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Pursuit of Happiness through Esports: An Interpretive Structural Approach

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Abstract

This study adopts an interpretive structural modelling (ISM) approach to identify a structural model of benefits obtained through playing esports in order to investigate how playing esports can promote happiness. 19 professional esports players were interviewed to capture the benefits they obtained from playing esports. After 12 benefit categories were identified through content analysis, 10 professional esports players were invited to form a group consensus on the inter-relationships among these 12 identified categories. The ISM developed in this study revealed that self-esteem and commitment were the two most important benefits that players obtained in order to develop their personal happiness. This study makes significant contributions to IS research, online gaming, and the esports industry by developing a player-specific benefit scale and a hierarchical benefit-value development framework.

Keywords: esports, benefits, happiness, interpretive structural modelling (ISM), online games

Introduction

Esports, a form of competitive online games where the primary aspects are facilitated through the use of electronic systems (Hamari and Sjöblom 2015), has changed rapidly over the last few years and continues to change, evidenced by the number of participants and spectators and the amount of media coverage, as well as organisers' considering esports for inclusion in major sports competitions. According to Newzoo, a company that specialises in offering market data related to digital media and related activities, the esports industry has generated $865M in direct revenue in 2019, and by 2022, this figure is expected to reach $1,790M (Newzoo 2019), indicating steady growth. Finally, the rise of esports is perhaps best illustrated by the news in 2017 that it would be a medal event in the 2022 Asian Games, in hopes of inclusion in the Olympics (Graham 2017). Esports emerged from competitions among professional players, which can be defined as "players who practice esports as a form of work and earn their living from it" (Seo 2013). The number of professional esports players has increased by nearly 400% since 2010 (eSports-Observer 2015). Furthermore, esports has reached the size where it is governed by various national and international governing bodies to oversee its rules and practices, suggesting the importance of competitive computer gaming in virtual world consumption (Seo 2013).

Hence, it is clear that esports are not a passing fad (Cunningham et al. 2018), and their influence will only continue to spread in future.

However, the rise of esports as a professional avenue for gamers in building a successful career appears somewhat bleak due to low earning potential (Taylor 2012), unstable sources of player salaries, and a lack of job security (Agha 2015). Combined with the high skillsets required to compete professionally on a national or international level, this raises the question as to why players train to become professional esports players. There is very little written in the esports literature that aims to understand the sudden and sustained growth of esports with players today, despite the overwhelmingly negative view of online gaming. Taking a closer look at the literature, little further detail has been provided in terms of whether esports can also provide benefits to the participants, thus promoting positive experiences and happiness, just as traditional sports do (Lundqvist 2011). Although positive youth development (PYD) frameworks (Holt 2007) and other positive psychology literature (Lundqvist 2011) can be used to understand the benefits obtained from playing esports and the values promoted through them, little is known about the specific benefits gained from playing esports and how such benefits influence each other to promote players' positive experiences, thereby making them happy, the only value that is final and sufficient (Diener 1994). In this study, a benefit refers to the total advantage or satisfaction offered by esports that meets the player's needs or wants (Park and Choi 2009). As its contextual definition is similar to those of needs and motivation (Peltier and Schribrowsky 1992), the term "benefit" has been used interchangeably with "needs" and "motivations" in this study. Given that the literature on both online games and traditional sport play has shown positive impacts of playing on players' career development, even life-long skill development and well-being (Lundqvist 2011), this study attempts to examine how benefits obtained from playing esports can promote players' happiness by explicitly linking benefits gained from playing esports with the happiness value that players pursue. By doing so, we offer a structured model of a positive personal value system development framework for esports players, allowing us to understand not only what players want (benefits sought) but also why they want what they want (values pursued – happiness).

Specifically, this study employed the PYD framework to develop a structural model of benefits obtained by esports players, explaining how players' pursuit of happiness can be achieved through esports play. To achieve the goals, an interpretive structural modelling (ISM) approach was used to identify a structural hierarchical framework of the benefits of playing esports. The outbreak of COVID-19 has highlighted the ever-growing digital nature of day to day life. With many traditional sports suffering setbacks due to a lack of preparedness against new age challenges, a new frontier has emerged in the world of gaming and esports. This research aims to identify and structure the benefits of engaging in this social and competitive activity through digital means. The sooner we recognise and demonstrate to the younger generations that said there is a legitimate pathway, the sooner the world will be able to embrace and reap the financial and social benefits of esports.

The following section outlines the esports industry and motivations for and benefits of playing online games, sports, and esports. Second, PYD frameworks are reviewed. Third, ISM is introduced as the key research approach, followed by research process. Next, we present the results of a multi-stage investigation that serves to answer our research question. Finally, the paper concludes with a discussion of the importance and implications of the findings in terms of esports and players' motivations to play.

Theoretical Background

Esports as a Rising Mainstream Business

Esports are known by many synonyms, such as electronic sports, gaming, cybersports, competitive computer gaming, and virtual sports (Jenny et al. 2016). The origins of esports can be traced to Korea in the late 1990s, with the rise of the game StarCraft and the increased accessibility of broadband, which helped build a strong gaming culture similar to that of major sporting leagues (Wagner 2006). Today, common genres of esports include first-person shooters such as Counter-Strike, real-time strategy games such as StarCraft, and multiplayer online battle arenas such as League of Legends (LoL). In sum, they are seen as a competitive and organised approach to playing computer games (Witkowski 2012).

Although considering esports as a form of sport is still being debated in the sport discipline (Cunningham et al. 2018), the establishment of national and international governing bodies in esports, the similar management components of traditional sports and esports, the increasing number of major corporate sponsors joining the esports business, and esports' ever-growing worldwide revenues have indicated that esports are becoming a mainstream business sector (Newzoo 2019). As an emerging industry, esports is generating significant interest from organisations such as Red Bull and Coca-Cola, since it allows sponsors to target the millennial audience that makes up the majority of esports streamers, who are harder to be reached through traditional forms of marketing (Gaudiosi 2014). The spread of esports is also leading to increased consumption through traditional viewing mediums, with millions of fans being attracted to watch the world championship tournaments (e.g., LoL) either live or online.

Becoming a Professional Player

As mentioned, esports differ from traditional sports in that they are almost entirely digitally mediated and there is a stronger emphasis on connections through social media platforms and streaming (Kaytoue et al. 2012). Despite this, esports players stand out from hobbyists in that, like their traditional sporting counterparts, they are signed up to large sports clubs that are supported by coaches, analysts, and managers. This exclusivity may involve players living within a dedicated "gaming house" environment where teammates live and practise together (Agha 2015).

Professional esports players also require constant cycles of intense training and learning. Routine training is required to help players develop their skills for competitive gameplay, such as team management, a balanced body and composure, and understanding of the technologies in use (Seo and Jung 2014). Daily practice can range anywhere from 10 hours daily (Kim and Thomas 2015) up to 16 hours in some cases (Taylor 2012). Despite rigorous training, players face constant struggles to remain at the top of their leagues, with studies focusing on player learning highlighting different stages of enjoyment, struggling, achievements, slumps, and recovery for players (Kim and Thomas 2015) due to constant updates to games. Finally, gaining sponsorship is central to becoming an esports player and is one of the biggest sources of revenue for esports teams (Rovell 2016). Despite this, many professional esports players do not earn enough through their esports activities to make a living and need to subsidise their income from other sources (Agha 2015). The question of what motivates these young players to become so dedicated to esports warrants further investigation in order to develop a better strategy for player development and esports management.

Motivations for Playing

In this study, a motivation is defined as a desire, need, or process that influences an individual's goal-directed behaviour (Smith et al. 1982); it is one of the most heavily studied constructs in consumer behaviour research in general, and sport-related research in particular (Pizzo et al. 2018). Additionally, as traditional sports are a relevant context in this study, the motivations behind both casual and professional play of sports are also explored. The exploration of these motivations helps to form the basis of the theoretical contribution of this study by highlighting the current gaps in this area of research where this study can contribute.

Whilst there are overlaps in the motivations identified among the online gaming, esports, and sports literature, there are also several key differences in the motivation constructs identified. There was a higher amount of extrinsic motivations identified in the sports literature than in the esports and online gaming literature, which both focused almost solely on intrinsic motivations, likely as a result of higher rewards on offer within sports due to their higher recognition compared to esports. However, within the sporting context, there are still more intrinsic than extrinsic motivations, suggesting that the positive aspects of personal development through esports that lead to these intrinsic motivations also exist in the sports context through their shared motivations. Online game motivations in casual contexts also reveal a higher focus on escapism and immersion (e.g., Billieux et al. 2013; Kuss et al. 2012) compared to esports and sports, possibly due to the casual nature of online gaming compared to esports and sports, and also highlighting the role that competition plays in leading towards long-term positive personal development and the achievement of benefits.

In addition, although the abovementioned studies can provide some insights into motivations for and benefits obtained from playing esports, these studies treat motivations in isolation. Literature has indicated that individuals' motivations are not isolated, static traits but interrelated structures (Guo et al. 2012). Though considering benefits as a set of interactive needs and expectations is a more meaningful and accurate explanation of technology use gratifications and positive value fulfilment (Guo et al. 2012), no attempt has been made to examine the possible underlying hierarchical relationships among benefits of playing esports. Such relationships aid in not only understanding the relative position and influences of the benefits to each other, but also how these benefits work together to lead to personal happiness actualisation, the final and sufficient value that matters to everyone (Diener 1994). This study was designed to further the understanding of esports players' motivations by generating such a hierarchical framework to map and understand the causal relationships between the various benefits players obtained from playing esports, thus answering the question of how these benefits can promote players' positive experience, making them happy.

Positive Youth Development through Sports

Positive youth development is an overarching framework that seeks to understand the empowerment of youths as opposed to seeing them as an issue to be fixed (Johnston et al. 2013) and sees that young people embody potential and are waiting for development (Holt 2007). It can be broken down into several key areas of development: physical, intellectual, psychological/emotional, and social (Fraser-Thomas et al. 2005). It has also been discovered to promote positive psychosocial development through social, emotional, behavioural, and cognitive qualities, as well as through social and environmental interactions (Johnston et al. 2013). Sport is a popular context within literature for exploring positive youth development due to its popularity with youth and the fact that it is an organised activity that allows the opportunity for positive youth development (Holt 2007). For example, within sports, youths have the opportunity to interact with mentors and leadership figures such as coaches, which allows them to learn vital skills such as persistence, working as a team, as well as coping skills and receiving constant feedback if support is required (Holt 2007). Sports also provide the opportunity for positive personal experiences by allowing participants to regularly interact with their peers and work together in various situations, leading them to improve their social skills, integrate with their community, and have positive inter-group relationships, which can lead to long-term success in adult career achievement (Fraser-Thomas et al. 2005). Despite the differing trends and focuses, all the studies clearly highlight different types of benefits that youths have gained through their regular playing of sports, highlighting the overall importance of the context in personal development and for understanding the types of benefits that players may also gain from esports.

Research Methodology

Interpretive Structural Modelling (ISM)

Developed by Warfield in 1973 (Warfield 1973), ISM is an interactive learning process whereby a set of unique, interrelated variables that affect the system under consideration are structured into a comprehensive systemic model (Warfield 1974). ISM principles are based on discrete mathematics, graph theory, social science, and collective planning (Sage 1977). The objective of this methodology is "to expedite the process of creating a digraph, which can be converted to a structural model, and then inspected and revised to capture the user's best perceptions of the situation." (Malone 1975,p.399). This method is considered interpretive, as discerning which variables are related, and how strongly, is left to the judgment of the coder (Sage 1977). The system is also structural, as an overall structure is extracted from a complex set of variables based on their relationships. Furthermore, the process is iterative, as coders can continuously refine early aspects of the model until they are satisfied with the resulting structural model (Mandal and Deshmukh 1994; Sage 1977). The resulting specific relationships and overall structures are portrayed in digraph models for easier analysis. ISM is also easy to use and highly communicable to larger audiences. The whole potential of the methodology is best realised in a group context with a computer (Janes 1988).

Due to the human brain's limits in dealing with complex issues involving a significant number of variables at a time (Warfield 1976), the use of ISM can advance collective understanding of those relationships by providing a comprehensible model of an inherently complex and usually impenetrable system (Anantatmua 2008b; Singh and Kant 2008). Its ability to bring structural clarity and establish a hierarchical order for prioritisation and consequent action has illustrated the versatility of ISM as a tool capable of modelling a diverse range of complex issues. Thus, since its inception, ISM has been extensively applied by a number of researchers to develop a better understanding of the complex systems under consideration, such as higher education programme planning (Hawthorne and Sage 1975), evaluating IS effectiveness (Kanungo et al. 1999), IT enablers and barriers for knowledge management (Anantatmua 2008a), and student technology use motivations (Guo et al. 2012). Building an ISM involves a number of steps, which are well documented in the literature (Guo et al. 2012). Table 1 below is the procedure this study adopted to develop an ISM model.

Table 1: ISM Procedure

Stage 1	Defining a set of variables that affect the system: A structural model is a collection of variables and their relationships. Thus, a set of variables affecting the system (in this case, benefits obtained by esports players) must first be defined before the structural model is developed. These variables can be generated by using previous literature, brainstorming, interviews, or other research methods (Arcade et al. 1999; Janes 1988). In this study, the semi-structured laddering interview technique was used to identify variables of interest.
Stage 2	Establishing a contextual relationship among variables: Identifying contextual relationships is the second fundamental concept of the ISM methodology (Malone 1975). In general, a group of people are asked to specify a relationship between each variable pair (pair-wise comparison). The literature documents a number of ways to seek opinions from experts about the contextual relationships of variables, such as brainstorming, the nominal group technique, and the Delphi technique (Barve et al. 2007). This study identified the contextual relationships between each pair of variables through the Delphi technique.
Stage 3	a) Developing a reachability matrix and checking the matrix for transitivity b) Partitioning the reachability matrix into different levels c) Forming a canonical matrix d) Drawing a directed graph (DIGRAPH) and removing the transitive links, then converting the resultant digraph into an ISM by replacing variable nodes with statements

Research Process

Table 2 provides specific research process based on Table 1 ISM procedure. We provide detailed procedures for stage 1 & stage 2 below. Analysis results for stage 3 are presented in Findings section.

Table 2. Research Process

Stage 1: Identifying benefit categories obtained through esports play **Step 1:** Interviewing esports professional players in order to identify benefits they can obtain from playing esports. **Technique adopted:** Laddering interview. **Output:** Interviewed 19 professional players **Step 2:** Analysing interview data to identify categories of professional players benefits obtained. **Technique adopted:** Content analysis. **Output:** 12 benefit categories identified
Stage 2: Establishing pair-wise relationships among benefits identified Forming a 10- member panel to reach group consensus about contextual relationships between each pair of variables identified **Technique adopted:** Delphi method. **Output:** Adjacency Matrix formed.
Stage 3: Generating professional players' benefit-value development hierarchical framework.

Stage 1: Identifying Benefit Categories Obtained through Esports Play

Step 1: Interview Technique and Procedure

Given the exploratory nature of this research, a series of one-to-one in-depth interview using laddering interview technique (Reynolds and Gutman 1988) was conducted to elicit motivations driving professional esports players to play. Although laddering interview is introduced as an approach to dig

below consumers' surface knowledge of the perceived product attributes and benefits, to the underlying beliefs and values motivating behavior (Peter and Olson 2005), its purpose is to reveal people's motives for choosing a particular product or service, in this case playing esports (Russell et al. 2004). Thus, it can be used in this study to uncover the underlying reasons why players want to playing esports, providing insights into understanding the structure underlying the different motivational layers of professional players. This step was necessary, due to the absence of comprehensive, esports-specific play motive scales. Due to its in-depth nature, laddering interview technique is suitable for gathering the detailed information required from a smaller pool of interviewees.

Nineteen professional LoL players competing on Australian esports teams were interviewed, which was sufficient due to the in-depth nature of the laddering methodology (Reynolds and Gutman 1988) and the low number of new constructs identified within the last few interviews. This number is also sufficient as there are only eight teams (40 players and all males) at the highest level of Australian competitive LoL play, meaning the participants represented nearly half of the existing players. The average age of participants was 21 years, ranging from 19 to 25. In terms of education, 15.7% had completed an undergraduate degree, and 47.4% were currently studying at university. Of those at university, only one was studying full-time, with the rest either studying part-time or deferring their degree. The average duration of participation in competitive esports was 3 years, ranging from 6 months to 8 years, and 52% of players were also working whilst playing either full- or part-time.

Interviews were held over Skype when necessary due to geographical distance and face-to-face where possible. Interviews ranged between 60 and 120 minutes and had four phases, as shown in Table 3.

Table 3: Interview Procedure

Phase 1	Verbally collect demographic information.
Phase 2	Gather constructs through direct elicitation. The initial elicitation question used to achieve this was "What benefits do you feel you have gained as a person through playing esports?", and additional clarification was provided should interviewees show difficulty in eliciting constructs.
Phase 3	To provide higher-level interpretations of the more abstract concepts, a series of "why" questions are required to probe deeper into constructs collected from the participant answers to understand their importance. Players were encouraged to speak freely until they were unable to provide additional reasons in response to the questions. This is termed the "laddering" interview technique, a widely used technique to uncover linkages connecting lower-level concepts to higher-level concepts. Responses were encouraged until the participant was unable to come up with further constructs.
Phase 4	Participants were also invited to add any additional thoughts or comments they might have in terms of any other benefits they might have but had not mentioned yet.

Step 2: Content Analysis for Variable Identification:

Three steps of content analysis were used to produce findings for this study: data reduction, categorisation, and classification of construct groups.

Data reduction involved the reading of interviews line by line, with ideas coded into raw constructs using open coding. Coding consistency was checked throughout the coding process by comparing interviews that had been previously coded. After this process, a total of 191 raw constructs were initially obtained, and this was reduced to 58 unique constructs by comparing constructs with each other to ensure that any constructs that meant the same thing were combined, e.g., "winning" and "not wanting to lose". Grouping constructs together also helped to identify constructs that were different but had the same idea, e.g., "competitive mindset" and "being the best".

The 58 unique constructs obtained from data reduction were then categorised into broader variables utilising frameworks from positive youth development. A total of 12 high-level variables were identified, as shown in Table 4.

Table 4: 12 Variables Identified through Interviews

Variable	Definition	N (19) *
S1: Achievement	Personal success in esports through the demonstration of competence according to social standards (Schwartz 1992)	15
S2: Commitment	Tendency to pursue high personal standards in esports, with a focus on the value of effort, mastery, and self-improvement (Johnston et al. 2013)	19
S3: Communication	Ability to listen, to give and receive feedback, and understand non-verbal behaviour (Johnston et al. 2013)	15
S4: Cooperation	Ability to work with, and help others to achieve a common goal (Johnston et al. 2013)	19
S5: Emotional Self-Regulation	Ability to control and prevent emotions with interfering with attention and performance in esports; using positive emotions constructively (Johnston et al. 2013)	17
S6: Hedonism	Emotions relating to pleasure and enjoying one's life (Schwartz 1992)	19
S7: Initiative	Ability to set realistic goals, and achieve these through managing time and taking responsibility for oneself (Johnston et al. 2013)	18
S8: Personal Growth	Feelings of continued development, growth and expansion, experiences and improvement over time of an individual reflecting more self-knowledge and effectiveness (Ryff and Keyes 1995)	17
S9: Power	Attainment or preservation of a dominant position of power within a general social system (Schwartz 1992)	16
S10: Purpose in Life	Has goals in life and a sense of directedness, feels there is meaning to present and past life, has aims and objectives for living (Ryff and Keyes 1995)	16
S11: Self-Esteem	One's overall belief in their self and ability (Johnston et al. 2013)	16
S12: Tangible Rewards	Something given in recognition of an effort or achievement	18

*: N indicates the number of participants who mentioned this construct.

Stage 2: Establishing a Contextual Relationship among Variables

Identifying contextual relationships is the second fundamental concept of ISM methodology (Malone 1975). In general, a group of people are asked to specify a relationship between each variable pair (pair-wise comparison). Group idea-generation methodology, such as the nominal group technique (Delbecq et al. 1975) or Delphi method (Dalkey and Helmer 1963), can be used to establish the contextual relationships between any two variables identified in stage 1. Given the geographic dispersion of the participants and the potential benefits the Delphi method brought to the study, a modified Delphi method was adopted, in which a three-round data collection process was employed to reach group consensus (Avella 2016).

For the sake of simplicity and the purpose of this study, the first-round questionnaire contained questions on binary relations. A 12-by-12 matrix was presented to the panel members, and the intended relation (Janes 1988) was used in this study to obtain the contextual relationship between each pair of variables (121 pairs in total). For panel member selection, care was taken to ensure that the panel members selected were relatively impartial so that the information obtained would reflect current knowledge and perceptions, yet also had an interest in the research topic (Hasson et al. 2000). As a result, the top 12 Oceanian professional esports players who were 18 years old or above and qualified for at least one international competition were invited to join the panel. Eleven players expressed interest and participated in the first-round online survey. One member's result was excluded due to incompletion of round three. Consequently, 10 members completed the standard Delphi three-round surveys. This sample size is consistent with the recommended panel size for the Delphi method of 10–18 (Avella 2016).

For this study, consensus was equated with 51% agreement amongst respondents, as suggested by Loughlin and Moore (Loughlin and Moore 1979). After the first round, 115 out of 121 pairs reached 51% agreement, while the remaining pairs reached 50% agreement. The second- and third-round emails were used for further clarification and/or revision of the opinions. At the end of round three, all questions had reached consensus.

The set of variables considered for ISM development were the 12 benefit categories identified earlier, denoted Si, in sequence, where i = 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12. Table 5 above provides the final relationships between each pair of motivation categories, in which cells were populated by 0s and 1s, where "1" indicates a relationship and "0" indicates otherwise. This binary matrix, which describes whether there is a direct relation between the row and column variables, is called the adjacency matrix and is used for ISM analysis.

Table 5: Adjacency Matrix

	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12
S1	1	0	0	0	0	1	0	0	1	0	0	1
S2	1	1	1	1	1	0	1	1	0	0	0	0
S3	1	0	1	1	0	0	1	1	0	0	0	0
S4	1	0	1	1	0	0	0	1	0	0	0	0
S5	1	0	0	0	1	0	0	1	0	0	0	0
S6	0	0	0	0	0	1	0	0	0	0	0	0
S7	1	0	0	0	0	0	1	1	0	1	0	1
S8	1	0	0	0	0	1	0	1	0	1	0	0
S9	0	0	0	0	0	1	0	0	1	0	0	0
S10	0	0	0	0	0	1	0	0	0	1	0	0
S11	0	0	1	1	1	0	1	0	0	0	1	0
S12	0	0	0	0	0	1	0	0	1	0	0	1

Findings – Structural Model Development

According to the ISM procedure above, the adjacency matrix, as shown in Table 5, is used for model development. The whole model analysis procedure was performed based on instructions provided by Guo et al. (Guo et al. 2012). The reachability matrix, level partition of the reachability matrix, and canonical form of the matrix are provided in Tables 6–8. Based on these results, Figure 1 shows the interpretive structural model for this study. This digraph illustrates the direct relations among all benefit categories, with arrows indicating the direction of each impact. For interpretive purposes, each point is followed by a description, which provides a clear picture of esports players' motivations for playing and the corresponding flow of relationships.

Figure 1 shows that self-esteem and commitment are the two most fundamental benefits allowing esports players to promote positive feelings of hedonism. Personal growth is the central factor as both the destination and the source of all other variables, indicating that it is the most salient variable in the framework. The model shows that hedonism – being happy – is the final destination of playing esports.

Table 6. Reachability Matrix

	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12
S1	1	0	0	0	0	1	0	0	1	0	0	1
S2	1	1	1	1	1	1	1	1	1	1	0	1
S3	1	0	1	1	0	1	1	1	1	1	0	1
S4	1	0	1	1	0	1	1	1	1	1	0	1
S5	1	0	0	0	1	1	0	1	1	1	0	1
S6	0	0	0	0	0	1	0	0	0	0	0	0
S7	1	0	0	0	0	1	1	1	1	1	0	1
S8	1	0	0	0	0	1	0	1	1	1	0	1
S9	0	0	0	0	0	1	0	0	1	0	0	0
S10	0	0	0	0	0	1	0	0	0	1	0	0
S11	1	0	1	1	1	1	1	1	1	1	1	1
S12	0	0	0	0	0	1	0	0	1	0	0	1

Table 7: Level Partition of Reachability Matrix

Level	S_i	$R(S_i)$	$A(S_i)$	$R \cap A$
L4	1	1,6,9,12	1,2,3,4,5,7,8,11	1
L8	2	1,2,3,4,5,6,7,8,9,10,12	2	2
L7	3	1,3,4,6,7,8,9,10,12	2,3,4,11	3,4
L7	4	1,3,4,6,7,8,9,10,12	2,3,4,11	3,4
L6	5	1,5,6,8,9,10,12	2,5,11	5
L1	6	6	1,2,3,4,5,6,7,8,9,10,11,12	6
L6	7	1,6,7,8,9,10,12	2,3,4,7,11	7
L5	8	1,6,8,9,10,12	2,3,4,5,7,8,11	8
L2	9	6,9	1,2,3,4,5,7,8,9,11,12,	9
L2	10	6,10	2,3,4,5,7,8,10,11	10
L8	11	1,3,4,5,6,7,8,9,10,11,12	11	11
L3	12	6,9,12	1,2,3,4,5,7,8,11,12	12

Table 8: Canonical Matrix

	S6	S9	S10	S12	S1	S8	S5	S7	S3	S4	S2	S11
S6	1	0	0	0	0	0	0	0	0	0	0	0
S9	1	1	0	0	0	0	0	0	0	0	0	0
S10	1	0	1	0	0	0	0	0	0	0	0	0
S12	1	1	0	1	0	0	0	0	0	0	0	0
S1	1	1	0	1	1	0	0	0	0	0	0	0
S8	1	1	1	1	1	1	0	0	0	0	0	0
S5	1	1	1	1	1	1	1	0	0	0	0	0
S7	1	1	1	1	1	1	0	1	0	0	0	0
S3	1	1	1	1	1	1	0	1	1	1	0	0
S4	1	1	1	1	1	1	0	1	1	1	0	0
S2	1	1	1	1	1	1	1	1	1	1	1	0
S11	1	1	1	1	1	1	1	1	1	1	0	1

Discussion

Among a wide spectrum of benefits obtained from playing esports, some have a more direct role than others. The benefits of self-esteem and commitment are at the bottom of the model, playing essential roles in motivating players to grow and be happier. Participant 3 highlighted the importance to him of confidence in achieving independence, and how it was valuable to him as a long-term skill of not having to rely on others for everything: *"The confidence is a big thing; I don't have to rely on my friends or my mum."*

Players also highlighted the importance of self-belief and their self-esteem in helping them to achieve their goals. These findings from the current study have also been found within sporting contexts, where one study focusing on gymnastics found a correlation between improved performance and self-belief and that self-belief leads to further positive desirable outcomes (Marsh et al. 2006). This study highlights this correlation, but within an esports context.

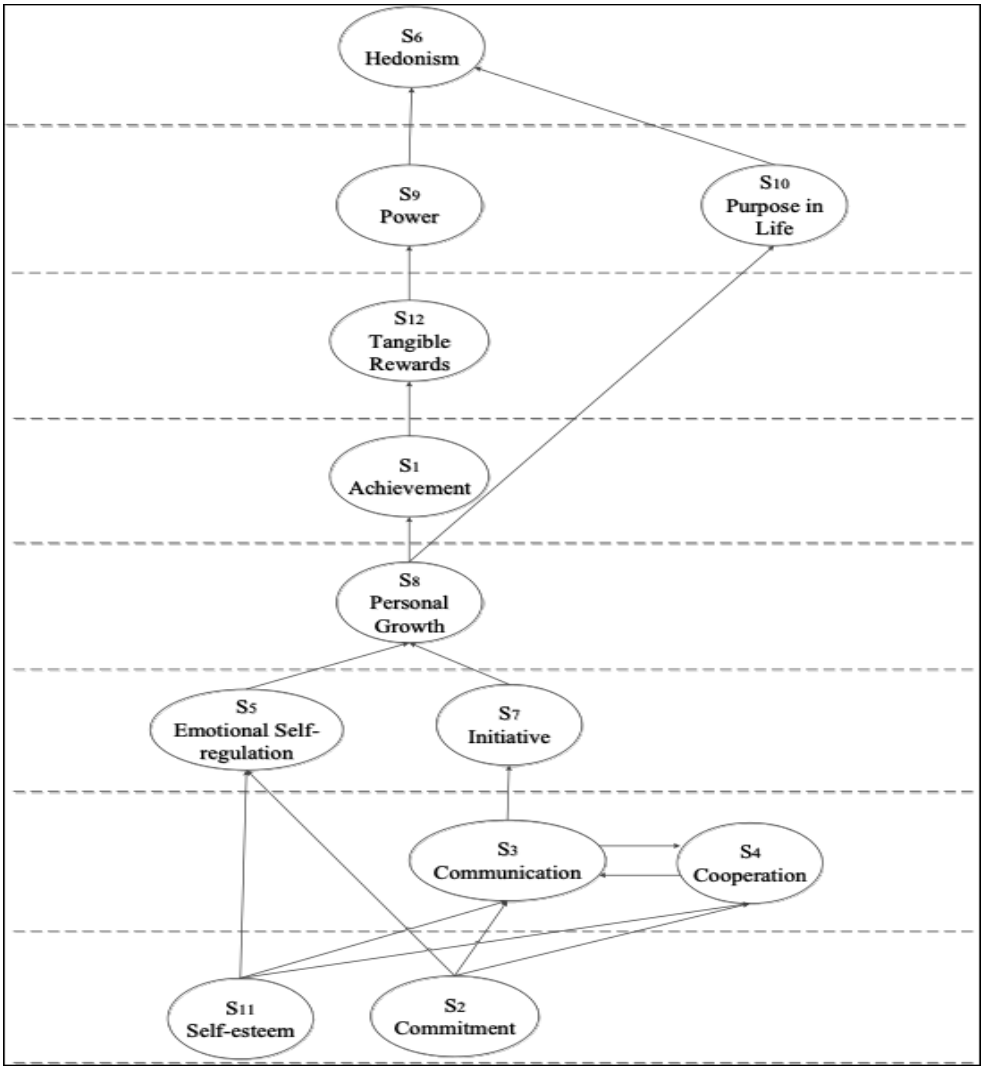

Figure 1: Interpretive Structural Model of Benefits Obtained through Esports Play

Based on the ISM developed in this study, both self-esteem and commitment also built a foundation for players to improve their communication and cooperation skills. These two variables then affected how players managed their emotions, which refers to the ability to control emotions, prevent them from interfering with attention and performance, and use positive emotions constructively (Johnston et al. 2013). This indicates the importance of having communication and cooperation skills in teamplay and life in general. Of particular importance to players in the area of emotional self-regulation were mentality (68% of participants) and handling pressure (47% of participants), both of which were stated to have direct impacts on players' personal growth. According to Blackburn and Kwak (Blackburn and Kwak 2014), an inability to regulate one's emotions can negatively affect the well-being of other players, such as by causing fatigue and eventually causing someone to quit. However, the players in this study felt that their experience in esports had helped them manage any negative emotions that they felt, in particular by improving their mentality and discipline, thus helping to promote their happiness.

Initiative, which refers to the ability to set realistic goals and achieve them by managing one's time and taking responsibility for oneself (Johnston et al. 2013), was the next in the hierarchy, working together with emotional self-regulation to help players grow as people. Having a set of goals and working hard to achieve them have been identified across various youth development literature as a key aspect of initiative (Hansen and Larson 2002), as well as a life-long skill that is vital for development. For

example, studies have found that the ability to achieve set goals leads to positive psychosocial development for individuals, as individuals are now able to see the value in setting goals (Danish et al. 2004).

The variable of personal growth is the central variable in the ISM developed in this study, indicating that for players to have a positive experience of esports play and feel happier, their growth into better people is the key. The ISM developed in this study shows that players can only feel personal success, pride, tangible rewards, status, and even happiness if they, as individuals, have feelings of continued development, growth, and expansion; improvement over time; and more self-knowledge and effectiveness. In other words, achievement, tangible rewards, power, purpose in life, and hedonism, which were at the top of the ISM model, depended on personal growth. Any shortcomings in an esports player's career development could have a negative impact on fulfilling top-level benefits and on their well-being. It is clear from this study that the players had gained benefits from their personal growth throughout their careers, supporting findings from existing literature on competitive sporting environments (Lundqvist 2011), but contributing to this within an esports context.

In this study, the achievement that players pursued refers to personal success through the demonstration of competence according to social standards (Schwartz 1992). It follows trends identified in existing well-being and developmental literature but does differ to an extent from the achievement mentioned in the gaming literature, which focuses more deeply on in-game achievement, which is more short-term than the achievement mentioned by players in this context.

Hedonism, as defined by Schwartz (1992), covers emotions relating to pleasure and enjoying one's life. Sports research has identified hedonism as a value that sports aim to encourage in participants (Taylor 2012), and hedonism has been identified in psychology as key to individual growth and development (Schwartz 1992). In this study, of particular importance to players was enjoyment, which was commonly listed as one of the key motivations for playing esports and has been broadly explored within the online gaming literature as a key experience dimension within gaming (Poels et al. 2012a). Benefits identified in this study, such as cooperation and communication, were also identified by players as leading to increased feelings of enjoyment due to improved social skills and friendships, highlighting the importance of these benefits to a player's long-term well-being.

Even in IS studies focusing on e-learning, people's ability to feel emotions of pleasure whilst doing an activity influences the amount of success and learning that they can achieve (Barab et al. 2005). Positive emotions help to ensure satisfaction throughout an individual's life and can help fight against negative emotions (Cohn et al. 2009), and to an extent, that can be seen in this study. The findings of these studies parallel existing findings in online gaming, sporting, and IS literature within the esports context. Finally, it is worth mentioning that the experts from the panel group all indicated that being happy could encourage them to become even more committed to and more self-confident about playing esports.

Implications

This study has three key theoretical contributions. First, through the use of semi-structured laddering interviews to elicit a finite set of constructs from professional esports players, the study developed a number of categories of esports player-specific benefits obtained through esports play. This esports player-specific gameplay benefit scale can be used to inform the development of questionnaires for player-specific studies in the esports context, since the scale developed here has little researcher bias, as the items were generated by the players themselves.

Second, by adopting the ISM technique, linkages were developed among these benefit categories through a single, systemic framework. The hierarchical structure model identified in this study indicates that the benefits are related and influence one another. This framework also shows that the fulfilment of these benefits can be a source of happiness.

Third, the results of this study can also contribute to the PYD literature by giving researchers a better understanding of the identified benefits as well as their interrelationships within a new sporting context not previously explored within the literature.

This study also has practical implications for the esports industry, in particular for esports organisations in terms of governing and managing players and communities. For esports organisations, this study not only highlighted the types of benefits that a player may achieve through play but also uncovered how these benefits influence each other in order to promote players' development of a positive value system. Given that increasing brand value is now a main priority for esports organisations and this will remain the case in the coming years (Newzoo 2019), esports organisations should pay close attention to understanding their players in order to offer the best service to them, thereby attracting them, retaining them, then attracting more fans and sponsors and increasing brand value. The findings of this study could serve this purpose by helping esports organisations better manage the needs of their players and their well-being by understanding and helping them to meet their long-term goals.

Esports organisations can also leverage the 12 identified benefits to promote the benefits of esports to an external audience that may have previously had a bad perception of gaming to further improve the legitimacy of esports. In particular, understanding the importance of the benefits that the players learn from the play of esports and how they can be applied even beyond the esports context can improve the general view of esports to people unfamiliar with it and increase recognition of esports as a whole. Improved legitimacy can help an organisation to gain additional sponsors, which play a crucial role in how an esports organisation can operate, as well as helping to expand the scale of the game, particularly in Australia, where the industry is relatively small and still quite unstable for players.

Conclusion

Despite the contributions of this study, there are several limitations that need to be considered. Firstly, all the players involved in this study played either League of Legends or Counter-Strike: Global Offensive in Australia, despite there being other games prominently played within esports such as Fortnite or Call of Duty with similar or larger prize pools. In addition, participants were all from Oceania, whereas e-sport is an international sport and is significantly bigger overseas than it currently is in Australia and New Zealand. Also, all participants were male, which may possibly skew the results of this study, as prior studies within online gaming have identified differences between males and females in terms of motivations and benefits (Poels et al. 2012b). However, all the players currently competing on professional teams in Australia are male; hence, this represents the existing gender demographic in Australian esports.

However, because esports is still a relatively new area of research, this study does provide preliminary ideas about this area to be further expanded on. For example, some of the limitations of this research can serve as a starting point for further research, such as an exploration of the benefits to players within other e-sport games, as well as to international players outside of Australia, who may have different benefits due to differing play environments, or even after their retirement to see whether these skills developed through esports play can be transformed into life-long skills.

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