenomenological and longitudinal qualitative studies that explore how learners in resource-constrained, multilingual, or rural contexts adapt to borderless classrooms. Furthermore, few studies address the intersection of digital access, pedagogical inclusivity, and boundary negotiation within localized educational systems. Bridging these gaps is essential to develop more responsive, inclusive, and evidence-based strategies for borderless learning in an evolving educational landscape.

3. Research Methodology

3.1 Research Design

In the context of this study, a phenomenological approach was employed. A phenomenological approach is needed to understand students' experiences in the borderless classroom. Phenomenology provides a rich and contextual understanding of problems, accomplishments, and coping strategies by delving into the participants' subjective experiences, feelings, and perceptions in the online learning environment. The focus on lived experiences using this method fits the dynamic complexity of issues such as digital divides, social integration hurdles, and variable learning preferences, offering a comprehensive picture that quantitative methods may overlook (Casey, 2009; Selvi, 2008; Cilesiz, 2011).

In addition, phenomenology assists the researcher in grasping the spirit of disturbances in education, especially those experienced during challenging times like the COVID-19 outbreak. This method encompasses participants' viewpoints and interpretations, which enables the researcher to understand how their experience changes as time progresses. The temporal dimension is essential in understanding the dynamic nature of online education during crisis and

adaptation periods as it highlights how learners negotiate problems emanating from unexpected changes in instructional digital environments.

Also, the focus on individual narratives in phenomenology ensures that the study is grounded in the stories and perspectives of these students. The participatory nature of this approach adds depth to the research and amplifies its validity. The researcher's study relies on phenomenology as its primary research method, providing the study with deep, qualitative depth to provide vital, real-world insights for educators, policymakers, and researchers striving to improve the quality and inclusion of online learning.

3.2 Setting

This research was done at Camarines Sur Polytechnic Colleges, a significant institution in the Bicol region of the Philippines. This academic institution was established to give technological, professional, and vocational education at the higher level in fishery, trade, technology, arts, and sciences. The school also provides short courses in technology and trade and encourages research on the exploitation and conservation of natural resources available in the province. CSPC's main campus is situated at Nabua, Camarines Sur – an area that was influential enough in framing this study's locale. This emphasizes that the institution is committed to academic excellence and exploring natural resources, setting a unique environment for studying learning experiences in the borderless classroom, where technology and education converge in rich natural beauty and resources.

3.3 Participants

The participants were carefully selected to gain insights into students' experiences in the borderless classroom at Camarines Sur Polytechnic Colleges (CSPC), which houses six academic departments. Purposive sampling was used to identify students who met specific criteria aligned with the study's objectives – namely, those actively enrolled during the second semester of the 2022-2023 academic year. This ensured that participants had timely and relevant experiences in digital learning environments. The sampling aimed to capture diverse perspectives based on how students engage with online education. A total of ten participants were chosen, guided by the principle of data saturation, where no new themes or insights emerged. While the sample size was not intended for statistical generalization, it allowed for a rich, in-depth exploration of the phenomenon. As is typical in qualitative research, the findings are not meant to be broadly generalizable but may offer transferable insights to similar educational contexts or institutions facing comparable challenges.

3.4 Data Collection

As part of this study, the researcher used a one-on-one semi-structured interview method to collect data from the ten identified participants. A well-structured interview guide was designed to ensure the depth of discussions for consistency. This guide provided key issues of students' experiences in the borderless classroom and probing questions in this environment. The questions were structured to explore different aspects, including problems encountered, strategies to overcome them, and the whole perception of online learning. The participants were allowed to raise any queries or concerns they might have had. These questions or concerns were clarified and mutually understood before the interviews began.

Before the interviews were conducted, informed consent was obtained from all individuals who voluntarily agreed to participate with full awareness of the study's purpose and their rights. The interviews were conducted online via Zoom and Google Meet, each lasting approximately 30 to 45 minutes.

The interviews were conducted by the primary researcher, who functioned as the facilitator and a trained assistant. The facilitator led the conversation, asking questions from the interview guide and enabling the participants to speak freely. At the same time, the assistant was vital for keeping records, capturing essential points, and participants' reactions. Furthermore, the interviews were audio-recorded, so interviewees' voices and expressions were accurately captured.

The strategy was meticulous to obtain verbal responses and the nuances accompanying the non-verbal communication to have a thorough database to work on. This included structured interviews and online recording methods, making it easier to collect qualitative information, which is paramount in the phenomenological examination of students' experiences in the virtual classroom.

3.5 Intercoder Reliability

The intercoder reliability process was carefully carried out in this study to improve the reliability of the interview transcripts (Burla et al., 2008). The intercoder had attained a BA degree in English Language Studies and earned academic units in a Master of Arts in English. The coding and analysis protocol was shared with the intercoder through Zoom meetings so that as many details of codes and categorization could be communicated as possible to facilitate transparency and replicability of the study. The interview transcripts, notes taken during the interviews, and the study protocol were included. For this purpose, it employed the initial list of codes originating in previous studies and organized and categorized into themes and codes following the stated guidelines with utmost care. The primary researcher and the intercoder had regular consultations and consensus meetings to deal with interpretation and disagreements in coding. Collaboratively and transparently, this approach supported the validity of interpretations or findings, objectivity, and enhancing the overall credibility and trustworthiness of the qualitative analysis.

3.6 Analysis and Coding

The final part of the subsequent stages of the research process was the data analysis, which the primary researcher and intercoder did. The analysis involved verifying and correcting the initial coding, which ensured reliable and accurate findings (Linneberg & Korsgaard, 2019). The interrater analysis approach addressed the discrepancies and disagreements during the coding process. The facilitator intercoder team used a conflict resolution form in which intercoder disputes over the codes category were diligently studied.

The facilitator and intercoder discussed this through Zoom meetings to reconcile the disagreements. The codes that were difficult to interpret or ambiguous were isolated and analyzed. Consensus was reached regarding the removal/addition of codes to specific categories via note-taking and collaborative discussions. This thorough process of appraisal and dialogue allowed for the finessing of codes so that they jibe with the research objectives and the subtle details of the participants' lived experiences.

The final percentage of agreement with the intercoder was substantial, about 83 percent, after a lengthy dispute and resolution of coding discrepancies. Finally, a comprehensive list of codes with their respective categories was compiled. The tabulated form presented in this case provided a clear picture of the thematic findings. The consolidated list thus formed the core source of data interpretation for the subsequent stages. It was well presented in the results and discussion section to ensure transparency in presenting the research findings.

4. Results and Discussion

The results of the data analysis generated four (4) themes, namely: 1) Adaptation and Resilience in Digital Learning, 2) Digital Divide and Access Challenges, 3) Social Interaction and Community Building, and 4) Enhanced Understanding Through Multilingual Approaches. These themes were used to categorize and describe the learning experiences of the 10 participants during education disruption due to the pandemic.

4.1 Adaptation and Resilience in Digital Learning

Some significant changes are occurring in education, mainly due to advancing technology. The educational sector now faces unimaginable challenges in this era of transformational change, particularly during the post-COVID-19 period. Students became the vanguards of this digital revolution as traditional classrooms vanished, making way for virtual spaces and online platforms, virtual classrooms, and remote learning. The theme of Adaptation and Resilience in Digital Learning was a sign of hope during an educational disruption. It revealed the incredible adaptability shown by students in a time of crisis.

The participants' proactive attitude and innovative approaches towards digitalization emerged in discussions on their experiences. The comment, "*I found ways to adapt to different online platforms, ensuring I never missed a class,*" by (P1) captures the determination that permeated the virtual classrooms. This is similarly reflected in (P3's) reaction: " Digital learning became a norm; we adapted by enhancing our technical skills." The reaction underscores the students' resilience as they adapt to the digital paradigm. Such stories reveal the cloth of digital fluency in which students negotiated the labyrinth of virtual education skillfully and creatively, defying the perils in borderless classrooms.

This study aligns with the prior research. Such studies as Smith et al. (2003) have demonstrated that students can adjust and embrace digital learning environments, highlighting their skills in overcoming challenges. The participants' digital literacy, which is the basis for successful online learning, can

be traced back to the root of their adaptability (Bawane & Spector, 2009). Indeed, they are skilled in moving on different online platforms, a testimony of their digital fluency, a skill essential for survival in this era of digitization. This is an attribute of the digital natives, who are born amidst technology and thus have embedded skills necessary for smooth assimilation into e-learning (Prensky, 2001). Through the borderless classroom, they cannot simply make do but thrive.

Theoretical foundations for the adaptability of the participants are provided by the Community of Inquiry (CoI) framework, as argued by Garrison et al. (2000). The multifaceted nature of online learning is shown by this framework with emphasis on cognitive presence, social presence, and teaching presence. Participants' proactive engagement depicts high cognitive presence, implying active and positive learning (Vaughan et al., 2013). The evidence of a lively social community is seen in their collective actions and peer support, which reveal the essence of belonging in the digital world (Lowenthan, 2010). The CoI framework illustrates the students' adaptive capabilities to manage diverse aspects of digitalization. It shows the extent to which they cannot only cope with academic difficulties but also create valuable social relationships in cyberspace.

This exploration yields crucial insights of great significance to educators and policymakers. It is necessary to integrate targeted digital literacy courses into the curriculum in recognition of its pivotal role. Instead, these initiatives would equip students with technical skills and, more importantly, critical thinking and information literacy, which are required to discern countless electronic data (Margaryan et al., 2011). Moreover, such professional development programs should incorporate students' inbuilt digital skills. The educator can establish a supporting online ecosystem by nurturing a social presence to create a collaborative learning atmosphere, encouraging significant interactions, and enhancing peer-to-peer learning (Shea et al., 2009).

In short, Adaptation and Resilience in Digital Learning portray students not as dumb learners but as dynamic designers of their learning path. In that spirit, the modern learner proves resilient, able to adapt, innovate, and thrive amidst the digital disruption inherent in our times. Teachers prepare students to transition smoothly to the borderless classroom by acknowledging their pre-existing digital skills. Together, the above could revolutionize the online instruction experience, making it engaging, productive, and inspiring – a rich educational journey for tomorrow's digital citizens.

4.2 Digital Divide and Access Challenges

As technology spreads at an unprecedented rate, a growing disparity threatens a pledge of equal education for all – the digital divide. This profound divide delineates students into two distinct categories: the fortunate ones with unrestricted access to digital tools and those excluded from margins lacking basic technological support tools, internet connection, and necessary learning materials. The digital divide ceased to be just a theoretical issue. Instead, it became a barrier that interrupted the learning process of many students when the educational system made a dramatic leap to the online platform in response to the COVID-19

pandemic. This investigation is thematic around the 'Digital Divide and Access Challenges,' an urgent call for bridging the gap and ensuring equal access to education to address the imbalances that impede students' participation and engagement in online learning experiences.

Narratives shared by the participants in this study shed light on the harsh truths experienced by many. The poignant reveal of participant (P2) sums up the struggle thus: "...my Internet connection was too weak to attend live classes." Similarly, (P5) says: "...had to rely on my smartphone that was not ideal for online assignments since I did not have." However, in this dispensation, where education is not bounded by the confines of the typical classroom settings, the lack of gadgets and effective internet connectivity impedes the active involvement of learners in online learning encounters. These implications go beyond school and touch on the students' esteem, motivation, and self-belonging in school.

In addition to preventing real-time interaction and submission of assignments, limited access also curtails the ability of students to actively participate in virtual discussions, collaborate on projects, and access online resources that are important for fuller learning. Even though asynchronous learning provides flexibility, it cannot reproduce a sense of immediacy, which usually occurs during live interactions and prompt feedback – considered significant elements of valuable educational experiences. As a result, students with access problems are pushed to the margins of the learning environment, with their voices lost in the electronic din. It hinders their academic progression, stiffens their personal and intellectual development, and affects their education afterward.

The digital divide must be tackled through a multifaceted, joined-up action from schools' institutions, governmental bodies, and private companies (Brown & Warschauer, 2006). It will give them the tools to facilitate online learning when given subsidized or free devices. However, a solution goes beyond providing access; students and their families should be taught how to use digital literacy and technological skills appropriately. According to Hachfeld and Lazarides (2021), digital literacy initiatives ought to be comprehensive, equipping learners with the ability to navigate the online environment and develop critical thinking skills to distinguish credible information from the vast digital landscape.

Teacher's involvement also plays a critical role in reducing the effects of the digital gap. An approach based on flexibility is imperative. Means et al. (2010) suggest that offering alternative resources and evaluation methods, including offline materials and project-based evaluation methods, can help ensure that students with access challenges actively participate and engage. Furthermore, such collaborative learning initiatives may establish a welcoming peer environment that nurtures a spirit of community and shared learning experiences.

Finally, the Digital Divide and Access Challenges theme is an apt illustration of the prevailing inequalities in our education system. However, it also serves as an alarm for progress. Overcoming the digital divide encompasses more than technology; it constitutes a moral imperative in creating an inclusive future where learning provides the only hope. The barriers established by the digital divide can be broken down by building collaborative partnerships, training students and families with digital literacy skills, and incorporating pedagogical approaches that recognize differences in learning styles. In this vein, let us imagine an educational environment where each student has an equal opportunity to achieve high-quality education, actively participate in learning, and transform educationally. By working with commitment and collective effort, we can construct bridges to an equal, inclusive, and digitally enabled world by working with dedication and collaborative effort.

4.3 Social Interaction and Community Building

Education has transformed beyond the physical classroom walls' limitations to the digital world's infinite universe. A pivotal transformation has unfolded in this virtual landscape: Reconstitution of Social Interactions and Community Building. With all the richness of social engagement, online platforms have become more common, replacing traditional classrooms characterized by face-to-face communications and immediate interpersonal bonds. Thematic exploration of Social Interaction and Community Building reveals the complexity of human interaction in the digital education age.

This aspect becomes clear through reflections by participant (P4), who observes, "Initially, I did not appreciate virtual discussions much. However, with time, I became more active in them and realized what depth of conversations they could bring about. This was empowering." The digital realm is uniquely free, as it allows individuals to say things they could not do in the face to face encounters. In such cases, learners are freed from the confines of a physical situation, which they use to their advantage by expressing more of their thoughts and views.

In contrast, Participant (P8) offers a different lens, highlighting the limitations inherent in asynchronous communication: (P8) highlights the paradoxes found in online forums where there is the convenience of time and place, but the delays may disrupt the conversations. Online interaction is a double-edged sword; the conversations need to have the instantaneousness characteristic. This realization highlights the importance of intentionally designing online forum forums in a way that is flexible and meaningful with time.

(P10) continues the conversation, saying, "Social media groups were transformed into our virtual campus square. We had joint resources for our assignments and held study sessions as well. It was like creating our universe online." (P10's) view shows how Social Media created campus squares the digital whereby students converge, share the idea, and feel belongingness. Digital squares emulate physical campuses by acting as nodes for intellectual banter and sociality, breaking the boundaries of geography.

Participant (P6) adopts a different tone in addressing the global aspect, stating, "Collaborating with peers opens my eyes to diverse perspectives. It challenged my preconceptions and enriched my understanding of various cultures". In this way, the digital space has become a melting pot of cultures and ideas, enhancing education by offering learners various worldviews and beliefs. The digital classroom, therefore, disregards the limitations of space in community building. This is evident with the growth of the "community" as defined by the old notion of geographic proximity into a dynamic and global network of learners. Participant (P9's) account resonates profoundly, reflecting on multicultural interactions: "Working on a project with students from different countries opened my eyes to how varied points of view shape up the work." Thus, online education offers an opportunity for students to transcend cultural barriers, to embrace diversity, and to develop a nuanced understanding of the world. The digital classroom has created a community where geographical distances disappear, and the richness of various cultures converge, creating an enabling atmosphere for comprehensive learning.

As it were, social presence is a kernel of social interaction and community building in online education. According to Garrison et al. (1999), social presence is the ability of community participants to present themselves socially and emotionally and promotes a feeling of community. Social presence in the virtual classroom is not merely a peripheral addition; it sustains the engagement that makes sense. Similarly, the participants' stories confirm that people perceive social presence as one of the key aspects of the social web experience. The statement by (P6) highlights that this involvement made the learner feel part of a community. Actively responding to peers' ideas helped to develop a sense of connection.

There are significant consequences for educators, instructional designers, and policymakers, as they will understand the dynamics of social interaction and community building in the digital classroom. Social presence development necessitates conscious pedagogical approaches encouraging active engagement, peer interaction, and group endeavors. Balancing asynchronous discussions with some synchronous virtual sessions gives students enough opportunities to interact in real-time, enhancing bonding among them as they proceed with their classes. As facilitators, educators initiate discussions, raise thought-provoking questions, and create an environment where every voice can find echoes.

Moreover, incorporating social learning theories such as Vygotsky's Zone of Proximal Development emphasizes the importance of peer collaboration in cognitive development (Vygotsky & Cole, 1978). Students develop their knowledge, communication skills, and critical thinking abilities through collaborative learning projects, assignments with peer review, and group discussions. These initiatives include incorporating them into the digital curriculum, allowing students to do well academically and socially.

Finally, the 'Social Interaction and Community Building' theme sheds light on the digital classroom's revolutionary prospects. This emphasizes that social presence is not lost in online education but is an impetus for collaborative learning, understanding, and culture. Educators today are positioned right at the center of this transition as the digital landscape keeps developing; they can reinterpret pedagogical paradigms. In this way, we create an open road leading to an

inclusive community of learners that is empathic towards one another and interconnected.

4.4 Enhanced Understanding Through Multilingual Approaches

While discussing the theme of "Enhanced Understanding Through Multilingual Approaches," the researcher illustrated a nuanced understanding of the significance of multilingual strategies in virtual learning. The discussion on the benefits of being multilingual was further illustrated by Participant 8, who shared, "Being multilingual helps me appreciate and interpret both present and past information better. It really opens up a lot of understanding."

According to Participant 2, "At first, I struggled with language, but integrating different languages into our lessons really transformed how I learn. It made my weak language skills stronger." Additionally, Participant 7 emphasized the value of linguistic comfort, stating, "I express myself best when I write in the language I'm most comfortable with, especially in our Purposive Communication class. It makes a big difference in how I perform academically."

In addition, participants addressed the intentional employment of both languages for a deeper look into various aspects of language (P5) and the benefits derived from translations to enhance knowledge of Tagalog-English and vice versa (P6). People approached the matter with subtle understanding as they accepted linguistic diversity. Participant (P8) stressed the significance of incorporating language resources to enhance learning and pointed out how multilingualism can actively contribute to the knowledge of academic subjects.

They echo earlier studies highlighting the cognitive gains from speaking more than one language – metalinguistic awareness, cognitive flexibility, and problemsolving abilities (Bialystok, 2001). Their experiences underscore many positive aspects of using several languages that echo sociocultural learning theories (Vygotsky, 1978). Gay (2018) emphasizes that using this method of language integration promotes cultural responsiveness in the teaching and learning process. It is in line with the culturally responsive pedagogy principles that education must include the diverse linguistic backgrounds of students.

Additionally, the participants' experiences are consistent with the concept of translanguaging (García, 2017), which supports the use of diverse languages for enhanced learning. The exemplary practices of translanguaging by the participants help better understand complex concepts, further nurturing a more inclusive and engaging learning environment.

The theme underscores the need to embrace linguistic diversity in the cyber world. With online education continuing to develop, recognizing multilingual approaches improves understanding and creates a learning environment where students' linguistic repertoires are glorified and used as a treasure trove. These insights help educators devise instructional methods utilizing multilingualism and make a borderless classroom a place where different languages come together to enrich the academic experience for everybody.

5. Conclusions and Recommendations

This study explored the lived experiences of students in a borderless classroom environment brought about by the digital shift in education. It examined how students at Camarines Sur Polytechnic Colleges adapted to virtual learning amid the challenges of the digital divide, diverse learning styles, and linguistic variation. The study aimed to understand the coping mechanisms students employed, the impact of digital access, and the role of multilingual and sociocultural inclusivity in their academic journeys.

Findings revealed that students demonstrated resilience and adaptability as they navigated various virtual platforms. Digital fluency emerged as a critical skill that enabled students to maintain their learning momentum despite technological limitations. However, the digital divide posed a significant barrier, limiting participation for those without adequate access to devices or stable connectivity. Socially, the borderless classroom fostered new forms of interaction and community-building through virtual discussions, collaborative learning, and culturally diverse exchanges. Multilingual approaches further enriched learning, helping students better comprehend course content and express themselves in a linguistically inclusive environment.

These insights highlight the need for integrating digital literacy into the curriculum – not just in terms of access to devices but through structured training that includes online etiquette, critical thinking, and information evaluation. Educators should also adopt flexible assessment strategies, such as project-based tasks or offline submissions, to ensure inclusivity for students with limited digital access. Promoting collaborative learning, peer interaction, and language diversity in instruction can cultivate a supportive and inclusive digital learning environment.

Future research should consider longitudinal studies to understand better how students' adaptability, digital literacy, and academic performance evolve. Exploring the role of parental involvement in students' digital learning experiences could also provide valuable strategies for building supportive online learning ecosystems. Additionally, cross-cultural studies may offer insights into how cultural contexts influence students' digital experiences and help identify context-sensitive solutions to improve e-learning.

A key takeaway from this study is the importance of planning in digital education. Pedagogical strategies must extend beyond providing access, emphasizing engagement, collaboration, and inclusion. One practical output that can be derived from this research is the development of an extension service program for educators and communities. This program could offer workshops and training on digital literacy, inclusive lesson design, and effective online instruction, thereby bridging the gap between theoretical frameworks and pedagogical practice.

Ultimately, building a resilient and inclusive e-learning environment requires collaborative efforts among educators, policymakers, and communities. By implementing these recommendations, institutions can enhance the quality of borderless education and better prepare students for an increasingly digital and interconnected world.

6. References

- Abdullah, A. G., Adriany, V., & Abdullah, C. U. (Eds.). (2020). Borderless education as a challenge in the 5.0 society: Proceedings of the 3rd International Conference on Educational Sciences (ICES 2019), November 7, 2019, Bandung, Indonesia. Routledge.
- Ally, M. (2004). Foundations of educational theory for online learning. *Theory and Practice* of Online Learning, 2, 15–44. https://doi.org/10.15215/aupress/9781897425084.003
- Anderson, T., & Dron, J. (2011). Three generations of distance education pedagogy. International Review of Research in Open and Distributed Learning, 12(3), 80–97. https://doi.org/10.19173/irrodl.v12i3.890
- Andrin, G., Kilag, O. K., Groenewald, E., Benitez, J., Dagala, F., & Ubay, R. (2024). Borderless learning environments: Impacts on educational management strategies. International Multidisciplinary Journal of Research for Innovation, Sustainability, and Excellence (IMJRISE), 1(2), 43–49.
- Barbour, M. K. (2013). The landscape of K-12 online learning: Examining what is known. In M. G. Moore (Ed.), *Handbook of distance education* (3rd ed., pp. 574–593). Routledge. https://doi.org/10.4324/9780203803738.ch36
- Bates, M. S., Phalen, L., & Moran, C. G. (2016). If you build it, will they reflect? Examining teachers' use of an online video-based learning website. *Teaching and Teacher Education*, 58, 17–27. https://doi.org/10.1016/j.tate.2016.04.004
- Bawane, J., & Spector, J. M. (2009). Prioritization of online instructor roles: Implications for competency-based teacher education programs. *Distance Education*, 30(3), 383–397. https://doi.org/10.1080/01587910903236536
- Bialystok, E. (2001). *Bilingualism in development: Language, literacy, and cognition*. Cambridge University Press. https://doi.org/10.1017/CBO9780511605963
- Brown, D., & Warschauer, M. (2006). From the university to the elementary classroom: Students' experiences in learning to integrate technology in instruction. *Journal of Technology and Teacher Education*, 14(3), 599–621.
- Burla, L., Knierim, B., Barth, J., Liewald, K., Duetz, M., & Abel, T. (2008). From text to codings: Intercoder reliability assessment in qualitative content analysis. *Nursing Research*, 57(2), 113–117. https://doi.org/10.1097/01.nnr.0000313482.33917.7d
- Casey, E. S. (2009). Remembering: A phenomenological study. Indiana University Press.
- Cilesiz, S. (2011). A phenomenological approach to experiences with technology: Current state, promise, and future directions for research. *Educational Technology Research and Development*, *59*, 487–510. https://doi.org/10.1007/s11423-010-9173-2
- Dalgarno, B., & Lee, M. J. (2010). What are the learning affordances of 3-D virtual environments? *British Journal of Educational Technology*, 41(1), 10–32. https://doi.org/10.1111/j.1467-8535.2009.01038.x
- Doswell, J. T. (2006). Augmented learning: Context-aware mobile augmented reality architecture for learning. In *Sixth IEEE International Conference on Advanced Learning Technologies (ICALT'06)* (pp. 1182–1183). IEEE.
- Fallin, L. (2023). Learning development in a time of disruption. *Journal of Learning Development in Higher Education*, (29). https://doi.org/10.47408/jldhe.vi29.1078
- García, O. (2017). Problematizing linguistic integration of migrants: The role of translanguaging and language teachers. In *The linguistic integration of adult migrants/L'intégration linguistique des migrants adultes* (pp. 11-26). https://doi.org/10.1515/9783110477498-005

- Garrison, D. R., & Archer, W. (2000). A transactional perspective on teaching and learning: A framework for adult and higher education. *Advances in Learning and Instruction Series*. Elsevier Science.
- Garrison, D. R., Anderson, T., & Archer, W. (1999). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education*, 2(2–3), 87–105. https://doi.org/10.1016/s1096-7516(00)00016-6
- Garrison, D. R., Anderson, T., & Archer, W. (2001). Critical thinking, cognitive presence, and computer conferencing in distance education. *American Journal of Distance Education*, 15(1), 7–23. https://doi.org/10.1080/08923640109527071
- Gay, G. (2018). *Culturally responsive teaching: Theory, research, and practice* (3rd ed.). Teachers College Press.
- Hachfeld, A., & Lazarides, R. (2021). The relation between teacher self-reported individualization and student-perceived teaching quality in linguistically heterogeneous classes: An exploratory study. *European Journal of Psychology of Education*, 36, 1159–1179. https://doi.org/10.1007/s10212-020-00501-5
- Hamid, M. Z. S. A., Hashim, K. S., Barcelona, K. E. P., & Babiera, R. I. M. (2023). Collaborative pedagogy for global learners: Adaptive teaching for borderless learning. In *Cases on responsive and responsible learning in higher education* (pp. 103– 119). IGI Global. https://doi.org/10.4018/978-1-6684-6076-4.ch007
- Hodges, C. B., Moore, S., Lockee, B. B., Trust, T., & Bond, M. A. (2020). The difference between emergency remote teaching and online learning. *Educause Review*.
- Huda, M., Luthfi, M. J., Jasmi, K. A., Basiron, B., Mustari, M. I., Safar, A., & Mohamed, A. K. (2019). Adaptive online learning technology: Trends in big data era. In *Diverse learning opportunities through technology-based curriculum design* IGI Global. https://doi.org/10.4018/978-1-5225-5519-3
- Jaggars, S., & Bailey, T. R. (2010). Effectiveness of fully online courses for college students: Response to a Department of Education meta-analysis. *Community College Research Center Brief*, (44).
- Linneberg, M. S., & Korsgaard, S. (2019). Coding qualitative data: A synthesis guiding the novice. *Qualitative Research Journal*, 19(3), 259–270. https://doi.org/10.1108/qrj-12-2018-0012
- Lombard, M., Snyder-Duch, J., & Bracken, C. C. (2010). Intercoder reliability. *Communication Research Methods*.
- Lowenthal, P. R. (2010). Social presence. In Social computing: Concepts, methodologies, tools, and applications (pp. 129–136). IGI Global. https://doi.org/10.4018/978-1-60566-984-7.ch011
- Margaryan, A., Littlejohn, A., & Vojt, G. (2011). Are digital natives a myth or reality? University students' use of digital technologies. *Computers & Education*, 56(2), 429– 440. https://doi.org/10.1016/j.compedu.2010.09.004
- Means, B. (2010). Technology and education change: Focus on student learning. *Journal of Research on Technology in Education,* 42(3), 285–307. https://doi.org/10.1080/15391523.2010.10782552
- Means, B., Padilla, C., & Gallagher, L. (2010). Use of education data at the local level: From accountability to instructional improvement. U.S. Department of Education.
- Meinokat, P., & Wagner, I. (2024, March). Classroom disruptions in digital teaching during the pandemic An interview study. In *Frontiers in Education*, 9, 1335249. https://doi.org/10.3389/feduc.2024.1335249
- Milakovich, M. E., & Wise, J. M. (2019). *Digital learning: The challenges of borderless education*. Edward Elgar Publishing. https://doi.org/10.4337/9781788979467

- Morschheuser, B., Hamari, J., & Koivisto, J. (2016, January). Gamification in crowdsourcing: A review. In 2016 49th Hawaii International Conference on System Sciences (HICSS) (pp. 4375–4384). IEEE. https://doi.org/10.1109/hicss.2016.543
- Palloff, R. M., & Pratt, K. (2013). Lessons from the virtual classroom: The realities of online teaching. John Wiley & Sons. https://doi.org/10.1177/152102511557
- Prensky, M. (2001). Digital natives, digital immigrants part 2: Do they really think differently? On the Horizon, 9(6), 1–6. https://doi.org/10.1108/10748120110424843
- Rincon-Flores, E. G., Castano, L., Guerrero Solis, S. L., Olmos Lopez, O., Rodríguez Hernández, C. F., Castillo Lara, L. A., & Aldape Valdés, L. P. (2024). Improving the learning-teaching process through adaptive learning strategy. *Smart Learning Environments*, 11(1), 27. <u>https://doi.org/10.1186/s40561-024-00314-9</u>
- Selvi, K. (2008). Phenomenological approach in education. In *Education in human creative* existential planning (pp. 39–51). Springer Netherlands. https://doi.org/10.1007/978-1-4020-6302-2_4
- Shea, P., & Bidjerano, T. (2009). Cognitive presence and online learner engagement: A cluster analysis of the community of inquiry framework. *Journal of Computing in Higher Education*, 21, 199–217. https://doi.org/10.1007/s12528-009-9024-5
- Siemens, G., & Tittenberger, P. (2009). *Handbook of emerging technologies for learning* (p. 65). University of Manitoba.
- Smith, P. J., Murphy, K. L., & Mahoney, S. E. (2003). Towards identifying factors underlying readiness for online learning: An exploratory study. *Distance Education*, 24(1), 57–67. https://doi.org/10.1080/01587910303043
- Tucker, B. (2012). The flipped classroom. Education Next, 12(1), 82-83.
- Vaughan, N. D., Cleveland-Innes, M., & Garrison, D. R. (2013). Teaching in blended learning environments: Creating and sustaining communities of inquiry. Athabasca University Press. https://doi.org/10.15215/aupress/9781927356470.01
- Vygotsky, L. S., & Cole, M. (1978). Mind in society: Development of higher psychological processes. Harvard University Press. https://doi.org/10.2307/j.ctvjf9vz4
- Zhao, F. (2003). Enhancing the quality of online higher education through measurement. *Quality Assurance in Education, 11*(4), 214–221. https://doi.org/10.1108/09684880310501395
- Zhao, Y., & Frank, K. A. (2003). Factors affecting technology uses in schools: An ecological perspective. *American Educational Research Journal*, 40(4), 807–840. https://doi.org/10.3102/00028312040004807corm