Understanding Esports Player Preferences: Which Self-Definitional Needs Drive Their Satisfaction?

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Abstract

Purpose – Esports is emerging as a global sensation, yet its distinctive nature complicates our understanding of players' motivations. This study leverages self-hierarchy and self-determination theories to examine the motivations that define players at individual, relational, and community levels, seeking to identify which motivations are most valued.

Design/methodology/approach – A mixed-method approach was employed, focusing on *Honor of Kings* esports players in China to explore the answers to the research questions. First, semi-structured interviews were conducted to uncover self-definitional motivations at various levels. Second, a quantitative study was conducted with 607 regular *Honor of Kings* players to empirically examine the effects of the identified motivations on satisfaction.

Findings – The qualitative and quantitative data results reveal that self-efficacy and self-worth at the individual level, recognition and emotional attachment from close others at the relational-self level, and co-creation and belongingness at the collective level positively influence game satisfaction. More importantly, self-definitional motivations at the relational level are valued the most. Additionally, identification with a game character moderates the effects of self-definitional motivation at the collective level and emotional attachment at the relational-self level.

Originality – This research delves into players' motivations for engaging with *Honor of Kings*, anchored in self-hierarchy and self-determination theories. It uncovers that motivations rooted in different aspects of self-identity have distinct associations with players' satisfaction level. This suggests a vital strategy for game designers and operators to adopt: to enhance player satisfaction, they should specifically address and emphasize the aspects of self-identity that matter most to their audience.

Keywords Esports, game satisfaction, self-hierarchy, self-determination theory, game character identification, mix methods

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1. Introduction

Esports, which are organized competitive video games, is becoming a global phenomenon. Witkowski (2012, p.350) defined esports as "an organized and competitive approach to playing computer games". In contrast to traditional sports, esports is computer-mediated and does not rely on the physical competence of participants. Furthermore, unlike other games, esports players are members of organized teams, compete in tournaments, and engage in training to prepare for competitions (Mendoza et al., 2023). Worldwide, Esports audience sizes are projected to reach more than 600 million by 2025, and sponsorship and advertising spending in the esports industry were worth more than USD641 million in 2021 (Gough, 2023). China currently has the highest number of mobile internet users globally. Its esports market revenue is projected to grow significantly, reaching USD 497.6 million in 2024 and achieving a steady compound annual growth rate of 4.98% from 2024 to 2028, with an expected market volume of USD 604.4 million by 2028 (Statista, 2024). Among esports games, *Honor of Kings* is one of the most popular in China, developed by Tencent Games' TiMi Studio Group. It has reached a peak of over 100 million concurrent users and became an official competition event in the Asian Games in 2021, marking the first time that an esports event was included as such and signifying an important milestone (Esports Charts, 2024).

China's mobile gaming market ranks second globally, just behind the United States. China's esports game industry chain is comprehensive and mature, with Chinese-developed mobile games accounting for half the revenue of the top 10 global mobile games (Singer and Chi, 2019; Zandt, 2024). The country's global influence continues to strengthen and deepen. In 2023, *Honor of Kings* secured its position as the top-growing mobile game globally for the fifth consecutive year, surpassing "*League of Legends*" and "*Teamfight Tactics*". Its widespread adoption, the unique cultural context of the Chinese market, the integrity of the esports industry chain, and the growing potential of the Chinese esports market together warrant the study of determinants in providing esports players with a compelling experience (Zhao and Lin, 2021; Chen and Wu, 2024). This research is significant for understanding the global development of esports.

There are many esports games in China, and attracting players is critical (Kong et al., 2024). Therefore, esports should provide a compelling experience that satisfies

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players' developmental needs. Qian et al. (2020a) and Brock (2017) claimed that esports players pursue extrinsic over intrinsic rewards. However, Kim and Thomas (2015) argued that esports players can be motivated by both extrinsic and intrinsic rewards. Esports has become an activity that players enjoy, and some develop themselves to become professional or semi-professional gamers (Martončik, 2015; Seo, 2016). Given the economic benefits and the growing interest in esports, creating compelling gaming experiences remains essential for the industry. Previous research suggests that doing so requires satisfying players' motivational needs (e.g., Hamari et al., 2017; Sailer et al., 2017; Meng-Lewis et al., 2024). Guided by self-determination theory (Ryan and Deci, 2006), these studies recommend that players are motivated by intrinsic needs such as competence, relatedness, and autonomy. However, studies focused on the specific drivers of such needs are limited. Furthermore, Wang and Hang (2021) and Liu (2019) suggested that motivational needs can be inner-directed, which emphasizes self-interest, whereas other-directed needs focus on satisfying perceived situational demands. Such findings demonstrate that the motivational needs of players may comprise various drivers.

Furthermore, psychologists argue that self-concept consists of three levels: individual, relational, and collective (Sedikides and Brewer, 2015). Each self may be associated with different motivational factors, and which level of motivational self will be preferred remains the center of the debate. According to a three-tier hierarchy of self-concepts, individuals develop multiple levels of identity, which vary in importance. To elaborate, individuals tend to put the individual self at the top of the hierarchy, followed by the relational self, which is developed with close others, and then the collective self (Sedikides et al., 2013). However, other psychological research suggests that individual and relational selves are equally important (Zajenkowska et al., 2021). Furthermore, Gaertner et al. (2002) claimed that contextual factors may influence the importance of the motivational self. Players may satisfy all self-definitional motivations, but those motivations are not equally weighted. Game developers and managers should know whether esports players' self-definitional motivations include various drivers and identify which level of self-definitional motivations the players tend to prioritize. While self-determination theory offers guidance on the contents of motivation, self-hierarchy theory aids in comprehending the importance that each motivator holds. The research gap is echoed by Bányai et al. (2019), who invite future research to consider exploring

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the motivational patterns of esports players. Despite the importance of self-definitional needs, existing research demonstrates attitudinal preferences toward some game characters (Ko and Park, 2021) and shows that the relationship between players and the game character may contribute to engagement (Mallon and Lynch, 2014). Existing studies may need to acknowledge the unique nature of esports, as conclusions drawn from prior research on free-to-play games or massively multiplayer online role-playing games (MMORPGs) may not apply to the context of esports. Given these gaps in the current esports literature, this research aims to answer the following questions:

RQ1. What are the various self-definitional motivations that esports players want to satisfy?

RQ2. How do the identified self-definitional motivations at different levels influence esports players' satisfaction?

A mixed-methods approach was employed to address the research questions. The integration of qualitative and quantitative research methods helps overcome the limitations of using either approach alone. This triangulation provides a more comprehensive understanding (Molina-Azorin, 2012; Chan et al., 2016). Qualitative research is crucial in formulating hypotheses and theories that explain the determinants of esports gamers' satisfaction. Concurrently, quantitative research substantiates these hypotheses by leveraging empirical data to validate the causal mechanisms influencing game satisfaction within the esports domain. Therefore, semi-structured interviews were conducted to explore the self-definitional motivations affecting esports players' satisfaction, followed by a quantitative study to analyze the relationship between the identified self-definitional motivations and game satisfaction.

This study makes several meaningful theoretical contributions. First, it demonstrates that self-definitional motivations are structured across three levels. Identifying these distinct motivational levels expands the literature that identifies a list of self-definitional motivations without conceptually classifying these motivations (Davis and Lang, 2012; Liu, 2016; Arztmann et al., 2024). Grounded in self-hierarchy and self-determination theories, our findings classify self-definitional motivations into individual, relational, and collective levels and specify the drivers for each level.

Second, our research findings support Gaertner et al. (2002), which reported that the preference for the motivational self depends on the context. We also contest the view that the individual self is the fundamental basis of self-definitions (Gaertner et al.,

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2002). Our findings reveal that esports players prefer self-definitional motivations at the relational-self level.

Third, we extend the self-determination theory (Ryan and Deci, 2006) by suggesting that individuals do not value competence, relatedness, and autonomy equally. In other words, players may weigh these aspects differently, according to their preferences. Specifically, esports players prefer self-definitional motivations at the relational-self level over those at the individual level, and they also prefer self-definitional motivations at the individual level over their collective level. Thus, game designers and managers need to focus on the self-definitional motivations that are most important to players to provide compelling experiences. Extending the work of Mallon and Lynch (2014) and Przybylski et al. (2012), our research findings suggest that not everyone identifies with their favorite character in a similar fashion. Self-definitional motivations at the collective level are only strengthened when players strongly identify with the game character. The effects of self-definitional motivations at the individual and relational levels are not influenced by the degree of game character identification.

Furthermore, our research offers valuable practical insights for game designers and marketing managers in the esports industry. It highlights strategies to effectively attract and retain players while enhancing their overall gaming experience. By focusing on China's esports market—one of the largest and most influential globally—this study provides actionable recommendations for designing games and campaigns that resonate with players. This includes leveraging insights into the success of *Honor of Kings*, a leading game in China's esports sector, to understand player behaviors and the factors driving their satisfaction.

For marketing managers, this research offers guidance on how to expand the player base and build stronger advocate communities, both in China and on a global scale. It also provides strategies for optimizing user engagement and retention by tailoring experiences to meet specific market needs. For game designers, the findings inform the creation of more compelling, user-centric designs, which are crucial for maintaining player loyalty and long-term satisfaction.

2. Theoretical foundation

2.1 Game satisfaction

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Satisfaction is "a sense of contentment that arises from an experience about an expected experience" (Hernon and Whitman, 2001, p.66). Satisfaction with online games is a crucial determinant of usage continuance and in-game purchase behavior (Kim et al., 2015). As the cornerstone of the game experience, the antecedents to players' satisfaction remain the central focus of scholarly work. For example, the atmosphere of the game (Yoshida and James, 2010), personalization features (Kwak et al., 2010), community involvement (Yoshida et al., 2015), and the flow of the game (Sepehr and Head, 2018) increase players' satisfaction. Furthermore, the social presence of others enhances gamers' experience (Sepehr and Head, 2018). Hew et al. (2023) revealed that immediacy, social interaction, and competition also lead to heightened enjoyment.

So far, much previous work on gamers' satisfaction has chiefly focused on system-related variables and psychological motivations. However, psychological needs are tied most strongly to individuals' core selves. Sedikides et al. (2013) suggested that motivational self-hierarchy is the foundation of identity formation. Specifically, individuals prioritize the individual self first, followed by the relational self developed with close others, and more distantly, the collective self (Sedikides et al., 2013). However, Zajenkowska et al. (2021) argued that individual and relational selves are equally important. Previous psychological research has been inconclusive about which level of motivational self-hierarchy individuals prioritize the most. Contextual variations may explain why these inconclusive results occur (Gaertner et al., 2002). Therefore, our research aims to explore esports players' self-definitional motivations at the individual, relational, and collective levels. We also aim to identify which level of self-definitional motivation is most critical among esports players.

2.2 The importance of esports players' self-definitional needs

We build on customers' self-definitional needs theory to understand what attracts esports players. Self-definitional needs often motivate behavioral intentions and attitudinal preferences (Vignoles et al., 2006; Kassemeier et al., 2022). "The 'self-concept' includes diverse representations of a person's unique identity, close relationships, and group memberships" (Nehrlich et al., 2019, p.213). Accordingly, Sedikides and Brewer (2015) identified this diversification as including three distinct components: the individual self, relational self, and collective self. To illustrate, the individual self includes the distinctive characteristics that differentiate one person from

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others. The relational self refers to the commonalities that a person shares with close others. The collective self includes characteristics that an individual shares with a meaningful group (e.g., community, leisure clubs, organizations). The importance of each of these lies in how they influence individuals' self-perception and their environment, determining their relationships with companies (Reed, 2004). Self-definitional needs are developed through three key sources: the individual level, close relationships (guild), and the broader game community. However, the level of preference among self-definitional needs varies, and there has yet to be a consensus on which level of self is primary. Gaertner et al. (2012) proposed that individuals will react more strongly to enhancements or threats to the individual self than the relational or collective self. Enhancing information generates a positive affective state, whereas threatening information produces negative emotions (Gaertner et al., 2012). Other studies, such as Zajenkowska et al. (2021), claimed that the individual self and relational self are equally important. They further reveal that demographic variables, such as age and the city size of residence, may also play a role in determining the level of importance.

Furthermore, the self-determination model is the dominant psychology paradigm for understanding entertainment experiences and explaining human motives. Individuals' basic psychological needs can be satisfied in games (Sailer et al., 2017). The consensus in previous research is that fulfilling the basic psychological needs of competence, autonomy, and relatedness enhances the gaming experience (Ryan et al., 2006). According to Ryan and Deci (2006), the need for competence captures the extent to which a game offers optimal opportunities and challenges for positive feedback. One's need for autonomy in the game can be satisfied through appropriate game design, content, and personal appeal (Ryan and Deci, 2001). The need for relatedness reflects one's desire to connect socially with others in the game (Ryan et al., 2006). Recent research also corroborates that the fulfillment of basic psychological needs intensifies the gaming experience (Tamplin‐Wilson et al., 2019; Wang and Hang, 2021). Indeed, Wang and Hang (2021) demonstrated that individual players' needs for competence, relatedness, and autonomy are satisfied through both self-directed and other-directed motivations. In particular, the need for competence is achieved through personal growth in the game and the aspirations for competent status within the guild. These findings indicate that the drivers of specific psychological needs may have multiple variables.

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Based on the above, from a motivational perspective, the self-hierarchy theory (Sedikides et al., 2013) and the self-determination theory (Ryan and Deci, 2006) both explain the importance of individual players' motivational needs. Therefore, this research employs both self-hierarchy and self-determination theories as guiding frameworks to identify esports players' self-definitional motivations at various levels and examine their impacts on game satisfaction.

3. Methodology

We employed a mixed-method approach in this research to gain a comprehensive understanding and specific insights into the emerging phenomenon of esports satisfaction. We integrated qualitative and quantitative methodologies (Täuscher and Laudien, 2018). The initial phase conducted qualitative research to explore the three distinct facets of the self as precursors to esports satisfaction, uncovering the core drivers that influence player satisfaction across these distinct levels, thus addressing RQ1. Subsequently, we utilized quantitative research to test the identified factors, aiming to verify RQ1 and further explore RQ2.

We conducted semi-structured interviews with the players of Honor of Kings, the multiplayer online battle arena (MOBA) developed by Tencent Games in 2015. As of November 2020, *Honor of Kings* boasted over 100 million active daily players, solidifying its position as one of the world's most popular games and the highest-grossing mobile game in history (Esports Charts, 2024). Honor of Kings secured the second-highest revenue among mobile games globally in February 2021, accumulating USD 218.5 million in gross revenue.

3.1 Study 1: A qualitative study

Using an interview-based approach has several benefits, such as elucidating the intricacies of a phenomenon, exploring pertinent factors, and establishing causal relationships within the specific research context (Lee et al., 2019, 2020). This study examines the self-definitional attributes that influence esports players' satisfaction. Therefore, we conducted one-to-one semi-structured interviews in an informal setting with twelve participants (seven male and five female players), including professional and non-professional players, all with rich experience of Honor of Kings; the respondents' profiles are listed in Table 1. The research team recruited the respondents

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on-site at an offline esports festival and then interviewed them on a one-to-one basis. The duration of each interview was roughly 30 to 40 minutes. We initiated every interview with casual conversation, inviting participants to share some background to build rapport with them, making them comfortable. Following this, a question prompted all participants to recount their latest interactions with Honor of Kings, after which they were invited to share their reflections on their gameplay experiences. Follow-up questions were tailored to the responses provided by the interviewees. This approach ensured that we captured comprehensive insights and obtained greater depth in our interviews.

[Insert Table 1]

3.1.1 Data analysis and results

We used open coding and axial coding methodologies, following the principles outlined by Cartwright et al. (2022), to transcribe and analyze the interviews. The coding process included three researchers, with one coder remaining independent from the data collection to reduce potential bias. During the open coding phase, each coder carefully examined the interview transcripts line by line to identify concepts within the textual data that reveal game satisfaction within the decision-making processes of the interviewees.

As we transitioned to the axial coding phase, our study identified and linked various categories to understand potential causal relationships explaining the satisfaction derived from esports games. We integrated these initial insights into a theoretical framework to construct a research model. Our next steps included rigorous testing and validation of this model using quantitative analysis. We carefully categorized and classified the responses from the twelve participants, organizing them into broad conceptual themes and selecting representative terms to capture the essence of each.

Our data reveal three distinct levels of self-definitional motivations associated with esports satisfaction, demonstrating the specific drivers for each level. Table 2 presents the results of the qualitative study along with sample quotes from participants. At the first level, the individual self is characterized by unique traits, experiences, and characteristics that distinguish one person from another (Sedikides and Spencer, 2007). Regarding this level, interviewees highlighted two key attributes. On the one hand, they

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expressed confidence in their ability to succeed in the game, with statements such as "*I cherish the sensation of consecutive victories," "Winning reflects one's capabilities,"* and "*I am satisfied with my strategic application and decision-making abilities in the game."* This last quote indicates that gamers' self-efficacy is crucial for their game satisfaction. On the other hand, they derive a sense of self-worth from gameplay, as evidenced by comments such as "*Leading everyone to victory ignites a sense of fulfillment in me. Every time I successfully lead the team to victory, it makes me feel that my contribution is recognized, thereby enhancing my sense of self-worth*." "*Honor of Kings has provided me with a platform to interact and compete with others. In the game, I can showcase my creativity and independence, which makes me feel that I have unique value*." "*Though I play a supporting role in the game, I am also pivotal in securing a win. Every small achievement I make in the game makes me feel needed and important*." "*Honor of Kings has given me the opportunity to demonstrate leadership and strategic thinking, allowing me to achieve success in my career and feel that I am valuable.*" This sense of self-worth strengthens their connection with the game and their roles, ultimately enhancing their satisfaction with the gaming experience.

At the second level, the relationship with close others, such as other team members, emerged as another key level. Participants noted that while they sought recognition from others, they also formed emotional connections with these individuals, which boosted their identity and satisfaction with the game. They shared that acknowledgment of their mastery of a specific hero motivated them to keep playing that character, which they referred to as "Recognition from close others". For example, "*I am primarily a secondary leader; the dual affirmation from team members and leaders makes me eager to continue in this middle role*", "*Our excellent performance in the competition received recognition from the coach and teammates…*" and "*Since many people say I perform well in this role, I have continued to embrace it*." Additionally, some participants highlighted that their interactions expanded beyond gaming, which included fostering emotional attachment to the guild, extending to other social media platforms, and forming strong relational ties. The sample quotes include, "*I still hang out with my former classmates, which makes me feel connected even though we are in different places*", "*My close friends who play the game and I have created WeChat groups, QQ groups, and Douyin groups, often exchanging thousands of messages*", "*I have established a deep emotional connection with my teammates; we*

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are not only comrades in arms in Honor of Kings but also friends in each other's lives", and "*This emotional attachment makes me feel like an indispensable part of the guild, and after work, I look forward to the moments when I can play with the guild members*". These aspects of the relational-self level contribute to a more profound identification with the game and its close others (e.g., game characters), thereby increasing satisfaction with the *Honor of Kings*.

At the third level, the collective self has traits that an individual shares with a significant community (for example, community, leisure clubs, and organizations). Our participants spoke about their sense of community belonging and how it diminished when fewer familiar people participated in the game. For example, "*We train together, improve together, and every victory makes us feel the strength of the team, making me more willing to participate in the game.*" and "*Several close friends and I have fixed hero selections, and using this stable lineup always brings more excitement. This sense of belonging encourages me to continue playing and enhances my expectations for the game.*" During the interviews, respondents expressed appreciation for the game's creators and operators, which motivated them to offer assistance to improve the game further. They appreciated the opportunity to co-create through reviews, feedback, posting, social media interaction, offline events, and other means. For example, "*Through player feedback and community interaction, the game is continuously improved, and our players' opinions and ideas are seriously considered," and "The game developers continuously update and optimize the game content, working with us professional players to promote the development of the esports culture. I feel that I am not only a participant in the game but also a part of the progress of the game.*" "*The game developers, by listening to the voices of the players, continuously improve the gaming experience. This two-way interaction makes me feel like an important participant, not just a consumer.*" Furthermore, the interviewees mentioned that the choice of roles related to themselves, and their team would further affect their gaming experience and feelings. "*I will particularly care about the skills of the heroes I excel at and share my thoughts. The game developers have provided rich content and educational value, such as the background stories of historical figures, which has sparked my interest in the game. At the same time, through interaction with other players, I can share knowledge and experience, and this process of co-creating value makes me feel delighted.*"

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The interview results reveal three levels of self-definitional motivations: the individual level, their guild level (relational-self level), and the broader game community level (collective-self level). Each level has its unique drivers. Interestingly, recognition from other players further enhances a player's choice of heroes, affecting the player's perception of the match with the chosen hero and team composition. This recognition can motivate players to improve the settings and skills linked to the character. The effects of the identified drivers at all levels are tested and validated in the subsequent quantitative phases of our research.

[Insert Table 2]

3.2 Study 2: A quantitative study

To further validate the factors identified at the three levels in the qualitative research, we conducted a quantitative study. This approach provided a more comprehensive understanding of how different aspects of the three levels of self may influence satisfaction (Van Thielen et al., 2018).

3.2.1 Hypotheses development

3.2.1.1 Individual level: Self-efficacy and self-worth

In general, self-efficacy reflects individuals' knowledge of a task at hand and captures their confidence in their ability to complete it efficiently and effectively (McKee et al., 2006). Self-efficacy also describes a consumer's ability to utilize technology through self-service (Fang et al., 2021). In the esports context, we define self-efficacy as an individual player's perception of their ability to play the game successfully. Individuals' self-efficacy can change over time as knowledge or experience is acquired (Gist and Mitchell, 1992). Based on previous studies, self-efficacy appears to determine customer participation (Dong et al., 2015; Lee and Littles, 2021), technology adoption (John, 2013), trust and intention to disclosure information (Keith et al., 2015), and performance (Achterkamp et al., 2015). Furthermore, studies on self-efficacy also demonstrate its significance in influencing life satisfaction (Azizli et al., 2015), relationship satisfaction (Canrinus et al., 2012), game enjoyment, and spending intention (Esteves et al., 2021). More importantly, Canrinus et al. (2012) pointed out that self-efficacy is related to attitudinal change, often through its impact on motivation. To illustrate, teachers' self-efficacy is the primary motivator of their performance.

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According to self-determination theory, an individual's feeling of competence is a critical factor in intrinsic motivation (Ryan and Deci, 2001). Therefore, the self-determination perspective is appropriate for examining game satisfaction, as players' perceptions of their capabilities in successfully playing the game influence their satisfaction.

A sense of self-worth captures an individual's intrinsic satisfaction and happiness derived from playing esports. Brown and Marshall (2013) defined self-worth as the degree of positive cognition based on an individual's perception of personal contribution to others. According to self-determination theory, competence, autonomy, and relatedness are fundamental psychological needs. According to Stefanone et al. (2011) and Tang et al. (2016), self-worth serves as a social-psychological motivator for individuals to fulfill their competence needs. Tang et al. (2016) further argued that self-worth determines individuals' social media engagement behavior. Liao et al. (2020) identified a positive relationship between self-worth and online gamer loyalty. Furthermore, self-worth influences consumers' attitudes and consumption behavior (Bakir et al., 2020), eWOM behavior (Hennig-Thurau et al., 2004; Hussain et al., 2018), and customer satisfaction (Namasivayam and Guchait, 2013). By interacting with other players in the esports game, players can develop a sense of self-worth by helping others solve problems or achieve victories. Thus, we propose that:

H1: Self-efficacy has a positive impact on game satisfaction.

H2: Self-worth has a positive impact on game satisfaction.

3.2.1.2 Relational level: recognition from close others and emotional attachment to the guild

Personal recognition is crucial for customer loyalty programs (Gwinner et al., 1998; Brashear-Alejandro et al., 2016). According to self-determination theory, the need for competence is a primary psychological motivation. Players can achieve recognition from close others through their experiences of demonstrating competence in a game. The fundamental feature of esports is competitiveness (Parshakov and Zavertiaeva, 2018); players capable of effective gameplay often receive recognition from other players. This recognition from other team members can enhance players' satisfaction. Prior research suggests that assisting new team members increases personal relatedness and reinforces social interactions among team members (Schau et al., 2009).

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Furthermore, when symbolic recognition is obtained, players are more willing to engage with brand communities. Peer recognition is a typical type of symbolic recognition (Tobon et al., 2020). Thus, recognition by other players can lead to better engagement with the game. More importantly, according to Barnett (2005), individuals are motivated to seek advice and support from others who help to maximize their decision accuracy. Other team members will highly appreciate a competent player's guidance and support in winning the game. Therefore, recognition from close others, namely other team members in the game, can lead players to develop high satisfaction.

Emotional attachment refers to the emotional bonds established with inanimate objects such as stores (Shahid et al., 2022), brands (Grisaffe and Nguyen, 2011), artificial intelligence (Pantano and Scarpi, 2022), and computer games (Shoshani et al., 2021). For instance, attachment to the avatar in the game can generate enjoyment (Kim et al., 2015), while Yoon et al. (1994) claimed that interpersonal attachments with other employees improve organizational commitment. Qian et al. (2020b) suggested that bonding with friends motivates traditional sports consumers. Similarly, Jin et al. (2017) argued that the strength of connections with others in the virtual environment contributes to engagement. Moreover, the need for relatedness in self-determination theory dictates the importance of emotional satisfaction. Therefore, it is reasonable to believe that emotional attachment positively contributes to esports satisfaction. Thus, we propose the following hypotheses:

H3: Recognition from close others has a positive impact on game satisfaction.

H4: Emotional attachment to the guild has a positive impact on game satisfaction.

3.2.1.3 Collective level: co-creation and collective belongingness

Co-creation, defined as customer participation in service delivery (Jaakkola and Alexander, 2014), has various benefits when applied to online games, especially co-creation with community belongingness. For instance, co-creation allows companies to capture the changing demands of customers, and participants often develop a feeling of accomplishment. Such feelings are usually associated with customer satisfaction (Meuter et al., 2000). Furthermore, co-created services also strengthen customer relationships (Witell et al., 2011), increase customer satisfaction (Chan et al., 2010; Heidenreich et al., 2015), and boost the hedonic game experience (Hussain et al., 2023). Participation in brand co-creation innovations also generates a sense of autonomy

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(Hsieh and Chang, 2016). Therefore, the co-created service offered by esports games provides players with an opportunity to autonomously shape the game experience design or functionality without direct interaction with esports game developers.

Consumer behavior researchers often describe belongingness as the belief and expectation that customers hold a recognized position in the community. As an important element of social identity, individuals seek to develop a sense of belonging, which reflects the importance of close relationships with friends and family (Leary et al., 2013). We posit that a sense of belonging is positively related to satisfaction. Prior research suggests that social interactions allow individuals to satisfy their social needs, generating positive moods (Sacco et al., 2014). Meeting the need for belonging also generates a high level of life satisfaction (Mellor et al., 2008). According to Workman (2014), individuals need to be connected with others when in a computer-mediated environment. When such a need is satisfied by technology, an individual's motivation to use the technology increases. Grounded in self-determination theory, we expect that esports community belongingness increases players' satisfaction. Thus, the following hypotheses are proposed:

H5: Co-creation has a positive impact on game satisfaction.

H6: Collective belongingness has a positive impact on game satisfaction.

3.2.1.4 The moderating role of game character identification

Several studies indicate that games allow players to build competence and express their identity through engaging with their characters (Ko and Park, 2021). Wang et al. (2022) defined game character identification as the extent to which a player views the game character as representing themselves. The extent of player-character identification influences player interactions with others. This identification process immerses players in the character's world. As a result, players may temporarily replace their identities with those of the game character by generating an illusion that they have become the character (Hefner et al., 2007). Previous research has examined how a character's appearance, personality, and behavior influence game performance (Lin and Wang, 2014; Rigby and Ryan, 2011). Mallon and Lynch (2014) also revealed a positive relationship between game character identification and player game experience and engagement.

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Players identify with game characters differently. Character identification in games influences player attitudes during interactions. According to Przybylski et al. (2012), players often choose a game character to express their idealized self in the virtual environment. When the character is congruent with the players' ideal self, players tend to have greater interaction with the character (Ko and Park, 2021) and satisfaction while playing (Przybylski et al., 2012). When players perceive their game character as closely connected with themselves, greater interaction occurs due to the intimate relationship developed. For the above reason, the following hypotheses are developed:

H7(a): Game character identification positively moderates the impact of self-efficacy on game satisfaction.

H7(b): Game character identification positively moderates the impact of self-worth on game satisfaction.

H7(c): Game character identification positively moderates the impact of recognition from close others on game satisfaction n.

H7(d): Game character identification positively moderates the impact of emotional attachment to the guild on game satisfaction.

H7(e): Game character identification positively moderates the impact of co-creation on game satisfaction.

H7(f): Game character identification positively moderates the impact of collective belongingness on game satisfaction.

We developed a research framework based on these hypotheses (Figure 1).

[Insert Figure 1]

3.2.2 Measures

The measurement tools used in this study are derived from existing scales adjusted and integrated to fit the research context, making them suitable for the actual conditions of *Honor of Kings* players (see Table 3). Two team members independently conducted English-Chinese back translations of the original scale, with guidance from esports research experts, to ensure face validity. The team also consulted three of the players to evaluate the wording and normative aspects of the scale items. All measurement items are measured using a seven-point Likert scale (1 = strongly disagree to 7 = strongly agree). Game satisfaction was measured using four items which assess the

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player's satisfaction with the game (1 = strongly dissatisfied to 7 = strongly satisfied), interaction feelings (1 = strongly displeased to 7 = strongly pleased), expectations (1 = worse than expected to 7 = better than expected), and opinions on replaying the game (1 = very unhappy to 7 = very happy).

[Insert Table 3]

3.2.3 Data collection and sample characteristics

An online survey targeting *Honor of Kings* players was conducted via www.wjx.com, one of China's leading data collection platforms. Respondents had to be moderate to heavy *Honor of Kings* players and members of a guild. A total of 1059 questionnaires were distributed, and after excluding those who failed screening questions, attention checks, or answer length requirements, 607 valid responses were obtained, resulting in a 57.3% response rate. Table 4 presents the demographic characteristics of the respondents.

4. Quantitative data analysis and results

4.1 Measurement model

The mean and standard deviation of each variable were calculated to clarify the data distribution before formal analysis and modeling. Table 5 presents descriptive statistics for all constructs and items. We also performed various reliability and validity tests to verify the estimation of the measurement model.

We performed a confirmatory factor analysis using Amos to validate our measurement model. To establish convergent validity, we assessed factor loadings, composite reliability (CR), Cronbach's alpha, and average variance extracted (AVE) following Gefen et al. (2000). As shown in Table 5, all factor loadings were significant and exceeded 0.7. Excepted for co-creation, the AVE for each construct exceeded 0.5, while co-creation AVE surpassed 0.4. The CR for each construct (including co-creation) and Cronbach's alpha for all constructs were above 0.7, affirming convergent validity. We also conducted the heterotrait-monotrait ratio of correlations (HTMT) to test the model validity (see Table 6). All HTMT ratios were below 0.9, indicating satisfactory model validity (Cheng et al., 2020). We evaluated the discriminant validity of the measurement model by comparing the square root of AVE for each construct with the

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correlations among the constructs. Table 7 shows that the square root of AVE for each construct (numbers in bold) exceeds the correlations with other constructs (standard numbers). We examined multicollinearity since several correlations were above 0.6. The predominant method to identify collinearity involves assessing variance inflation factors (VIF) and the condition number (Mason and Perreault, 1991). The VIF of all variables was below 5.0 (Table 5), and the correlation coefficients between variables were below 0.85 (Table 7). Therefore, multicollinearity was unlikely to be an issue in our research.

[Insert Table 4]

[Insert Table 5]

[Insert Table 6]

[Insert Table 7]

4.2 Structural model

We used Amos 24 to examine the structural model and tested our hypothesized research framework. Table 8 presents the hypotheses and the estimated results. Most model fit indices were satisfactory. Specifically, the chi-square/df ratio was 1.805, CFI was 0.977, TLI was 0.972, and RMSEA was 0.036. These values suggest that the proposed model fits the data well (Hair et al., 2010). We then calculated the path coefficients to examine the relationships between variables within the model.

Hypothesis testing results indicate that, at the individual-self level, self-efficacy and self-worth have a significant positive impact on game satisfaction, supporting H1 ($\beta = 0.232$; $p < 0.001$) and H2 ($\beta = 0.219$; $p < 0.001$). At the relational-self level, recognition from close others (H3: $\beta = 0.677$; $p < 0.001$) and emotional attachment to the guild (H4: $\beta = 0.173$; $p < 0.01$) have significant positive impacts on game satisfaction, as supported by the data. Finally, at the collective level, the relationships between co-creation and game satisfaction (H5: $\beta = 0.135$; $p < 0.05$) as well as collective belongingness and game satisfaction (H6: $\beta = 0.241$; $p < 0.001$) are also confirmed.

Regarding moderating effects, our results showed that the game character identification at the individual level is not supported, leading to the rejection of both H7(a) and H7(b). At the relational-self level, the data did not support the moderating role of game character identification in the relationship between game satisfaction and

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recognition from close others. However, the data supported H7(d), which proposes that game character identification positively moderates the impact of emotional attachment to the guild on game satisfaction. This led to the rejection of H7(c) and support for H7(d). At the collective level, game character identification positively moderates the impact of co-creation and collective belongingness on game satisfaction. Hence, H7(e) and H7(f) were supported.

[Insert Table 8]

5. Theoretical contributions

Our study makes several theoretical contributions, including identifying new factors influencing esports player motivations and providing a novel framework for understanding self-definitional motivations across individual, relational, and collective levels. First, our study adds to the gaming literature by using a unique theoretical approach to uncover three distinct levels of self-definitional motivations and identify the specific drivers for each level. We conducted semi-structured interviews, which show that esports players seek meaningful interactions to fulfill various motivations. Previous studies primarily used self-determination theory to understand why people enjoy gaming and how often they play (Kim et al., 2015; Mills et al., 2018; Wang and Hang, 2021). We build upon previous work by Nehrlich et al. (2019) and Ryan et al. (2006), showing that self-efficacy and self-worth drive motivations at the individual level, while recognition from close others and emotional attachment drive motivations at the relational level. At the collective level, co-creation and a sense of belonging drive motivations. Rather than measuring its direct effect, we explored the drivers of these motivations (Arztmann et al., 2024; Liu, 2016; Davis and Lang, 2012).

Second, our research contributes to the self-hierarchy literature by identifying the hierarchical order of self-definitional motivations. While self-definitional motivations in esports satisfaction can be categorized into three levels—individual, relational, and collective—players do not necessarily value these levels equally. Psychological research has not reached a consensus on which level holds the most prominence. For instance, Sedikides et al. (2013) and Nehrlich et al. (2019) argued that individuals prioritize the individual self the most, followed closely by the relational self, with the collective self valued the least. Conversely, Zajenkowska et al. (2021) suggested that the individual self and relational self are equally important, both

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surpassing the collective self in significance.The inconsistencies in findings may arise from contextual differences, as broader situational factors can influence the primacy of a specific self-level (Gaertner et al., 2002). In the esports context, where collaboration among team players is essential, our findings reveal that players value relational self-motivation the most, followed by individual self-motivation, and then collective self-motivation. These results align with Gaertner et al. (2002), who emphasized the role of context in shaping the hierarchical order of self-definitional motivations. Therefore, the relative importance of these motivations may shift depending on the specific environment being studied.

Third, our results demonstrate that self-definitional motivation at the collective level ranks lowest in the hierarchy. We corroborate the findings of Zajenkowska et al. (2021), which showed that some cultural and individual demographics may influence how individuals rank their needs. For instance, as individuals age, they tend to value others' needs more than individual needs. In the esports context, our players reveal that identifying with the game character may increase preference levels associated with motivation. The more players identify with the game character, the more they appreciate collective needs such as co-creation and belongingness.

Our study focused on the factors influencing player satisfaction in *Honor of Kings* within the Chinese market, utilizing a mixed-methods approach spanning quantitative and qualitative research. This research enriches the esports scholarship by providing a comprehensive perspective and empirical validation. It significantly contributes to understanding global esports dynamics and the industry's worldwide development.

6. Practical implications

It is important for esports managers and operators to understand the self-definitional motivations that influence the satisfaction of esports players (Qian et al., 2020b; Meng-Lewis et al., 2024). Our research findings indicate that players hold positive attitudes toward Honor of Kings when their needs for autonomy, competence, and relatedness are fulfilled. Specifically, game satisfaction is driven by individual-level factors such as self-efficacy and self-worth, relational-level factors like recognition from close others and emotional attachment, and collective-level factors such as co-creation and belongingness. As a result, we recommend that esports game designers and managers

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prioritize elements that fulfill self-definitional needs at the individual, guild/team, and esports community levels, focusing on team recognition and emotional attachment. Among these, recognition from close others at the relational level is highly valued by players and has the greatest motivational impact. Therefore, promotional materials should highlight the relational self to enhance accessibility. Furthermore, we suggest that esports operators establish a strategic rewards program to help players engage with others and gain recognition, as players are motivated to enhance their relational selves.

Understanding self-definitional motivations is essential (Meng-Lewis et al., 2024), and our research offers valuable insights for customer segmentation and targeting within the esports industry. Our findings indicate that esports managers and designers should be mindful that players who strongly identify with their favorite game character are more likely to perceive a greater motivational value in their collective gaming experience. Although motivations related to collective self-definition may not have the highest motivational value, they significantly enhance player satisfaction among those with strong character identification. Keeping this in mind, it is crucial for esports operators and design managers to highlight how the game fosters opportunities for players to actively shape their gaming experience and feel a sense of belonging within the wider esports community, particularly for those strongly connected to their preferred game character. Additionally, it is important to note that focusing on self-definitional motivations at the individual and relational levels may not be as effective for customer segments strongly identified with specific characters. Therefore, esports operators and designers should tailor their marketing to different player groups rather than using a uniform approach.

7. Limitations and future work

Our study has identified some potential areas for future investigation. First, our research was conducted within the context of exclusively China-based *Honor of Kings* game players; in other words, all participants were from a single esports and geographic region. It would be beneficial for future research to replicate our study using other games. It is also important to recognize that individuals from Eastern and Western cultures define the self differently (Hong and Chang, 2015). Therefore, future research should replicate our research using games originating in Western cultures, such as

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Defense of the Ancients, to explore potential differences in self-definitional motivations among players from diverse cultural backgrounds.

Second, our findings highlight strong connections between the self-defining motivations we identified and game satisfaction. Future research could use experimental methods to investigate the causal impact of these self-defining motivations. Additionally, our study used participants who were moderate to heavy players of *Honor of Kings*. Subsequent research could explore whether the self-defining hierarchy we identified also applies to casual players (non-professional players). Lastly, our research indicates that players' identification with *Honor of Kings* and the game character moderates the relationship between game satisfaction and collective-level self-defining motivations. Future research could delve into other potential moderators that might strengthen or weaken the effects of motivations.

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References

Achterkamp, R., Hermens, H.J. and Vollenbroek-Hutten, M.M. (2015), "The influence of success experience on self-efficacy when providing feedback through technology", *Computers in Human Behavior*, Vol. 52, pp.419-423.

Arztmann, M., Domínguez Alfaro, J.L., Hornstra, L., Jeuring, J. and Kester, L. (2024), "In-game performance: the role of students' socio-economic status, self-efficacy and situational interest in an augmented reality game", *British Journal of Educational Technology*, Vol. 55 No. 2, pp.484-498.

Azizli, N., Atkinson, B.E., Baughman, H.M. and Giammarco, E.A. (2015), "Relationships between general self-efficacy, planning for the future, and life satisfaction", *Personality and Individual Differences*, Vol. 82, pp.58-60.

Bakir, A., Gentina, E. and de Araújo Gil, L. (2020), "What shapes adolescents' attitudes toward luxury brands? The role of self-worth, self-construal, gender and national culture", *Journal of Retailing and Consumer Services,* Vol. 57, p.102208.

Bányai, F., Griffiths, M.D., Király, O. and Demetrovics, Z. (2019), "The psychology of esports: a systematic literature review", *Journal of Gambling Studies*, Vol. 35, pp.351-365.

Barnett, W.T. (2005), "Consumer trust and advice acceptance: the moderating roles of benevolence, expertise, and negative emotions", *Journal of Consumer Psychology*, Vol. 15 No. 2, pp.141-148.

Brashear-Alejandro, T., Kang, J. and Groza, M.D. (2016), "Leveraging loyalty programs to build customer-company identification", *Journal of Business Research*, Vol. 69 No. 3, pp.1190-1198.

Brock, T. (2017), "Roger Caillois and esports: on the problems of treating play as work", *Games and Culture*, Vol. 12 No. 4, pp.321-339.

Brown, J.D. and Marshall, M.A. (2013), "The three faces of self-esteem", Kernis, M.H. (Ed.), *Self-Esteem Issues and Answers: A Sourcebook of Current Perspectives*, Psychology Press, pp.4-9.

Cartwright, S., Liu, H. and Davies, I.A. (2022), "Influencer marketing within business-to-business organisations", *Industrial Marketing Management*, Vol. 106*,* pp.338-350.

Canrinus, E.T., Helms-Lorenz, M., Beijaard, D., Buitink, J. and Hofman, A. (2012), "Self-efficacy, job satisfaction, motivation and commitment: exploring the

23

relationships between indicators of teachers' professional identity", *European Journal of the Psychology of Education*, Vol. 27, pp.115-132.

Chan, H.K., Wang, X., Lacka, E. and Zhang, M. (2016), "A mixed-method approach to extracting the value of social media data", *Production and Operations Management*, Vol. 25 No. 3, pp.568-583.

Chan, K.W., Yim, C.K. and Lam, S.S.K. (2010), "Is customer participation in value creation a double-edged sword? Evidence from professional financial services across cultures", *Journal of Marketing*, Vol. 74 No. 3, pp.48-64.

Chen, J. and Wu, Y. (2024), "Would you be willing to purchase virtual gifts during esports live streams? Streamer characteristics and cultural traits", *Computers in Human Behavior*, Vol. 152, p. 108075.

Cheng, X., Bao, Y. and Zarifis, A. (2020), "Investigating the impact of it-mediated information interruption on emotional exhaustion in the workplace", *Information Processing and Management*, Vol. 57 No. 6, p. 102281.

Davis, R. and Lang, B. (2012), "Modeling the effect of self-efficacy on game usage and purchase behavior", *Journal of Retailing and Consumer Services*, Vol. 19 No. 1, pp.67-77.

Dong, B., Sivakumar, K., Evans, K.R. and Zou, S. (2015), "Effect of customer participation on service outcomes: the moderating role of participation readiness", *Journal of Service Research*, Vol. 18 No. 2, pp.160-176.

Esports Charts. (2024), "Honor of Kings international release and esports in 2024", available at: https://escharts.com/news/honor-of-kings-international-release-esports-2024 (accessed 26 January 2024).

Esteves, J., Valogianni, K. and Greenhill, A. (2021), "Online social games: the effect of social comparison elements on continuance behaviour", *Information and Management*, Vol. 58 No. 4, p.103452.

Fang, Y., Boelens, M., Windhorst, D.A., Raat, H. and van Grieken, A. (2021), "Factors associated with parenting self‑efficacy: a systematic review", *Journal of Advanced Nursing*, Vol. 77 No. 6, pp.2641-2661.

Gaertner, L., Sedikides, C., Vevea, J.L. and Iuzzini, J. (2002), "The 'I', the 'we', and the 'when': a meta-analysis of motivational primacy in self-definition", *Journal of Personality and Social Psychology*, Vol. 83 No. 3, p.574.

24

Gaertner, L., Sedikides, C., Luke, M., O'Mara, E.M., Iuzzini, J., Jackson, L.E., Cai, H. and Wu, Q. (2012), "A motivational hierarchy within: primacy of the individual self, relational self, or collective self?" *Journal of Experimental Social Psychology*, Vol. 48 No. 5, pp.997-1013.

Gefen, D., Straub, D.W. and Boudreau, M.C. (2000), "Structural equation modeling and regression: guidelines for research practice", *Communications of the Association for Information Systems*, Vol. 4 No. 7, pp.2-75.

Gist, M.E. and Mitchell, T.R. (1992), "Self-efficacy: a theoretical analysis of its determinants and malleability", *Academy of Management Review*, Vol. 17 No. 2, pp.183-211.

Gough, C. (2023), "Revenue of the global eSports market 2020-2025", *Statista*, available at https://www.statista.com/statistics/490522/global-esports-market-revenue/ (accessed 17 June 2024).

Grisaffe, D.B. and Nguyen, H.P. (2011), "Antecedents of emotional attachment to brands", *Journal of Business Research*, Vol. 64 No. 10, pp.1052-1059.

Gwinner, K.P., Gremler, D.D. and Bitner, M.J. (1998), "Relational benefits in services industries: the customer's perspective", *Journal of the Academy of Marketing Science*, Vol. 26 No. 2, pp.101-114.

Hair, J.F., Black, W.C., Babin, B.J. and Anderson, R.E. (2010), *Multivariate Data Analysis (7th ed.),* Pearson Education Limited, New Jersey, NJ.

Hamari, J., Alha, K., Järvelä, S., Kivikangas, J.M., Koivisto, J. and Paavilainen, J. (2017), "Why do players buy in-game content? An empirical study on concrete purchase motivations", *Computers in Human Behavior*, Vol. 68, pp.538-546.

Heidenreich, S., Wittkowski, K., Handrich, M. and Falk, T. (2015), "The dark side of customer co-creation: exploring the consequences of failed co-created services", *Journal of the Academy of Marketing Science*, Vol. 43, pp.279-296.

Hennig-Thurau, T., Gwinner, K.P., Walsh, G. and Gremler, D.D. (2004), "Electronic word-of-mouth via consumer-opinion platforms: what motivates consumers to articulate themselves on the internet?" *Journal of Interactive Marketing*, Vol. 18 No. 1, pp.38-52.

Hernon, P. and Whitman, J.R. (2001), *Delivering Satisfaction and Service Quality: A Customer-Based Approach for Libraries*, American Library Association, Chicago, IL.

25

Hew, J.J., Lee, V.H., Tang, S.T., Tan, G.W.H., Ooi, K.B. and Dwivedi, Y.K. (2023), "Are online mobile gamers really happy? On the suppressor role of online game addiction", *Information Systems Frontiers*, Vol 26., pp.217-249.

Hong, J. and Chang, H.H. (2015), "'I' follow my heart and 'we' rely on reasons: the impact of self-construal on reliance on feelings versus reasons in decision making", *Journal of Consumer Research*, Vol. 41 No. 6, pp.1392-1411.

Hsieh, S.H. and Chang, A. (2016*),* "The psychological mechanism of brand co-creation engagement", *Journal of Interactive Marketing*, Vol. 33 No. 1, pp.13-26.

Hussain, A., Abid, M.F., Shamim, A., Ting, D.H. and Toha, M.A. (2023), "Videogames-as-a-service: how does in-game value co-creation enhance premium gaming co-creation experience for players?", *Journal of Retailing and Consumer Services*, Vol. 70, p.103128.

Hussain, S., Guangju, W., Jafar, R.M.S., Ilyas, Z., Mustafa, G. and Jianzhou, Y. (2018), "Consumers' online information adoption behavior: motives and antecedents of electronic word of mouth communications", *Computers in Human Behavior*, Vol. 80, pp.22-32.

Jaakkola, E. and Alexander, M. (2014), "The role of customer engagement behavior in value co-creation: A service system perspective", *Journal of Service Research*, Vol. 17 No. 3, pp. 247-261.

Jin, W., Sun, Y., Wang, N. and Zhang, X. (2017), "Why users purchase virtual products in MMORPG? An integrative perspective of social presence and user engagement", *Internet Research*, Vol. 27 No. 2, pp.408-427.

John, S.P. (2013), "Influence of computer self-efficacy on information technology adoption", *International Journal of Information Technology*, Vol. 19 No. 1, pp.1-13.

Kassemeier, R., Haumann, T. and Güntürkün, P. (2022), "Whether, when, and why functional company characteristics engender customer satisfaction and customer-company identification: the role of self-definitional needs", *International Journal of Research in Marketing*, Vol. 39 No. 3, pp.699-723.

Keith, M.J., Babb, J.S., Lowry, P.B., Furner, C.P. and Abdullat, A. (2015*),* "The role of mobile‐computing self‐efficacy in consumer information disclosure", *Information Systems Journal*, Vol. 25 No. 6, pp.637-667.

Kim, K., Schmierbach, M.G., Chung, M.Y., Fraustino, J.D., Dardis, F. and Ahern, L. (2015), "Is it a sense of autonomy, control, or attachment? Exploring the effects of in-

26

game customization on game enjoyment", *Computers in Human Behavior*, Vol. 48, pp.695705.

Kim, S.H. and Thomas, M.K. (2015), "A stage theory model of professional video game players in South Korea: the socio-cultural dimensions of the development of expertise", *Asian Journal of Information Technology*, Vol. 14 No. 5, pp.176-186.

Ko, D.W. and Park, J. (2021), "I am you, you are me: Game character congruence with the ideal self", *Internet Research*, Vol. 31 No. 2, pp.613-634.

Kong, J.S.L., Kwok, R.C.W., Lai, G.C.H. and Law, M. (2024), "Motivational profile and knowledge creation in eSports: examining the roles of mutualistic co-presence", *Internet Research*, Vol. 34 No. 7, pp.1-28.

Kwak, D.H., Clavio, G.E., Eagleman, A.N. and Kim, K.T. (2010*),* "Exploring the antecedents and consequences of personalizing sport video game experiences", *Sport Marketing Quarterly*, Vol. 19 No. 4, pp.217-225.

Leary, M.R., Kelly, K.M., Cottrell, C.A. and Schreindorfer, L.S. (2013), "Construct validity of the need to belong scale: mapping the nomological network", *Journal of Personality Assessment*, Vol. 95 No. 6, pp.610-624.

Lee, S.H., Choi, S.J. and Kim, H.W. (2020), "What makes people send gifts via social network services? A mixed methods approach", *Internet Research*, Vol. 30 No. 1, pp.315-334.

Lee, S.H., Lee, B.Y. and Kim, H.W. (2019*),* "Decisional factors leading to the reuse of an on-demand ride service", *Information and Management*, Vol. 56 No. 4, pp.493-506.

Lee, Y.H. and Littles, C. (2021), "The more the merrier? The effects of system-aggregated group size information on user's efficacy and intention to participate in collective actions", *Internet Research*, Vol. 31 No. 1, pp.191-207.

Liao, G.Y., Pham, T.T.L., Cheng, T.C.E. and Teng, C.I. (2020), "Impacts of real-world need satisfaction on online gamer loyalty: perspective of self-affirmation theory", *Computers in Human Behavior*, Vol. 103, pp.91-100.

Lin, H. and Wang, H. (2014), "Avatar creation in virtual worlds: behaviors and motivations", *Computers in Human Behavior*, Vol. 34, pp.213-218.

Liu, C. (2019), "Men and their groomed body", *European Journal of Marketing*, Vol. 53 No. 5, pp.1015-1034.

Liu, C.C. (2016), "Understanding player behavior in online games: the role of gender", *Technological Forecasting and Social Change*, Vol. 111, pp.265-274.

27

Mallon, B. and Lynch, R. (2014), "Stimulating psychological attachments in narrative games: engaging players with game characters", *Simulation and Gaming*, Vol. 45 No. 4), pp.508-527.

Martončik, M. (2015), "esports: playing just for fun or playing to satisfy life goals?" *Computers in Human Behavior*, Vol. 48, pp.208-211.

Mason, C.H. and Perreault, W.D. (1991), "Collinearity, power, and interpretation of multiple regression analysis", *Journal of Marketing Research*, Vol. 28 No. 3, pp.268-280.

McKee, D., Simmers, C.S. and Licata, J. (2006), "Customer self-efficacy and response to service", *Journal of Service Research*, Vol. 8 No. 3, pp.207-222.

Mellor, D., Stokes, M., Firth, L., Hayashi, Y. and Cummins, R. (2008), "Need for belonging, relationship satisfaction, loneliness, and life satisfaction", *Personality and Individual Differences*, Vol. 45 No. 3, pp.213-218.

Mendoza, G., Bonilla, I., Chamarro, A. and Jiménez, M. (2023), "The defining characteristics of esports players. A systematic review of the samples used in esports research", *Aloma*, Vol. 41 No. 1, pp.111-120.

Meng-Lewis, Y., Wong, D. and Liu, C. (2024), "The emergent community of esports fans in Japan: an analysis of motivations and preferences", *Managing Sport and Leisure*, pp.1-32.

Meuter, M.L., Ostrom, A.L., Roundtree, R.I. and Bitner, M.J. (2000), "Self-service technologies: understanding customer satisfaction with technology-based service encounters", *Journal of Marketing*, Vol. 64 No. 3, pp.50-64.

Mills, D.J., Milyavskaya, M., Mettler, J. and Heath, N.L. (2018), "Exploring the pull and push underlying problem video game use: a Self-Determination Theory approach", *Personality and Individual Differences*, Vol. 135, pp.176-181.

Molina-Azorin, J.F. (2012), "Mixed methods research in strategic management: impact and applications", *Organizational Research Methods*, Vol. 15 No. 1, pp.33-56.

Namasivayam, K. and Guchait, P. (2013), "The role of contingent self-esteem and trust in consumer satisfaction: examining perceived control and fairness as predictors", *International Journal of Hospitality Management*, Vol. 33, pp.184-195.

Nehrlich, A.D., Gebauer, J.E., Sedikides, C. and Abele, A.E. (2019), "Individual self > relational self > collective self—But why? Processes driving the self-hierarchy in self-and person perception", *Journal of Personality*, Vol. 87 No. 2, pp.212-230.

28

Pantano, E. and Scarpi, D. (2022), "I, robot, you, consumer: measuring artificial intelligence types and their effect on consumers emotions in service", *Journal of Service Research*, Vol. 25 No. 4, pp.583-600.

Parshakov, P. and Zavertiaeva, M. (2018*),* "Determinants of performance in eSports: a country-level analysis", *International Journal of Sport Finance*, Vol. 13 No. 1, pp.34-51.

Przybylski, A.K., Weinstein, N., Murayama, K., Lynch, M.F. and Ryan, R.M. (2012), "The ideal self at play: the appeal of video games that let you be all you can be", *Psychological Science*, Vol. 23 No. 1, pp.69-76.

Qian, T.Y., Zhang, J.J., Wang, J.J. and Hulland, J. (2020a), "Beyond the game: dimensions of esports online spectator demand", *Communication Sport*, Vol. 8 No. 6, pp.825-851.

Qian, T.Y., Wang, J.J., Zhang, J.J. and Lu, L.Z. (2020b), "It is in the game: dimensions of esports online spectator motivation and development of a scale", *European Sport Management Quarterly*, Vol. 20 No. 4, pp.458-479.

Reed, A. (2004), "Activating the self-importance of consumer selves: exploring identity salience effects on judgments", *Journal of Consumer Research*, Vol. 31 No. 2, pp.286-295.

Rigby, C.S. and Ryan, R.M. (2011), *Glued to Games: How Video Games Draw Us in and Hold Us Spellbound*, Praeger, Santa Barbara, CA.

Ryan, R.M. and Deci, E.L. (2001), "On happiness and human potentials: a review of research on hedonic and eudaimonic well-being", *Annual Review of Psychology*, Vol. 52 No. 1, pp.141-166.

Ryan, R.M. and Deci, E.L. (2006), "Self-regulation and the problem of human autonomy: does psychology need choice, self-determination, and will?" *Journal of Personality*, Vol. 74 No. 6, pp.1557-1586.

Ryan, R.M., Rigby, C.S. and Przybylski, A. (2006), "The motivational pull of video games: a self-determination theory approach", *Motivation and Emotion*, Vol. 30, pp.344-360.

Sacco, D.F. and Ismail, M.M. (2014), "Social belongingness satisfaction as a function of interaction medium: face-to-face interactions facilitate greater social belonging and interaction enjoyment compared to instant messaging", *Computers in Human Behavior*, Vol. 36, pp.359-364.

29

Sailer, M., Hense, J.U., Mayr, S.K. and Mandl, H. (2017), "How gamification motivates: an experimental study of the effects of specific game design elements on psychological need satisfaction", *Computers in Human Behavior*, Vol. 69, pp.371-380.

Schau, H.J., Gilly, M.C. and Wolfinbarger, M. (2009), "Consumer identity renaissance: the resurgence of identity-inspired consumption in retirement", *Journal of Consumer Research*, Vol. 36 No. 2, pp.255-276.

Sedikides, C. and Brewer, M.B. (2015), "Individual self, relational self, and collective self: partners, opponents, or strangers?", Sedikides, C. and Brewer M.B. (Eds.), *Individual Self, Relational Self, Collective Self*, Psychology Press, Philadelphia, pp.1-4.

Sedikides, C., Gaertner, L., Luke, M.A., O'Mara, E.M. and Gebauer, J.E. (2013), "A three-tier hierarchy of self-potency: individual self, relational self, collective self", *Advances in Experimental Social Psychology*, Vol. 48, pp.235-295.

Sedikides, C. and Spencer, S.J. (2007), *The Self*, Psychology Press, New York, NY.

Seo, Y. (2016), "Professionalized consumption and identity transformations in the field of eSports", *Journal of Business Research*, Vol.69 No. 1, pp.264-272.

Sepehr, S. and Head, M. (2018), "Understanding the role of competition in video gameplay satisfaction", *Information and Management*, Vol. 55 No. 4, pp.407-421.

Shahid, S., Paul, J., Gilal, F.G. and Ansari, S. (2022), "The role of sensory marketing and brand experience in building emotional attachment and brand loyalty in luxury retail stores", *Psychology and Marketing*, Vol. 39 No. 7, pp.398-1412.

Shoshani, A., Braverman, S. and Meirow, G. (2021), "Video games and close relations: attachment and empathy as predictors of children's and adolescents' video game social play and socio-emotional functioning", *Computers in Human Behavior*, Vol. 114, p.106578.

Singer, D. and Chi, J. (2019), "The keys to eSports marketing: don't get "ganked"", *McKinsey and Company Quarterly*, August 2019.

Statista (2024), "Esports – China", available at https://www.statista.com/outlook/amo/esports/china (accessed 12 May 2024).

Stefanone, M.A., Lackaff, D. and Rosen, D. (2011), "Contingencies of self-worth and social-networking-site behavior", *Cyberpsychology, Behavior, and Social Networking*, Vol. 14 No. 1-2, pp.41-49.

Tamplin-Wilson, J., Smith, R., Morgan, J. and Maras, P. (2019), "Video games as a recovery intervention for ostracism", *Computers in Human Behavior*, Vol. 97, pp.130-136.

Tang, Q., Zhao, X. and Liu, S. (2016), "The effect of intrinsic and extrinsic motivations on mobile coupon sharing in social network sites: the role of coupon proneness", *Internet Research*, Vol. 26 No. 1, pp.101-119.

Täuscher, K. and Laudien, S.M. (2018), "Understanding platform business models: a mixed methods study of marketplaces"*, European Management Journal*, Vol. 36 No. 3, pp.319-329.

Tobon, S., Ruiz-Alba, J.L. and García-Madariaga, J. (2020), "Gamification and online consumer decisions: is the game over?" *Decision Support Systems*, Vol. 128, p.113167.

van Esch, P., Cui, Y. and Jain, S.P. (2021), "Self-efficacy and callousness in consumer judgments of AI‐enabled checkouts", *Psychology and Marketing*, Vol. 38 No. 7, pp.1081-1100.

Van Thielen, T., Decramer, A., Vanderstraeten, A. and Audenaert, M. (2018), "When does performance management foster team effectiveness? A mixed-method field study on the influence of environmental extremity", *Journal of Organizational Behavior*, Vol. 39 No. 6, pp.766-782.

Vignoles, V.L., Regalia, C., Manzi, C., Golledge, J. and Scabini, E. (2006), "Beyond self-esteem: influence of multiple motives on identity construction", *Journal of Personality and Social Psychology*, Vol. 90 No. 2, p.308.

Wang, L., Sun, Y. and Luo, X. (2022), "Game affordance, gamer orientation, and in-game purchases: a hedonic-instrumental framework", *Information Systems Journal*, Vol. 32 No. 6, pp.1097-1125.

Wang, W. and Hang, H. (2021), "Exploring the eudaimonic game experience through purchasing functional and nonfunctional items in MMORPGs", *Psychology and Marketing*, Vol. 38 No. 10, pp.1847-1862.

Witell, L., Kristensson, P., Gustafsson, A. and Löfgren, M. (2011), "Idea generation: customer co-creation versus traditional market research techniques", *Journal of Service Management*, Vol. 22 No. 2, pp.140-159.

Witkowski, E. (2012), "On the digital playing field: how we "do sport" with networked computer games", *Games and Culture*, Vol. 7 No. 5, pp.349-374.

31

Workman, M. (2014), "New media and the changing face of information technology use: the importance of task pursuit, social influence, and experience", *Computers in Human Behavior*, Vol. 31, pp.111-117.

Yoon, J., Baker, M.R. and Ko, J.W. (1994), "Interpersonal attachment and organizational commitment: subgroup hypothesis revisited", *Human Relations*, Vol. 47 No. 3, pp.329-351.

Yoshida, M. and James, J.D. (2010), "Customer satisfaction with game and service experiences: antecedents and consequences", *Journal of Sport Management*, Vol. 24 No. 3, pp.338-361.

Yoshida, M., Heere, B. and Gordon, B. (2015), "Predicting behavioral loyalty through community: why other fans are more important than our own intentions, our satisfaction, and the team itself", *Journal of Sport Management*, Vol. 29 No. 3, pp.318-333.

Zajenkowska, A., Kaźmierczak, I., Bodecka, M., Rajchert, J. and Batory-Ginda, A. (2021), "Demographic and contextual factors impact a three-tier hierarchy of self-potency among community adults and inmates", *Personality and Individual Differences*, Vol. 180, p.110988.

Zandt, F. (2024), "The most successful mobile games of 2023", *Statista*, available at: https://www.statista.com/chart/31343/mobile-games-with-highest-estimated-revenue/ (accessed 26 July 2024).

Zhao, Y. and Lin, Z. (2021), "Umbrella platform of Tencent eSports industry in China", *Journal of Cultural Economy*, Vol. 14 No. 1, pp.9-25.
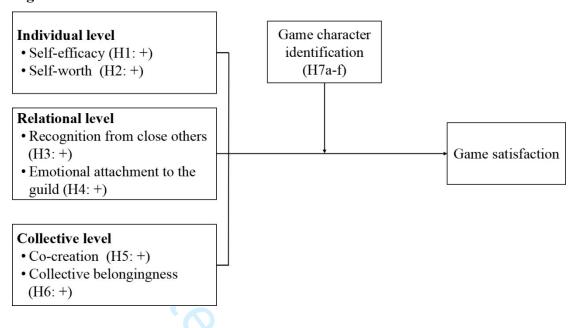
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Figure 1. Research framework

Table 1. Profile of interviewees (Qualitative research)

Interviewee	Gender	Occupation	Years of playing Honor of Kings	Current frequency of playing Honor of Kings
1	Male	Non-professional player, Company employee	6 years	around 5-6 hours per week
2	Male	Professional player, University esports team	5 years	around 5 hours per day
3	Female	Non-professional player, Company employee	5 years	around 3 hours per week
4	Male	Non-professional player, Teacher	7 years	around 2 hours per day
5	Male	Non-professional player, Company manager	6 years	3 times per day
6	Female	Professional player, Former esports team player	6 years	around 4 hours per day
7	Male	Non-professional player, Company employee	5 years	4-5 times per week
8	Female	Non-professional player, Civil servant	4 years	around 2-5 hours per week
9	Male	Professional player, University esports team player	6 years	around 5 hours per day
10	Male	Professional player, University esports team player	4 years	around 3 hours per day
11	Female	Non-professional player, Company employee	4 years	3-4 times per day
12	Female	Non-professional player, Freelancer	5 years	around 2 hours per day

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Table 2. Representative responses

Levels	Concepts	Features	Sample responses
Individual-self level	The individual self is a form of self that differentiates a person from others.	Self-efficacy	I cherish the sensation of consecutive victories. I have devoted a significant amount of time and energy to training and improving my skills in this game. I am very confident in my performance and team cooperation abilities in the game, which makes me feel a strong sense of self-efficacy. Every time I win a match, it further strengthens my confidence and makes me enjoy the game process even more. (U2)
			Honor of Kings demands high proficiency in controls, and winning reflects one's capabilities. In the game, I can experience the joy of control and strategic planning. Even though I am not a top player, I am satisfied with my progress and game skills. This sense of achievement enhances my self-efficacy, allowing me to feel proud and satisfied even outside of work. (U11)
			I am satisfied with my strategic application and decision-making abilities in the game. This not only makes me happy in the game but also strengthens my confidence in my teaching abilities. This makes me feel more confident in both teaching and gaming fields. (U4)
		Self-worth	Leading everyone to victory ignites a sense of fulfillment in me. Every time I successfully lead the team to victory, it makes me feel that my contribution is recognized, thereby enhancing my sense of self-worth. (U1)
			Honor of Kings has provided me with a platform to interact and compete with others. In the game, I can showcase my creativity and independence, which makes me feel that I have unique value. (U12)
			Though I play a supporting role in the game, I am also pivotal in securing a win. Every small achievement I make in the game makes me feel needed and important. (U7)
			Honor of Kings has given me the opportunity to demonstrate leadership and strategic thinking, allowing me to achieve success in my career and feel that I am valuable. (U6)
Relational-self level	The relational-self is the self that is based on attachment to important relationship partners.	recognition from close others	I am mostly a secondary leader; the dual affirmation from team members and leaders makes me very willing to continue in this middle role. (U3)
			As a member of the university's esports team, I feel very proud because every victory is the result of our team's tacit cooperation. Our excellent performance in the competition not only received recognition from the coach and teammates, but also made me feel that I am a valuable team member, and it motivates me to continuously improve my skills to contribute more to the team. (U9)
			Since many people say I perform well in this role, I have continued to embrace it. (U10)
			Honor of Kings gives me the opportunity to experience team spirit in different environments. In the game, I can lead my team to victory, which not only makes me feel a sense of personal achievement, but, more importantly, I have gained the recognition and respect of my team members. (U5)
		Emotional attachment to the guild	I still hang out with my former classmates which makes me feel that, even though we are in different places, our friendship remains unchanged. (U9)
			My close friends who play the game and I have created WeChat groups, QQ groups, and even Douyin groups, often

			exchanging thousands of messages. (U1)
			I have established a deep emotional connection with my teammates; we are not only comrades in arms in Honor of Kings but also friends in each other's lives. (U11)
			After joining the guild, I have built friendships with players from diverse backgrounds, discussing tactics and sharing the joy of the game together. This emotional attachment makes me feel like an indispensable part of the guild, and even after work, I look forward to the moments when I can play with the guild members. (U8)
Collective-self level	The collective self is the self that is based on identification with important communities.	Co-creation	I am the type of person who complains about new skins on gaming websites and often posts memes, but it's all in the spirit of making the game more enjoyable. Through player feedback and community interaction, the game is continuously improved, and our players' opinions and ideas are seriously considered. (U5)
			In my perception, this game has groundbreaking significance, so I am willing to play it with friends and have participated in some events. The game developers continuously update and optimize the game content, working with us professional players to promote the development of the esports culture. I feel that I am not only a participant in the game but also a part of the progress of the game. (U6)
			I will particularly care about the skills of the heroes I excel at and will also share my thoughts. The game developers have provided rich content and educational significance, such as the background stories of historical figures, which has sparked my interest in the game. At the same time, through interaction with other players, I can share knowledge and experience, and this process of co-creating value makes me feel delighted. (U4)
			The game developers, by listening to the voices of the players, continuously improve the gaming experience. This two-way interaction makes me feel like an important participant, not just a consumer. (U10)
		Collective belongingness	I feel accepted and valued and, even in the virtual world, I can experience the power of teamwork and support. Wearing the same skin creates a sense of team unity, fostering a strong team spirit. (U12)
			We train together, improve together, and every victory in competition makes us feel the strength of the team, making me more willing to participate in the game. (U2)
			Several close friends and I have fixed hero selections, and using this stable lineup always brings more excitement. This sense of belonging encourages me to continue playing and enhances my expectations for the game. (U4)

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Table 3: Measurement items and sources

Construct	Item		Source
Self-efficacy (SE)	SE1	If I wanted to, I believe I have the ability to play Honor of Kings well.	van Esch et al. (2021)
	SE2	I am confident I could play Honor of Kings well.	
	SE3	I believe I have the skills needed to play Honor of Kings well.	
Self-worth (SW)	SW1	My engagement in Honor of Kings would help other members solve problems.	Tang et al. (2016)
	SW2	My engagement in Honor of Kings would create new opportunities for other members.	
	SW3	My engagement in Honor of Kings would help other members win the game.	
Recognition from close others (GR)	GR1	I am recognized by guild members from Honor of Kings.	Brashear-Alejandro et al. (2016)
	GR2	I know some guild members from Honor of Kings.	
	GR3	I know some new friends through the guild in Honor of Kings.	
Emotional attachment to the guild (EA)	EA1	I feel emotionally connected to my guild through Honor of Kings.	Pantano and Scarpi (2022)
	EA2	I am very attached to my guild through playing Honor of Kings.	
	EA3	I would miss my guild when I am not playing Honor of Kings or I cannot access the game.	
	EA4	Honor of Kings is special for me because of my guild.	
Co-creation (CV)	CV1	The game offered me several options to customize the game to my needs.	Heidenreich et al. (2015)
	CV2	Because of the many game features, I had to spend a lot of time and energy in order to play the game.	
	CV3	I would provide personal information in order to play Honor of Kings.	
Collective belongingness (BL)	BL1	I belong to a community of people who share the same values through Honor of Kings.	Brashear-Alejandro et al. (2016)
	BL2	I feel close to the game.	
	BL3	I feel I share the same values as Honor of Kings.	
Game character identification (RI)	RI1	When someone criticizes my favorite game character, it feels like a personal insult.	Ko and Park (2021)
	RI2	I am very interested in what others think about my favorite game character.	
	RI3	When I talk about my favorite game character, I usually say "we" rather than "they".	
	RI4	When someone praises my favorite game character, it feels like a personal compliment.	
	RI5	If a story in the media criticizes my favorite character, I would feel embarrassed.	
Game Satisfaction (SA)	SA1	As a result of my interaction with Honor of Kings, I am very… (1 = strongly dissatisfied to 7 = strongly satisfied)	Ko and Park (2021)
	SA2	My feelings about my favorite game interaction with me are that I am… (1 = strongly displeased to 7 = strongly pleased)	
	SA3	My encounter with my favorite game is… (1 = worse than expected to 7 = better than expected)	
	SA4	My feelings about playing my favorite game again would be… (1 = very unhappy to 7 = very happy)	

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Table 4. Descriptive statistics of respondents (Quantitative research)

Demographic variable	Frequency	Percentage
Gender		
Female	293	48.3
Male	314	51.7
Age (years)		
18-25	136	22.4
26-30	306	50.4
31-40	146	24.1
41-50	19	3.1
Education background		
High school	14	2.3
College	59	9.7
Bachelor's degree	484	79.7
Postgraduate and above	50	8.2
How often do you play Honor of Kings?		
Monthly	48	7.9
Weekly	277	45.6
Daily	282	46.5

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Table 5. Results of convergent validity testing

Construct	Item	Factor loading	CR	AVE	α	VIF
SE	SE1	0.807	0.852	0.659	0.850	1.900
	SE2	0.860				
	SE3	0.764				
SW	SW1	0.742	0.777	0.537	0.777	1.864
	SW2	0.732				
	SW3	0.725				
GR	GR1	0.770	0.789	0.555	0.788	2.178
	GR2	0.712				
	GR3	0.751				
EA	EA1	0.784	0.901	0.696	0.900	2.014
	EA2	0.840				
	EA3	0.861				
	EA4	0.849				
CV	CV1	0.656	0.727	0.471	0.723	2.239
	CV2	0.732				
	CV3	0.668				
BL	BL1	0.784	0.838	0.633	0.835	2.507
	BL2	0.816				
	BL3	0.786				
RI	RI1	0.856	0.919	0.694	0.919	2.515
	RI2	0.817				
	RI3	0.812				
	RI4	0.854				
	RI5	0.825				
SA	SA1	0.733	0.805	0.508	0.801	2.793
	SA2	0.754				
	SA3	0.686				
	SA4	0.676				

Abbreviations: SE = Self-efficacy; SW = Self-worth; GR = Recognition from close others; EA = Emotional attachment to the guild; CV = Co-creation; BL = Collective belongingness; RI = Game character identification; SA = Game satisfaction.

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Table 6. Discriminant validity evaluation based on HTMT

	SE	SW	GR	EA	CV	BL	RI
SW	0.751						
GR	0.576	0.549					
EA	0.440	0.522	0.653				
CV	0.633	0.607	0.637	0.560			
BL	0.510	0.603	0.700	0.725	0.675		
RI	0.410	0.431	0.562	0.627	0.589	0.732	
SA	0.667	0.682	0.820	0.662	0.679	0.731	0.652

Abbreviations: SE = Self-efficacy; SW = Self-worth; GR = Recognition from close others; EA = Emotional attachment to the guild; CV = Co-creation; BL = Collective belongingness; RI = Game character identification; SA = Game satisfaction.

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Table 7. Descriptive statistics and correlations between latent variables

	M	SD	SE	SW	GR	EA	CV	BL	RI	SA
SE	5.437	1.127	**0.812**							
SW	5.424	0.971	0.610**	**0.733**						
GR	5.754	0.884	0.472**	0.430**	**0.745**					
EA	4.867	1.395	0.386**	0.436**	0.550**	**0.834**				
CV	5.381	0.953	0.550**	0.513**	0.569**	0.516**	**0.687**			
BL	5.096	1.234	0.430**	0.485**	0.571**	0.629**	0.586**	**0.795**		
RI	4.673	1.509	0.362**	0.364**	0.477**	0.570**	0.542**	0.642**	**0.852**	
SA	5.612	0.821	0.553**	0.539**	0.691**	0.562**	0.665**	0.598**	0.559**	**0.713**

Abbreviations: SE = Self-efficacy; SW = Self-worth; GR = Recognition from close others; EA = Emotional attachment to the guild; CV = Co-creation; BL = Collective belongingness; RI = Game character identification; SA = Game satisfaction.

Note: Bold numbers show the square root of AVE of each construct; ** = significant at the 0.01 level.

Table 8. Results of the hypothesized model

Hypothesis	Hypothesized path	Path coefficient	Result
H1	Self-efficacy (SE) → Game satisfaction (SA)	0.232 ***	Supported
H2	Self-worth (SW) → Game satisfaction (SA)	0.219***	Supported
H3	Recognition from close others (GR) → Game satisfaction (SA)	0.677 ***	Supported
H4	Emotional attachment to the guild (EA)→Game satisfaction (SA)	0.173**	Supported
H5	Co-creation (CV) → Game satisfaction (SA)	0.135*	Supported
H6	Collective belongingness (BL) → Game satisfaction (SA)	0.241***	Supported

Model fit statistics: χ^2 (209) = 377.160 (ρ < 0.05); χ^2/df = 1.805; CFI = 0.977; TLI = 0.972; RMSEA = 0.036.

Hypothesis	Hypothesized path	Path coefficient	Result
H7(a)	Game character identification (RI) moderates: SE → SA	0.037	Rejected
H7(b)	Game character identification (RI) moderates: SW → SA	0.062	Rejected
H7(c)	Game character identification (RI) moderates: GR → SA	0.025	Rejected
H7(d)	Game character identification (RI) moderates: EA → SA	0.097**	Supported
H7(e)	Game character identification (RI) moderates: CV → SA	0.100**	Supported
H7(f)	Game character identification (RI) moderates: BL → SA	0.116**	Supported

Note: * = significant at the 0.05 level; ** = significant at the 0.01 level; *** = significant at the 0.001 level.

Acknowledgement

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Responses to Guest Editor's and Reviewers' Comments

We would like to thank the Guest Editor, Reviewers and Internet Research Editorial Office for their support and constructive comments. Modifications based on your suggestions have been made in the manuscript and are presented in the following table and throughout the paper. We hope that we have addressed all the issues to the satisfaction of the editorial team.

Guest Editor's Decision	Authors' response
Dear Dr. Liu: Manuscript ID INTR-02-2024-0305.R2 entitled "Understanding Esports Players' Preferences: Which Self-Definitional Needs Drive Their Satisfaction?" which you submitted to Internet Research, has been reviewed. The comments of the referee(s) are included at the bottom of this letter. The referee(s) have recommended publication, but also suggest some minor revisions to your manuscript. Therefore, I invite you to respond to the referee(s)' comments and revise your manuscript. To revise your manuscript, log into https://mc.manuscriptcentral.com/intr and enter your Author Centre, where you will find your manuscript title listed under "Manuscripts with Decisions." Under "Actions," click on "Create a Revision." Your manuscript number has been appended to denote a revision. You will be unable to make your revisions on the originally submitted version of the manuscript. Instead, revise your manuscript using a word processing program and save it on your computer. Please also highlight the changes to your manuscript within the document by using the track changes mode in MS Word or by using bold or coloured text. Once the revised manuscript is prepared, you can upload it and submit it through your Author Centre. When submitting your revised	Thank you for the decision of the guest editors, the encouragement and recommendation from both reviewers. We also appreciate the detailed revision suggestions from the Internet Research Editorial Office, which were crucial for enhancing the readability and accuracy of the entire paper, significantly improving its quality. We have carefully revised each point according to the suggestions from the Internet Research Editorial Office and have had two proofreaders further modify and confirm the changes. All references have been checked and formatted to fit in with house style of Internet Research. We strongly believe that your support and suggestions helped to improve the manuscript significantly. Thank you again for your assistance. We hope that our revisions will meet with your satisfaction.

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manuscript, you will be able to respond to the comments made by the referee(s) in the space provided. You can use this space to document any changes you make to the original manuscript. In order to expedite the processing of the revised manuscript, please be as specific as possible in your response to the referee(s).

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Once again, thank you for submitting your manuscript to Internet Research and I look forward to receiving your revision.

Sincerely,
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Reviewer 1's Comments	Authors' Responses
<u>Recommendation: Accept</u> Comments: I am satisfied with the authors' efforts to improve the manuscript and respond to my comments. I am pleased with the quality of their work. Well done! Additional Questions: 1. Originality: Does the paper contain new and significant information adequate to justify publication?: Yes. 2. Relationship to Literature: Does the paper demonstrate an adequate understanding of the relevant literature in the field and cite an appropriate range of literature sources? Is any significant work ignored?: Yes. 3. Methodology: Is the paper's argument built on an appropriate base of theory, concepts, or other ideas? Has the research or equivalent intellectual work on which the paper is based been well designed? Are the methods employed appropriate?: Yes. 4. Results: Are results presented clearly and analysed appropriately? Do the conclusions adequately tie together the other elements of the paper?: Yes. 5. Implications for research, practice and/or society: Does the paper identify clearly any implications for research, practice and/or society? Does the paper bridge the gap between theory and practice? How can the research be used in practice (economic and commercial impact), in teaching, to influence public policy, in research (contributing to the body of knowledge)? What is the impact upon society (influencing public attitudes, affecting quality of life)? Are these implications consistent with the findings and conclusions of the paper?: Yes. 6. Quality of Communication: Does the	Thank you for your positive feedback and the recommendation for Accept. We are deeply grateful. We would also like to express our appreciation for the valuable suggestions you provided in the previous rounds, which greatly helped us improve the quality of this paper. Thank you very much!

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paper clearly express its case, measured against the technical language of the field and the expected knowledge of the journal's readership? Has attention been paid to the clarity of expression and readability, such as sentence structure, jargon use, acronyms, etc.: Yes.	

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Reviewer 2's Comments	Authors' Responses
Recommendation: **Accept**	Thank you for your support and the recommendation for Accept. We strongly believe that your support and suggestions helped to improve the manuscript significantly.
Comments: The authors have made a good effort and addressed the issues spotted in the last round. The paper makes a good contribution to esports. Congratulations.	Thank you very much!
Additional Questions: 1. Originality: Does the paper contain new and significant information adequate to justify publication?: NA	
2. Relationship to Literature: Does the paper demonstrate an adequate understanding of the relevant literature in the field and cite an appropriate range of literature sources? Is any significant work ignored?: NA	
3. Methodology: Is the paper's argument built on an appropriate base of theory, concepts, or other ideas? Has the research or equivalent intellectual work on which the paper is based been well designed? Are the methods employed appropriate?: NA	
4. Results: Are results presented clearly and analysed appropriately? Do the conclusions adequately tie together the other elements of the paper?: NA	
5. Implications for research, practice and/or society: Does the paper identify clearly any implications for research, practice and/or society? Does the paper bridge the gap between theory and practice? How can the research be used in practice (economic and commercial impact), in teaching, to influence public policy, in research (contributing to the body of knowledge)? What is the impact upon society (influencing public attitudes, affecting quality of life)? Are these implications consistent with the findings and conclusions of the paper?: NA	
6. Quality of Communication: Does the paper clearly express its case, measured	

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against the technical language of the field and the expected knowledge of the journal's readership? Has attention been paid to the clarity of expression and readability, such as sentence structure, jargon use, acronyms, etc.: NA

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Internet Research Editorial Office's Comments	Authors' Responses
The manuscript has room for improvement before it is accepted for publication. Below are some examples. It is a good idea to seek help from a professional copy-editing service provider.	Thank you very much for your detailed revision suggestions, which were crucial for enhancing the readability and accuracy of the entire paper, significantly improving its quality. We have carefully revised each point according to the suggestions from you, and have had two proofreaders further modify and confirm the changes. We hope that our revisions meet the requirements of *Internet Research*. Thank you very much!
1. There are some typos and grammatical mistakes (e.g., "physical competencge", "various trainings", "play a support role" in the main text and in Table 2, "we conductrf", "between emotional attachment to the guild and satisfaction H7(d)", "our findings reveal that esports players appreciate... then followed", "hirarchical order", "the bottom of the hierarcy", "hey will appreciate", "Jeuring, J. and and Kester, L." in the reference list, a space is missing from "A.and", "messages.(U1)", "Table 6.Discriminant", remove the extra space from "However, studies", "strategy .", "have a Bachelor's degree" should be "... bachelor's...", "Bachelor" in Table 4 should be "Bachelor's degree", the table header "Interview" in Table 1 should be "Interviewee", "Except for the satisfaction construct" does not need the word "for", etc.). All "e-sports" should be "esports". It seems that some articles (e.g., "the", "an", etc.) are not needed (e.g., "Grounded in the self-hierarchy and self-determination theories", "The descriptive statistics", "the Honor of Kings" in the main text and in Table 3). The spelling of some words should be changed because the manuscript uses American English (e.g., "towards" should be "toward").	Thank you very much for your detailed comments on our manuscript. We have carefully reviewed and corrected all the typographical and grammatical errors as you pointed out. We believe these revisions have significantly improved the quality of our manuscript. We appreciate your patience and guidance throughout this process.
2. The manuscript should use the required reference format and citation style (see the Author Guidelines at https://www.emeraldgrouppublishing.com/journal/intr). Remove the spaces between the initials of each author or editor name in references (e.g., "Hermens, H. J." should be "Hermens,	Thank you for your detailed feedback on the reference format and citation style of our manuscript. We have thoroughly reviewed and updated the references according to the guidelines provided. We believe these changes have significantly improved the formatting and consistency of our references. Thank you again for your guidance.

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H.J.", etc.). All ", &" between author names in references should be "and" without the comma (e.g., "Babin, B. J., & Anderson, R. E." should be "Babin, B.J. and Anderson, R.E.", etc.). All "&" between author names in citations should be "and" instead (e.g., "Singer & Chi, 2019" should be "Singer and Chi, 2019", etc.). A paper title should not use any italic font. A journal name, book title or conference proceedings should use an italic font. Each reference should take a new line (e.g., Bányai et al., 2019). References should be complete (e.g., the book title of Brown and Marshall (2013)). A reference should not include the day and month after the publication year (e.g., Zandt, 2024). A reference from an electronic source must include the access date after the word "accessed" within a pair of parentheses (e.g., Zandt, 2024). The access date "26th January 2024" should be "26 January 2024". A reference should be complete and should not include "..." among author names (e.g., "Jackson, L. E. ... and Wu, Q. (2012)"). References should be sorted by author name(s) and year (e.g., "Mendoza, G..." should appear after "Mellor, D...", "Sedikides, C., Gaertner, L..." should appear before "Sedikides, C. and Spencer, S. J..." after "Sedikides, C., & Brewer, M. B..."). Remove extra spaces (e.g., "emotions", Journal", etc.).	
3. The manuscript should be consistent. The sentence " Table 2 presents the demographic characteristics of the respondents" should be "Table 4...". "Hypothesis 1" to "Hypothesis 7f" in Table 8 should be "H1" to "H7(f)" instead. The construct "self-worth" is not a noun like others. There are discrepancies between constructs in the hypotheses, those mentioned in the main text, those in Figure 1, and those in Tables 2, 3 and 8 (e.g., "esports satisfaction" vs. "Game satisfaction" vs. "players' satisfaction with the sport" vs. "players' satisfaction with the esports" vs. "players' satisfaction" vs. "satisfaction"; "close others ' recognition" vs. "Significant others recognition" vs. "guild recognition", which	Thank you for your detailed feedback on the consistency of our manuscript. We have carefully reviewed and made the necessary adjustments to ensure consistency throughout the document. Additionally, we referred to two articles published in *Internet Research*: Teng (2019) and Pirkkalainen et al. (2022), which also used ''self-worth'' as a variable name. All other issues have been carefully addressed and confirmed. We believe these changes have significantly improved the consistency and clarity of our manuscript. Thank you for your valuable feedback. Reference: Teng, C. I. (2019), "How avatars create identification and loyalty among online gamers: contextualization of self-

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have grammatical mistakes; etc.). The game becomes "King of Glory" in Table 1. The entry "Non-professional player, government staff" in Table 1 should be "... Government..." following the style of others. The term "Relational" becomes "Relatedness" in Table 2. The description "The individual self is a form of self that differentiates a person from others" in Table 2 should be followed by a dot like others. Some quotes in Section 3.1 are slightly different from those in Table 2. Section 4.1 mentions "standardized path loadings" twice while the term in Table 5 is "Factor loading". The value "H6: β = 0.1353" should include three decimal places like other values.	affirmation theory", *Internet Research*, Vol. 29 No. 6, pp.1443-1468. Pirkkalainen, H., Tarafdar, M., Salo, M.and Makkonen, M. (2022), "Proximal and distal antecedents of problematic information technology use in organizations", *Internet Research*, Vol. 32 No. 7, pp.139-168.
4. The manuscript should be proofread to ensure accuracy. The footnote of Table 7 says that "Bold numbers show the square root of AVE of each construct" but none of the values in Table 7 use a bold font. Section 2.2 has a quote from "Nehrlich et al., 2019, p.3", but the corresponding reference does not include "p.3".	Thank you for your detailed and patient feedback; we are particularly grateful! We have carefully addressed each of your suggestions and have also conducted a thorough review of the entire manuscript. We have proofread the manuscript to ensure these changes are accurate and consistent. Thank you again for your valuable feedback.
5. There are ways to improve the readability of the manuscript (e.g., remove all the Chinese name of "Honor of Kings", remove the row "Total" from Table 4, "30–40 minutes" should be "30 to 40 minutes", "There are many esports games in China, and choosing which game players should play is critical" should be broken into two sentences, Figure 1 may include the hypothesis codes, "a seven-point Likert-type scale (1= strongly disagree, 7 = strongly agree)" should be "... (1 = strongly disagree to 7 = strongly agree)", "game satisfaction results (1= strongly dissatisfied, 7 = strongly satisfied), interaction feelings (1= strongly displeased, 7 = strongly pleased), expectations (1= worse than I expected, 7 = better than I expected), and opinions on replaying the game (1= very unhappy, 7 = very happy)", "With VIF values below 2.793 (see Table 5), the VIF of all variables is less than 5.0, and the correlation coefficients between each variable are less than 0.85, as shown in Tables 5 and 7, respectively." can be simplified to "The VIF	Thank you for your detailed and patient feedback, we are particularly grateful! We have carefully addressed each of your suggestions and have also conducted a thorough review of the entire manuscript. We believe these changes have significantly improved the readability and clarity of our manuscript. Thank you again for your help.

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of all variables is less than 5.0 (Table 5) while the correlation coefficients between each variable are less than 0.85 (Table 7).", Section 4.2 may mention the version of Amos used, "our research findings support Gaertner et al. (2002) who report" should be "... which reported", etc.). The sentences "At the relational-self level, the data did not support the moderating role of game character identification in the relationship between close others' recognition and satisfaction. However, they supported the moderating role in the relationship between emotional attachment to the guild and satisfaction H7(d), resulting in the rejection of H7(c) and support for H7(d)" should be simplified. The main text should briefly describe in Sections 3 or 4 which analysis answers which research question. Figures and tables should be self-explanatory. The items of "Game satisfaction (SA)" in Table 3 should be complete so that each "..." (which is missing from "SA1") should be replaced by the options. The footnote of Tables 7 and 8 should explain what single- to triple-asterisk denote respectively. Tables 5 to 7 should explain the meaning of the short forms in the footnote. The short forms are not needed in Table 8. The short forms in the main text should be replaced by the full name unless they are defined the first time they are used in the main text (e.g., "Aside from CV", etc.). A short form should follow its full name the first time it appears in the main text (e.g., "Yoon et al. (1994) claim", "Gaertner et al. (2002) claim"). Sentences describing prior studies should use the past tense (e.g., "Jin et al. (2017) also posit", etc.). Sentences describing the results should use the past tense.

If applicable, acknowledge the conference proceedings or journal paper upon which this manuscript is developed.

Please revise the manuscript thoroughly and submit the revised version. Thank you. | Thank you once again for your meticulous work and for patiently pointing out each issue in our manuscript along with detailed suggestions for improvement. Your feedback has not only greatly enhanced the accuracy and readability of our article but has also provided significant guidance for our future writing. We have engaged two professional proofreaders to conduct a thorough review, ensuring that all revisions are properly implemented. Additionally, we |

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| | have further expressed our gratitude to everyone who has helped us throughout this process. |
| | Thank you again for your support and assistance. |

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Responses to Internet Research Editorial Office's Comments

We would like to express our sincerest gratitude to the Internet Research Editorial Office for their meticulous work and patient guidance. We have further adjusted and revised our paper in hopes of meeting the publication requirements of Internet Research. Modifications based on your suggestions have been made in the manuscript and are presented in the following table and throughout the paper. We hope that we have addressed all the issues to the satisfaction of the editorial team.

Internet Research Editorial Office's Comments	Authors' Responses
1. There are some typos and grammatical mistakes (e.g., "play a support role" in the main text and in Table 2 should be "... supporting...", "they supported the moderating role in the relationship between satisfaction and emotional attachment to the guild H7(d)" should be "they supported H7(d), which proposes that game character identification positively moderates the relationship between emotional attachment to an esport team and game satisfaction", "the more likely they are to appreciate" should be "... they appreciate", "how individuals perceive... and determines", a space is missing from "very … (1= strongly dissatisfied", "is … (1= worse", "At the relational-self level: recognition" should use a comma instead of a colon, "esport" should be "esports", "Esports are emerging" should be "is" because "Esports" here refer to the industry, etc.).	Thank you very much for your detailed revision suggestions, which were crucial for enhancing the readability and accuracy of the entire paper, significantly improving its quality. We have carefully reviewed and incorporated the feedback from our professional proofreaders into our manuscript. We have made the necessary corrections and have thoroughly checked the entire document to ensure that all changes align with the suggestions provided. Thank you very much!
2. The manuscript should use the required reference format and citation style (see the Author Guidelines at https://www.emeraldgrouppublishing.com/journal/intr). All ", and" between author names in references should be "and" without the comma (e.g., "Babin, B.J., and Anderson, R.E.", "Choi, S.J., and Kim, H.W.", "Sedikides, C., and Brewer, M.B.", "Morgan, J., and Maras, P.", "Gustafsson, A., and Löfgren, M."). A journal name, book title or conference proceedings should use an italic font (e.g., "Delivering Satisfaction and Service Quality: a Customer-Based Approach for Libraries"). A journal name, book title or conference proceedings should use the capital letter in the first letter of each content word (e.g., "Journal of service research" should be "Journal of Service	Thank you for your detailed feedback on the reference format and citation style of our manuscript. We have thoroughly reviewed and updated the references according to the guidelines provided. We believe these changes have significantly improved the formatting and consistency of our references. We appreciate your patience and guidance throughout this process.

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Research"). Different parts of a reference should be joined together with commas (e.g., "(2019). "Video"). A citation should use the name as the corresponding reference (e.g., "according to Barnett White (2005)") should be "according to Barnett (2005)"). Some references are not cited (e.g., Brown and Marshall, 2013; Parshakov and Zavertiaeva, 2018; Sedikides and Brewer, 2001) while some citations cannot be found in the reference list (e.g., "Brown and Marshall (2006)", "Parshakov et al., 2018", "Sedikides and Brewer, 2015", "Zajenkowska et al. (2019)").	
3. The manuscript should be consistent. The construct "Collective belongingness" in Tables 2 to 3 and Tables 5 to 7 should appear after "Co-creation" following the order they appear in the hypotheses. The sentence "Satisfaction is measured using four questions which assess the player's views on their satisfaction with the game" should be "Game satisfaction... four items... their interaction..." according to the information in Table 3. There are discrepancies between constructs in the hypotheses, those in the main text, those in Figure 1, and those in the tables (e.g., "Recognition from close others" in H3 vs. "Recognition from Close others" with a capital "C" in Table 8 vs. "recognition by close others" in Section 4.2 vs. "Recognition by other team members" in Section 3.2.1.2 vs. "recognition by other players" in Section 3.2.1.2 vs. "Close other recognition" in Tables 3 and 5 to 7 vs. "Team-based recognition" in Table 2 vs. "Significant others recognition" in Figure 1 vs. "Close others' recognition" in the title of Section 3.2.1.2; "Emotional attachment to an esport team" in H4 vs. "Emotional attachment to a guild" in Tables 2 and 8 vs. "Emotional attachment" in Tables 3 and 5 to 7 and Figure 1; "Esports co-creation" in H5 vs. "Co-creation" in Table 2 to 3 and 5 to 8 and Figure 1; "Esports community belongingness" in H6 vs. "Collective belongingness" in Tables 2 and 8 vs. "Belongingness" in Tables 3 and 5 to 7 vs. Community belongingness" in Figure 1).	Thank you for your suggestions. We have made the following revisions based on your feedback: 1. We have standardized the order of variables and the way they are measured across all tables. 2. We have aligned the phrasing in the main text (including all hypotheses), tables, and framework diagrams. 3. We have updated the title in ScholarOne to match. Thank you again for your guidance.

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The term "esport character identification" in the title of Section 3.2.1.4 and "Ingame-character identity" in Table 8 should be "game character identification". Both "esport character" should be "game character". The term "relatedness-self level " in Table 2 and Section 3.1.1 should be "relational-self level". The scale "(1= worse than I expected to 7 = better than I expected)" in the main text and Table 3 may drop both "I" following the style of other scales. The hypotheses should use the same structure (e.g., "has a positive impact on" in H1 to H2 and H5 to H6 vs. "positively impacts" in H3 and H4). All "positively moderates the relationship between... and game satisfaction" should be "positively moderates the impact of... on game satisfaction" instead. The paper title in the manuscript file should not be different from the one in ScholarOne.	
4. The manuscript should be proofread to ensure accuracy. H5 is about co-creation and H6 is about belongingness, but H5 and H7(e) are about belongingness and H6 and H7(f) are about co-creation in Table 8. Check whether the relevant sentences are correct, including "the relationship between collective belongingness and co-creation is also confirmed by the data (H5: β = 0.241; p < 0.001; H6: β = 0.135; p < 0.05)" (which should be "... the impacts of... co-creation... on game satisfaction (H5: β =...; p <...) and... belongingness... on game satisfaction (H6: β =...; p <...) are also supported by the data" with the correct term or value filled in each ellipsis) and "game character identification positively moderates the relationship between collective belongingness H7(e) and co-creation H7(f) with esports satisfaction" (which should be "... positively moderates the impacts of... co-creation in H7(e) and... belongingness in H7(f) on esports satisfaction" with the correct term filled in each ellipsis).	Thank you for pointing out this critical issue. We have made corresponding revisions to the main text and Table 8, and have rewritten the content of the results section. Thank you again for your valuable feedback.
5. There are ways to improve the readability of the manuscript (e.g., "our research findings support Gaertner et al. (2002) who report" should be "... which reported" because "Gaertner et al.	Thank you very much for your valuable suggestions to improve the readability of our article! We have revised the wording and made further modifications to the details. We are particularly grateful for your contributions and truly appreciate them.

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(2002)" is a study, "rejected" and "supported" in Table 8 should be "Rejected" and "Supported" respectively, "TiMi Studios" should be "TiMi Studio Group"). The sentence "recognition from close others (H3) and emotional attachment to the guild (H4) are supported by the data, showing a significant positive effect (β = 0.677; p < 0.001; β = 0.173; p < 0.01, respectively)" should present the complete relationships (i.e., the impacts of the constructs on game satisfaction) and report the path coefficients and the p-values immediately after the corresponding hypotheses. Sentences describing prior studies should use the past tense (e.g., "Yoon et al. (1994) claim", "Gaertner et al. (2002) claim", "Brown and Marshall (2006) define", "Witkowski (2012, p.350) defines", "Qian et al. (2020a) and Brock (2017) claim", "Kim and Thomas (2015) argue", "Wang and Hang (2021) and Liu (2019) suggest", "Sedikides et al. (2013) posit", "Gaertner et al. (2012) propose", "Canrinus et al. (2012) point out", "Tang et al. (2016) further claim", "Jin et al. (2017) posit", "Mallon and Lynch (2014) also reveal", "Sedikides et al. (2013) and Nehrlich et al. (2019) claim", "Hew et al. (2023) reveal", "Zajenkowska et al. (2021) propose", "Wang and Hang (2021) demonstrate", "Liao et al. (2020) identify", "Qian et al. (2020b) suggest", "Wang et al. (2022) define", "Zajenkowska et al. (2021) argue"). Sentences describing the research process or the results should use the past tense (e.g., "we conduct a quantitative study"). The manuscript has about 13000 words, more than the upper limit of 9500 words. Some repeated contents can be removed (e.g., demographic information of the respondents).

Regarding the tense issue, we reviewed articles published in Internet Research and noticed that some use the present tense while others use the past tense when describing previous studies. Therefore, we have adjusted the tense in the sections describing our research process but have maintained the tense in the literature review and when discussing previous research.

Initially, the word count of our submission was below 9500 words. However, after detailed revisions based on the feedback from two reviewers and the editor, especially in the qualitative research section, the word count has increased. We hope our revisions and explanations meet your satisfaction.

Thank you again for your suggestions and feedback, which have been very helpful in enhancing our paper. We hope that the revised version will be satisfactory to you.

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Responses to Internet Research Editorial Office's Comments

We would like to express our sincerest gratitude to the Internet Research Editorial Office for their meticulous work and patient guidance. We have further adjusted and revised our paper in hopes of meeting the publication requirements of Internet Research. Modifications based on your suggestions have been made in the manuscript and are presented in the following table and throughout the paper. We hope that we have addressed all the issues to the satisfaction of the editorial team.

Internet Research Editorial Office's Comments	Authors' Responses
1. There are some typos (e.g., "TiMi Studios Group" should be "... Studio...", "positive impact on satisfaction" should be "... on game satisfaction", "satisfaction; Finally" should be "satisfaction. Finally").	Thank you very much for your detailed revision suggestions. We have made the necessary corrections and have thoroughly checked the entire document to ensure that all changes align with the suggestions provided. Thank you very much!
2. The manuscript should be consistent. The footnote "BL = Collective belongingness; CV = Co-creation" in Tables 5 to 7 should be "CV = Co-creation; BL = Collective belongingness".	Thank you for your suggestions. We have made revisions based on your feedback. We appreciate your patience and guidance throughout this process.
3. There are ways to improve the readability of the manuscript (e.g., "our research findings support Gaertner et al. (2002), who report" should be "... which reported" because "Gaertner et al. (2002)" is a study, add a space after all "→" in Table 8). The construct "Close other recognition" does not make good sense and should be revised. The sentence "close other recognition (H3: β = 0.677; p < 0.001) and emotional attachment to the guild (H4: β = 0.173; p < 0.01) are supported by the data, showing significant positive impacts of the constructs on game satisfaction" should be "... (H4: β = 0.173; p < 0.01) have significant positive impacts on game satisfaction, as supported by the data". Sentences describing prior studies should use the past tense (e.g., "Yoon et al. (1994) claim" should be "... claimed", "Gaertner et al. (2002) claim", "Brown and Marshall (2013) define", "Witkowski (2012, p.350) defines", "Qian et al. (2020a) and Brock (2017) claim", "Kim and Thomas (2015) argue", "Wang and Hang (2021) and Liu (2019) suggest", "Sedikides et al. (2013) suggest", "Gaertner et al. (2012) propose", "Canrinus et al. (2012) point out", "Tang et al. (2016) further argue",	Thank you for your suggestions. We have made the corresponding modifications based on your suggestions to enhance the readability of the manuscript, and we have changed the sentences describing previous studies to the past tense, as well as simplified the repetitive descriptions. Thank you again for your guidance.

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"Jin et al. (2017) argue", "Mallon and Lynch (2014) also reveal", "Hew et al. (2023) reveal", both "Zajenkowska et al. (2021) propose", "Wang and Hang (2021) demonstrate", "Liao et al. (2020) identify", "Qian et al. (2020b) suggest", "Wang et al. (2022) define", "Zajenkowska et al. (2021) argue"). Repeated contents can be removed (e.g., "Except for the game satisfaction construct... replaying the game (1 = very unhappy to 7 = very happy)." can be shorted to "All items are measured using a seven-point Likert scale.").	

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