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ONLINE GAMES: PERSPECTIVES OF TEACHERS AND STUDENTS AT CANMARATING NATIONAL HIGH SCHOOL, ABUYOG, LEYTE

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ABSTRACT

This study examined the psychological and social gratifications sought by Junior High School students through online gaming and how these motivations influence their academic behavior and classroom engagement. Anchored in a qualitative research design, the investigation employed semi-structured interviews, reflective journals, and teacher observation notes to capture the lived experiences of Grades 7–10 learners and consenting teachers. Data collection emphasized depth and authenticity, allowing participants to articulate their perspectives on gaming as both leisure and social interaction. The gathered narratives were systematically encoded and subjected to thematic analysis, with recurring patterns identified through frequency counts and saturation of themes. The analysis revealed that students primarily engaged in online games to satisfy needs for social connection, stress relief, and achievement, while also reporting enhanced peer relationships and collaborative skills. However, findings also indicated tendencies toward distraction, reduced study time, and occasional conflicts with academic responsibilities. Teachers observed both positive and negative shifts in classroom participation, suggesting that gaming motivations intersect with broader issues of self-regulation and values formation. Overall, the study highlights the dual role of online gaming as a source of psychological gratification and a potential challenge to academic focus, underscoring the importance of balanced guidance from educators and parents. These insights contribute to contextualized strategies for values education and student

support, particularly in rural school settings where digital leisure increasingly shapes adolescent learning experiences.

Keywords: *Online gaming, Psychological gratifications, Social gratifications, Academic behavior, Student engagement, Qualitative research*

INTRODUCTION

Online games have become a significant part of students' digital lives, offering immersive experiences and fostering social interaction. Defined by Gao Yingtong and Liu Yanshu (2007) as "games that can be played by many people at the same time by using transmission control/network protocol (TCP/IP) and relying on the Internet," they emphasize multiplayer engagement and internet connectivity. In recent years, online gaming has emerged as a dominant form of entertainment among students, influencing how they spend their leisure time and shaping their behavior, social relationships, and academic performance. As digital access continues to expand across Philippine schools and communities, it becomes increasingly important to understand how educators and learners perceive the role of online gaming particularly in rural settings where infrastructure and institutional support remain limited.

Although numerous studies have explored the effects of online gaming on student behavior and academic outcomes, most have focused on urban or technologically advanced environments, leaving rural public schools underrepresented in empirical research. While Gao and Liu's (2007) definition highlights the technical nature of online games, it does not account for how these dynamics unfold in resource-constrained communities. Supporting this concern, Dela Cruz et al. (2023) found that students in Northern Samar actively engage in mobile gaming despite limited infrastructure, and that their experiences are shaped by distinct socio-cultural and educational contexts. These findings underscore the need for localized, qualitative inquiry into how online games are perceived and experienced in rural schools. Focusing on Canmarating National High School in Abuyog, Leyte, this research seeks to uncover the perceived benefits, challenges, and implications of online gaming from both teacher and student perspectives.

As online gaming becomes increasingly embedded in students' daily routines, it raises important questions about its impact on education and well-being. This inquiry aligns with the United Nations' 2030 Agenda, particularly SDG 4: Quality Education, which promotes inclusive and relevant learning opportunities, and SDG 3: Good Health and Well-being, which emphasizes mental health, digital balance, and responsible technology use. According to the World Health Organization (2022), quality education is a key determinant of lifelong health and must evolve alongside digital trends. Understanding how online gaming affects learners in underserved communities contributes to a more grounded perspective on how digital entertainment intersects with educational quality and student wellness.

In the national context, the Philippine government's long-term vision, Ambisyon Natin 2040, aspires for a "matatag, maginhawa, at panatag na buhay" where Filipinos live long and healthy lives, are smart and innovative, and thrive in a high-trust society (National Economic and Development Authority [NEDA], 2016). Central to this vision is the development of well-rounded, future-ready citizens capable of navigating the demands of a rapidly evolving digital world. As technologies like online gaming become increasingly embedded in the lives of young learners, especially in rural communities, it is essential to understand how these behaviors influence academic engagement, social development, and personal well-being. Insights from this research can inform inclusive and culturally responsive educational strategies that support the nation's goal of building a prosperous, empowered, and innovative-driven society.

Institutionally, the core values and academic direction of Leyte Normal University (LNU) provide a strong foundation for research that explores the intersection of education, technology, and student development. Guided by its vision to be a leading teacher education institution committed to excellence and innovation, and its mission to produce globally competitive professionals responsive to societal needs, LNU promotes scholarly inquiry that addresses real-world challenges in local contexts. This research supports LNU's goals by fostering critical thinking, contextual relevance, and inclusive education particularly through its focus on how online gaming affects learners and educators in a rural public-school setting. By investigating the behavioral, academic, and social implications of digital gaming among students in Abuyog, Leyte, the study contributes to LNU's commitment to transformative education and community engagement.

A sound legal foundation for this research is provided by Republic Act No. 10533, or the Enhanced Basic Education Act of 2013, which strengthens the Philippine K to 12 Curriculum by emphasizing the development of 21st-century skills such as digital literacy, critical thinking, and responsible technology use. Section 5 of the Act mandates that the curriculum be learner-centered, inclusive, and responsive to both local and global demands, making it imperative to understand how digital behaviors like online gaming influence academic engagement and social interaction. Additionally, DepEd Order No. 21, s. 2019, which outlines the Policy Guidelines on the K to 12 Basic Education Program, encourages contextualized and research-informed teaching practices. It calls on educators to conduct classroom-based research that addresses emerging challenges and supports holistic learner development. This study directly responds to that mandate by providing evidence-based insights that can guide interventions, policies, and instructional strategies tailored to the realities of Filipino learners.

Understanding the impact of online gaming on students in rural educational settings is essential in today's digitally connected world. As gaming continues to shape the habits and experiences of Filipino youth, its influence on academic performance, behavior, and social interaction must be examined especially in communities where digital access is expanding but remains uneven. Rural schools like Canmarating National High School face distinct challenges and opportunities that are often overlooked in mainstream research. Investigating how teachers and students perceive online gaming offers valuable insights into the lived realities of learners in resource-limited environments. This inquiry

supports the national vision of Ambisyon Natin 2040, aligns with the transformative goals of Leyte Normal University, and responds to global and legal frameworks that advocate for inclusive, responsive, and future-ready education. By bridging these perspectives, the research contributes meaningfully to the development of culturally grounded, evidence-based strategies that enhance student well-being and academic engagement in the Philippine countryside.

This study focuses on exploring the perceived effects of online gaming among Junior High School students and teachers at Canmarating National High School, a rural public secondary school in Abuyog, Leyte. Guided by the Uses and Gratifications Theory, the research investigates the psychological and social motivations behind students' engagement with online games such as entertainment, social interaction, escapism, achievement, and stress relief and how these behaviors influence academic performance, classroom engagement, and interpersonal relationships. The scope is limited to qualitative data gathered through interviews, focus group discussions, and classroom observations, emphasizing lived experiences and contextual realities rather than statistical generalizations. The study does not include urban schools, elementary learners, or quantitative measures of gaming frequency or academic scores. It also excludes commercial or clinical perspectives on gaming addiction. Delimitations were set to ensure depth of inquiry within a rural educational context, allowing the research to generate insights that are locally grounded yet aligned with broader educational goals such as SDG 4 and 3, Ambisyon Natin 2040, and the K to 12 Curriculum.

Understanding the perceived effects of online gaming in a rural educational setting is vital in shaping responsive, inclusive, and future-ready learning environments. This study holds significance for multiple stakeholders' students, teachers, school leaders, researchers, and policymakers by offering context-specific insights into how digital behaviors intersect with academic engagement, well-being, and classroom dynamics. Grounded in the Uses and Gratifications Theory and aligned with national and global education goals, the research aims to contribute meaningfully to both local practice and broader educational discourse.

This study is significant for students as it sheds light on the psychological and social motivations behind their engagement with online gaming. By understanding how gaming fulfills needs such as entertainment, social interaction, escapism, achievement, and stress relief, students can become more aware of their digital habits and how these behaviors influence their academic performance and personal development. The findings may empower learners to make more informed choices about balancing recreational media use with educational responsibilities, especially in rural settings where access to structured leisure activities is limited.

For educators, the study offers valuable insights into how online gaming affects classroom dynamics, student engagement, and learning outcomes. By capturing teacher perspectives on both the benefits and challenges of gaming such as enhanced peer relationships versus distraction and reduced academic focus the research supports the development of responsive, learner-centered teaching strategies. These insights can help

teachers adapt their classroom management approaches and integrate digital wellness education into their pedagogy, fostering a more inclusive and empathetic learning environment.

The study contributes to educational leadership and policy development by highlighting the unique digital behaviors and needs of students in rural public schools. It provides evidence-based recommendations that can inform school programs, guidance services, and curriculum enhancements aligned with the K to 12 Curriculum and DepEd's learner-centered vision. By situating online gaming within the broader discourse on student well-being and academic integrity, the research supports the creation of policies that are both context-sensitive and future-ready.

This research fills a gap in the literature on media use and student behavior in rural Philippine education. Most existing studies focus on urban or global contexts, leaving rural learners underrepresented. By offering a conceptual and empirical foundation grounded in the Uses and Gratifications Theory, this study encourages future researchers to explore related topics such as digital literacy, emotional resilience, and technology integration in underserved communities. It also opens pathways for comparative studies across regions and school types.

Aligned with SDG 4 (Quality Education) and SDG 3 (Good Health and Well-being), as well as Ambisyon Natin 2040, this study supports the national vision of producing smart, healthy, and innovative Filipino citizens. By examining how online gaming intersects with education and well-being, the research contributes to the development of inclusive and equitable learning environments. It reinforces the importance of understanding student behavior in context, ensuring that educational reforms and innovations are grounded in the lived realities of Filipino learners.

In exploring the multifaceted impact of online gaming within a rural educational context, this review of related literature draws upon global and local studies that illuminate the psychological, social, and academic dimensions of digital play. Anchored on the Uses and Gratifications Theory, the review is organized around five core themes: student motivations for gaming, perceived benefits and challenges in the classroom, effects on social and cognitive development, the influence of rural infrastructure and socio-cultural factors, and the pedagogical implications for inclusive and future-ready education. By synthesizing existing research across these domains, the study aims to contextualize online gaming as both a personal and pedagogical phenomenon, offering insights that support the goals of the K to 12 Curriculum, SDG 4 and 3, and Ambisyon Natin 2040.

Motivations Behind Online Gaming Among Rural Learners

Online gaming has increasingly become a digital refuge for students in rural communities, offering psychological and social gratifications that traditional environments may lack. These motivations ranging from escapism and entertainment to social bonding and achievement are often intensified by contextual factors such as limited recreational outlets, emotional isolation, and peer influence. Bao et. al (2022) explored this

phenomenon among left-behind children in rural China, revealing that Internet Gaming Disorder (IGD) unfolds through cyclical stages of entering, immersing, exiting, and re-entering gameplay. Their grounded theory study found that online games meet deep psychological needs while simultaneously fostering addictive behaviors, leading to diminished attention spans, increased aggression, and declining academic performance. The profit-driven design of internet games and the socio-environmental conditions of rural youth were identified as key contributors to excessive gaming. These findings underscore the importance of understanding student motivations within their lived realities, particularly in rural Philippine schools where similar patterns may emerge.

The motivations behind online gaming among rural learners are often shaped by emotional needs, peer dynamics, and limited recreational alternatives. In a cross-sectional study conducted in Thailand, Taechoyotin et al. (2020) examined the prevalence and associated factors of IGD (Internet Gaming Disorder) among secondary school students in a rural community. While the reported prevalence was relatively low compared to global figures, the study emphasized a rising trend in IGD and called for preventive interventions targeting at-risk youth. The findings suggest that even in rural settings, adolescents are drawn to online gaming as a coping mechanism and social outlet, with potential implications for their mental health and academic engagement. The authors advocate for future qualitative research to better understand the psychological drivers of gaming behavior and its relationship to well-being an approach that aligns with the present study's focus on student motivations within the rural Filipino context.

Emerging technologies such as augmented reality AR (Augmented Reality) have shown promise in enhancing student motivation and engagement, particularly in underserved learning environments. Liao et. al (2024) conducted a comparative study on the effects of an AR game-based learning application called StemUp among young EFL (English as a Foreign Language) learners in rural and urban areas. Their mixed-methods research revealed that while both groups experienced significant gains in English performance and motivation, rural students demonstrated greater improvement in both domains. The study identified motivation, enjoyment, gamification, and learning effectiveness as key qualitative themes, suggesting that immersive digital platforms can fulfill psychological needs and stimulate academic interest. These findings support the idea that game-based learning whether through AR or traditional online games can be a powerful tool for engaging rural learners, especially when designed to align with their contextual realities and emotional drivers.

Game-based learning environments have also demonstrated strong potential to enhance student motivation and academic performance, particularly when designed to foster intrinsic engagement. In a study conducted in Ankara, Turkey, Tüzün et. al (2009) implemented a three-dimensional educational computer game to teach geography to primary school students. Over a three-week period, learners showed significant gains in achievement and motivation, with those in the game-based environment exhibiting higher intrinsic motivation and lower extrinsic motivation compared to traditional classroom settings. Students became less focused on grades and more independent in their learning, suggesting that digital games can cultivate autonomy and enjoyment in

academic tasks. These findings reinforce the idea that online games, when thoughtfully integrated, can serve as effective instructional tools especially in rural contexts where traditional learning may lack stimulation and digital engagement can fulfill unmet psychological needs.

Digital game-based learning (DGBL) continues to demonstrate its capacity to enhance student motivation, engagement, and literacy in key areas of digital citizenship. Zheng et al. (2024) conducted a quasi-experimental study in a primary school in Guangzhou, China, to evaluate the effects of a DGBL course designed to foster digital etiquette literacy. Their findings revealed that students exposed to game-based instruction showed significantly higher motivation and engagement compared to those in conventional learning environments. The study emphasized the importance of early exposure to digital conduct and etiquette, especially as internet use among children and adolescents rises globally. These results suggest that game-based platforms not only fulfill psychological needs for enjoyment and interaction but also serve as effective tools for cultivating responsible digital behavior. In rural educational settings, where formal digital citizenship education may be limited, such motivational benefits of online gaming could be harnessed to support both academic and ethical development.

Collectively, these studies affirm that online gaming motivations among rural learners are deeply intertwined with emotional needs, contextual limitations, and the evolving role of digital platforms in education. Understanding these motivations is essential for designing inclusive, future-ready learning environments that align with SDG 4 (Quality Education) and SDG 3 (Good Health and Well-being) especially in rural Filipino schools where digital engagement is rapidly growing but often underexamined.

Perceived Benefits and Challenges of Online Gaming in the Classroom

The integration of game-based learning tools into classroom instruction has shown promising effects on student motivation, engagement, and academic performance. Hung et. al (2015) investigated the use of a tablet-PC game, Motion Math: Hungry Fish, to teach mathematical concepts to young learners. Their study compared two groups, one exposed to challenging game levels and another to matching levels and found that students in the challenging group experienced significantly higher flow, motivation, and satisfaction. These findings suggest that well-designed educational games can foster deeper engagement and self-efficacy, particularly when the level of challenge is appropriately calibrated. In rural classrooms, such interventions may offer innovative ways to overcome motivational barriers and enhance learning experiences. However, the study also underscores the importance of thoughtful implementation, as the effectiveness of gaming in education depends on its alignment with curricular goals and learner needs.

The use of online classroom games has also emerged as a dynamic instructional strategy that resonates with the digital fluency of today's learners. A qualitative study conducted by Hossain (2021) among postgraduate students in Human Resource Management at a university's Faculty of Business and Administration revealed both the advantages and drawbacks of integrating game-based platforms into teaching. The

findings emphasized that online classroom games enhance student motivation, confidence, and engagement, while also fostering stronger interaction between students and instructors. However, challenges such as varying levels of digital literacy and the need for pedagogical alignment were also noted. These insights are particularly relevant in rural high school settings, where the adoption of game-based learning must be carefully contextualized to ensure it supports not distracts from academic goals. The study underscores the importance of balancing innovation with instructional rigor to cultivate lifelong learners in a technology-driven era.

Understanding how adolescents perceive the benefits and harms of online gaming is essential for educators aiming to manage its influence in classroom settings. Li et al. (2025) addressed this gap by developing and validating the Time Perspective Scale of Perceived Benefits and Harms of Internet Gaming (TPS-PBHIG) among Chinese adolescents. Their study introduced a four-factor structure that integrates present- and future-oriented perspectives, revealing how students weigh immediate gratification against long-term consequences. The findings showed that cognitive distortions such as overreliance on gaming for self-esteem or social acceptance were linked to Internet Gaming Disorder (IGD), while perceived benefits in emotional regulation and social skills also contributed to gaming engagement. These insights highlight the dual nature of online gaming in educational contexts: it can foster motivation and cognitive stimulation but also pose risks when escapism and maladaptive beliefs dominate. For rural classrooms, where emotional and social outlets may be limited, understanding these perceptions is crucial in designing balanced, learner-centered interventions.

The assumption that all students naturally embrace digital game-based learning due to their status as “digital natives” has been critically examined in recent scholarship. Bourgonjon, et. al (2010) conducted a large-scale study involving 858 Flemish secondary school students to investigate their actual perceptions of video games in the classroom. Using an extended Technology Acceptance Model (TAM), the study found that perceived usefulness and ease of use were significant predictors of students’ acceptance of educational video games. However, the findings also challenged the notion that all students are equally immersed in gaming culture or prefer game-based instruction. Media usage among youth was shown to reflect traditional developmental goals such as socialization, self-expression, and relaxation rather than a wholesale shift in learning preferences. These insights suggest that while online gaming can enhance classroom engagement, its adoption must be critically assessed and tailored to diverse learner profiles, especially in rural settings where access and cultural relevance may vary.

Teacher perceptions and preparedness play a pivotal role in the successful integration of digital game-based learning (DGBL) into classroom practice. Easterling (2021) conducted a quantitative study among 345 P–12 teachers in Northern Minnesota to assess their views on the benefits and barriers of using digital games for instruction. The findings revealed strong support for DGBL’s motivational value, its ability to provide instant feedback, and its usefulness as a supplemental learning tool. However, significant barriers were also identified, including the high cost of games and equipment, and a lack of formal training in both preservice and in-service teacher development programs. These

insights highlight a critical implementation gap: while educators recognize the pedagogical potential of online gaming, systemic limitations hinder its widespread adoption. For rural Filipino classrooms, this underscores the need for targeted professional development and infrastructure support to ensure that game-based strategies are not only embraced but effectively applied.

Despite growing interest in DGBL, teachers continue to face significant barriers to its classroom implementation. Watson and Yang (2016) explored these challenges through a mixed-methods study involving interviews and surveys with 109 K–12 teachers in the United States. Their findings identified four key factors that hinder the use of games in instruction: difficulties in implementation, technological limitations, systemic constraints, and challenges in acquiring game resources. Gender and teaching level influenced perceptions of these barriers, with male teachers more concerned about implementation and female teachers more affected by technological and resource-related issues. Notably, teachers with prior experience using games reported fewer concerns about implementation and systemic resistance. These insights highlight the importance of teacher familiarity and support systems in overcoming obstacles to DGBL. In rural Filipino classrooms, where infrastructure and access may be limited, addressing these barriers through targeted training and resource allocation is essential to unlock the full potential of game-based learning.

Taken together, these studies reveal that while online gaming and game-based learning offer significant motivational and instructional benefits, their classroom integration must be approached with careful planning, teacher support, and contextual sensitivity. For rural schools in the Philippines, this means aligning digital strategies with local realities, ensuring equitable access, and fostering both student and teacher readiness. Such efforts contribute meaningfully to SDG 4 (Quality Education) by promoting inclusive, engaging, and future-ready learning environments.

Online Gaming and Its Impact on Social, Emotional, and Cognitive Development

Online gaming exerts a complex influence on the social, emotional, and cognitive development of learners, producing both beneficial and detrimental effects depending on context, duration, and game design. Al Fuad and Helminsyah (2017) examined these dual impacts among elementary school students, identifying negative outcomes such as addiction, isolation, rudeness, and diminished interpersonal skills. At the same time, their study highlighted positive developmental gains, including enhanced responsibility, self-control, and cooperative behavior. Cognitively, students who engaged in online gaming demonstrated improved memory, problem-solving abilities, hand-eye coordination, and comprehension. These findings suggest that the effects of online gaming are not monolithic but vary based on individual and environmental factors. In rural educational settings, where access to structured digital activities may be limited, understanding these nuanced impacts is essential for guiding responsible integration of gaming into learning environments.

Games both digital and analog play a significant role in shaping the developmental trajectories of adolescents and young adults. Barros (2025) emphasized that gaming serves as a platform for peer interaction, identity formation, and the cultivation of social competence during these critical stages. Strategic and cooperative games were found to enhance executive functioning, teamwork, and problem-solving, while moderate gaming contributed to empathy, emotional resilience, and stress relief. However, the study also cautioned against excessive or unregulated gaming, particularly in toxic online environments, which may lead to social withdrawal and impaired communication. These findings underscore the dual nature of gaming: when balanced, it can foster holistic development, but when unchecked, it may reinforce negative behavioral patterns. For educators in rural Filipino contexts, this highlights the importance of guiding students toward healthy gaming habits that support both academic and psychosocial growth.

Serious games have gained recognition as valuable tools for fostering cognitive, social, and emotional development in middle childhood. Megagianni and Kakana (2021) conducted a multidimensional study involving 110 Greek primary school teachers to assess their perceptions of serious games in education. The findings revealed a high prevalence of serious game usage (83.6%), albeit with low frequency, and a strong positive correlation between perceived educational value and developmental impact. Teachers who had used serious games rated their benefits more favorably, particularly in terms of motivation, collaboration, and instructional effectiveness. Moreover, higher self-reported ICT skills were associated with greater use of serious games, suggesting that teacher digital competence influences adoption. These insights affirm that serious games can support holistic child development when integrated thoughtfully especially in rural classrooms where traditional resources may be limited and digital tools can bridge gaps in engagement and learning.

The relationship between video game engagement and adolescent well-being is multifaceted, with implications for both emotional resilience and educational outcomes. García et. al (2024) examined this dynamic through the lens of the United Nations Sustainable Development Goals specifically SDG 3 (Good Health and Well-being) and SDG 4 (Quality Education). Using the Video Game Experiences Questionnaire (VGEQ), they surveyed 1,146 adolescents in Spain and found significant gender and age disparities in video game dependence and its emotional consequences. Male adolescents exhibited higher levels of dependency and were more prone to sadness, irritability, and anger. Late adolescents were also more vulnerable to adverse effects compared to younger peers. These findings highlight the importance of considering developmental stage and gender when evaluating the impact of gaming on mental health. For educators in rural Filipino contexts, this research reinforces the need for age-sensitive, balanced approaches to integrating gaming into learning environments ensuring that its cognitive and motivational benefits do not come at the expense of emotional well-being.

The emotional and cognitive effects of online gaming among college students reveal a nuanced interplay between moderation and excess. Zhao et al. (2021) conducted a large-scale survey in Northern Anhui, China, involving 850 college students to examine the relationship between online game behaviors, emotional states, and executive

function. Their findings identified a dual role of gaming: moderate engagement was associated with improved emotional well-being and enhanced executive functioning, while excessive gaming even without meeting clinical criteria for addiction was linked to increased anxiety, depression, and impaired cognitive control. The study emphasized that online gaming should not be universally condemned but rather monitored for signs of indulgent behavior that may escalate into mental health concerns. These insights are particularly relevant for educators and mental health practitioners working with adolescents and young adults, including those in rural Filipino contexts, where digital engagement is rising and executive function plays a critical role in academic success and emotional regulation.

Collectively, these studies affirm that online gaming can serve as both a developmental asset and a potential risk. For rural Filipino classrooms, the challenge lies in designing interventions that harness gaming's cognitive and motivational benefits while safeguarding students' emotional and social well-being. This balanced approach supports the broader goals of SDG 3 and SDG 4, promoting holistic development through context-aware, future-ready educational practices.

The Role of Rural Context in Shaping Gaming Experiences

Gaming experiences are not solely defined by digital content but are deeply shaped by the socio-spatial contexts in which players engage. De Kort and Wijnand (2008) emphasized that digital gaming is a situated experience influenced by co-player presence, audience dynamics, and spatial organization. Their framework on sociality characteristics highlights how both co-located and mediated environments affect emotional engagement and the meaning derived from play. In rural settings, where physical proximity to peers may be limited and digital infrastructure uneven, these socio-spatial contingencies become more pronounced. For rural Filipino learners, gaming may serve as a bridge to social connection and collaborative learning, compensating for geographic isolation. Understanding how place and community shape gaming behavior is essential for educators aiming to harness game-based learning in ways that are socially enriching and contextually relevant.

The cultural integration of video games is also shaped by local socioeconomic realities, especially where traditional leisure spaces are scarce. Hossain and Al Fahad (2024) explored how video games became mainstream in Dhaka, Bangladesh, serving as both cultural response and coping mechanism amid neoliberal pressures. Their ethnographic study revealed that vocational stress and limited recreational infrastructure drove youth toward mobile gaming for entertainment, identity, and peer connection. Using the theory of attainment, they explained how gaming aligns with goal pursuit and social validation. These findings resonate with rural Filipino contexts, where similar constraints such as economic pressures and limited play spaces may shape gaming not merely as leisure but as adaptive response to evolving social norms. Educators must consider these dynamics when designing game-based learning that reflects students lived realities.

Geographical context also influences how esports are consumed and valued across communities. Molnár and Müller (2025) found that urban players focus on competitive gameplay and skill development, while rural audiences engage with esports for social interaction and community bonding. Their survey of 285 enthusiasts revealed that regional factors shape not only access but also the cultural meaning attached to gaming. For rural Filipino learners, esports may function more as a social outlet than a competitive pursuit, affirming the need for game-based learning that prioritizes collaboration and community relevance over performance metrics.

Social contexts further shape the emotional and experiential dimensions of gaming. Kaye and Bryce (2012) found that cooperative gameplay fosters social belonging, integration, and enjoyment, while poor group dynamics may provoke frustration. Their focus group analysis identified collaboration, collective competence, and task-relevant skills as key antecedents of shared gaming experiences. In rural Filipino classrooms, where gaming often serves as a primary avenue for peer connection, cooperative games may offer both cognitive stimulation and emotional support. Designing game-based learning environments that reflect local social structures can enhance engagement and well-being.

Video games are increasingly recognized as geographical media that shape perceptions of space, place, and identity. Morawski and Wolff-Seidel (2024) emphasized the pedagogical potential of digital worlds to enrich geography education. Their discursive overview encourages educators to transfer traditional inquiries such as spatial relationships and cultural landscapes into game-based contexts. For rural Filipino classrooms, where access to diverse geographical settings is limited, video games offer immersive opportunities to simulate global spaces and foster spatial awareness. Integrating gaming into geography instruction can bridge gaps in exposure and engagement, making learning more relevant and inclusive.

Excessive gaming behaviors are also embedded in social and environmental contexts. Zhu et. al (2025) applied a social-ecological lens to examine how access, social networks, and gameplay experiences influence excessive gaming among Chinese players. Their qualitative study revealed that players actively negotiate contextual pressures by adjusting availability, reinterpreting experiences, and managing expectations. In rural settings, where recreational alternatives are limited and social networks tightly knit, these influences may intensify both the appeal and risks of gaming. For rural Filipino learners, this underscores the need to foster digital literacy and self-regulation strategies that empower students to navigate gaming environments responsibly.

Finally, the digital divide into gaming intersects with socioeconomic status and geography. Jorgensen (Zevenbergen) (2015) found differences in frequency and context of game usage between urban and rural students, though game preferences remained consistent. This suggests that while rural learners face infrastructural and economic barriers, their interest and engagement with gaming are comparable. For rural Filipino classrooms, this insight affirms that student motivation is present, but equitable access

and pedagogical integration remain key challenges. Addressing these disparities supports SDG 4 (Quality Education) by ensuring that game-based learning is inclusive, responsive, and grounded in local realities.

Pedagogical Implications for Inclusive and Future-Ready Education

The urgency to reform education policy in response to global disparities, outdated curricula, and rapid technological change has become a central concern for future-ready learning. Amiri et. al (2025) emphasized that current systems often fail to provide equitable access and meaningful learning opportunities, particularly in underserved regions. Their study advocates for inclusive education, lifelong learning, STEM integration, and personalized instruction as pillars of modern policy reform. Drawing on successful models from Finland, Singapore, and Estonia, the authors highlight how strategic investments in technology and pedagogy can transform classrooms into accessible, dynamic learning environments. These insights are especially relevant for rural Filipino education, where gaps in infrastructure and digital access persist. By aligning policy with the principles of sustainability, innovation, and inclusivity as outlined in SDG 4 (Quality Education) governments can empower all learners, regardless of social standing, to thrive in a chronologically dynamic future.

As education systems grapple with the demands of an unpredictable future, progressive pedagogy has emerged as a vital framework for rethinking policy and practice. Future-ready education must move beyond traditional models to embrace transformative innovations such as personalized learning, competency-based education, social-emotional learning, and project-based instruction. These approaches aim to cultivate critical thinking, creativity, collaboration, and communication skills essential for thriving in dynamic global contexts. The chapter underscores the need for educational policies that are agile, inclusive, and technologically integrated. For rural Filipino classrooms, this vision offers a compelling pathway to bridge learning gaps and empower students with adaptable competencies. By embedding future-ready principles into policy, educators and legislators can ensure that all learners, regardless of geography or socioeconomic status, are equipped for lifelong success (Kumari, 2025).

Preparing educators for the demands of future-ready learning requires a fundamental rethinking of pre-service teacher education. Nair (2025) emphasized the transformative potential of integrating Work-Integrated Learning (WIL) with innovative pedagogical practices to create holistic, adaptive, and context-responsive teacher preparation programs. By blending theoretical instruction with authentic, real-world experiences facilitated through partnerships between academia and industry pre-service teachers gain the skills necessary to navigate complex educational environments. The study highlights the importance of embedding technology, collaborative learning, and learner-centered approaches into teacher education curricula to foster agility and relevance. For rural Filipino education systems, this model offers a promising pathway to bridge the gap between theory and practice, ensuring that future educators are not only grounded in sound pedagogy but also equipped to lead inclusive, tech-enabled classrooms that reflect the realities of their communities.

In response to the accelerating pace of technological change and global interconnectedness, Nawaz et. al (2025) advocate for a comprehensive reimagining of education that equips students with future-ready competencies. Their article emphasizes the limitations of traditional educational models and calls for a shift toward personalized learning, digital integration, project-based instruction, and the cultivation of social-emotional skills. Central to this transformation is the active involvement of educators, policymakers, and communities in designing systems that foster creativity, critical thinking, and lifelong learning. These innovations align with SDG 4, offering a roadmap for inclusive and adaptive education reform. For rural Filipino classrooms, this vision provides a compelling framework to bridge equity gaps and prepare learners for the complexities of a globalized, future-driven world.

The onset of the Fourth Industrial Revolution (4IR) demands a strategic transformation in educational leadership to ensure learning environments remain inclusive, equitable, and technologically responsive. Gupta (2024) emphasized that educational leaders must cultivate technological fluency, integrate interdisciplinary curricula, and promote ethical use of emerging technologies such as AI (Artificial Intelligence), IoT (Internet of Things), and big data. His framework advocates for resilience-building among educators and learners, alongside collaborative partnerships that bridge institutional and industry boundaries. These strategies are essential for navigating the disruptions brought by 4IR (Fourth Industrial Revolution) while fostering innovation and equity. For rural Filipino schools, where digital literacy and infrastructure gaps persist, such leadership models offer a roadmap to future-ready education one that empowers communities to adapt, thrive, and participate meaningfully in a rapidly evolving global landscape.

Effective school leadership is central to shaping future-ready learning environments, especially in systems undergoing rapid transformation. Boon (2023) explored the evolving perceptions and roles of school leaders in Singapore, revealing that leadership for future-ready learners is a multifaceted construct encompassing six broad domains of knowledge, competencies, and skills. Through qualitative analysis of responses from leaders in training, the study emphasized the need for adaptive leadership that responds to 21st-century demands balancing innovation, equity, and pedagogical reform. These findings offer valuable guidance for both aspiring and incumbent leaders, highlighting the importance of strategic adaptation in fostering student resilience, creativity, and global readiness. For rural Filipino schools, where leadership often intersects with resource constraints and community engagement, Boon's framework provides a practical lens for cultivating visionary, context-sensitive educational leadership aligned with SDG 4 and the imperatives of future-ready learning.

The transition from traditional to future-ready education demands a thoughtful integration of innovation and pedagogy. Shanmugam et. al (2025) examined how outdated teaching models centered on rote memorization and standardized testing fail to cultivate essential 21st-century skills such as adaptability, collaboration, and digital literacy. Their paper advocates for experiential learning, game-based education, adaptive platforms, and competency-based models as key strategies to enhance engagement and

learning outcomes. The authors also highlighted the transformative role of emerging technologies like AI, augmented reality, and virtual reality in creating immersive, personalized learning environments. Drawing from successful reforms in Finland, Singapore, and South Korea, they emphasized the importance of tailoring global best practices to local contexts. For rural Filipino classrooms, this approach offers a roadmap to bridge educational gaps and foster inclusive, tech-enabled learning environments that prepare students for a dynamic, interconnected future.

Together, these studies affirm that inclusive, future-ready education requires systemic reform, visionary leadership, and pedagogical innovation. For rural Filipino schools, the challenge lies in contextualizing global frameworks to local realities ensuring that every learner is empowered to thrive in a rapidly changing world. This vision aligns with the transformative goals of SDG 4 (Quality Education), promoting equity, adaptability, and lifelong learning across diverse educational landscapes.

Research Questions

In today's increasing digital world, online gaming has emerged as a dominant form of entertainment among students, shaping how they interact, learn, and cope with everyday challenges. While much of the existing research focuses on urban and technologically advanced settings, rural schools in the Philippines such as Canmarating National High School in Abuyog, Leyte face distinct realities that remain underexplored. This study investigates the perceived effects of online gaming from both student and teacher perspectives, guided by the Uses and Gratifications Theory, which explains how individuals engage with media to fulfill psychological, emotional, and social needs. By examining the benefits, challenges, and educational implications of online gaming in a rural academic context, the research aims to generate insights that support inclusive, learner-centered, and future-ready education aligned with the goals of *Ambisyon Natin 2040*, the K to 12 Curriculum, and Leyte Normal University's commitment to transformative teaching and community engagement.

1. What psychological and social gratifications do students in a rural public high school seek through online gaming, and how do these motivations influence their academic behavior and engagement?
2. How do teachers and students at Canmarating National High School perceive the benefits and challenges of online gaming in relation to classroom dynamics and student performance?
3. In what ways does online gaming affect students' social relationships, emotional well-being, and cognitive development within a rural educational setting?
4. How do infrastructural limitations and socio-cultural factors in rural communities shape the nature and impact of students' online gaming experiences?
5. How can insights from teacher and student perspectives on online gaming inform learner-centered, inclusive, and future-ready pedagogical strategies aligned with the K to 12 Curriculum, SDG 4 and 3, and Ambisyon Natin 2040?

Grounded in the Uses and Gratifications Theory (Blumler & Katz, 1974), this study hypothesizes that students in a rural public high school actively engage in online gaming to fulfill specific psychological and social needs. These include entertainment, social interaction, escapism, achievement, and stress relief motivations that reflect their agency in choosing digital media as a coping mechanism and social tool. In a rural context where recreational outlets are limited and digital access is emerging; online gaming becomes a purposeful activity that satisfies unmet emotional and interpersonal needs. This hypothesis supports the idea that students are not passive consumers but intentional users of media, shaping their own digital experiences in response to their environment.

It is hypothesized that students perceive online gaming as beneficial to their social and cognitive development. Specifically, gaming may enhance peer relationships through shared experiences and collaborative play, while also stimulating cognitive functions such as strategic thinking, problem-solving, and digital literacy. These perceived benefits are particularly relevant in rural schools, where traditional learning resources may be scarce and digital platforms offer alternative avenues for engagement. By exploring these positive outcomes, the study aims to uncover how online gaming can complement educational goals and support holistic student development.

Conversely, the study hypothesizes that teachers perceive online gaming as a source of distraction and reduced academic focus among students. In classrooms where attention and discipline are critical to learning outcomes, excessive gaming may interfere with study habits, task completion, and classroom participation. This hypothesis recognizes the tension between digital entertainment and academic priorities, especially in rural settings where educators must balance innovation with structure. Understanding these challenges from the teacher's perspective is essential to developing responsive strategies that mitigate negative effects while acknowledging students' digital realities.

Another key hypothesis is that students' online gaming behavior is significantly shaped by contextual factors such as limited access to recreational spaces, socio-cultural norms, and infrastructural constraints. In rural communities, these realities influence how, when, and why students engage with digital media. Unlike urban counterparts, rural learners may rely more heavily on online gaming as a primary outlet for socialization and stress relief. This hypothesis emphasizes the importance of situating digital behavior within the lived experiences of students, ensuring that educational responses are culturally and contextually relevant.

Finally, the study hypothesizes that insights from both student and teacher perceptions of online gaming can inform pedagogical strategies that are learner-centered, inclusive, and aligned with national development goals. These include the K to 12 Curriculum, SDG 4 (quality education), SDG 3 (mental health and well-being), and Ambisyon Natin 2040, which envisions smart, healthy, and innovative Filipino citizens. By integrating these perspectives into classroom practice, educators can design interventions that respect students' digital interests while promoting academic integrity, emotional wellness, and future-ready learning.

METHODOLOGY

This study employed a qualitative descriptive research design to investigate how online gaming behaviors shape the emotional state, executive function, and social experiences of Junior High students in a rural Filipino classroom. The chosen design aligns directly with the title's focus on teacher and student perspectives by prioritizing rich, context-sensitive descriptions and first-person accounts collected within Canmarating National High School, enabling an in-depth understanding of gaming's educational and psychosocial implications in this specific locale. Anchored in the principles of constructivist inquiry, the research sought to understand how students interpret and navigate their gaming experiences within their socio-cultural and educational environments.

To ensure both depth and rigor, the design combined narrative analysis with systematic coding procedures. Responses were carefully examined through Thematic Analysis, which involved familiarization, generation of initial codes, clustering into sub-themes, and development of broader themes. Importantly, the study also employed frequency tables to quantify the occurrence of codes across seventy participants, thereby strengthening the validity of the findings by showing which motivations, effects, and constraints were most expressed. This integration of qualitative depth and frequency counts allowed the researcher to capture both the richness of individual perspectives and the patterns of collective experience.

The research was conducted within a classroom-based setting, using purposive sampling to select participants who actively engage in online gaming. Data collection methods included semi-structured interviews, focus group discussions, and reflective journals, enabling triangulation and deeper understanding of the phenomena. Elements of case study methodology were integrated, focusing on a specific group of learners to examine the interplay between digital behaviors and cognitive-emotional development in a rural educational setting.

This design aligns with SDG 4 (Quality Education) and SDG 3 (Good Health and Well-being) by investigating how digital engagement affects student well-being and learning capacity. It also supports the broader goal of rethinking education policy and pedagogy in light of the Fourth Industrial Revolution (4IR), ensuring that findings are not only academically robust but also socially and contextually responsive. By combining qualitative thematic analysis with frequency distributions, the study provides grounded insights for future-ready, inclusive educational practices that reflect both the lived realities and the collective patterns of rural Filipino learners.

This study was conducted in a public secondary school located in a rural barangay in Abuyog, Leyte, Philippines. The school serves a diverse population of Junior High School students, most of whom come from farming and fishing communities. Limited access to digital infrastructure, intermittent internet connectivity, and constrained educational resources characterize the learning environment, making it a representative setting for examining the impact of online gaming behaviors in rural Filipino classrooms.

The locale was purposefully selected to align with the study's objectives of contextualizing global research findings within local realities. It reflects the challenges and opportunities faced by rural learners in navigating digital engagement, emotional regulation, and cognitive development. The school has recently begun integrating digital tools into its curriculum, including mobile-based learning platforms and occasional internet-based activities, which have increased student exposure to online games both inside and outside the classroom.

This setting provides a rich backdrop for exploring how online gaming behaviors intersect with emotional states and executive function, particularly in communities where digital access is uneven and social interaction is tightly knit. The locale also supports the study's alignment with SDG 4 (Quality Education) and SDG 3 (Good Health and Well-being) by highlighting the need for inclusive, context-sensitive educational strategies that promote well-being and digital literacy among rural youth.

The respondents of this study were drawn from the Junior High School population of Canmarating National High School, a public secondary school located in a rural barangay of Abuyog, Leyte, Philippines. A total of 70 students from Grades 7 to 10 will participate, along with teachers who are available and have provided consent. The students were selected through purposive sampling, based on their active involvement in online gaming and their willingness to share personal insights regarding its emotional, cognitive, and social effects.

The group included both male and female students, aged 12 to 16 years, representing a range of academic performance levels and socio-economic backgrounds. Most came from households engaged in farming, fishing, or informal labor, reflecting the broader demographic profile of the community. Their shared experiences of limited digital infrastructure, intermittent internet access, and strong peer networks provided a rich context for exploring how online gaming behaviors manifest in rural educational settings.

This respondent profile aligns with the study's aim to contextualize global research findings within the realities of Filipino learners. It also supports the integration of SDG 4 (Quality Education) and SDG 3 (Good Health and Well-being) by focusing on students' emotional states, executive function, and digital engagement in a rural classroom environment.

To gather relevant data on the emotional, cognitive, and social dimensions of online gaming among junior high school students at Canmarating National High School, the study utilized a set of validated and adapted research instruments suited for a rural classroom context.

1. **Structured Interview Guide** A semi-structured interview protocol was developed to explore students' gaming habits, emotional responses, and perceptions of how gaming affects their focus, decision-making, and social interactions. The guide included open-ended questions aligned with the study's objectives and was reviewed by fellow educators for clarity and cultural relevance.

2. **Reflective Journal Prompts** Students were invited to maintain short reflective journals over a one-week period, documenting their gaming experiences, emotional states, and any noticeable changes in behavior or academic focus. These journals provided qualitative insights into the day-to-day impact of gaming in their lives.

3. **Adapted Rating Scales** To support triangulation, simplified versions of established scales were adapted for classroom use:
   - **Generalized Anxiety Disorder Scale (GAD-7)**
   - **Patient Health Questionnaire (PHQ-9)**
   - **Behavior Rating Inventory of Executive Function – Student Version (BRIEF-S)** These tools were modified for age-appropriateness and translated into Filipino where necessary to ensure accessibility and comprehension.

All instruments were pilot tested with a small group of non-participant students to ensure clarity, cultural sensitivity, and reliability. The combination of interviews, journals, and rating scales allowed for a rich, triangulated understanding of how online gaming behaviors intersect with emotional well-being and executive function in a rural Filipino classroom setting.

The data collected through semi-structured interviews, reflective journals, and adapted rating tools were analyzed using qualitative thematic analysis, consistent with the study's qualitative-descriptive design. This approach enabled an in-depth exploration of students lived experiences, perceptions, and emotional responses related to online gaming within a rural classroom context, while also allowing for systematic identification of recurring ideas and meanings.

Interview transcripts and journal entries were carefully reviewed, coded, and categorized to identify emerging themes across three core dimensions: emotional states, executive function, and social experiences. Thematic analysis followed an inductive process, allowing patterns to emerge organically from the data. Codes were refined through iterative reading and peer validation to ensure credibility, contextual relevance, and alignment with the study's objectives. To strengthen the analysis, frequency tables were generated to show how often specific codes appeared across the seventy participants, providing quantitative support for the qualitative findings. This integration of narrative depth and frequency counts ensured that both individual voices and collective patterns were represented.

While adapted rating tools (e.g., GAD-7, PHQ-9, BRIEF-S) were used to support reflection and guide discussion, their results were interpreted qualitatively rather than statistically. These tools served as prompts to deepen understanding of students' emotional and cognitive states, rather than as instruments for numerical measurement.

This analytical approach ensured that findings remained grounded in the voices of participants and responsive to the realities of rural Filipino education. By combining thematic synthesis with frequency distributions, the study provided a balanced account of both rich contextual insights and dominant trends. It also supported the study's alignment

with SDG 4 (Quality Education) and SDG 3 (Good Health and Well-being) by highlighting context-sensitive perspectives on student well-being and digital engagement.

RESULTS

The data gathered from 70 (seventy) respondents through semi-structured interviews, reflective journals, and observation notes were subjected to Thematic Analysis. This approach allowed the researcher to identify recurring patterns, meanings, and categories across both English and Filipino responses. The process involved familiarization with the data, generation of initial codes, clustering into sub-themes, and the development of broader themes that directly address the research questions. By triangulating student narratives, teacher observations, and rating scale responses, the analysis provides a nuanced understanding of how online gaming influences the psychological, social, and academic dimensions of learners in a rural public high school context. The following tables present the thematic analysis organized per research question, beginning with RQ1.

Table 1.0: Thematic Analysis Table – RQ1

Research Question	Data Excerpts (Interview / Journal / Teacher Notes)	Initial Codes	Sub-Themes	Main Themes
RQ1: What psychological and social gratifications do students in a rural public high school seek through online gaming, and how do these motivations influence their academic behavior and engagement?	"Online games relieve my problems and stress." "Ang online games ay nagbibigay ligaya sa akin." "It helps me to make a friend." "I don't play online games."	Stress Relief Happiness / Enjoyment Friendship / Social Connection Non-participation Entertainment / Boredom Relief Challenge / skill development	Emotional Gratifications Social Bonding Cognitive Stimulation Non-Participation	**Motivations for Gaming and Their Influence on Engagement**

	"I enjoy because if I am bored, I'm going to play online games." "Roblox… challenging, you need to survive the 99 nights in the forest."			

Table 1.1: RQ1 Frequency Table – Motivations for Gaming

Initial Code	Frequency (No. of Respondents)	Sub-Theme	Main Theme
Stress relief / relaxation	15	Emotional Gratifications	Motivations for Gaming
Happiness / enjoyment	18		
Entertainment / boredom relief	12		
Friendship / social connection	14	Social Bonding	
Challenge / skill development	6	Cognitive Stimulation	
Non-participation	5	Non-Participation	

Table 2.0: Thematic Analysis Table – RQ2

Research Question	Data Excerpts (Interview / Journal / Teacher Notes)	Initial Codes	Sub-Themes	Main Themes
RQ2: How do teachers and students at	"Gaming helps me think faster."	Cognitive Stimulation	Reported Benefits	**Perceived Effects on Classroom**

Canmarating National High School perceive the benefits and challenges of online gaming in relation to classroom dynamics and student performance?	"Some students get sleepy in class after playing late." "Nakakalimutan ko ang aking mga takdang-aralin dahil sa online games." "Gaming boosts my attention… enhances problem solving." "Minsan ang mga bata ngayon ay nagpupuyat dahil lang sa mga online games."	Fatigue / Sleep Disruption Missed Assignments Enhanced focus / Problem solving Classroom Distraction	(focus, teamwork, creativity, problem-solving) Reported Challenges (fatigue, distraction, missed tasks, reduced participation)	**Dynamics and Student Performance**

Table 2.1: RQ2 Frequency Table – Effects on Focus, Study Habits, and Participation

Initial Code	Frequency (No. of Respondents)	Sub-Theme	Main Theme
Distraction / reduced focus	20	Academic Challenges	Perceived Effects on Classroom Dynamics and Performance
Missed assignments / tasks	12		
Fatigue / sleep disruption	10	Health and Well-being	
Reduced participation in class	8	Academic Challenges	
Enhanced focus / problem-solving	7	Reported Benefits	

Balanced habits / no effect	8		
Non-participation (does not play)	5	Non-Participation	

Table 3.0: Thematic Analysis Table – RQ3

Research Question	Data Excerpts (Interview / Journal / Teacher Notes)	Initial Codes	Sub-Themes	Main Themes
RQ3: In what ways does online gaming affect students' social relationships, emotional well-being, and cognitive development within a rural educational setting?	"Gaming improves my socialization with friends and families." "Kapag natatalo sa laro… nagagalit, naapektuhan ang ugnayan sa kaklase, kaibigan, at pamilya." "I don't go out of the house anymore because of online games." "Pinapatibay ng online games ang relasyon sa aking mga kaklase dahil parehas	Improved Socialization Conflict when losing Reduced family time Strengthened peer bonds Social isolation	Positive Social Outcomes (bonding, teamwork, communication) Negative Social Outcomes (conflict, isolation, reduced family interaction) Emotional Effects (anger, happiness, stress relief) Cognitive Aspects (focus, teamwork skills, problem-solving)	**Dual Impact of Gaming on Social and Emotional Development**

	kaming naglalaro." "Gaming actually makes me distant towards my classmates, friends, and family."			

Table 3.1: RQ3 Frequency Table – Social, Emotional, and Cognitive Effects of Gaming

Initial Code	Frequency (No. of Respondents)	Sub-Theme	Main Theme
Improved socialization / peer bonding	16	Positive Social Outcomes	Dual Impact on Social and Emotional Development
Strengthened relationships with classmates	12		
Family conflict / strained ties	10	Negative Social Outcomes	
Social isolation / reduced interaction	8		
Emotional happiness / stress relief	9	Emotional Effects	
Irritability / anger when losing	7		
Cognitive skills (teamwork, problem-solving)	8	Cognitive Aspects	
Non-participation (does not play)	5	Non-Participation	

Table 4.0: Thematic Analysis Table – RQ4

Research Question	Data Excerpts (Interview / Journal / Teacher Notes)	Initial Codes	Sub-Themes	Main Themes
RQ4: How do infrastructural limitations and socio-cultural factors in rural communities shape the nature and impact of students' online gaming experiences?	"Sometimes the internet is too slow." "We share one phone at home." "My parents only allow 1–2 hours of screen time." "Nawawalan ako ng pera kasi pinagloload ko para makapaglaro." "Minsan pupunta ako sa peso-wifi para maglaro kahit mayroong klase."	Poor Connectivity Shared Devices Parental Restrictions Financial cost of gaming Reliance on public wifi	Access Barriers (devices, connectivity, cost) Household and Parental Rules Community Practices (peso-wifi, shared resources)	**Rural Constraints Shaping Gaming Experiences**

Table 4.1: RQ4 Frequency Table – Rural Constraints and Cultural Factors

Initial Code	Frequency (No. of Respondents)	Sub-Theme	Main Theme
Poor internet connectivity	14	Access Barriers	Rural Constraints Shaping Gaming Experiences
Shared devices (one phone/computer at home)	11		
Financial cost (buying load / peso-wifi)	10		

Parental restrictions on screen time	12	Household and Parental Rules	
Reliance on public wifi (peso-wifi stations)	8	Community Practices	
Community attitudes (gaming discouraged / limited)	6		
Non-participation (does not play)	9	Non-Participation	

Table 5.0: Thematic Analysis Table – RQ5

Research Question	Data Excerpts (Interview / Journal / Teacher Notes)	Initial Codes	Sub-Themes	Main Themes
RQ5: How can insights from teacher and student perspectives on online gaming inform learner-centered, inclusive, and future-ready pedagogical strategies aligned with the K to 12 Curriculum, SDG 4 and 3, and Ambisyon Natin 2040?	"What changes in your gaming habits could help improve your school performance?" "If teachers understand why we play, they can guide us better." "Gaming could be used for teamwork activities." "Ang natutunan ko sa paglalaro ay huwag magalit kapag natatalo at huwag magmura sa iba	Balanced gaming habits Teacher guidance Teamwork and collaboration Values formation (discipline, respect)	Inclusive strategies Future-ready skills (collaboration, digital literacy) Values-based learning Health and well-being	**Pedagogical Implications Aligned with K to 12, SDGs, and Ambisyon Natin 2040**

	pang manlalaro.”			

Table 5.1: RQ5 Frequency Table – Pedagogical Implications

Initial Code	Frequency (No. of Respondents)	Sub-Theme	Main Theme
Balanced gaming habits (limit screen time, prioritize academics)	13	Health and Well-being	Pedagogical Implications Aligned with K to 12, SDGs, and Ambisyon Natin 2040
Teacher guidance and understanding	12	Inclusive Strategies	
Teamwork and collaboration through gaming	10	Future-Ready Skills	
Values formation (discipline, respect, resilience)	11	Values-Based Learning	
Digital literacy / skill-building	6	Future-Ready Skills	
Health and wellness concerns (avoid fatigue, balance lifestyle)	8	Health and Well-being	
Non-participation (does not play)	10	Non-Participation	

Table 6.0: Thematic Synthesis Table

Main Theme	Description
Motivations for Gaming	Students engage in online gaming primarily for psychological gratification such as stress relief, enjoyment, and boredom relief, as well as to seek social connections. These motivations influence their academic behavior and engagement.

Perceived Effects on Classroom Dynamics and Performance	Teachers and students perceive online gaming as having positive effects such as improved focus, teamwork, and creative problem-solving, but also note challenges like fatigue, distraction, and reduced participation.
Dual Impact on Social and Emotional Development	Online gaming may strengthen social bonds and peer relationships, but also lead to family conflict, social isolation, and emotional strain. Students report both positive emotional states and irritability or withdrawal.
Rural Constraints Shaping Gaming Experiences	Infrastructural limitations, socio-cultural factors, and resource sharing in rural communities shape the nature and impact of students' online gaming experiences. These include poor connectivity, shared devices, and parental restrictions.
Pedagogical Implications Aligned with K to 12, SDGs, and Ambisyon Natin 2040	Insights from students and teachers suggest that gaming can support learner-centered and inclusive pedagogy when guided properly. Themes include teamwork, values formation, digital literacy, and balanced habits that promote health and academic success.

DISCUSSION

The frequency distribution confirms that the majority of students play online games for emotional gratifications, particularly happiness, relaxation, and boredom relief. A significant number also value gaming for social bonding, while fewer respondents highlight cognitive stimulation through challenging or skill-based games. Notably, a small group reported non-participation, preferring other activities over gaming. These frequencies reinforce thematic analysis by showing that online gaming is primarily valued for its emotional and social benefits, which in turn influence how students engage with their academic responsibilities.

Building on the initial analysis of students' psychological and social gratifications from online gaming (RQ1), the second research question examines how these gaming practices are perceived in relation to classroom dynamics and student performance. The responses of 70 (seventy) participants were carefully examined using Thematic Analysis, a qualitative approach that identifies recurring ideas, patterns, and meanings across narratives. Both English and Filipino responses were normalized during coding to ensure inclusivity and accuracy. Through familiarization, coding, clustering into sub-themes, and the development of broader themes, the analysis captures how teachers and students

alike recognize both the benefits (focus, teamwork, creativity) and the challenges (fatigue, distraction, reduced participation) of online gaming within the rural public high school context. The following table presents the thematic analysis for RQ2.

The frequency distribution for RQ2 shows that the negative academic impacts of gaming particularly distraction, missed assignments, and fatigue were reported more often than positive outcomes. However, a notable group of respondents emphasized that gaming can also enhance focus, problem-solving, or have little effect when balanced with study habits. This dual perception underscores the complexity of gaming's role in classroom dynamics: while it can hinder participation and performance, it also holds potential as a tool for cognitive stimulation when managed responsibly.

After examining the perceived benefits and challenges of online gaming in classroom dynamics (RQ2), the analysis now turns to its impact on students' social relationships, emotional well-being, and cognitive development. Responses reveal both positive and negative influences, ranging from strengthened peer bonds and improved communication skills to family conflicts, reduced time for social interaction, and emotional strain. These perspectives highlight the dual nature of gaming as both a source of connection and a potential cause of isolation.

The frequency distribution for RQ3 highlights the dual nature of gaming's social and emotional impact. Many respondents emphasized positive outcomes such as peer bonding, strengthened relationships, and emotional relief, while others reported negative consequences including family conflict, social isolation, and irritability. Cognitive benefits like teamwork and problem-solving were also noted, though less frequently. These findings reinforce the thematic analysis by showing that online gaming simultaneously fosters connection and creates tension, depending on how it is experienced and managed.

Following the exploration of social and emotional impacts (RQ3), the analysis now considers the structural and cultural realities of rural communities that shape students' gaming experiences. Responses highlight issues such as limited access to devices, unstable internet connectivity, and shared resources within households. At the same time, socio-cultural attitudes ranging from parental restrictions to community perceptions of gaming emerge as significant factors influencing how students engage with online games. These realities provide important context for understanding the broader impact of gaming in rural educational settings.

The frequency distribution for RQ4 emphasizes the structural and cultural realities of rural communities that shape students' gaming experiences. Limited connectivity, shared devices, and financial costs were the most frequently cited barriers, while parental restrictions and reliance on peso-wifi stations further constrained access. A smaller group noted community attitudes that discourage gaming, and several respondents reported non-participation due to these limitations. These findings highlight how rural infrastructure and socio-cultural factors significantly influence the nature and impact of online gaming, reinforcing the need for context-sensitive educational strategies.

Building on the previous findings, the last research question (RQ5) focuses on how insights from both teachers and students can inform learner-centered, inclusive, and future-ready pedagogy. Responses highlight the importance of balancing gaming with academics, the need for teacher guidance, and the potential of integrating gaming elements into collaborative and skill-based learning. These perspectives connect directly to educational priorities under the K to 12 Curriculum, Sustainable Development Goals (SDG 3 and SDG 4), and Ambisyon Natin 2040, emphasizing health, quality education, and future-ready competencies.

The frequency distribution for RQ5 highlights how both students and teachers envision pedagogical strategies that balance gaming with academics and well-being. Respondents most often emphasized the need for teacher guidance, values formation, and balanced habits, while also recognizing the potential of gaming to foster teamwork, collaboration, and digital literacy. These insights align strongly with the K to 12 Curriculum, SDG 3 (health and well-being), SDG 4 (quality education), and Ambisyon Natin 2040, underscoring the importance of contextualized, learner-centered approaches that transform gaming from a distraction into a tool for inclusive and future-ready education.

Taken together, the frequency tables for RQ1–RQ5 provide a quantitative snapshot of recurring responses, showing which motivations, effects, constraints, and pedagogical insights were most expressed by the seventy participants. However, beyond the numerical counts, the thematic synthesis table organizes these codes into broader sub-themes and main themes, allowing for a deeper understanding of how online gaming shapes student experiences in psychological, social, academic, and pedagogical dimensions. This synthesis highlights the dual nature of gaming its benefits and challenges while situating the findings within the rural school context and aligning them with national and global educational priorities. The following table presents the consolidated thematic analysis across all research questions.

Synthesis of Thematic Analysis

The thematic analysis of 70 (seventy) student and teacher responses, supported by frequency distributions across RQ1–RQ5, revealed a multi-layered picture of online gaming in the rural school context. The frequency tables confirmed which codes were most dominant, while the thematic synthesis organized these into broader patterns and meanings. Together, they highlight several overarching themes:

1. **Psychological and Social Gratifications (RQ1)**

Frequency counts showed that emotional gratifications (happiness = 18, stress relief = 15, boredom relief = 12) were the most common motivations, followed by social bonding (friendship = 14). A smaller group mentioned cognitive stimulation (6) or non-participation (5). These motivations directly shape school engagement, with enjoyment sometimes enhancing focus but often competing with study time.

2. **Perceptions of Benefits and Challenges (RQ2)**
Respondents most frequently cited distraction/reduced focus (20) and missed assignments (12) as challenges, alongside fatigue/sleep disruption (10). Positive effects such as enhanced focus/problem-solving (7) and balanced habits (8) were less frequent but notable. This dual perception underscores the need for balance and teacher guidance in managing gaming habits.

3. **Social, Emotional, and Cognitive Effects (RQ3)**
Peer bonding (16) and strengthened relationships (12) were common positive outcomes. Negative effects included family conflict (10), social isolation (8), and irritability/anger (7). Emotional relief (9) and cognitive skills (8) were also reported, showing mixed outcomes.These findings confirm the dual nature of gaming's social and emotional impact.

4. **Rural Constraints and Cultural Factors (RQ4)**
The most frequent barriers were poor connectivity (14), shared devices (11), and financial costs (10). Parental restrictions (12) and reliance on peso-Wi-Fi stations (8) further shaped gaming practices. These constraints highlight the unique rural context where gaming is both desired and restricted by resource limitations.

5. **Pedagogical Implications (RQ5)**
Respondents emphasized balanced habits (13), teacher guidance (12), and values formation (11) most often. Other insights included teamwork/collaboration (10), health concerns (8), and digital literacy (6). These align with the K to 12 Curriculum, SDG 3 (health and well-being), SDG 4 (quality education), and Ambisyon Natin 2040, suggesting that gaming can be reframed as a tool for future-ready pedagogy when managed responsibly.

Overarching Themes Across Research Questions

- **Dual Nature of Gaming**. Both beneficial (focus, teamwork, stress relief) and detrimental (distraction, fatigue, isolation).
- **Contextual Influences**. Rural infrastructure and socio-cultural factors significantly shape gaming experiences.
- **Pedagogical Opportunities**. With guidance, gaming can support learner-centered, inclusive, and values-based education.
- **Balance and Regulation**. Students and teachers alike stress the need for moderation, discipline, and structured habits.

Conclusions

The following section presents the consolidated results of the study, highlighting the recurring patterns and insights derived from the frequency tables and thematic analysis across the five research questions.

RQ1 – Psychological and Social Gratifications

The findings revealed that students primarily engaged in online gaming for emotional gratifications, with happiness (18), stress relief (15), and boredom reduction (12) cited most frequently. Social bonding also emerged as a strong motivation, with friendship and peer connection mentioned by 14 respondents. A smaller group highlighted cognitive stimulation (6), noting the challenge and skill development offered by games, while 5 respondents reported non-participation, preferring other activities such as watching movies or focusing on academics. These motivations illustrate how gaming fulfills psychological and social needs, directly influencing how students balance enjoyment with academic responsibilities.

RQ2 – Perceptions of Benefits and Challenges

Students and teachers expressed a dual perception of gaming's impact on classroom engagement. The most common challenges were distraction from studies (20), missed assignments (12), and fatigue or sleep disruption (10), showing how excessive play can hinder academic focus. At the same time, several respondents acknowledged positive effects, including enhanced focus and problem-solving skills (7) and the ability to maintain balanced habits (8). These contrasting views underscore the need for moderation and teacher guidance, as gaming can either support or undermine learning depending on how it is managed.

RQ3 – Social, Emotional, and Cognitive Effects

Online gaming was found to have both positive and negative effects on students' relationships and emotional well-being. On the positive side, peer bonding (16) and strengthened relationships with classmates (12) were frequently reported, highlighting gaming's role in fostering communication and shared interests. However, negative outcomes were also evident, including family conflict (10), social isolation (8), and irritability or anger when losing (7). Emotional relief such as happiness and stress reduction (9) coexisted with these challenges, while cognitive benefits like teamwork and problem-solving (8) were noted but less dominant. These findings confirm the dual nature of gaming's social and emotional impact.

RQ4 – Rural Constraints and Cultural Factors

The rural context significantly shaped students' gaming experiences, with poor internet connectivity (14), shared devices at home (11), and financial costs such as buying load or accessing peso-wifi (10) identified as major barriers. Parental restrictions (12)

further limited screen time, while reliance on peso-wifi stations (8) and discouraging community attitudes (6) reflected broader socio-cultural influences. These constraints highlight the unique realities of rural learners, where gaming is both desired and restricted by infrastructural and cultural limitations, shaping how students access and experience digital play.

RQ5 – Pedagogical Implications

Respondents emphasized several strategies for integrating gaming insights into education. The most frequent recommendations included promoting balanced habits (13), strengthening teacher guidance (12), and fostering values formation such as discipline, respect, and resilience (11). Other suggestions involved using gaming to support teamwork and collaboration (10), addressing health concerns like fatigue (8), and enhancing digital literacy (6). These pedagogical implications align with the K to 12 Curriculum, SDG 3 (Good Health and Well-being), SDG 4 (Quality Education), and Ambisyon Natin 2040, underscoring that gaming, when managed responsibly, can be reframed as a tool for inclusive, learner-centered, and future-ready education.

The frequency tables provided quantitative confirmation of recurring responses, while the thematic synthesis organized these into broader themes. Together, they reveal the dual nature of gaming its benefits and challenges shaped by rural constraints and pedagogical opportunities.

The study concludes that online gaming among students at Canmarating National High School is a multifaceted phenomenon shaped by psychological needs, social dynamics, infrastructural realities, and pedagogical possibilities. The frequency analysis confirmed that emotional gratifications such as happiness, stress relief, and boredom reduction, together with social bonding through friendship and peer connection, were the most common motivations for gaming. At the same time, challenges including distraction, fatigue, missed assignments, and family conflict were frequently reported, reflecting the dual nature of gaming's impact on student life. Rural constraints, particularly poor internet connectivity, shared devices, and financial limitations further influenced how learners accessed and experienced online games. Despite these barriers, both students and teachers recognized opportunities to integrate gaming into teamwork, values formation, and digital literacy, highlighting its potential as a tool for inclusive and future-ready education. Overall, the findings underscore the importance of contextualized, values-based, and learner-centered strategies that acknowledge both the risks and potentials of gaming, ensuring alignment with the K to 12 Curriculum, SDG 3 (Good Health and Well-being), SDG 4 (Quality Education), and Ambisyon Natin 2040.

Recommendations

Based on the findings and conclusions of the study, the following recommendations are proposed to address the challenges and harness the potentials of online gaming within the rural school context.

1. Promote Balanced Gaming Habits.

Students should be encouraged to set clear limits on screen time and prioritize academic responsibilities before engaging in online gaming. This can be reinforced by integrating lessons on time management and self-discipline into advisory classes and values education, ensuring that learners develop healthy routines that balance recreation with study. By promoting moderation, schools can help students enjoy the benefits of gaming without compromising their academic performance or well-being.

2. Strengthen Teacher Guidance and Classroom Strategies.

Teachers play a crucial role in shaping how gaming is perceived and managed in the classroom. Training programs should equip educators to recognize both the benefits and risks of gaming, enabling them to respond with empathy and balance. Moreover, teachers can creatively use gaming analogies and activities to foster teamwork, collaboration, and problem-solving skills, aligning classroom strategies with students' digital interests while maintaining academic focus.

3. Support Social and Emotional Development.

Gaming can be harnessed to strengthen peer relationships and collaborative learning when guided appropriately. Schools should facilitate peer bonding activities that channel gaming into teamwork rather than isolation. At the same time, values-based lessons should address emotional challenges such as irritability, withdrawal, or unhealthy competition, promoting respect, resilience, and healthy social interaction. This ensures that gaming contributes positively to students' emotional growth and interpersonal skills.

4. Address Rural Constraints and Resource Gaps.

The realities of rural education such as poor connectivity, shared devices, and reliance on peso-Wi-Fi stations must be addressed to ensure equitable access to digital opportunities. Schools and communities should advocate for improved internet infrastructure and provide equitable access to devices. Community-based solutions, such as supervised learning hubs, can also reduce dependence on commercial Wi-Fi stations and create safer, more inclusive spaces for digital engagement.

5. Integrate Gaming Insights into Future-Ready Pedagogy.

Finally, gaming should be reframed as a tool for inclusive and future-ready education. Strategies must align with SDG 3 (Good Health and Well-being) and SDG 4 (Quality Education) by promoting wellness, inclusiveness, and digital competence. Findings should also be connected to Ambisyon Natin 2040, emphasizing responsible technology use as part of preparing students for future opportunities. School policies should be developed to balance academic performance with recreational gaming, ensuring holistic student development that is both value-based and globally relevant.

6. Provide Directions for Future Researchers

Future researchers are encouraged to expand on this study by exploring online gaming across different contexts, grade levels, and school environments. Comparative studies between rural and urban schools could highlight how infrastructure and socio-cultural factors shape gaming behaviors differently. Further inquiry may also integrate quantitative measures, such as academic performance data or psychological scales, to complement qualitative insights and strengthen generalizability. Researchers may examine long-term effects of gaming on student well-being, digital literacy, and classroom engagement, as well as investigate emerging platforms such as e-sports and gamified learning. By building on the findings of this study, future research can contribute to a deeper understanding of how online gaming intersects with education, ensuring that strategies remain responsive to evolving technologies and the diverse realities of Filipino learners.

In sum, the study affirms that online gaming is not merely a recreational pastime but a multifaceted phenomenon that intersects with students' psychological needs, social relationships, academic engagement, and the unique realities of rural education. By grounding the analysis in both qualitative narratives and frequency counts, the research offers evidence-based insights that are academically rigorous and contextually relevant. The recommendations emphasize the importance of balance, teacher guidance, values formation, and infrastructural support, aligning with the K to 12 Curriculum, SDG 3 (Good Health and Well-being), SDG 4 (Quality Education), and Ambisyon Natin 2040. Ultimately, this chapter underscores that when managed responsibly and contextualized within rural schooling, online gaming can be reframed as a meaningful educational tool one that promotes inclusivity, values-based learning, and future-ready pedagogy, transforming potential distractions into opportunities for growth, innovation, and holistic student development.

Compliance with Ethical Standards

This study adhered to ethical standards in conducting classroom-based research involving junior high school students at Canmarating National High School. Given the age and vulnerability of the respondents, special care was taken to ensure that participation was voluntary, informed, and respectful of their rights and well-being.

Informed consent was obtained from both the student participants and their parents or guardians through signed consent forms written in Filipino and English. These forms clearly explained the purpose of the study, the procedures involved, the voluntary nature of participation, and the assurance that no harm would result from involvement. Students were also informed that they could withdraw from the study at any time without penalty.

To protect the privacy and confidentiality of respondents, all personal identifiers were removed during data transcription and analysis. Pseudonyms were used in reporting

qualitative findings, and all data were stored securely in password-protected digital files accessible only to the researcher.

The study also ensured cultural sensitivity and age-appropriateness in the design of interview questions and journal prompts. Instruments were reviewed by fellow educators and pilot-tested to ensure clarity and relevance to the local context. Emotional well-being was prioritized throughout the data collection process, and students were encouraged to speak freely without fear of judgment or academic consequence.

This ethical framework aligns with the principles of academic integrity, child protection, and the broader goals of SDG 3 (Good Health and Well-being) and SDG 4 (Quality Education), ensuring that the research contributes meaningfully to both local practice and global discourse while safeguarding the dignity of all participants.

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