

Controller to Console: Tracing the Footsteps of Video Game Media Evolution in the Filipino Gaming Experience

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ABSTRACT

The precipitously changing business models have catalyzed new communication forms, conveying revolutionary patterns of engagement between consumers. In the video game industry, innumerable media have gained a solid development pace to engage users with game-related content. This research reconnoiters video game structure's perceived usefulness, enjoyment, and media richness. Explicitly (i.e. mass interpersonal, and mass personal communication) influenced users' attitudes and intentions to use the video game and the media, with the nucleus on the Philippines as a developing country milieu. Survey data from 590 participants were amassed using a homogenous purposive sampling method and evaluated the research constructs through confirmatory factor analysis and structural equation modeling. The outcomes disclosed that (i.e. usefulness, enjoyment, and media richness) of the live-streaming platform positively impacted users' attitudes toward the video game and the media. Conversely, in the multigroup analysis, heterogeneity exists among the effect of media format's characteristics on users' attitudes and intention to use the game. The richness of video game-related media conveyed through mass communication channels has no significant effect on Filipino users' attitudes toward video games. Building on these findings, video game operators can improve user experience by (1) conceding the role of masspersonal communication through livestream activations and streamer collaboration, (2) centering on informative video game content through mass communication channels, (3) integrating compelling storytelling, relatable commentary, or avenues for community interaction to uplift the overall user experience, propagating both positive attitudes and a sense of enjoyment among users.

Keywords: Video games, Live streaming, communication, media richness.

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1. INTRODUCTION

Aggregate technological advancements have invigorated the exploration of media technology's impact on human communication. The exponential upsurge in the popularity of social media platforms is an incipient area of study for understanding their inherent functionalities and influences on usage behaviors. Entertainment-oriented content and live streaming platforms, where users can view real-time videos created by streamers, have befittingly become a cornerstone of today's platform economies. As such, this paper presents an interdisciplinary approach to the social role of media consumption, exploring valuable insights for analyzing user engagement in masspersonal communication.

Before the inception of the COVID-19 pandemic, video games had been established to alleviate stress and mitigate feelings of loneliness (Kaye, 2017; Nebel, & Ninaus, 2022). However, the pandemic served as a catalyst, sparking an exceptional rise in video games' preexisting significant popularity (Barr & Copeland-Stewart, 2021; Kröger *et al.*, 2022), and establishing a noticeable trend in their widespread consumption (Goh *et al.*, 2023). Lehtonen (2023) tinted that the key driver propelling the industry's value creation emanates from its capacity to impact player involvement and immersive experiences. This idiosyncratic characteristic established consumers as value co-creators from the outset. Video games, especially multiplayer and role-playing games, frequently provides social interaction platforms for users to create and customize their virtual identities and environment and to connect easily with other players (Altha *et al.*, 2014; Hamari & Lehdonvirta, 2010; Griffiths *et al.*, 2013).

The entertainment and social worth of video games catapulted a significant boost in prominence and global participation for the video game industry. Gough (2020) reported growing sales growth for digital games (57 percent), physical games (82 percent), and game console (155 percent) during March 2020, implying that people were turning to video game as means to connect virtually with other individuals and to keep them entertained through the crisis. Further, in a global survey by Data Reportal (2023), the Philippines experienced the highest video gaming usage reach with a gaming penetration of 95.8 percent in 2022. Given the rising momentum of the video game industry, user penetration in the global online game market will hit 44.6% by 2027, which will be around 53.4 million users. Further, the expansion of the industry is poised to reach around \$521 by 2027 in revenues (Statista, 2023). Thus, in the imminent decade, video games will rise as the fastest-growing segment in the entertainment and media market.

The swift ascent in video game user reach led to the permeation of diverse video game-related media (Chang & Lee, 2022). In the local scene, Filipino gamer and live streamer Edgar Dumali amassed 13 million followers on his gaming creator page – ChoOxTV – with mostly streams on the mobile multiplayer online battle arena (MOBA) game Mobile Legends (YugaTech, 2022). Further, video game-related media offer opportunities for users to connect with other individuals outside of the game environment itself. In particular, Twitch reigns supreme in this arena, experiencing an 83% year-on-year (YoY) growth in viewership, with more than 5 billion hours of gaming content viewed during the second quarter of 2020 (Streamlabs & Stream Hatchet, 2020). Millions of users resort to live streaming services like Twitch and YouTube because these provide video content and user interaction (Hamilton *et al.*, 2014). Moreover, real-time streaming platforms enable gamers to interact with audiences who are watching gameplay live, thereby becoming a popular interaction tool in the realm of e-sports or video game competitions. For instance, Mobile Legends: Bang Bang Professional League (MPL) Philippines experienced a rise in viewership wherein around 800,000 viewers came together to watch the grand final match alone (Esport Charts, 2022). This mounting prevalence of eSports tournaments offers young individuals' opportunities to express their creativity and participate in the eSports dominion (Purbasari *et al.*, 2020). It further typifies how real-time streaming services that broadcast e-sports competitions have continued to thrive since the genesis of the pandemic.

Live streaming services epitomize masspersonal communication media, in which the streamer (i.e., information sender) broadcasts game-related information for mass communication and the viewer (i.e., information receiver) interactions take the form of interpersonal communication (i.e., chatting) (O'Sullivan, & Carr 2018). Users can

obtain video game-related information from three different sources, namely traditional mass communication media (e.g., television or radio), interpersonal communication media (e.g., online communities and gaming peers), and masspersonal communication media (e.g., live streaming services).

Amidst the growing economic value and prominence of video games and video-game related media, there is a dearth of research examining the simultaneous effects of the various video game information formats on users in the Philippine context. Numerous studies shed light only on the effects of in-game communication (Chuang, 2006, Gong, Wang & Li, 2019; Shen and Williams, 2011; Williams, 2006), and real-time streaming services (Sjoblom *et al.*, 2017) on users independently. Furthermore, other studies investigated determinants of user loyalty toward online video games (Yang *et al.*, 2009; Lu and Wang, 2008), yet literature stream was not able to capture the effect of other game-related media. Brasel and Gips (2022) accentuated multiple media type as pivotal in the contemporary media environment. This paper fosters upon the work of Chang and Lee (2022) which explored the impact of different video game-related communication media on user experience in the South Korean context. With the robust industry growth and rise in video game participation in the Philippines, it is then pivotal to examine the impact of various video game information formats on Filipino user experience. To the best of our knowledge, this is the first study to explore the simultaneous effects of different communication media formats on Filipino video game users.

It delves into how the determinants of media usage change depending on the type of communication format (O'Sullivan, & Carr 2018). Video games have been studied extensively from the perspective of mass-mediated communication formats, which include radio, film, and television. Nevertheless, the development of social interaction platforms in online video game environments enabled users to share their gaming experiences with their peers. Currently, individuals can share short-form videos about game information (e.g., Tiktok videos), thereby prodding the consideration of the impact of interpersonal dynamics in video game communication (Lucas & Sherry, 2004). Further, Chang and Lee (2022) also considered the impact of masspersonal communication (e.g., livestreaming services) on video game users, which is a driver of video game popularity in the Philippines.

In assessing the simultaneous effect of multiple game-related communication media on Filipino video game players, this study trails Chang and Lee (2022) in ruminating about the usefulness of game-related content, enjoyment, and richness of game-related media. That said, the research framework of this study builds upon theories of uses and gratification and media richness. Using survey data comprised of 590 respondents, this study employed structural equation modeling (SEM) through maximum robust estimation to establish connections between video game-related media and video games, taking into account users' attitudes and intentions towards both. Consequently, an integrated model of these factors was created to evaluate their interrelationships. The study observes how users' attitudes towards video game-related media influence their intention to play video games, and conversely, how their attitudes towards video games influence their intention to use video game-related media. Finally, multiple group analysis was applied to validate the connections between video games and video game-related media and to determine the effectiveness, satisfaction, and depth of video game-related media based on the communication format.

2. LITERATURE REVIEW, THEORETICAL FRAMEWORK, AND HYPOTHESES DEVELOPMENT

2.1 Evolution of Media Environment

Jensen (2022) underscored the impact of the evolution of digital technologies (i.e., from writing via printing to computers) on the media landscape. This digital evolution is amplified by the ascendancy of the Internet, allowing a significant decline in media production and dissemination costs. At the same time, wireless devices and the Internet of Things (IoT) liberalized accessibility irrespective of time and place. Kaitawarn (2015) also pointed out that the widespread adoption of mobile phones can be attributed to advancements in mobile technology. This evolution has transformed mobile phones into versatile multimedia platforms, incorporating features of internet access, online games, and social networking capabilities. Looking ahead, Wang *et al.* (2023) propose that voice will play a pivotal role in upcoming services, highlighting a prevalent tendency in the adoption of artificial intelligence (AI) to increasingly concentrate on the interface design of business applications and human-machine communication. Therefore, digital technologies have engendered one-to-one, one-to-many, and many-to-many interactions, transforming user experiences across different media.

Historically, communication was one-way, beginning with the sender and ending with the recipient. However, the rise of the Internet introduced a paradigm shift, turning communication into interactive, two-way exchanges. This transformation had profound implications for individuals engaging, accessing information, and seeking social-emotional support (Castillo, 2019). It enhanced how people employ interpersonal communication as a two-way information exchange within the media landscape. Characterized by its dual-directional nature and the involvement of a limited number of participants, interpersonal communication has emerged as the predominant communication model in contemporary media platforms such as email, instant messaging, online communities, and social networking services.

Similarly, The Internet heralded a transformative era in mass communication, which had previously been characterized by unidirectional information flow to a large audience with limited feedback. It introduced groundbreaking interactive potentials and ensured a more diverse spectrum of voices and active engagement within the public sphere (Baumgartner *et al.*, 2021; Holt & Karlsson, 2011). Over time, new communication platforms like Facebook, YouTube, and Instagram have emerged, enabling large-scale, two-way interaction.

Nonetheless, the rise of live-streaming platforms has reshaped the dynamics of interactions, blurring the lines between mass and interpersonal interactions. The live-streaming context is fascinating due to its ability to facilitate masspersonal interactions. Within this framework, streamers can broadcast to a vast, largely unfamiliar audience while simultaneously engaging with individual viewers personally. Live streaming on platforms like TwitchTV fosters real-time communication among viewers and streamers, marking novel mass communication forms encompassing news, images, videos, and music. TikTok is another popular platform where brands are advised to partner with credible and knowledgeable Key Opinion Consumers (KOCs) on the platform to boost sales through positive electronic word-of-mouth for accurate information and authentic content (Phan & Nguyen, 2024).

According to O'Sullivan (2005), masspersonal communication refers to situations where mass and interpersonal communication overlap. It can occur when mass communication is personalized for individual interactions, interpersonal communication reaches a larger audience, and individuals engage in both

simultaneously. Rather than focusing exclusively on the communication technology used, it takes a user-centered approach to thoroughly understand communication episodes (Carr, 2017). Since O'Sullivan's work, numerous studies have characterized social media platforms as embodying masspersonal communication (Carr & Hayes, 2015). O'Sullivan and Carr (2017) further introduced a classification model categorizing communication modes into mass communication, interpersonal communication, and masspersonal communication based on the level of personalization and content accessibility.

2.2 Usefulness and Enjoyment

The Uses and Gratification Theory (UGT) is a core theoretical framework to comprehensively elucidate how individuals embrace various media formats and derive gratifications obtained through the utilization and availability of media. (Katz, 1959), It is based on the assumption that individuals actively choose media and are self-aware of their needs, primarily based on the benefits gained (Luo & Remus, 2014). Extending beyond conventional media, UGT has been employed in new communication media, such as Internet news (Zhang & Zhang, 2013), web-based information services (Luo & Remus, 2014), and online games (Yang *et al.*, 2023). Among the critical motivations for engaging with media services, previous scholarly endeavors have consistently highlighted the pivotal roles of perceived information usefulness and the enjoyment of media interactions (Leung, 2013; Yang *et al.*, 2023). Building upon prior UGT research, we formulated the following test hypotheses for our current study.

H_1 : The usefulness of a medium providing information about a video game (video game-related media) has a positive effect on a user's attitude toward the video game.

H_2 : The usefulness of a medium providing information about a video game (video game-related media) has a positive effect on a user's attitude toward video game-related media.

H_3 : The enjoyment of a medium providing information about a video game (video game-related media) has a positive effect on a user's attitude toward the video game.

H_4 : The enjoyment of a medium providing information about a video game (video game-related media) has a positive effect on a user's attitude toward video game-related media.

2.3 Richness of Media

Media richness, a concept originally proposed by Daft and Lengel (1986), pertains to a communication channel's capacity to deliver information in a detailed manner, thereby augmenting the recipient's understanding. They delineated four pivotal aspects of media richness: immediate feedback, diverse cues, varied languages, and personalization (Daft and Lengel, 1986).

Focusing on the gaming sphere, Liao *et al.* (2020) asserted that games are complex systems with media functions facilitating user message exchange. However, games vary in features; while some provide interfaces for instant messaging, others do not (Tseng *et al.*, 2022). Despite these divergences, a plethora of research persistently emphasizes the profound informational richness that games offer. Jarke (2007) highlighted computer games' emotional engagement, learning support, and neurological impact, particularly evident in pervasive gaming due to enhanced media richness and mobility. Additionally, Tseng *et al.* (2022) revealed that specific elements of media richness, such as personal focus and immediate feedback, expedite the establishment of guanxi (social connections) and bolster online gamer loyalty by

utilizing the concepts of presence and interactivity. These studies underscore the relevance of media richness in online gaming.

H_5 : The richness of a communication channel (i.e., mass, interpersonal, and masspersonal communication) in providing video game-related media has a positive effect on user's attitude toward the video game.

H_6 : The richness of a communication channel (i.e., mass, interpersonal, and masspersonal communication) in providing video game-related media has a positive effect on users' attitudes toward the media

2.4 Attitude and Intention to Use Video Game and Video-Game Media

This research builds upon the Technology Acceptance Model (TAM), which stems from the Theory of Reasoned Action (TRA). TRA posits that an individual's beliefs about the consequences of a particular behavior impact their attitudes, subsequently affecting their behavioral intention (BI) (Hsu and Lu, 2004). Davis (1989) expanded on TRA by crafting a model focused on users' acceptance of information and communication technology (ICT). Essentially, people's beliefs regarding the outcomes of using ICT, be it a specific technology or system, influence their attitudes toward it. These attitudes, in turn, shape their intentions to use the technology or system, signifying their willingness or likelihood to engage in ICT-related behaviors.

H_7 : A user's attitude toward a video game has a positive impact on the user's intention to use the video game.

H_8 : A user's attitude toward a video game has a positive effect on the user's intention to use the media.

H_9 : A user's attitude toward the media communication channel (i.e., mass, interpersonal, and masspersonal communication) has a positive impact on the user's intention to use the video game.

H_{10} : A user's attitude toward the media communication channel (i.e., mass, interpersonal, and masspersonal communication) has a positive impact on the user's intention to use the media.

3. METHODOLOGY

Causal quantitative research design was applied to investigate and identify the extent and nature of cause-and-effect relationship among the study variables. Following a homogeneous purposive sampling method, the sample comprised 590 respondents, aged 18-44 years old. Filipino video game players who obtained video-game related information from mass communication, interpersonal communication, and masspersonal communication media. All survey respondents were asked to rate media richness, enjoyment, usefulness, attitude toward video games, attitude toward video game-related media, intention to use video games, and intention to use video game-related media to test the ten hypotheses.

Research instrument involved 28 questions. For usefulness and enjoyment of media, the five-item and four-item scales of Sjöblom and Hamari (2017). The five-item scale of Chen and Chang (2018) was employed to capture the richness of media. The survey further included the four-item scale of Agarwal and Prasad (1999) to encapsulate attitudes toward video games and the three-item scale of Liu *et al.* (2009) for attitudes toward video game media communication format. Intention to use video game and the

intention to use video game media using the four-item scale of Agarwal and Karahanna (2000) and the three-item scale of Liu *et al* was administered. (2009). That said, all research instruments were rated through a seven-point Likert scale (i.e., from 1 = “strongly disagree” to 7 = “strongly agree”). The validity of the measurement scales was then analyzed using Cronbach’s Alpha (α) which generated values between 0.761 to 0.888, implying that the scales exhibited good reliability and internal consistency.

The study hypotheses were evaluated by employing structural equation modeling (SEM), a two-step process comprising: (1) confirming the measurement model’s reliability and validity through confirmatory factor analysis (CFA), and (2) scrutinizing the structural models via path analysis (Fan, 2016). SEM integrates factor analysis, path analysis, and other modeling approaches to establish a system of linear equations representing the hypothesized connections between latent variables and their numerous indicators (Knoke, 2005).

The statistical analyses were conducted utilizing the Lavaan package within RStudio. Model evaluations were based on the following fit indices: Tucker Lewis Index (TLI), Comparative Fit Index (CFI), Standardized Root Mean Square Residual (SRMR), and Root Mean Square Error of Approximation (RMSEA). Acceptable model fit criteria entail TLI and CFI values above 0.90 (Weston & Gore, 2006; Hu & Bentler, 1999) and SRMR and RMSEA values of 0.08 or lower (Hu & Bentler, 1999; Fabrigar *et al.*, 1999).

4. RESULTS AND DISCUSSION

4.1 Common Method Bias and Normality Test

The Mardia’s test and Anderson-Darling test were utilized before the measurement model estimation to detect multivariate and univariate normality, respectively. Both tests found a non-normal distribution in the survey data, which prompted the use of a maximum likelihood robust (MLR) estimator to control for non-normality and reduce outlier effects (Rosseel, 2012). Moreover, Harman’s single factor test demonstrated no common method bias issue given that all variable factor loadings are higher than 0.30 and proportion variance is 0.49 which is below the 0.5 threshold.

4.2 Measurement Model

A confirmatory factor analysis (CFA) was then conducted to confirm the factor structure of the model with seven latent variables. Hair *et al.* (2011) underlined to remove questionnaire items with factor loadings (i.e., standard estimate) below 0.7. Upon conducting the CFA, all questionnaire items had factor loadings above 0.7. Further, the fit indices of the measurement model were all within the acceptable range. Specifically, CFI is 0.964; TLI is 0.959; RMSEA is 0.048; and SRMR is 0.055, which demonstrates an adequate fit of the measurement model.

4.3 Convergent and Discriminant Validity

To further substantiate the validity of the measurement model, the convergent and discriminant validity of the measurement scales were determined. As displayed in Table 1, the measurement scales exhibit convergent validity given that the Average Variance Extracted (AVE) values of each construct were above 0.50. Furthermore, discriminant validity was also corroborated as the Heterotrait-monotrait (HTMT) ratios of correlation fell below the 0.90 threshold except for the HTMT ratios of correlation

between Attitude Towards Media and Intention to Use Media, which minimally inched above the threshold yet remained below one (Fornell & Larcker, 1981; Henseler, 2015).

Table 1. AVE Values and HTMT Ratios of Correlation

	AVE	USE	ENJ	MR	ATTM	IUM	ATTG	IUG
USE	0.74	1.00						
ENJ	0.88	0.77	1.00					
MR	0.84	0.54	0.56	1.00				
ATTM	0.86	0.81	0.82	0.66	1.00			
IUM	0.82	0.75	0.77	0.62	0.91	1.00		
ATTG	0.74	0.56	0.59	0.40	0.64	0.60	1.00	
IUG	0.84	0.56	0.62	0.43	0.66	0.66	0.87	1.00

USE: Usefulness; ENJ: Enjoyment; MR: Media Richness; ATTM: Attitude Towards Media; ATTG: Attitude Towards Game; IUG: Intention to Use Game; IUM: Intention to Use Media

4.4 Structural Model

Table 2 depicts the results of the structural model, showing that nine out of then ten paths were significant (Table 2). Further, all of the model fit indices were within the acceptable range (CFI = 0.963; TLI = 0.959; RMSEA = 0.049; SRMR = 0.057), which implied a good model fit for the structural model.

Table 2. SEM Results

Hypothesis	Estimates	SE	<i>p</i>	Result
H_1 : USE → ATTG	0.269	0.100	***	Supported
H_2 : USE → ATTM	0.470	0.073	***	Supported
H_3 : ENJ → ATTG	0.391	0.081	***	Supported
H_4 : ENJ → ATTM	0.489	0.069	***	Supported
H_5 : MR → ATTG	0.055	0.051	0.287	Not Supported
H_6 : MR → ATTM	0.260	0.054	***	Supported
H_7 : ATTG → IUG	0.836	0.049	***	Supported
H_8 : ATTG → IUM	0.106	0.054	**	Supported
H_9 : ATTM → IUG	0.172	0.042	***	Supported
H_{10} : ATTM → IUM	0.837	0.051	***	Supported

USE: Usefulness; ENJ: Enjoyment; MR: Media Richness; ATTM: Attitude Towards Media; ATTG: Attitude Towards Game; IUG: Intention to Use Game; IUM: Intention to Use Media

Note. *** denotes significance at the 1% level (two-tailed); ** denotes significance at the 5% level (two-tailed)

The demographic composition of the study's participants is as follows: out of the (590) total sample size, 197 identified as female, 389 as male, and 4 chose not to disclose their gender. Age-wise, the respondents were divided into four groups: 549 decks within 18-24 age bracket, while 41 were between 25 and 56 years old. In terms of educational background, 452 were undergraduate college students, 72 held a bachelor's degree, and 54 were senior high school students. The remaining 12 varied in educational attainment. Sundry respondents (258) re-counted watching 0 to 2 hours of

video game-related content in mass communication media per week. 221 watched for 3 to 5 hours, 74 for 6 to 10 hours, and 25 for 10.5 to 20 hours. A small group of 12 watched for 21 or more hours.

The results demonstrated a positive relationship between the perceived usefulness and enjoyment derived from video game-related media on user attitudes toward both the media and the video games themselves. When users discover such media to be valuable, be it through reviews, tutorials, or gameplay videos, they benefit from insights and assistance that enhance their gaming experience. This may involve a deeper understanding of game mechanics, the ability to overcome challenges, or the capacity to make informed decisions, thereby elevating their overall enjoyment of the game. Moreover, user's enjoyment is intricately woven with engagement and immersion. Video game users who find enjoyment from video game-related media – may it spring from entertaining commentary or engaging storytelling – tends to create emotional connections with both the game and the media. Such an emotional link breeds a sense of belongingness among gamers, leading to more positive attitudes both the game and the media. The direct ties of usefulness and enjoyment run parallel with studies on mass communication, interpersonal communication, and masspersonal communication (Greene & Krcmar, 2005; Sherrt *et al.*, 2006; Wu *et al.*, 2010). This alignment with web advertising research underscores the importance of informative and entertaining content, which significantly affects how individuals perceive advertisements and their overall attitudes toward them.

The structural model for the overall group disclosed that media richness exhibited a statistically significant impact on users' attitudes toward the media. While media richness observably shapes users' intentions to engage with video game-related media, it does not manifest a corresponding improvement in their attitude toward the video game itself. Having said that, users may appreciate and engage with a video game media type that is rich in content and interactive for its own sake, acknowledging its utility and entertainment value in enhancing their understanding of the game or providing a more immersive experience. Yet, this would not translate to a positive perception of the immersing themselves into the game. The divergence in impact may be rooted in the heterogenous effect on the three different types of media, implying that the form of media might have a distinct influence on users' attitudes.

The overall group model also demonstrated attitudes toward video games exert a significant direct influence on the intention to use both video games and related media, thereby streamlining the crucial role of user sentiment in shaping their engagement with the gaming ecosystem. When a user holds a positive attitude toward a particular video game, it reflects their satisfaction and enjoyment and serves as a key handler for their subsequent actions. They convert to explore various sources of game-related media, such as reviews, gameplay videos, or community discussions, to deepen their understanding, discover hidden aspects, or simply extend their enjoyment of the game. Essentially, such a dynamic illustrates the symbiotic relationship between user attitudes and their engagement with video game-related content. Positive attitudes create a feedback loop, where users' curiosity fuels their intention to use both the game itself and the diverse media surrounding it. This fortifies the idea that user attitudes may define the video gaming landscape, influencing not only individual actions but also the broader dynamics of the gaming ecosystem.

Attitudes toward video game-related media (ATTM) exert a statistically significant positive relationship on Filipino user's intention to use both video games and the media format. These discoveries parallel insights from studies in web advertising, which emphasize how positive attitude towards advertisements that can

provide product information ominously impact brand image and influence purchase intentions. Analogously, in the gaming context, positive attitudes toward media that deliver video game information can lead to more favorable perceptions of the games themselves and heightened intentions to play them. This synergetic relationship between video games and video game-related media underscores how they complement each other, creating a dynamic ecosystem where each component reinforces and enhances the other.

Table 3 shows the results of the multigroup analysis to determine the existence of heterogeneity in the relationship of the research constructs depending on the media communication format. Model fit indices are all within the acceptance range as observed in Table 4.

Compared to the overall group model, the usefulness of masspersonal communication exhibited a more forceful influence on users' attitudes toward the game. The significance lies in its inference that information obtained through masspersonal communication media carries more weight in shaping user decisions compared to information from mass communication or purely interpersonal sources. For illustration, gameplay livestreams enable Filipino gamers to receive personalized responses from the streamer, ask questions, share opinions, and even receive real-time gameplay tips. In this logic, livestreaming falls within the category of masspersonal communication media due to its ability to offer a wide-reaching, live broadcast while maintaining an element of personal interaction. On this addendum, Filipinos may perceive live streams as highly useful for making informed decisions about video games. The personalized interaction and real-time feedback from the streamer and the community can significantly influence their attitudes toward both the game being played and the live-streaming platform itself.

Table 3. Parameter Comparison of Three Models

Hypothesis	Estimates		
	Mass Communication	Interpersonal communication	Masspersonal communication
$H_1: \text{USE} \rightarrow \text{ATTG}$	0.269***	0.325***	0.498***
$H_2: \text{USE} \rightarrow \text{ATTM}$	0.470***	0.372***	0.417***
$H_3: \text{ENJ} \rightarrow \text{ATTG}$	0.391***	0.243***	0.297***
$H_4: \text{ENJ} \rightarrow \text{ATTM}$	0.489***	0.475***	0.452***
$H_5: \text{MR} \rightarrow \text{ATTG}$	0.055	0.216***	0.074**
$H_6: \text{MR} \rightarrow \text{ATTM}$	0.260***	0.265***	0.203***
$H_7: \text{ATTG} \rightarrow \text{IUG}$	0.836***	0.843***	0.812**
$H_8: \text{ATTG} \rightarrow \text{IUM}$	0.106**	0.031	0.112
$H_9: \text{ATTM} \rightarrow \text{IUG}$	0.172***	0.155***	0.167***
$H_{10}: \text{ATTM} \rightarrow \text{IUM}$	0.837***	0.915***	0.903***

USE: Usefulness; ENJ: Enjoyment; MR: Media Richness; ATTM: Attitude Towards Media; ATTG: Attitude Towards Game; IUG: Intention to Use Game; IUM: Intention to Use Media

Note. *** denotes significance at the 1% level (two-tailed); ** denotes significance at the 5% level (two-tailed)

Table 4. Model Fit Indices of Three Models

	CFI	TLI	RMSEA	SRMR
Mass Communication	0.963	0.959	0.042	0.057
Interpersonal Communication	0.979	0.976	0.033	0.041
Masspersonal Communication	0.976	0.973	0.036	0.042

Findings showcased that Filipino users' enjoyment of masspersonal communication media has a significantly weaker influence on user attitudes toward games compared to mass communication media revealing an intriguing contrast in the dynamics of these two forms of communication in the context of video games. As stated, masspersonal communication media, offers a blend of personalized interaction and broad content dissemination. In the case of live streaming, viewers can engage in real-time chats with both the streamer and fellow audience members. On the other hand, mass communication media, which typically involve more traditional forms like game reviews or articles, may not offer the same level of real-time interaction and community engagement. They are often sought out precisely for game-related information or in-depth analysis. Users may prioritize the utility of mass communication media when seeking detailed insights about a game, making purchasing decisions, or staying updated on the latest developments in the gaming world. The enjoyment derived from these media appears to have a more significant influence on user attitudes toward games, as it directly enhances their overall experience of consuming game-related information.

Interestingly, the multigroup analysis showed the impact of the richness of mass communication media on users' attitudes toward the game, thus presenting an intriguing contrast when compared to interpersonal and masspersonal communication media. Unlike the latter two, where the richness of the media content does exert a statistically significant influence on user attitudes, mass communication media, which often includes more traditional forms like broadcast media (i.e., television shows), appears to diverge in its effects. This divergence can be ascribed to the fundamental differences in the nature and purpose of these communication mediums. Interpersonal and masspersonal communication media tend to emphasize personalized interactions and tailored content, which can create deeper and more emotionally engaging experiences for users. Richness in these contexts deciphers into more meaningful connections, trust-building, and, consequently, a more positive attitude toward the game. On the other side of the spectrum, mass communication media typically cater to broader and more heterogeneous audiences, often prioritizing the dissemination of general information. In such cases, the richness of the medium may not have the same impact on user attitudes as it would in one-on-one or personalized communication settings. Users of mass communication media might perceive the richness as less relevant to their individual experiences or preferences, which could explain the absence of a statistical influence on their attitudes toward the game.

Multigroup analysis also bared that the impact of Filipino users' attitude towards the video game on the intention to use video-game-related media is contingent on the mode of communication. In the case of video-game-related media disseminated through mass communication channels, there is a noticeable connection between users' attitudes toward the game and their engagement with mass communication media. This suggests that when users have positive attitudes toward a video game and encounter related media through mass communication, they are more inclined to consume and engage with that media. This phenomenon might be attributed to mass communication's broader and more generalized nature, where users may rely on it as a source of general

information about the game. Positive attitudes toward the game could lead them to seek out such information, thus influencing their intention to use mass communication media for this purpose. Nonetheless, this consequence is not as apparent in interpersonal and masspersonal communication settings. Personalized forms of communication, users' attitudes toward the game may be influenced by factors beyond the content of the game itself, such as recommendations or discussions with friends or peers. The direct impact of users' game-related attitudes on their intention to use interpersonal and masspersonal communication media might be less pronounced because their decisions may be driven by factors other than their own attitudes.

5. CONCLUSION AND MANAGEMENT IMPLICATIONS

SEM was exhausted to empirically investigate how usefulness, richness, and enjoyment derived from obtaining video game-related media mass, interpersonal, and masspersonal media format impact users' attitudes and intentions to use the game and the media in the Philippine context. The results showed that nine out of the ten paths were statistically significant.

Elucidating in this study, three high-impact operable strategies emerge to augment their interactions and enhance user attitudes. Firstly, recognizing the distinctive allure of masspersonal communication media, such as livestreaming platforms, operators are advised to foster collaborations with influencers and content creators who can furnish not only informative content but also cultivate interactive and community-driven experiences. Nurturing robust relationships with these creators can significantly amplify the utility of game-related media and facilitate the cultivation of a dedicated and engaged player community.

Secondly, it is paramount to prioritize the creation of informative and valuable content within mass communication media channels, including game reviews, articles, and videos. These channels serve as indispensable resources for gamers seeking profound insights, tactical guidance, and impartial evaluations. By consistently delivering superior-quality and insightful content, video game operators can effectively shape user attitudes and wield influence in guiding gamers toward well-informed decisions concerning their games.

Finally, striking an equilibrium between enjoyment and utility within video game-related media is paramount in video game marketing communication strategies. Content should not merely serve as an information conduit but should also captivate and engage users. The concoction of elements such as compelling storytelling, relatable commentary, or avenues for community interaction can elevate the overall user experience, engendering both positive attitudes and a sense of enjoyment. In adopting these strategies, video game operators can proficiently engage their target audience, dispense valuable content, and engender a comprehensive gaming environment, leading to heightened success and a prolonged presence in the aggressively competitive video game industry.

Adjacent to the gaming industry, this paper postulates valuable insights into the evolving social interactions within the platform economy. The increasing prominence of social media and hyper-consumption is prompting businesses to reassess their marketing strategies. The assertion of this study elucidate how live streaming platforms are ushering in a new era of engagement. Specified that the study was conducted exclusively in the Philippines, future researchers should include diverse countries with differing customer profiles to enhance the generalizability of the findings. Ancillary, there exists potential for further research refinement, particularly by narrowing the

research scope to delve into video game-related user behavior nuances. This might encompass an exploration of potential variations across various live streaming platforms, video game genres, or alternative communication formats, such as mass communication. For future academic endeavors, the inclusion of qualitative or experimental research designs could serve to corroborate and build upon the insights gleaned from this research.

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REFERENCES

- [1] Agarwal, R., & Prasad, J. (1999). Are individual differences germane to the acceptance of new information technologies?. *Decision sciences*, 30(2), 361-391.
- [2] Barr, M., & Copeland-Stewart, A. (2021). Playing Video Games During the COVID-19 Pandemic and Effects on Players' Well-Being. *Games and Culture*.
- [3] Baumgartner, A., Fürst, S., & Schönhagen, P. (2021). Conceptualizing the dialogical structure of mass communication: A comparison of the dialogical networks and mediated social communication approaches. *Discourse, Context & Media*, 44, 100546. <https://doi.org/10.1016/j.dcm.2021.100546>
- [4] Carr, C. T. (2017). Masspersonal communication: A model bridging the mass-interpersonal divide. *New Media & Society*. <https://doi.org/10.1177/1461444816686104>
- [5] Carr, C. T., & Hayes, R. A. (2015). Social media: Defining, developing, and divining. *Atlantic journal of communication*, 23(1), 46-65.
- [6] Chang, J., & Lee, D. (2022). Changes in user experience and satisfaction as media technology evolves: The reciprocal relationship between video games and video game-related media. *Technological Forecasting and Social Change*, 174, 121219.
- [7] Chen, C. C., & Chang, Y. C. (2018). What drives purchase intention on Airbnb? Perspectives of consumer reviews, information quality, and media richness. *Telematics and Informatics*, 35(5), 1512-1523.
- [8] Daft, R. L., Lengel, R. H., & Treviño, L. K. (1986). *The relationship among message equivocality, media selection, and manager performance: Implications for information support systems*. Department of Management, Texas A & M University.
- [8] Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 319-340.
- [9] Esport Charts (2022 October 24). MPL Philippines Season 10 recap: increase in viewership and exciting matches. Retrieved May 6, 2023 from <https://escharts.com/news/mpl-philippines-season-10-recap-increase-viewership-and-exciting-matches>
- [10] Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods*, 4(3), 272. <https://doi.org/10.1037/1082-989X.4.3.272>

- [11] Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18, 39–50. <https://doi.org/10.1177/002224378101800312>
- [12] Goh, E., Al-Tabbaa, O., & Khan, Z. (2023). Unravelling the complexity of the Video Game Industry: An integrative framework and future research directions. *Telematics and Informatics Reports*, 12, 100100. <https://doi.org/10.1016/j.teler.2023.100100>
- [13] Greene, K., & Kremer, M. (2005). Predicting exposure to and liking of media violence: A uses and gratifications approach. *Communication Studies*, 56(1), 71–93.
- [14] Hair, Joe F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a Silver Bullet. *The Journal of Marketing Theory and Practice*, 19(2), 139–152. <https://doi.org/10.2753/MTP1069-6679190202>
- [15] Hamilton, W. A., Garretson, O., & Kerne, A. (2014, April). Streaming on Twitch: fostering participatory communities of play within live mixed media. In *Proceedings of the SIGCHI conference on human factors in computing systems* (pp. 1315-1324).
- [16] Henseler, J., Ringle, C.M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43, 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- [17] Holt, K., & Karlsson, M. (2011). Edited participation: Comparing editorial influence on traditional and participatory online newspapers in Sweden. *Javnost-the public*, 18(2), 19-35. <https://doi.org/10.1080/13183222.2011.11009054>
- [18] Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indices in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1–55. <https://doi.org/10.1080/10705519909540118>
- [19] Hsu, C. L., & Lu, H. P. (2004). Why do people play on-line games? An extended TAM with social influences and flow experience. *Information & Management*, 41(7), 853-868.
- [20] Hsu, C. L., Lin, J. C. C., & Miao, Y. F. (2020). Why are people loyal to live stream channels? The perspectives of uses and gratifications and media richness theories. *Cyberpsychology, Behavior, and Social Networking*, 23(5), 351-356.
- [21] Jarke, M. (2007). Serious games: The impact of pervasive gaming on business.
- [22] Kaitawarn, C. (2015). Factor influencing the acceptance and use of M-payment in Thailand: a case study of AIS mPAY rabbit. *Review of Integrative Business and Economics Research*, 4(3), 222.
- [23] Kaye, L. K., Kowert, R., & Quinn, S. (2017). The role of social identity and online social capital on psychosocial outcomes in MMO players. *Computers in Human Behavior*, 74, 215-223.
- [24] Katz, E. (1959). Mass communications research and the study of popular culture: An editorial note on a possible future for this journal. *Departmental Papers (ASC)*, 165.
- [25] Knoke, D. (2005). *Structural Equation Models*. Encyclopedia of Social Measurement, 689–695. <https://doi.org/10.1016/b0-12-369398-5/00392-3>
- [26] Kröger, J. L., Raschke, P., Percy Campbell, J., & Ullrich, S. (2022). Surveilling the gamers: Privacy impacts of the video game industry. *Entertainment Computing*, 44, 100537.
- [27] Lehtonen, M. J., Gustafsson, R., & Hassan, L. (2023). The multiplex of value creation and capture logics in the video game industry: An integrative review of

- 20 years of studies and a future research agenda. *Technological Forecasting and Social Change*, 195, 122756.
- [28] Liao, G. Y., Huang, T. L., Cheng, T. C. E., & Teng, C. I. (2020). Impacts of media richness on network features and community commitment in online games. *Industrial Management & Data Systems*, 120(7), 1361-1381.
- [29] Liu, S. H., Liao, H. L., & Pratt, J. A. (2009). Impact of media richness and flow on e-learning technology acceptance. *Computers & Education*, 52(3), 599-607.
- [30] Luo, M. M., & Remus, W. (2014). Uses and gratifications and acceptance of Web-based information services: An integrated model. *Computers in Human Behavior*, 38, 281-295. <https://doi.org/10.1016/j.chb.2014.05.042>
- [31] Nebel, S., & Ninaus, M. (2022). Does Playing Apart Really Bring Us Together? Investigating the Link Between Perceived Loneliness and the Use of Video Games During a Period of Social Distancing. *Frontiers in Psychology*, 13, 683842. <https://doi.org/10.3389/fpsyg.2022.683842>
- [32] O'Sullivan, P. B. (2005, May). Masspersonal communication: Rethinking the mass interpersonal divide. In *annual meeting of the International Communication Association, New York*.
- [33] O'Sullivan, P. B., & Carr, C. T. (2018). Masspersonal communication: A model bridging the mass-interpersonal divide. *New media & society*, 20(3), 1161-1180.
- [34] Phan, N. T. T., & Nguyen, T. M. (2024). The Influence of Key Opinion Consumers on Customers' Purchase Intention via TikTok-The Case of Generation Z in Vietnam. *Review of Integrative Business and Economics Research*, 13(1), 51-70.
- [35] Purbasari, R., Sari, D. S., & Muttaqin, Z. (2020). Mapping of digital industry competitive advantages: Market-based view approach. *Review of Integrative Business and Economics Research*, 9, 380-398.
- [36] Rosseel, Y. (2012). lavaan: An R package for structural equation modeling. *Journal of Statistical Software*, 48, 1-36. <https://doi.org/10.18637/jss.v048.i02>
- [37] Sherry, J. L., Lucas, K., Greenberg, B. S., & Lachlan, K. (2006). Video game uses and gratifications as predictors of use and game preference. *Playing video games: Motives, responses, and consequences*, 24(1), 213-224.
- [38] Sjöblom, M., & Hamari, J. (2017). Why do people watch others play video games? An empirical study on the motivations of Twitch users. *Computers in human behavior*, 75, 985-996.
- [39] Statista. (September 8, 2022). Revenue of video games market in Southeast Asia 2018-2027, by country. In *Statista*. Retrieved November 20, 2022, from <https://www-statista-com.dlsu.idm.oclc.org/forecasts/1306736/southeast-asia-revenue-of-video-games-market-by-country>
- [40] Statista. (2023). Digital media Video games worldwide. <https://www.statista.com/outlook/dmo/digital-media/video-games/worldwide>
- [41] Streamlabs & Stream Hatchet (2020). Streamlabs and Stream Hatchet Q3 2022 Live Streaming Report. Retrieved July 7, 2023 from <https://streamlabs.com/content-hub/post/streamlabs-and-stream-hatchet-q3-2022-live-streaming-report>
- [42] Sun, P. C., & Cheng, H. K. (2007). The design of instructional multimedia in e-Learning: A Media Richness Theory-based approach. *Computers & education*, 49(3), 662-676.
- [43] Tseng, F., Huang, T., Pham, T. T. L., Cheng, T., & Teng, C. (2022). How does media richness foster online gamer loyalty? *International Journal of Information Management*, 62, 102439. <https://doi.org/10.1016/j.ijinfomgt.2021.102439>

- [44] Wang, S. M., Huang, Y. K., Shih, C. W., & Li, P. C. (2023). Evaluation of service quality on natural language processing service: A case on train station AI service. *Review of Integrative Business and Economics Research*, 12(4), 71-87.
- [45] Weston, R., & Gore Jr, P. A. (2006). A brief guide to structural equation modeling. *The Counseling Psychologist*, 34(5), 719-751. <https://doi.org/10.1177/0011000006286345>
- [46] Yang, J., Wang, R., Cook, A., & Fuller, R. (2023). Gaming during the COVID-19 pandemic: Examining its effect on loneliness & motivation, playing and gratification differences between competitive and recreational gamers. *Telematics and Informatics Reports*, 11, 100093. <https://doi.org/10.1016/j.teler.2023.100093>
- [47] Zhang, L., & Zhang, W. (2013). Real-time Internet news browsing: Information vs. Experience-related gratifications and behaviors. *Computers in Human Behavior*, 29(6), 2712-2721. <https://doi.org/10.1016/j.chb.2013.07.009>