

**PARENTAL MEDIATION OF VIDEO GAMING
IN SINGAPORE**

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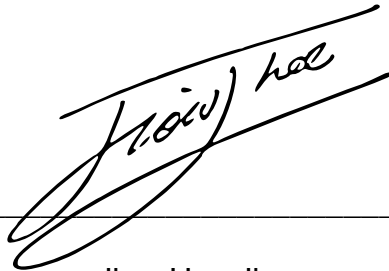
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DECLARATION

I hereby declare that the thesis is my original work and it has been written by me in its entirety. I have duly acknowledged all the sources of information which have been used in this thesis.

This thesis has also not been submitted for any degree in any university previously.

A handwritten signature in black ink, written in a cursive style. The signature appears to read "Jiow Hee Jhee". The signature is written over a horizontal line.

Jiow Hee Jhee
10 November 2014

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Summary

This thesis examined parental mediation of video gaming in Singapore. Video gaming has become a popular online activity among the young in Singapore. Moreover, its evolution has raised concerns about its negative effects on children, and has also placed tremendous strain on parents' efforts to monitor and manage their children's usage. However, parental mediation theory, with its roots in television studies, has not adequately accommodated the challenges of this new media platform; this has resulted in descriptive and explanatory limitations of the theory. Its contradictory claims of effectiveness have also questioned the theory's philosophical foundations. As such, this thesis seeks to address these limitations.

Chapter 1 reviews how the video gaming industry has evolved in its interactivity, identity multiplicity, accessibility, portability, sociability and perpetuity; and claims that these increased affordances have added to parental concerns surrounding children's video gaming habits, and increased challenges to parental mediation. It also explains why Singapore is a suitable location for studying parental mediation of video games, given the high video game consumption among its youths, the prevalence of video gaming concerns, and its challenging parental work-life environment.

Chapter 2 delves further into parental mediation theory's

development, with regards to various new media platforms; namely, Internet and video games. The chapter highlights certain conceptual constraints and contradictory effectiveness claims as limitations to the theory, and argues for an exploration into the following research questions (RQs) “**How is Parental Mediation Practised?**” (RQ1), “**How is Parental Mediation Received?**” (RQ2), and “**What does effective parental mediation look like?**” (RQ3). Parents’ perceptions, their practices and nuances of practices, as well as their children’s reactions to those practices and perceptions, are areas of interest proposed to aid in answering the research questions.

Chapter 3 justifies and documents the research methodology, sampling framework, recruitment procedures, data collection, and data processing techniques. This study is based on home interviews with a sample of 41 children between the ages of 12 and 17, and their parents, all of whom play First Person Shooter or Massively Multiplayer Online Role Playing Games.

Chapters 4 and 5 analyse the interviews and provide descriptive and explanatory clarity to parental mediation theory. These chapters posit certain relationships between parent-child activities, and look at factors that influence those activities, based on literature review and the interviews conducted. These relationships were quantitatively tested later,

to see if generalisable claims could be made.

Chapter 6 outlines the research methodology underlying RQ3 and the relationships in previous chapters, in which 433 parent-child pairs underwent an online quantitative survey that was developed through a concept sorting process.

Chapter 7 highlights findings from the quantitative phase and discusses its implications on parental mediation and its effectiveness.

Chapter 8 concludes the study by accounting for its limitations and sets out recommendations for future research.

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List of Abbreviations

ADHD	Attention Deficit Hyperactivity Disorder
CA	continual assessment (in Singapore schools)
CCA	co-curricular activities (extracurricular activities that are required of students in Singapore schools)
CD	compact disc
CF	consent form (for participating in this study)
DSM	Diagnostic and Statistical Manual of Mental Disorders
EA	EA Research and Consulting Pte Ltd
ESRB	Entertainment Software Rating Board
FPS	first-person shooter game
CGD	console gaming device
HHGD	hand-held gaming device
JNSQRS	Je Ne Sais Quoi Research Solutions (research firm hired to conduct online surveys for this study)
LAN	Local Area Network
MC	matching code
MDA	Media Development Authority of Singapore
MMORPG	massively multi-player online role playing game
MOE	Ministry of Education (Singapore)
MSF	Ministry of Social and Family Development (Singapore)
MSP	mobile smart phone

PC	personal computer
PEGI	Pan European Game Information
PIS	participant information sheet (for participation in this study)
PSPI	Parenting Style and Parental Involvement scale
PVGU	Pathological Video Game Use
RA	research assistant
SA	semestral assessment (end-of-semester examinations in Singapore schools)
VGCS	Video Games Classification System (Singapore)

CHAPTER 1: BACKGROUND

This chapter underlines the significance of exploring parental mediation of video gaming in Singapore. It seeks to demonstrate that the evolution of video games and their widespread encroachment into the domestic realm pose challenges for effective parental supervision of children who play video games. It also explains why Singapore is an ideal location for this study.

1.1 Prevalence of Video Games

Video games, defined as “an electronic or computerised game played by manipulating images on a video display or television screen” (Prato, Feijoo, Nepelski, Bogdanowicz, & Simon, 2010, p. 17), have become one of the most popular leisure activities among the young (Funk, 2009). In the United States, it is estimated that more than three in five teens now play some form of video games (Lenhart, Madden, Macgill, & Smith, 2007; Rideout, Foehr, & Roberts, 2010), a proportion that has increased more than six times since 1999 (Roberts, 1999). A Europe-based study found that an average of 51% of children between 11 and 18 played video games (Kalmus, Runnel, & Siibak, 2009), up from a reported 7% in 1995 (Griffiths & Hunt, 1995). A study of British children found an average of 64% of 6- to 17-year-olds played video games in their leisure (Livingstone, 2002). Livingstone’s study (2002) of 10- to 16-year-old

children found that video gaming was one of three things they would do, both on good days (15%), and on boring days (19%). In the U.S., market research showed an overwhelming 12.68% increase in the number of children aged 2 to 17 involved in video gaming, significantly outpacing the 1.54% increase in population among that age group (NDP Group, 2011). In 2012, Asia-Pacific already had 33% share of the global video game market (US\$22.2 billion of revenues, 298 million gamers) and is estimated to be growing at a 13% rate (De Prato, Feijóo, & Simon, 2014).

Since its introduction in the 1970s, the video game industry has overtaken the film industry, and is growing four times faster than other media and entertainment sectors in the consumer market (Malliet & Meyer, 2005; Prato et al., 2010). Livingstone (2007) found, in a sample on the types of gaming gadgets available in the British home domain, that 67% of children had access to console gaming devices (CGDs), 53% had personal computers (PCs), and 42% had hand-held gaming devices (HHGDs). In the U.S., children aged 8 to 18 had an average of at least two PCs (98%) and two CGDs (87%) in their domestic space (Rideout et al., 2010). Indeed, with video games' rapid growth and expansion into the consumer market, it has undoubtedly intruded more aggressively into the domestic space. In order to capture video games' rapid growth and expansion, the following section charts the historical development of video

games, specifically highlighting changes in its affordances of portability, sociability, perpetuity, accessibility, interactivity and identity multiplicity.

1.2 Evolution of Video Games

A few major eras can be discerned in the history of the development of video games, although these eras are not clearly defined, and may overlap in time periods (Malliet & Meyer, 2005; Prato et al., 2010). They are marked by important technological advancements in interface and graphic design, which further enabled changes in game design features and player activity. The emergence of the Internet and, thereafter, broadband and wireless Internet access, as well as the growing proliferation of portable gaming and telecommunication devices, were key innovations which introduced a slew of new possibilities for game design and game play options.

1.2.1 Pre-History and First-Generation Consoles (1972-1976)

Malliet and Meyer (2005) traced the “pre-history” (p. 23) of video games to pre-electronic game machines, such as the amusement park pinball and slot machines. It was only with the advent of computer technology that the world welcomed its first video game, *Pong*, in 1972, commonly viewed as the birth of the video gaming industry (Herman, Horwitz, Kent, & Miller, 2002; Malliet & Meyer, 2005; Myers, 1990; Prato et al., 2010). The years 1972 to 1976 are known as the era of “first

generation consoles” (Prato et al., 2010, p. 13), characterised by excellent market performance of console and arcade games (Egenfeldt-Nielsen, Smith, & Tosca, 2008; Malliet & Meyer, 2005; Prato et al., 2010). Console-based games are played on an electronic device that is not a personal computer, usually connected to a television or any other video monitor (Prato et al., 2010), whereas arcade games are “coin-operated entertainment machines (...specialised electronic devices, equipped with a monitor or screen and a series of input tools, contained in a cabinet and typically designed to play only one game)” (Prato et al., 2010, p. 18). This era was also marked by several breakthroughs (Egenfeldt-Nielsen et al., 2008; Malliet & Meyer, 2005; Myers, 1990). First, the penetration of console games into homes signalled the first instance of video gaming at home. Second, peripheral gaming devices, such as the joystick and fake guns, were introduced into the console and arcade market. Third, video games started offering two player formats. Fourth, competitive “kill-or-be-killed” (Malliet & Meyer, 2005, p. 27) elements and other reward features were added to video games. Fifth, that era ushered in the racing simulator *Death Race* game that was the first to award bonus points for intentionally crashing into creatures, which “startled parents, politicians, the media, and other authorities because of its explicit violent character” (Malliet & Meyer, 2005, p. 27). *Death Race* marked the “beginning of a long-standing

tradition of public outrage and worry over the morality of games and their players” (Egenfeldt-Nielsen et al., 2008, p. 55).

1.2.2 Second-Generation Consoles (1976-1983)

The years 1976 to 1983 were known as the era of the “second generation consoles” (Prato et al., 2010, p. 13), which differed from first generation models by having general purpose processors in the console devices, thereby allowing “users to play different games by means of [large 8-inch] interchangeable cartridges” (Prato et al., 2010, p. 14). This was a critical technological advancement that allowed many developers to produce a diverse range of games, laying the foundation for game genres to further evolve (Malliet & Meyer, 2005). Many game genres started rising in popularity and catering to different markets, such as maze, space war, simulation, graphical adventure and role-playing games (Egenfeldt-Nielsen et al., 2008; Malliet & Meyer, 2005). This era also saw the introduction of new genres such as the “climbing or obstacle game” (Malliet & Meyer, 2005, p. 29). Besides advancements in console device technology, and the rise in the number of genres, this era also saw the entry of HHGDs and PCs. These HHGDs were intended to grow the video game market by targeting players who found CGDs difficult to play. PCs, typically to which a software programme game component has been installed (Prato et al., 2010), were also intended to provide an alternative to CGDs. However, in

this era, HHGDs had battery capacity that lasted 15 minutes of video game playing at a time, resulting in dismal adoption rates (Malliet & Meyer, 2005).

This era also saw the launch of *Space Invaders*, a video game heralding many key breakthroughs in players' interactions with video games. First, *Space Invaders* was the first game to introduce video games that had no ending, which meant that "players could keep on playing indefinitely, always finding a new challenge in having to do better than the time before" (Malliet & Meyer, 2005, p. 28). Second, *Space Invaders* was also the first game that "used a narrative structure, albeit a primitive one" (Malliet & Meyer, 2005, p. 28), providing players a purpose and mission within a storyline, thereby promoting a sense of achievement (Malliet & Meyer, 2005; Yee, 2006). Third, *Space Invaders* started using sound in a functional way, creating a more intense player experience. Fourth, that period also saw the development of the first game, *Pac-Man*, which captivated the female population by creating a "feel-good atmosphere" (Malliet & Meyer, 2005, p. 29). Fifth, technological advances in screen resolution resulted in better quality images that enabled the development of more realistic visual perspectives for video game players, such as cylindrical-like space view scrolling which made the virtual space seem endless (Egenfeldt-Nielsen et al., 2008).

1.2.3 Third- and Fourth-Generation Consoles (1983-1995)

The years 1983 to 1995 were known as the era of “third and fourth generation consoles” (Prato et al., 2010, p. 16). This era saw the first “handheld game computer” (Malliet & Meyer, 2005, p. 36) (HHGD), which allowed users to play different games via a game cartridge system. Inexpensive and light compact discs (CDs) were also used to store the game information component of PCs or CGDs (Malliet & Meyer, 2005; Prato et al., 2010).

Many game genres had already been launched before this, but this era led to the emergence of even more novel genres—“god games” (Malliet & Meyer, 2005, p. 37) and “first-person shooter games” (Prato et al., 2010, p. 15). The god game or strategy game allowed the player to control many others, and was not just an individual-character game. The first-person shooter game embodied the tremendous technological advancements during that period, which afforded improved game experiences through better graphics and sound, and lowered the cost of producing gaming devices. However, first-person shooter games and another game genre, “Beat ‘em ups” (Malliet & Meyer, 2005, p. 38), were also notorious in this era for attracting negative attention. These genres stoked public panic because of their violent content, as they taught the young to “violently knock down all opposition they encountered” (Malliet &

Meyer, 2005, p. 38), which the public felt could lead to more serious aggression issues, compared with the relatively passive viewing of television content. There were a number of notable characteristics to the first-person-shooter games in this era. First, the game places a high requirement on the player's skill, which thus necessitates more practice through prolonged play to achieve game objectives. Second, the game genre "managed to directly involve the player in the game" by having the player assume the position of the first-person shooter (Malliet & Meyer, 2005, p. 41). Third, the genre drew fierce criticism because of its explicit and vivid portrayals of violence. Another breakthrough genre of this era was immersive games, exemplified by the 3D PC game, *Castle Wolfenstein 3D*, which was widely perceived as a great "model for immersion" (Malliet & Meyer, 2005, p. 48) in that it boasted three-dimensional capabilities. This era also saw the puzzle game *Tetris* break new ground by demonstrating that a scoring system could enhance a game's appeal. This era also witnessed the birth of "multi-player, multi-character cooperative play video games with independent player entry and departure" (Egenfeldt-Nielsen et al., 2008, p. 64), such as *Ultima Online* (Electronic Arts Inc, 2014).

There have also been innovations in the development of game devices. With the introduction of the mouse in 1987, players had the

unprecedented ability to move their characters in exploration-type games, without having to type in text commands, thereby affording more intuitive interaction with the game, through the “point-and-click technique” (Malliet & Meyer, 2005, p. 37). This function, aided by the emphasis on storytelling in video games, gave rise to an engaging game genre known as strategy games, which was associated, in the 1990s, with an increase in the average video game playing time (Malliet & Meyer, 2005). Towards the end of the 1980s, video gaming had “become a staple of pop culture which most children—and sometimes indirectly their parents—had experienced and worried voices had been raised about the influence of gaming on young minds” (Egenfeldt-Nielsen et al., 2008, p. 78). In response to public concerns, in 1994, the U.S. enacted the Videogame Rating Act, which required the industry to apply a rating system to video games (Egenfeldt-Nielsen et al., 2008; Herman et al., 2002).

1.2.4 Post-1995

The years after 1995 saw significant improvements in games in terms of their “realism and congruence with human intuition” (Malliet & Meyer, 2005, p. 41). Video games, especially role-playing ones, became increasingly complex; of greater concern, was the fact that they were also discernibly more violent. Notably, too, video games in this era were significantly impacted by the arrival of the Internet, which afforded

unprecedented multiplayer formats of play with real people, from around the world, and across different time zones (Egenfeldt-Nielsen et al., 2008; Malliet & Meyer, 2005; Prato et al., 2010). Statistics from several countries suggest that video game addiction was becoming more common (Kuss & Griffiths, 2011), especially for Massively Multiplayer Online Role Playing Game (MMORPG) players, because they wanted to develop their virtual characters (Hall, 2005; Yee, 2002). Some players went to the extent of hiring “virtual babysitters” (Hall, 2005, p. 52) to develop their online virtual character. This fervent enthusiasm for video games, especially MMORPGs, fuelled the establishment of many gaming communities within which players discussed the game, shared strategies, or boasted about their game scores on websites or bulletin boards (Hall, 2005). This period also saw an enhanced immersion experience, with the players’ ability to personalise their virtual characters in some video games (Hall, 2005). With the diffusion of wireless broadband connections, this era also saw the dawn of mobile gaming, defined as games played on mobile devices, such as mobile smart phones (MSPs) and personal data assistants (Egenfeldt-Nielsen et al., 2008; Malliet & Meyer, 2005). Casual games grew in popularity as well, as mobile gaming gained more audiences (Prato et al., 2010). Location-based technologies were also incorporated into the mobile gaming experience, thus heightening the pervasiveness of video gaming,

where “you’re always connected to the game, and it is not easy to tell reality from fiction” (Hall, 2005, p. 51).

Recent years have also seen many significant changes within the video gaming landscape. Technological advancements now afford motion control as a method of interaction with CGDs (A. H. Cummings, 2007; Prato et al., 2010), e.g., *Nintendo’s Wii* and *Microsoft’s Kinect*, while the use of virtual reality helmets makes video gaming more immersive (Mitra, 2010). At the same time, the emergence of cloud computing through wireless streaming relieves game devices of data processing burdens, thus facilitating the playing of even more complex games (Prato et al., 2010).

1.3 Video Game Affordances

As the preceding historical account suggests, various innovations in the video game industry introduced new content genres, novel forms of game play, and fresh possibilities for player-to-player and player-to-game interaction, thereby encouraging more sustained engagement with video games that enhanced their entertainment value. But these enhancements also triggered new concerns or amplified existing fears about the impact of video games on players, especially children (Malliet & Meyer, 2005), in response to which parents began to manage and mediate their children’s video game usage. The following sections account for the evolved game

affordances and its impact on parental mediation.

1.3.1 Portability

In an era when video games could only be played on arcade or home console machines, parents arguably had greater control over, and could limit, gaming activity to specific locales. However, video games can now be played on portable devices such as laptops, HHGDs and MSPs; while the game information component of video games can be stored in CDs for PCs and CGDs, cartridges for HHGDs (Herman et al., 2002); or streamed wirelessly via cloud computing. Clearly, innovations in miniaturisation, energy capacity and data storage and transmission have greatly enhanced the portability of video games, which takes video games, in some respects, out of parental control.

This growing portability has some distinct implications for parental mediation. Parental monitoring is made more difficult because video game playing is no longer confined to a fixed location around which arrangements for adult supervision could be planned and executed fairly predictably. With the portability of games, the ease with which children can play anytime and anywhere, away from their parents' active visual monitoring, poses a discrete challenge for restrictive and active mediation. Gaming devices are now located in children's bedrooms more frequently than in the past, when CGDs were often found in living rooms (Oosting,

IJsselsteijn, & de Kort, 2008). Coupled with the rise of “bedroom culture” (Bovill & Livingstone, 2001, p. 179), where children’s bedrooms become media-rich havens, replete with their personal media devices, playing video games becomes yet another form of media consumption children can engage in privately, away from parental supervision.

1.3.2 Sociability

As video games evolve, the dimension of sociability has become even more salient. Far evolved from the two-player format of the First-Generation console era, today’s video games offer multiple platforms for players to interact across spatial and temporal boundaries, and some games even require players to compete, or team up, with others to complete a game objective, especially in MMORPGs (Egenfeldt-Nielsen et al., 2008; Yee, 2002). While players may interact with people known to them, such as relatives and friends, such requirements of sociability raise the possibility of children interacting with online strangers, with one study finding that 33% of game players participate in online games with strangers (Mitra, 2010, p. 90). As game manufacturers continue to extensively incorporate location-aware technologies into game design, players’ ability to physically track and locate other players introduces greater risk to children’s interactions with strangers online. And yet, as player-to-player interaction during video gaming is not a primary, but a

peripheral activity, it becomes increasingly difficult for parents to anticipate and monitor online activities—or even to predict possible harms—because of the serendipitous way in which such interactions may occur. In such circumstances, parents have to strategically allow their children to enjoy the benefits of in-game sociability, while apprising their children of the attendant risks and possibly installing safety features.

1.3.3 Perpetuity

A growing proportion of games, especially MMORPGs, are characterised by perpetuity, where individuals can play endlessly, with no resolution or end in sight. Even games that do come to a resounding end may have sequels which game developers release in rapid succession to enable players to play interminably. At the same time, the “independent player entry and departure” (Egenfeldt-Nielsen et al., 2008, p. 64) feature enables players to enter or exit a game without negative consequences to game play. With online game servers being always on, players can also play online video games anywhere and anytime, as long as they have wireless Internet access. Even casual games—not intentionally designed for prolonged play—that are typically used as time-fillers between daily activities, can now be suspended and returned to at any time, encouraging players to incessantly play (Hjorth, 2011).

For parents, the main implication of the perpetuity of games is in

the time commitment that such game playing demands, raising then secondary issues of addiction (Choo et al., 2010; Gentile et al., 2011; Hauge & Gentile, 2003; Mentzoni et al., 2011; Ng & Wiemer-Hastings, 2005; Yee, 2002). In “most MMORPGs, the gameplay is dominated by time-on-task, where the players who can devote the most hours to the game develop strong characters” (Hall, 2005, p. 52). Extant research has demonstrated the adverse impact of excessive game play on children’s academic performance via the time displacement effect (Biegen, 1985; Hauge & Gentile, 2003). Beyond more extreme situations of excessive play and addiction, other concerns prevail about the perpetuity of games that require players to monitor the online game space throughout the day, engaging in multi-tasking to do so, for example, simultaneously doing homework and playing online games on the computer. There is, as yet, no broad agreement on the impact of multi-tasking, although some research suggests that online multi-tasking may negatively influence cognitive processing and with adverse long-term effects (Kenyon, 2008).

Perpetuity games entice players to play longer, and more frequently, throughout the day, and players may find it difficult to manage or account for their time. Parents will also face challenges trying to keep track of their children’s gaming time on perpetuity games, and parent-child discussions on time usage may also be futile.

1.3.4 Accessibility

Video gaming has also become far more accessible than before. No longer confined to game consoles or computers, video games have now become embedded in social networking sites and Internet browsers (Klimmt, Schmid, & Orthmann, 2009), both of which are frequently used by children with Internet access (Livingstone & Bovill, 2001). Games can also be played on the ubiquitous mobile phone and increasingly popular tablet computers, which are favoured for their portability. As many of these games become more accessible to children across multiple platforms, and often available for free (Klimmt et al., 2009; Prato et al., 2010), parents' ability to impose restrictions via the selection and purchase of video games has been undermined.

1.3.5 Interactivity

The interactivity of video games, broadly defined as the magnitude of control afforded to the player in his or her interaction with the game (Dovey & Kennedy, 2006; Klimmt, Hartmann, & Frey, 2007; Salen & Zimmerman, 2005; Severin & Tankard, 2010; Walkerdine, 2007), has also been greatly enhanced over the years. Salen and Zimmerman (2005) identified interactive engagements with video games in four dimensions: cognitive, explicit, functional, and beyond-the-object.

Cognitive interactivity is defined as "the psychological, emotional,

and intellectual participation between a person and a system” (Salen & Zimmerman, 2005, p. 70). With game devices possessing higher processing power and screen resolution, thereby offering players a game environment that has more realistic graphics, sound and in-game movements of player’s characters or object, the immersiveness of games has been intensified (Salen & Zimmerman, 2005). While a more immersive game experience is not problematic in and of itself, it may exert a greater pull on the player, with consequences for greater time commitment to the game (Yee, 2006). Accompanying the heightened realism of games is greater complexity, with some video game genres becoming more difficult to learn and play, and role playing games, in particular, having very complex rules for players to build on their characters (Malliet & Meyer, 2005). This limits the extent to which parents can exercise active mediation and co-playing, because “parents who do not game themselves may find it difficult to grasp what is going on in videogames” (Nikken & Jansz, 2006, p. 183).

Video games have also evolved in their level of explicit interactivity, defined as “participation with designed choices and procedures [with] choices, random events, dynamic simulations, and other procedures programmed into the interactive experience” (Salen & Zimmerman, 2005, p. 70). Again, although explicit interactivity is not inherently problematic,

when manifested in simulations of violence and aggression, it raises grave apprehensions among parents and educators (C. A. Anderson & Bushman, 2001; C. A. Anderson, Gentile, & Buckley, 2007; Gentile et al., 2011; Hauge & Gentile, 2003). Violence in video games has been a growing concern since the introduction of *Death Race*. Anxieties were greatly heightened by the Columbine shooting of 1999, where two teenagers went on a shooting rampage using weapons similar to those in their frequently played game, *Doom*, raising questions about the effects of violent video games (Funk, 2005; Herman et al., 2002; Piotrowski, 2007). Similarly, the inclusion of sexual simulations in games has also raised the alarm about media effects, a notable example being *Grand Theft Auto*, which had sexual simulations surreptitiously embedded into the game (Egenfeldt-Nielsen et al., 2008; Glater, 2008; Oosting et al., 2008). Along with other content issues, such as simulations of profanities, drug or tobacco consumption (Entertainment Software Rating Board, 2011), these explicit simulations place a considerable burden on parental mediation, particularly given the hidden nature of some of these simulations such in *Grand Theft Auto*.

Today's video games also offer richer functional interactivity: "functional, structural interactions with the material components of the system" (Salen & Zimmerman, 2005, p. 70). With the introduction of fake

guns, motion control sensors, earphones and virtual helmets, video game input devices are now more realistic and make the gameplay experience even more immersive (A. H. Cummings, 2007; Herman et al., 2002; Prato et al., 2010; Skalski, Tamborini, Shelton, Buncher, & Lindmark, 2011). But this makes parental monitoring and supervision even more problematic, as parents will not be able to see or hear what their children are experiencing when playing video games using such devices.

Beyond the object-interactivity are interactions “beyond the immediate gaming experience” (Salen & Zimmerman, 2005, p. 70) that exist within video gaming clans, communities and websites that centre on specific games or game genres. Such online communities are especially prevalent for role-playing games. For players, interacting within this extended milieu fuels their achievement factor; it involves and encourages greater time investment, and further inculcates a personal attachment to the game, contributing possibly to game addiction (Yee, 2002, 2006). This exerts additional pressure on parents to mediate, not only in-game, but also beyond-game, activity.

1.3.6 Identity Multiplicity

Closely intertwined with the affordance of interactivity is that of identity multiplicity, where today’s games offer rich, multi-layered environments, as exemplified by MMORPGs, and enable players to

assume and maintain multiple identities. For children and adolescents still in their formative stages of life, identity exploration and experimentation can be a rewarding exercise which helps them to define a sense of self (Meyers, Fisher, & Marcoux, 2009), particularly online, where social pressures are diminished. Yet, these virtual environments are not divorced from the players' offline lives, because online actions are shaped by and, in turn shape, individuals' behavioural assumptions and attitudes (Castronova, 2005). The mutual influence between an individual's online and offline experiences are what complicate parental mediation of children's video game playing. Identity formation and assertion online and offline, while interconnected, involve different verbal, visual and social cues, and parents need to guide children on which cues are appropriate in which contexts, and explain how their online experiences relate to their overall development as an individual.

The following sections of the chapter will examine these affordances' impact on the key parental concerns of children's video gaming usage (Sections 1.4.1 to 1.4.3) and the challenges to parental supervision (Section 1.5).

1.4 Video Gaming Concerns

Parents have three main concerns about their children's video gaming usage: time displacement, social and content concerns.

1.4.1 Time Displacement Concerns

The affordances of video games, specifically sociability, identity multiplicity and interactivity, have made playing more attractive and engaging to the players. Time limits to video gaming have also been removed, due to the perpetuity afforded. Together with the widely held view that video gaming is a non-beneficial activity (Griffiths, 1997), the concern of the displacement effect of time on other beneficial activities such as studying, exercising or reading, is greatly heightened (Hauge & Gentile, 2003; Kutner, Olson, Warner, & Hertzog, 2008; Ng & Wiemer-Hastings, 2005; Oosting et al., 2008; Ramirez et al., 2010). Video gaming is also viewed as a “solitary activity” (Haythornthwaite & Wellman, 2002, p. 373). Hence, parents are concerned that children will withdraw from healthy social activities as a result of spending excessive time on video gaming (Kutner et al., 2008; Oosting et al., 2008). Prior research supports this reduction hypothesis, with some demonstrating that media use displaces academic activities (Biegen, 1985), and consumption of excessive media will lead to poor academic achievement (Kirsh, 2009). Although there is evidence to suggest that media use displaces other leisure activities (rather than academic pursuits), such as television viewing (W. Lee & Kuo, 2002), the perception still persists that consumption of media displaces academic pursuits (Ballard, 2003).

Excessive time spent on video gaming has been shown to lead to family and relationship problems as well (Kirsh, 2009). A study found that, as a result of video gaming, adolescents spent 30% less time reading and 34% less time doing homework, compared with peers who do not play video games (H. M. Cummings & Vandewater, 2007). That study also supported the notion that gaming is a solitary activity that displaces time spent with family members and friends on other activities. Besides the issue of declining academic performance and social problems, some actual health problems have also been linked to prolonged video gaming usage, including wrist, neck and elbow pain, tenosynovitis, peripheral neuropathy, enuresis, encopresis and epileptic seizures (Funk, 2009; Griffiths, 1997).

Funk (2009) found that, from the age of two, children spent, on average, more than 40 minutes a day playing video games. Livingstone (2002) found that in Europe, children aged 6 to 17 played an average of 45 minutes of video games a day. A more recent study of U.S. found that, over the years, children aged 8 to 18 were spending even more time on video gaming—from 26 minutes in 1999, to 49 minutes in 2004, and 1 hour and 13 minutes a day in 2010 (Rideout et al., 2010).

These studies also found significant differences in video gaming time between boys and girls in different age groups. In Livingstone's European sample (2002) of 6- to 17-year-olds, boys averaged 57 minutes

a day, while girls averaged 24 minutes a day of video gaming time. The Kaiser Family Foundation reported that U.S. boys spent almost twice as much time playing video games as girls (Rideout et al., 2010). The difference in time spent playing video games between age groups was also statistically significant, with 11- to 14-year-olds having the longest duration per day (Rideout et al., 2010). However, Livingstone (2002) found that 12- to 14-year-olds averaged 47 minutes of video gaming time per day, compared with 50 minutes for 15- to 17-year-olds. Gentile and Walsh (2002) found, in a sample of U.S. children, 8- to 12-year-olds averaged 56 minutes a day, while 13- to 17-year-olds averaged 78 minutes of video gaming a day. Another study in the U.S. found that for those who play games every day, 57% of them are aged 12-14, and the remaining 43% are aged 15-17 (Lenhart et al., 2008).

The findings are in line with current research that seems to suggest that playing time tends to peak in the middle childhood to early adolescence years (Funk, 2009; Griffiths, Davies, & Chappell, 2004; Rideout et al., 2010). Such considerable playing times among technology-savvy youths necessarily heighten parental concerns and invite a wide range of parental strategies to manage their usage. This study samples early adolescents and their parents to test this further.

1.4.2 Social Concerns

Another area of concern is the user-user (social) interaction (Livingstone & Helsper, 2008), afforded by the sociability of video games, and required in many game structures, especially in MMORPGs (Ducheneaut & Moore, 2004). Madden, Cortesi, Gasser, Lenhart, and Duggan (2012) noted that “72% of parents of online teens are concerned about how their child interacts online with people they do not know, with some 53% of parents being ‘very’ concerned” (p. 2). A 2007 study showed that 31.5% of parents engaged in active discussions about instant messaging (Cottrell, Branstetter, Cottrell, Rishel, & Stanton, 2007). Parents are typically worried that their child may be harassed, stalked, sexually exploited, or even subjected to unwanted advertising by online strangers (Lenhart, Lewis, & Rainie, 2001).

1.4.3 Content Concerns

The Columbine shooting incident in 1999, in which two teenagers (aged 17 and 18) killed 12 students and a teacher, and injured 24 other people, sparked a renewed fear in the U.S. on the violent effects of video games on children. Using weapons that were similar to those used in their frequently played game *Doom*, the two teenagers went on a rampage (J. E. Anderson & Song, 2001; Funk, 2005; N. Gibbs & Roche, 1999). This led researchers, clinicians and policy makers to express concern that children

who view violence in video and computer games could exhibit aggressive behaviour or thoughts, desensitisation to violence, and decreased empathy in their daily lives (C. A. Anderson et al., 2010).

Several longitudinal studies on violent video game effects since 2004 have found correlations between violence in video gaming and real-world behaviours (C. A. Anderson et al., 2010). First, children who view violent scenes may be more conditioned to choosing violence as a means of conflict resolution. Second, they may also view any non-intentional act as a provocation; for example, a bump by others may be perceived as an act of violence, leading to retaliation. Third, they may become desensitised to violence in real life, which results a decrease in empathy. Fourth, children who consume violent content may become more aggressive as they grow older. Aggression studies have shown that, more than just viewing violent content, the participatory nature of the player in video games reinforces the violent cognition. Research suggests that children, more so than young adults, may be more susceptible to violent video game effects (C. A. Anderson et al., 2010), and are also more likely than adults to choose violence as their favourite game feature (Griffiths et al., 2004). Unfortunately, there are more violent games available, compared to those that promote pro-social content (D. R. Anderson & Evans, 2003; Funk, 2005). First Person Shooter (FPS) games, in particular, are

notorious for eliciting moral panics on the adverse influence of video games (J. E. Anderson & Song, 2001; Malliet & Meyer, 2005).

There are other content concerns as well, such as the promotion of antisocial behaviour and sexual content (Piotrowski, 2007). Some video games promote the destruction of property, e.g., damaging cars by scratching it with a key, as in *Need for Speed*. Other video games involve damaging competitors' cars in the process of winning a race. These games promote antisocial values that may border on, or involve criminal behaviour. There are also games that have hidden objectionable content that can be unlocked with a mod, examples of which are mini-games with sexual content within *Grand Theft Auto: San Andreas* game (Glater, 2008; Piotrowski, 2007).

These content concerns are captured extensively in the Entertainment Software Rating Board's (ESRB) *Game Rating & Descriptor Guide* (Entertainment Software Rating Board, 2011), which lists the following: Alcohol Reference, Animated Blood, Blood, Blood and Gore, Cartoon Violence, Comic Mischief, Crude Humor, Drug Reference, Edutainment, Fantasy Violence, Informational, Intense Violence, Language, Lyrics, Mature Humour, Mild Violence, Nudity, Partial Nudity, Real Gambling, Sexual Themes, Sexual Violence, Simulated Gambling, Strong Language, Strong Lyrics, Strong Sexual Content, Suggestive

Themes, Tobacco Reference, Use of Drugs, Use of Alcohol, Use of Tobacco and Violence.

The Pan European Game Information (PEGI) age rating system is another game rating guide that was “established to help European parents make informed decisions on buying computer games” (Pan European Game Information, 2013, p. 1). While it guides parents on the age-appropriateness of games, it also lists the following content descriptions: Bad Language, Discrimination, Drugs, Fear, Gambling, Sex, Violence and Online Gameplay.

These concerns with regard to video game content are further heightened by the realistic nature and gameplay experiences afforded by today’s video games, and further compounded by the evolving challenges to parental mediation of video games as discussed in Section 1.4.1.

1.5 Challenges to Parental Mediation

As discussed in Section 1.3, the evolution of video games and their enhanced affordances of portability, sociability, perpetuity, accessibility, interactivity and identity multiplicity, have notable implications for parental mediation of children’s video game playing.

The enhanced affordances of portability, perpetuity (multitasking) and pervasiveness of video games have placed a strain on parental monitoring efforts. In an always-on, always-available, play-anywhere era,

it is practically impossible for parents to have an all-encompassing appreciation of their children's video game play activities, with the 'traditional' mediation strategies of restrictive mediation, active mediation and co-playing being severely challenged (Nikken & Jansz, 2003). Restrictive mediation tactics, such as imposing video game usage rules, are logistically more difficult to enforce, whereas active mediation and co-playing would require considerable parental investment of time and energy that today's time-starved parents may be unable to afford. With video games being more accessible nowadays, many parents find it difficult to exercise gatekeeping in the selection and purchase of video games, thereby undermining the efficacy of another restrictive mediation tactic.

The interactivity, sociability and identity multiplicity of video games have also heightened parents' concerns about unsavoury content in video games, e.g., violence, nudity, coarse language, etc.; time displacement, contact with strangers, and identity effects on the players. Yet, even as parents' anxieties about video game content continue to grow, their ability to act on these concerns are being significantly undermined, due to the relentless evolution of these video game affordances. The growing variety of platforms and channels for player-player and player-game interaction, socialisation and identity assertion continue to widen the divide between parents and their game-playing children. With games being far more

complex and dynamic today, parents have to constantly play catch-up with their children to engage them in active mediation or co-playing.

1.6 Singapore As a Location for this Study

Singapore is an ideal location to study parental mediation of video games, in part because of the pervasive usage of video games among its adolescents, and the nation's aggressive push for Internet connectedness and video gaming proficiency among its citizens, alongside anecdotal evidence of parental concerns on the adverse impact of video games on children. The following sections will elaborate on this.

1.6.1 Singapore's Video Game Scene

Singapore's youths are among the most wired in Asia (J. A. Baker, 2010), with 73% of children aged between 13 and 17 having played video games, of which 11% played more than five times a week (Khoo, Hawkins, & Voon, 2005). A study by Infocomm Development Authority of Singapore showed that 36% of children between 7 and 14 play or download video games, and 24% of this age group are involved in interactive online gaming (Infocomm Development Authority of Singapore, 2012). Another study on school-going children showed that 82.6% of 9- to 14-year-olds played video games at least once a week, spending an average of 20.2 hours (Choo et al., 2010). Consistent with research from other countries, this study also found that boys played about four hours more per week,

compared to girls (Choo et al., 2010). A survey by Synovate claimed that Singaporean youths averaged 33 minutes of video gaming time daily, making it the third highest among Asian youths (Neubronner, 2008). Choo et al.'s study (2010) showed that of the 9% of gamers who exhibited pathological symptoms, 54% claimed that stress from studies and family relationships were contributing factors. These pathological gamers played more than 37 hours a week, and compared to other countries such the United States, Germany, South Korea and Australia, Singapore has the fifth highest percentage of pathological gamers (Choo et al., 2010).

Yet, this consumption trend would likely increase as Singapore continues improving its technological infrastructure and, promoting and incentivising the video gaming. First, with 87% of households on broadband (Infocomm Development Authority of Singapore, 2013), Singapore continues to aggressively promote Internet usage, by providing wireless connections for everyone (B. Lee, 2006); faster download speeds (Singapore Government News, 2010); and greater Internet capacity and cloud computing facilities (Infocomm Development Authority of Singapore, 2014). Studies have shown that there is a higher incidence of video gaming typically among those with faster connections (Madden & Rainie, 2003). Moreover, the Media Development Authority of Singapore (MDA) has been actively and successfully promoting the video game industry in

Singapore (Loh, 2012) by investing 20 million Singapore dollars (approximately US\$15.7 million) to “take Singapore’s next generation games to a new level” (Gaochuan, 2010, p. 1). Singapore’s Internet infrastructure development, touted as one of the “key drivers of Singapore’s future growth” (H. H. Chua, Chin, & Tham, 2010, p. 1), and the government’s push to become an “Intelligent Island” (Chun, 1997, p. 1), have laid the foundation for ubiquitous video game usage.

Second, video gaming is widely promoted and greatly incentivised through competitions and monetary rewards (W. Tan, 2009). Gaming conventions are held to showcase the latest game offerings (Seow, 2012). International gaming competitions, such as *Defense of the Ancients* (DotA) 2 (Oo, 2011), offer prize money of S\$180,000 (approximately US\$141,000); Asian World Cyber Games, World Cyber Games, Electronic Sports World Cup, Asian DotA Championship; and Iron.Lady Championships, with prize money of S\$4,100 (approximately US\$3,200), illustrate the promotion of competitive video gaming in Singapore (Ting, 2010). Moreover, Singapore’s Cybersports and Online Gaming Association support competitive video gaming for overseas activities, and offer the free use of gaming centres for training (Ting, 2010). Serious games, such as *Counter-Strike: Global Offensive*, *DotA 2*, *AuditionSEA*, *World Of Warcraft: Mists Of Pandaria*, *DiabloIII*, *StarCraft II: Heart Of The*

Swarm, League Of Legends, and Heroes Of Newerth, are predominantly MMORPGs and FPS games that are aggressively promoted to, and have been adopted by, the masses (Loh, 2011a; Oo, 2011; Seow, 2012; W. Tan, 2009; Ting, 2010). This study focused on the players of MMORPGs and FPS games, in light of their popularity in Singapore.

1.6.2 Singaporean Parents' Concerns

Copious consumption of video gaming among youths in Singapore, and the relentless promotion of video gaming, exacerbate parental concerns. As with parents in other countries, Singapore parents have also expressed concerns about time displacement, and the social and content issues arising from frequent video game use (H. H. Chua & Poon, 2010; Oo, 2007, 2009).

With approximately 10% of Singaporean youth gamers exhibiting pathological symptoms (Choo et al., 2010), which has, in some cases, negatively impacted their academic attainment (H. H. Chua & Poon, 2010; Khamid, 2011; Skoric, Teo, & Neo, 2009), it is not surprising then that parents are concerned about the time displacement effect of video gaming, as academic achievement is highly valued in Singapore, and parents are often found to emphasise this importance to their children (R. P. Ang & Huan, 2006; J. B. Tan & Yates, 2011). Anecdotal accounts showed that meals, socialisation, and study times have been displaced, to make way

for video gaming (H. H. Chua, 2011; Neubronner, 2008). Chua (2009) found that Singapore youths spent about 27 hours a week on video gaming. This statistic is very much higher than in other countries that already have ongoing video game addiction problems, and has shocked many experts and government officials in Singapore. Students are known to be playing for six hours every weekday, and entire weekends, skipping daily hygiene habits such as the brushing of teeth, to the extent that parents have to compel them to take a break from games to study—or sleep (H. H. Chua, 2009). The media also reported on an extreme case of a 15-year-old who played for 60 hours non-stop, without bathing and napping, and only occasionally pausing to eat (Leung, 2005). Furthermore, video game companies are not helping the situation by encouraging gameplay “anywhere, anytime” (Trevor Tan, 2012, p. 1).

Social issues such as youths being victimised, bullied, harassed, subjected to racist remarks, physically beaten and cheated of large sums of money by other video game players have also now causing concern (M. H. Chua, 2005; Leow, 2009; Oo, 2007; Yng, 2010). In Singapore, there was an incident in which a student became angry, and physically attacked his opponent, for defeating him in an MMORPG game known as *DotA* (Leow, 2009). Another incident of gaming rage involved an individual who repeatedly stabbed his opponent for the same reason—his victim had

defeated him in *Counterstrike*, a very popular FPS game. Psychiatrists familiar with this phenomenon claimed that the majority of offenders in game-related violence are often students or young working adults.

There were also reported instances of teenage girls who were sexually exploited when they chose to turn their online acquaintances into real life dalliances, after having gotten to know them through networked video games such as *MapleStory*, *World of Warcraft*, and *Audition* (Theresa Tan, 2012). Experts in Singapore warned that “playing a game together can warm a girl up faster than mere chatting. Over time, the girl may let her guard down as her new game partner wins her trust by enthusiastically helping her to advance in the game” (Theresa Tan, 2012, p. 1). A study showed that 16% of Singapore children have met up with online strangers, although not necessarily through video games alone (Liau, Khoo, & Ang, 2008). According to the police, the majority of those victims who were raped by online strangers were between 7 and 19 years old (Tai, 2013).

A Member of Parliament’s nephew made headlines when he was found to be S\$80,000 (approximately US\$63,000) in debt from purchases he had made in video games (Oo, 2007). Already, many parents are of the opinion that video gaming is a waste of time and money, and even more so where it involves virtual consumption or in-game purchases (O. B. Tan,

1993). Unfortunately, many youths have found these in-game merchandises or services have appealing, to the extent they are willing to steal, such as using victims' phones to purchase in-game credits (Y. L. Lim, 2012). In one case, the amount billed was S\$600 (approximately US\$470). Aside from theft, parents are also concerned about random spewing of vulgarities, which appears to be part of the video gaming culture, especially when playing in competitive teams (Yng, 2010).

Another valid concern parents have is with regard to sexual content in video games (H. H. Chua, 2007; Tham, 2010, 2011). In one particular game, *My-Minx*, players as young as seven are encouraged to live like celebrities by getting drunk, buying condoms, having one-night stands, and buying sexy lingerie and drugs. Parents have shown strong objections to the fantasy lifestyle that these games encourage (Tham, 2010). Others worry about games that portray themes of rape and bestiality (Tham, 2011); Singapore parents have been known to lobby the country's Media Development Authority to remove games with sexy and titillating themes from store shelves.

In particular, Singapore parents have expressed their fears about the correlation between their children's exposure to violent and gory video games, and the reported increase in aggressive attitudes among Singaporean gamers (Media Development Authority of Singapore, 2010;

Oo, 2009; Teng, Chong, Siew, & Skoric, 2011; The Straits Times, 1994).

These concerns are further exacerbated by the noted lack of media literacy among many children (L. Lee & Low, 2007; P. H. Lim, 2008).

Social workers have claimed that “teens, especially those without enough supervision or communication at home, find the attention or affection online” (Tai, 2013, p. 1). It appears likely that parents may be aware of some of the possible consequences associated with prolonged video gaming, but recognise that they face an uphill battle in trying to monitor or restrict their children’s online gaming activities.

1.6.3 Singaporean Parents’ Challenges

Alongside these concerns, affordances of video games, such as accessibility, interactivity and portability, are putting a strain on parental mediation efforts. Singaporean gamers are increasingly downloading video game titles instead of buying them from stores, thereby constraining parents’ involvement in the game acquisition process (H. H. Chua, 2007; Siew & Tan, 2008). Moreover, game producers are now developing “freemium” (Trevor Tan, 2012, p. 1) strategies to entice consumers, allowing children to have free access to popular games. These strategies work to get players addicted to the games, offering some games for free during the introductory phase, or up to a certain level, before requiring payment for added in-game advantages or to access higher levels of play

(Oo, 2012a; Trevor Tan, 2012). In some cases, payment is required if a player wishes to speed up the game, such as by buying 'healthy points' instead of waiting half an hour for the game character to replenish on its own. Usage of portable devices is fast becoming common (Loh, 2011b; Tham, 2011). Game producers are also actively pursuing the portable game market, which is expected to outsell the PC and console game markets (Trevor Tan, 2012). Multi-tasking between video gaming, chatting and Internet surfing, are common among Singapore youths, raising concern among parents as to the effect of video games on their children's attention span (Chiang & Long, 2005). Out-of-game interactivity, characterised by gamers' participation in cosplay events, in which gamers act out their characters and interact with online characters in person, also hinders parents' ability to investigate the real life "online characters" with whom their children are interacting in the real world (Seow, 2012).

Furthermore, parents spend less time engaging with their children (L. Lee & Low, 2007). First, the proportion of Singaporeans working more than 60 hours a week has increased, from 17% in 2000, to 19% in 2005 (Singapore Department of Statistics, 2005). The number of working hours a week has also increased over the years, with males averaging 50.6 hours (up from 50.0 hours five years earlier), and females averaging 45.5 (up from 44.9 five years earlier). Latest data shows that average working

hours and overtime hours of employees in Singapore have increased over the last ten years (Ministry of Manpower, 2014). Second, Singapore is seeing an increase in the percentage of dual-career couples (Singapore Department of Statistics, 2005). As of 2004, at least 45% of Singaporean households were dual-career (Ministry of Community Development Youth and Sports, 2010). Third, the majority of Singaporean workers are reportedly overworked and more stressed (*Channel News Asia*, 2012). Stressful lifestyles, which include working beyond office hours and during vacation, add to the overworked phenomenon.

With increased working hours and overworking, and with more parents joining the workforce, parents are hard-pressed for time to monitor and mediate their children's video gaming habits. Such demanding lifestyles have prompted some parents to delegate to schools the main role of raising their children in the digital age (L. Lee & Low, 2007), and prompted others to use video gaming as a babysitting tool (Oosting et al., 2008; Wee, 2003). A recent study showed that many parents were ignorant as to what their children do online, and some experts have warned that this is disconcerting (M. Sim, 2010). To add to the controversy, some experts in Singapore are calling for parents to spend time playing video games with their children for the purposes of family bonding and to manage their children's video gaming lifestyle (Cheong, 2008; Poon,

2010b).

While some parents may have the luxury of time, they may not be media savvy, or sufficiently knowledgeable about video games to enable them to manage their children's gaming activities (Ho, 2012; Kwek, 2007; L. Lee & Low, 2007; L. H. Lim & Theng, 2011; Loh, 2010), or be even interested to learn how to do it and, in some instances, "they might be IT-illiterate and don't understand the need to know more about cyberdangers" (Ho, 2012, p. 1). On occasion, some parents simply do not care (Wee, 2003).

1.6.4 Mediation Efforts in Singapore

Responding to parents' concerns and challenges with regard to their video gaming children, the Singapore government, through MDA, has set out a few initiatives. First, MDA has set aside S\$10 million (approximately US\$7.8 million) to fund projects that can help to curb excessive video gaming habits (Choo et al., 2010). Second, in 2008, MDA introduced the Video Games Classification System (VGCS) to provide pertinent information on video games—specifically, age and content advisories (Media Development Authority of Singapore, 2010; Oo, 2009). Instead of banning certain games that may appeal to discerning adults, VGCS seeks to "protect the young while allowing wider choice for adults... [and] aims to reflect community standards while ensuring that due

consideration is given to a video game's educational and artistic merit" (Media Development Authority of Singapore, 2010, p. 1). Third, the Film Distribution Licence regulates the kinds of games video game retailers can sell (Media Development Authority of Singapore, 2013a; Oo, 2009). In line with the Films Act, pornographic content and gambling in video games would typically infringe censorship guidelines (Chan, 1993; Oo, 2009; Siew, 2008). In 2011, MDA penalised a prominent mobile phone service provider for violating the Internet Code of Practice by distributing games that were sexually offensive (Tham, 2011). However, video games that are downloaded via legitimate websites are not within the VCGS' purview, and would also slip through the licensing and censorship framework. Fourth, MDA also provides educational resources for parents to manage their children's video gaming habits (Media Development Authority of Singapore, 2013c). Websites such as GamerDad, GAMEparents and Cyberwellness@SG, are examples of parental resources supported by MDA (Media Development Authority of Singapore, 2013b). Yet, many parents feel that the state needs to do more to legislate and enforce restrictions on harmful video games and curb gaming addiction among youths (Phang & Schaefer, 2009).

Aside from MDA's regulatory framework, social welfare organisations also do their part, such as with programmes to provide

families with helpful tips on managing video gaming habits, and promoting the pursuit of healthy alternative activities (Poon, 2010b). These organisations recruit reformed problem gamers to engage with those who are currently experiencing gaming addiction, so as to encourage more balanced gaming. Suggested strategies include setting a time limit to gaming, and the pursuit of healthy alternatives to gaming. All these initiatives are aimed at promoting a healthy gaming diet (that does not affect gamers' occupational functioning), and do not advocate a complete elimination of gaming from a person's life. These initiatives are producing some favourable results, as documented by anecdotal reports (Poon, 2010b). Unlike other countries, such as South Korea and China, where boot camps are organised to treat gaming addicts, Singapore's main thrust is to empower parents to manage their children's video gaming habits (Oo, 2012b; Poon, 2010a, 2010b). This approach is widely accepted by Singaporeans (Goh, 2009; The Nielsen Company, 2010).

1.7 Summary

Thus far, the study has explored how video games have evolved in its interactivity, identity multiplicity, accessibility, portability, sociability and perpetuity. This study has also argued that these evolved affordances have added to parental concerns surrounding children's video gaming consumption, and increased challenges to parental mediation. This study

has highlighted Singapore as a suitable location for studying parental mediation of video games, given the high video game consumption of youths, the prevalence of video gaming concerns, and its challenging parental work-life environment.

CHAPTER 2: LITERATURE REVIEW

This chapter reviews the literature on parental mediation and argues specifically for a re-conceptualisation of the theory within the field of video gaming. As video gaming evolves, it has significantly impinged on parental management of the child. Yet, parental mediation studies have not deviated much from concepts birthed during the television era, and have not adequately captured parental adaptations to variances within the video gaming space. Moreover, contradictory accounts on the effectiveness of parental mediation of video gaming cloud the philosophical motivations of the theory.

This chapter begins by emphasising the importance of parental intervention in their children's involvement with gaming media. It then argues for a departure from the current concepts of parental mediation, highlighting current parental mediation strategies and their limitations. This is followed with a proposed re-conceptualisation of the theory so as to improve the theory's descriptive and explanatory strength. The chapter ends by addressing contradictory effectiveness claims, and further examination of this issue.

2.1 Importance of Parental Mediation

While Chapter 1 highlighted parental concerns associated with video gaming, this section outlines the widespread perception about the

effects of media on children; specifically, television (TV), Internet and video games, which elucidate the importance of parental mediation.

In retrospect, it appears the media has always been perceived in a negative light (Kirsh, 2009), widely thought to negatively influence those who consume it. Whether in the form of the written word, images, movies or, increasingly of late, the Internet and video gaming, the media has been accused of being a conduit for negative content, albeit and amidst more positive opinions about the media's potential. The teaching of values (Samaniego & Pascual, 2007) and "the promotion of positive aspects of social behaviour (e.g., sharing, manners, and cooperation)" (Committee on Public Education, 2001, p. 423) are some purported benefits of TV viewing. The educational qualities of TV viewing include preparing the child for school and expanding his or her vocabulary (Chakroff & Nathanson, 2009). The Internet, widely perceived as an educational tool, has also helped children sustain their offline social networks, and provided a safe place for them to experiment with their identity (Livingstone, 2003). Video gaming has been shown to promote learning (Prensky, 2006). Examples include the learning of mathematical and social skills, and historical, political and scientific concepts (Khoo, 2012; Shaffer, 2006; Squire, 2011). It is also widely believed that video gaming can help individuals develop better problem-solving skills. Video games are also used in occupational and

physical therapy, and in palliative treatments (Griffiths, 2003). As such, at every introduction of a “new” media platform, the public has reacted with enthusiasm at its benefits, but whenever young people’s media consumption reaches perceptibly high levels, adults become concerned that it may be harmful (D. R. Anderson & Evans, 2003; Committee on Public Education, 2001; Eastin, Greenberg, & Hofschire, 2006; Livingstone, 2003). Parental concerns tend to focus on media content containing sex, crime, obscenity, nudity, violence, and crime (e.g., demonstrations and instructions on how to make destructive weapons, such as bombs). These growing concerns have led to many studies that examine the media’s harmful effects on children and youths (Singer & Singer, 2001).

Additionally, concerns about addiction to these media activities continue to escalate (Choo et al., 2010; Griffiths, 2003; Kalmus, Blinka, & Ólafsson, 2013; Kuss & Griffiths, 2011; Ng & Wiemer-Hastings, 2005; Young, 2001).

In response, governments worldwide have introduced policies to regulate media content, notably in the U.S. (Piotrowski, 2007) and Europe (European Commission, 2010). These policies include the censorship of media content (P. H. Ang & Nadarajan, 1996; Bybee, Robinson, & Turow, 1982; Mendoza, 2009; Wold, 2010) and the development of tools that empower parents to manage their children’s consumption of media more effectively, typically in the form of media ratings (Entertainment Software

Rating Board, 2011; Nikken, Jansz, & Schouwstra, 2007; Pan European Game Information, 2013; Walsh & Gentile, 2001). While these initiatives have some measure of effectiveness (Jomini & Chernin, 2004), the responsibility of mediation fundamentally lies with the parents (Chakroff & Nathanson, 2009; Mendoza, 2009; Shin & Huh, 2011).

Extant literature asserts that parents are the most important “models, monitors and mediators” (Hogan, 2001, p. 663) in their children’s media consumption, and that they are in a strategic position to mediate the media consumption because they are the source and conduits of the family’s value system (Kirwil, Garmendia, Garitaonandia, & Fernandez, 2009; Shin & Huh, 2011). Parents are also excellent examiners of media effects on their children (Gentile, Nathanson, Rasmussen, Reimer, & Walsh, 2012; Gentile & Walsh, 2002), and the best judge of their children’s strengths and weaknesses, and, therefore, would best know how to go about mediating media consumption. Parents are also the ones with “access and authority to establish rules and guidance” (Hogan, 2001, p. 663). It is evident that parents have an important role to play in their children’s media consumption (Eastin et al., 2006; Kalmus et al., 2013; Mendoza, 2009; Skoien & Berthelsen, 1996).

2.2 Parental Mediation Theory

Parental mediation is defined as the strategies that parents

introduce to maximise the benefits and minimise the risks (potential negative impacts) of media influence (Kirwil, 2009; Kirwil et al., 2009; Shin & Huh, 2011). The term first appeared “in the 1980s when deregulation was in effect [in the United States] and standards of children’s television was low” (Mendoza, 2009, p. 30). It was developed out of a media effects paradigm, and typically captures the intervention of the relationship between the person and the media into restrictive, active and co-use activities (Bybee et al., 1982; Livingstone & Helsper, 2008; Nathanson, 2008; Shin & Huh, 2011; Valkenburg, Krcmar, Peeters, & Marseille, 1999). While the theory began at a conceptual level, “providing a list of categories for something without explaining how they relate to one another—[or otherwise] known as taxonomies” (Littlejohn, 2008, p. 19), it has evolved (Chakroff & Nathanson, 2009). Parental mediation theory has frequently sought to describe the activities and explain its relationships with factors that influence its application, and the consequences of its application, by recording the “occurrence”, “precursors” and “effects” (Valkenburg et al., 1999, pp. 52-53). These aspects have been consistently explored by many parental mediation studies (see Eastin et al., 2006; Livingstone & Helsper, 2008; Nathanson, 2008; Nikken & Jansz, 2003; Valkenburg et al., 1999), and have been “very important in helping [to] clarify the mediation construct” (Chakroff & Nathanson, 2009, p. 557).

Literature proposes that parental mediation of video gaming follows that which was used for TV viewing (Chakroff & Nathanson, 2009). This is due to certain similarities. First, parents' positive or negative views about TV content may be generalised to game content (Kutner et al., 2008; Nathanson, 2008; Nikken & Jansz, 2003, 2006; Sneed & Runco, 1992). For parents, nudity, violence and the use of coarse language have always been issues, especially with regard to TV content or video games (Nikken & Jansz, 2003, 2006). Second, studies indicate that parents actually apply the same mediation strategies used for TV viewing to video game playing (Entertainment Software Rating Board, 2011; Funk, 2005; Kirsh, 2009; Media Development Authority of Singapore, 2010). Third, many studies have already been conducted on TV mediation, which leaves Internet and video gaming mediation, set within a more appropriate theoretical framework, relatively unexplored (Chakroff & Nathanson, 2009; Eklund & Bergmark, 2013; Nikken & Jansz, 2003, 2006). To date, many video game mediation studies have adopted the conceptual framework used for TV viewing; namely, restrictive mediation, active mediation and co-use mediation (Chakroff & Nathanson, 2009; Nikken & Jansz, 2006, 2013).

Yet, there are glaring differences between watching television and playing video games. With TV viewing, parents only had to manage the influence of media content on their children. Restrictive, active and co-

viewing mediation, terms that were coined in the 1980s, were adequate to capture the range of behaviours practised by parents to limit their children's exposure to, or to try to influence their children's views about media (TV) content that was both harmful and educational (Chakroff & Nathanson, 2009; Kutner et al., 2008; Nikken & Jansz, 2003, 2006; Shin & Huh, 2011). However, playing video games is more interactive in nature and, therefore, a far more "immersive activity than watching television" (Nikken & Jansz, 2006, p. 183). It is not surprising to find that violent effects of video gaming tend to be larger than those of TV watching, for which active discussions alone may not mitigate the effects (C. A. Anderson et al., 2010). Moreover, media platforms such as Internet and video games include the opportunity—and concern—for socialisation with strangers in cyberspace. Communication with unknown contacts surfaces parents' age-old concerns about the dangers and possible repercussions of such activities (Kirwil et al., 2009; Kutner et al., 2008), which oblige fresh practices of mediation beyond what was already practised with regard to TV mediation (Eklund & Bergmark, 2013; Kirwil, 2009; Livingstone, 2007). With an increasing number of video games being accessible and played on Internet-enabled computers, it is, therefore, worthwhile to review those strategies employed for the mediation of Internet activities.

Parental mediation studies—derived from negative TV effects—have tended to be based on surveys (Bybee et al., 1982; Cho & Cheon, 2005; Eastin et al., 2006; Eklund & Bergmark, 2013; Kirwil, 2009; Livingstone & Helsper, 2008; Nathanson, 2002; Nikken & Jansz, 2003, 2006, 2013; Shin & Huh, 2011; Valkenburg et al., 1999; R. Warren, 2001), which may not be able to provide for more nuanced interpretations in the emerging field of video gaming. As discussed in Chapter 1, the rapid evolution of video games has placed increasing challenges on parents' ability to manage their children's time and activities in this regard, and parents have had to adapt their management techniques. These trends test the limits of current parental mediation concepts.

This study argues that parental mediation theory has not adequately captured the adaptations parents have had to make in the video gaming space. This chapter examines, specifically in the video gaming context, how, and the extent to which, parental mediation is effected, and its relative impact or descriptive strength (Baran, 2009; Silverman, 2005). Descriptive power refers to the integrity of the concepts and their ability to distinguish among activities. "Explanatory power" (Griffin, 2009, p. 30) encompasses the ability to account for, and explain its relationships with, its influencing factors (Littlejohn, 2008; Sutton & Staw, 1995). As Chakroff and Nathanson (2009) noted, it is "important to

go a step beyond.... and understand exactly how mediation can work” (p. 557).

2.2.1 Restrictive Mediation

Restrictive mediation is a strategy that “appears to be the most self-explanatory” (Chakroff & Nathanson, 2009, p. 554), with parents setting the family’s rules and boundaries for media consumption. Parents may forbid a child to watch a certain TV programme, or a particular type of programme (Valkenburg et al., 1999). Restrictions may also include rules as to the duration of viewing, specific viewing hours (Valkenburg et al., 1999), or the location for TV viewing (Cottrell et al., 2007; Nathanson, 2008). Alternate terms used are restrictive guidance or rule-making (Bybee et al., 1982; Nathanson, 2002; Valkenburg et al., 1999; R. Warren, 2001).

There are three types of restrictive mediation associated with Internet use (Kirwil, 2009). The first type refers to the use of technological tools to control and monitor children’s Internet usage behaviour (Eastin et al., 2006; Kirwil, 2009). For instance, parents can, with the help of software, block certain types of websites, or track the websites visited (Eastin et al., 2006). In this case, technology ensures that parental requirements are met. The second type, termed rulemaking, refers to the setting of rules and boundaries for Internet usage or consumption (Eastin

et al., 2006; Kirwil, 2009; Livingstone & Helsper, 2008). As with TV viewing, these rules include the time, duration, and location, of usage (Livingstone & Helsper, 2008); which websites are appropriate for surfing, and the kinds of content that can be viewed (Eastin et al., 2006). Parents may also regulate their children's online interactions with other users, and participation in online communities (Kirwil, 2009). Adherence to these rules is very much dependent on the children. The third type refers to the active monitoring of children's Internet usage (Kirwil, 2009). This entails reading their children's emails and monitoring visited websites after the child has finished using the computer (Kirwil, 2009). These activities can be done covertly or overtly (Livingstone & Helsper, 2008).

Restrictive practices in video gaming would involve active monitoring, and the use of rules and regulations to intervene in the relationship between the child and video gaming (Nikken & Jansz, 2003, 2006). This laying down of rules may relate to duration of usage, strategic times of usage, parental approval and selection of games the child is allowed to play, or that game-playing is allowed only after the child has completed his or her school work or household chores (also known as behaviour contingency) (Hogan, 2001; Kutner et al., 2008; Nikken & Jansz, 2006).

Limitations of Restrictive Mediation Concept

While restrictive mediation accounts for the rules and regulations that parents may set for their children's media consumption, studies have included monitoring activities as a construct (Eastin et al., 2006; Kirwil, 2009; Nikken & Jansz, 2003, 2006). After rules are in place, it is expected that parents monitor their children's adherence to the stipulations that were set for them, in terms of duration of use, the content encountered, or the boundaries for online social interactions, and are therefore classified as restrictive mediation. While monitoring may also result in the rules being further refined, and is therefore aptly conceptualised as restrictive mediation, it may also result in parents discussing (active mediation) with their children on those issues. For example, parents who discover their children playing video games that have questionable content, or with unknown social contacts, are more likely to engage in discussions with their children (Skoien & Berthelsen, 1996). As such, monitoring activities may not have any implications for restrictive mediation, and loses validity when categorised as such. Nikken and Jansz (2003, 2006) included "acquiring information about a videogame and reading about game content before allowing children to play" (Nikken & Jansz, 2006, p. 191) as part of the restrictive construct. Again, while parents may engage in investigative activities to better inform the rulemaking process, it may also result in further discussions with the child. As many studies have shown, it

is not surprising to find parents employing both restrictive and active mediation with equal frequency (Livingstone & Helsper, 2008; Nikken & Jansz, 2003). While there is an increasing need for parents to undertake investigative strategies and to involve the use of technology in mediation, it may be a misnomer to narrowly subsume these mediation strategies under the “restrictive mediation” label, steeped with its inherent descriptive weaknesses.

2.2.2 Co-Use Mediation

In TV mediation research, co-use mediation is also termed social co-viewing (Nathanson, 2008). It refers to occasions when the parent and child watch TV together. While active mediation may take place during co-viewing, co-viewing attempts to distinguish itself as devoid of any parent-child discussions (Nathanson, 2002). This may not seem to be an explicit mediation strategy because parents co-view for personal enjoyment, or co-viewing takes place when the child just happens to be with the parent during a particular programme (Nathanson, 2008). However, co-viewing remains in the literature as a mediation strategy, under the premise that when parents co-view with their children, that togetherness enhances the effect of the TV content on the child(ren) (Nathanson, 2002). Nathanson (2008) attempted to further distinguish between parents’ passive and intentional co-viewing. In some cases, parents have been known to

intentionally introduce their child(ren) to a particular TV programme (typically documentaries or something with an educational content) and to watch it with the child. However, most TV mediation studies do not measure intentionality; only the behaviours are captured (Mendoza, 2009; Valkenburg et al., 1999; R. Warren, 2001). While researchers mooted the notion that parents may choose an unfocused mediation style—an “unstructured, relaxed approach to TV” (Valkenburg et al., 1999, p. 54)—the concept was not well accepted and was subsequently dismissed.

The co-using, co-viewing, or social co-use concept found in TV mediation has been extended to Internet content (Eastin et al., 2006; Kirwil, 2009). Again, these behaviours do not capture any intentionality on the parents’ part, and do not involve any relevant conversation while using the Internet (Eastin et al., 2006; Kirwil, 2009). Livingstone and Helsper (2008) claimed that this term should be subsumed under active co-use because when a parent and child sit together to use the Internet, their proximity to one another would make “co-use more active” (p. 589).

Co-playing refers to playing video games with the child (Nikken & Jansz, 2003, 2006; Shin & Huh, 2011).

Limitations of Co-Use Mediation Concept

There are several indications that this concept needs to be further defined and clarified before it can be applied to studies of video gaming.

First, in many studies, there is no clear distinction between co-viewing or co-use, and active mediation (Chakroff & Nathanson, 2009; Mendoza, 2009). Parents were observed to slip in some opinions during co-use. While this does not bode well for the descriptive ability of the concept of active mediation, which will be elaborated upon later, it suggests the same weakness for the co-use concept.

Second, studies of video gaming show that parents rarely carry out co-playing. A recent study showed that only 1.5% of children played video games with their parents (Eklund & Bergmark, 2013). This is consistent with other studies that show that parents hardly, or rarely, play video games with their children (Kutner et al., 2008; Nikken & Jansz, 2006; Oosting et al., 2008). While video games allow for multi-player engagement, these interactions typically do not take place within the same physical space, but over the virtual space. Video gaming usage is typically not shared, because the screen size is designed for a single viewer; input devices are also meant for single users; and the devices are commonly located in a small or private area, posing great challenges for co-playing between parents and children (Haythornthwaite & Wellman, 2002; Livingstone & Helsper, 2008; Nikken & Jansz, 2006). While console devices provide opportunities for co-playing, video gaming appears to be primarily a “solitary activity” (Nikken & Jansz, 2003, p. 2). Also, given how

video games have evolved (see Chapter 1), parents may find it difficult to understand video games and working the controls of the games their children play; video gaming is viewed as “less intergenerational” (Nikken & Jansz, 2006, p. 183). Kutner et al.’s study (2008) reported instances of parents “trying to rent and observe games” (p. 85), which strongly suggests that parents have investigative purposes when playing. This investigative intent is further supported by findings from the Nielsen Games’ study (2008).

Third, until now, studies on video game mediation do not account for any effects, either positive or negative, of co-playing, and only capture its frequency (Eklund & Bergmark, 2013; Nikken & Jansz, 2003, 2006, 2013; Oosting et al., 2008; Shin & Huh, 2011). Already, attempts to clarify intentionality in co-viewing for TV mediation studies, and the use of “active” in “active co-use” for Internet mediation, suggest that the effect of accidental or unintentional co-use is doubtful and, as such, has detrimental impact on its usefulness and explanatory standing in parental mediation theory (Chakroff & Nathanson, 2009; Livingstone & Helsper, 2008; Nathanson, 2008).

Given that co-use has inherent conceptual difficulties, and co-playing is hardly practised, difficult to practise, and potentially used for investigative purposes, as a concept, co-playing suffers some measure of

descriptive and explanatory abilities. Moreover, it does not occupy a defined spot in parental mediation literature.

2.2.3 Active Mediation

Active mediation typically involves the use of discussions with the child in managing their media relationship (Chakroff & Nathanson, 2009).

This strategy involves discussing the TV programme with the child either “during or after viewing” (Valkenburg et al., 1999, p. 54), but does not stipulate that parents have viewed the programme together with the child. Nathanson (2008) noted that, although parent-child discussions may take place, often the discussion is not specific to issues with regard to content. Parents may “encourage children to view the material more critically” (Nathanson, 2008, p. 3506), such as asking the child(ren) if they thought a particular (segment of a) movie was a realistic portrayal of today’s society, sometimes termed a categorisation process (Fujioka & Austin, 2002). Parents may also provide supplementation or additional information on the programme, such as where the show was filmed (Fujioka & Austin, 2002; Nathanson, 2008). Parents may also show their approval of certain programme characters’ behaviours, thereby endorsing or validating those behaviours (Fujioka & Austin, 2002; Nathanson, 2008). Parents may also express their attitudes about the programme (Nathanson, 2008). Expressing negative attitudes, such as rejection,

counterarguments, or contextualisation and disapproval of TV content, is referred to as negative mediation; while expression of positive attitudes in the form of acceptance and approval of content is termed positive mediation (Fujioka & Austin, 2002; Nathanson, 2008). Often, parents may use a mix of positive and negative active mediation; at times, parent-child conversations may take on a social hue (Mendoza, 2009). As such, instructive or evaluative mediation have been coined as alternatives, to reflect the objective of the discussions (Valkenburg et al., 1999).

In managing Internet consumption, interpretive mediation, active mediation, or active co-use (Eastin et al., 2006) refers to “instructive interactions and sharing the experience of Internet use by sitting next to the child” (Kirwil, 2009, p. 395). This typically involves surfing the Internet with the child, and having relevant discussions about its usage.

This form of mediation, in video gaming, refers to an active effort on the parent’s part to process, interpret and translate video gaming content or activities to their children (Nikken & Jansz, 2003, 2006).

Limitations of Active Mediation Concept

As “media becomes less passive and more interactive” (Mendoza, 2009, p. 35), the term active mediation would imply all mediation activities carried out by parents, but lacks the ability to specifically convey the intentions of the conversational process. As such, it is not surprising that

terms such as ‘instructive’, ‘evaluative’, and ‘interpretive’ have been used to further elaborate the concept. Given the challenges that many parents face in understanding video games, as compared with their children, parental discussions may be limited in scope. Moreover, no study has captured, qualitatively, the nature and topics of these discussions in the video gaming space. While the term poses complications, it is relatively less problematic than the previous two concepts; nevertheless, it can be further improved.

2.2.4 Adaptations and Other Activities

Studies have hinted that parents have adapted the management of their children’s media consumption. First, there is a larger requirement for, and emphasis on, monitoring activities, which have been conveniently classed under restrictive mediation (Eastin et al., 2006; Kirwil, 2009; Nikken & Jansz, 2003, 2006; Oosting et al., 2008). As mentioned in the limitations of co-viewing, this is largely due to the difficulties associated with the miniaturisation and location of media devices. These monitoring activities refer to behaviours that parents engage in to inform them of their children’s video game consumption. As argued earlier, the result of monitoring may not have anything to do with restrictive mediation, and may, instead, lead to better parent-child discussions. Parents have also been found to engage in activities that inform them about the video game.

Literature has shown parents using game classification guides and content descriptors, such as the ESRB ratings, PEGI ratings and VGCS, as tools to help them decide on appropriate games for their children (Entertainment Software Rating Board, 2011; Media Development Authority of Singapore, 2010; Pan European Game Information, 2013; Piotrowski, 2007). This practice is prevalent enough to warrant as a stand-alone mediation strategy called “game rating checking” (Shin & Huh, 2011, p. 1). Parents have been known to interact with other adults to learn more about the video games that their children play. Presumably, this is due to their lack of understanding on their children’s video games (Kutner et al., 2008). Yet, there are studies that illustrate a practice where fathers, typically, who have some gaming experience and proficiency, play the games first to assess appropriateness, before letting their child play it (Holden, 2009b). Additionally, co-playing parents have been found to do so with monitoring or investigative intent (Nielsen Games, 2008). However, parental attempts to monitor video gaming activity are fraught with challenges; hence, parental mediation of video gaming would necessitate thorough investigative strategies.

Second, the current framework does not capture parental behaviours, such as encouraging their children to explore alternative activities (Eklund & Bergmark, 2013). These diversionary, bait-and-switch

tactics are not new to parenting literature; it has been frequently highlighted that involvement and support in extra-curricular activities and religion, seen as protective factors, are effective ways in which parents can guide teens, and decrease the likelihood of them engaging in potentially problematic behaviours (Skoien & Berthelsen, 1996).

Thus far, the review has identified the limitations of current constructs within video gaming mediation, and has suggested exploring other parental mediation activities. As such, an examination of strategies that parents employ to manage their children's video gaming is very much warranted to provide descriptive strength to the theory, which prior quantitative studies have been unable able to offer.

2.3 Factors that Influence Parental Mediation

An exploration of the factors that influence parental mediation is important to clarify the constructs and boost descriptive and explanatory strength to the theory (Baran, 2009; Chakroff & Nathanson, 2009; Griffin, 2009; Littlejohn, 2008; Robert & Jennings, 2013; Silverman, 2005; Sutton & Staw, 1995). The following section sets out three factors that influence the application of parental mediation strategies; namely, parental challenges, parental perceptions of video games, and parental perceptions of the child.

2.3.1 Parental Challenges

While Chapter 1 detailed the growing challenges placed on parents' management of their children arising from the evolution of video games, parental mediation literature has also hinted at some specific factors.

It was found that demographically, mothers engage in mediation more frequently than fathers, and this is due to the fact that mothers are more likely to be the primary care givers (Nathanson, 2008; Valkenburg et al., 1999; R. Warren, 2001). Nikken and Jansz (2003, 2006) found that mothers were more likely to mediate using restrictions and discussions. Studies have not been conducted on the availability of time in video gaming mediation, and it would be reasonable to explore this further, based on the following observations. First, co-playing may prove difficult, because it involves a lot of time, as it requires parents to understand the game structure and operate the controls. Second, conversational activities may prove challenging, as parental knowledge about the gaming world is often very limited, and may require significant time investment for them to understand the game, before they can proceed to engage their children in discussions (Nikken & Jansz, 2006). Third, the three main mediation strategies used for TV viewing already show distinctions in time requirements, which can also be applied to video gaming. "Content discussion would seem to be the most intensive form because it requires

parents and children to engage in prolonged interaction” (R. Warren, 2001, p. 218). This is followed, in step-down degrees of intensity, by co-viewing, which requires very little time and, finally, rulemaking, which requires the least amount of time (R. Warren, 2001). Moreover, “parents may find it more practical to apply restrictive mediation in the case of video gaming, rather than applying active mediation or to co-play with the child, because they do not want to spend too much time on gaming” (Nikken et al., 2007, p. 332). Warren’s findings (2001) suggest that available time was a factor that could possibly account for various demographic observations. “When access was measured as the total time at home, its influence on mediation was significant” (R. Warren, 2001, p. 226). It is not surprising that restrictive mediation, easily employed, compared with co-playing or parental discussion, has been found to be the most widely adopted strategy in video game mediation (Kutner et al., 2008; Nikken & Jansz, 2006; Oosting et al., 2008; Skoien & Berthelsen, 1996). As such, it is plausible that parents’ choice of mediation strategy is correlated to the amount of available time they have.

Also, Livingstone and Helsper (2008) claimed that, “more Internet-skilled parents were more active mediators of their child’s Internet use” (p. 592). As such, parents’ own perceived Internet experience and skills also influence mediation strategy, as it empowers them with knowledge,

confidence and skills to be more proactive in mediating. With video game studies intimating a greater need for information seeking activities, such as checking game ratings, and increasing reliance on technological solutions for monitoring and restrictions, parents' video game and technological competency would become a growing factor that influences parental mediation.

While many parental mediation studies have captured data, such as demographics of the mediator (in this case, the parents), there is insufficient nexus linking any of that to parental mediation strategies. Hence, this study argues for a correlation between challenges parents face and their chosen mediation strategies, and proposes an exploration into this lacuna.

2.3.2 Parental Perceptions of Video Games

Research has also shown that parental perceptions of media effects influence their approach to parental mediation (Mendoza, 2009; Nikken & Jansz, 2013). Restrictive mediation of video gaming was positively correlated to parents' negative perception of gaming, and co-playing was positively correlated to parents' positive perception of gaming (Nikken & Jansz, 2003, 2006; Shin & Huh, 2011). These findings are also consistent with parental mediation in other media platforms. In TV mediation studies, negative attitudes toward content account for most

variances in parents' rulemaking (R. Warren, 2001). Co-viewing has been known to be associated with parents' positive perceptions of the effects of the media content, or when parents "expected positive social-emotional effects of game playing on their children" (Shin & Huh, 2011, p. 5). For Internet mediation, "parents' selection of strategies depends on the importance of values that are threatened in the process of socialisation" (Kirwil, 2009, p. 396). However, unlike Livingstone and Helsper's study (2008), where they found correlations between specific rules and specific risks activities (concerns), in general, parental mediation studies have not made those specific claims.

Although some studies have suggested that parental mediation strategies for video gaming are dependent on parents' perception of video gaming, these studies are few (Kutner et al., 2008; Skoien & Berthelsen, 1996), and have not adequately addressed parental concerns about video gaming, prompting calls for more exploration into this area. Moreover, given the aggressive evolution of video games, parental perceptions may have correspondingly evolved over the years, yet may not been adequately recorded in media studies.

Therefore, this study attempts to explore the range of parental perceptions on video gaming and to observe its relationship with parental mediation of video game. The subsequent section will examine positive,

as well as negative, parental perceptions toward video gaming.

2.3.2.1 Negative Video Gaming Perceptions

Literature has identified three broad areas of parental concerns in relation to their children's video gaming habits. These concerns were extensively discussed in Chapter 1, and will be briefly summarised here.

First, overlapping parental concerns about the displacement effect of time on other activities deemed (by parents to be more) beneficial to the child, such as studying, exercising or reading, have been found prevalent in studies on both video gaming and TV viewing (Hauge & Gentile, 2003; Kutner et al., 2008; Ng & Wiemer-Hastings, 2005; Oosting et al., 2008; Ramirez et al., 2010). Parents are also concerned that their children will withdraw from healthy social activities as a result of spending excessive time on video gaming (Kutner et al., 2008; Oosting et al., 2008). Another concern is that children's academic grades will be compromised if they spend too much time playing video games (Kutner et al., 2008). Oosting et al. (2008) found, in a qualitative study, that parents with this concern typically practised restrictive mediation. This would seem logical, as parents would want to directly manage and restrict the amount of time their children spent on video gaming. "Parents who believed that their children spent too much time playing video games rather than participating in other activities were more likely to restrict their children's use of video

games” (Skoien & Berthelsen, 1996, p. 1).

Second, as mentioned previously, another area of concern is centred on content (Funk, 2005; Kutner et al., 2008; Piotrowski, 2007). Concerns for violent effects are frequently studied, and other content issues, such as nudity and coarse language usage, also feature prominently as a concern in video gaming (Funk, 2005). “Their objections seemed to focus more on their son’s exposure to mature content that conflicts with their values at too young an age rather than a fear that the child would actually model the behaviour” (Kutner et al., 2008, p. 86). Many of these studies have referred to parents’ deep concerns with negative attitudes of video gaming arising from the nature of the content (Nathanson, 2002; Shin & Huh, 2011). Cottrell et al.’s study (2007) showed that 52% of parents engaged in active discussions with their children on the perceived effects from viewing inappropriate Internet content. “Parents concerned about the content of video games were more likely to discuss with their children, the content and characterisations with the games” (Skoien & Berthelsen, 1996, p. 1).

Third, also mentioned in Chapter 1, an area of concern is the user-user (social) interaction (Livingstone & Helsper, 2008). As social interactions sometimes take place via video games played over the Internet, and for the reasons highlighted earlier, this poses a challenge for

parental monitoring. This challenge is more pronounced as user-user interaction is embedded in the game itself, and is typically not the primary activity, therefore making parental monitoring difficult. Cottrell et al.'s study (2007) showed that 31.5% of parents engaged in active discussions about instant messaging. This issue of online contacts is not frequently discussed in video game mediation (Kutner et al., 2008). However, this will become increasingly salient as video games escalate their push for multiplayer formats that require—and necessitate—online connectivity (Funk, 2005).

Studies have also highlighted wasting money as another undesirable effect of video gaming (Kirwil et al., 2009; Sneed & Runco, 1992), but research in this area is scarce. Even so, it would not be unreasonable to assume that concerns of this nature would influence game purchasing decisions and, therefore, influence how parents manage that activity. Yet, with game purchasing mechanisms evolving, and with the introduction of in-game virtual consumption, much research is needed to explore this area of concern, and how parents have adapted and/or continue to adapt.

2.3.2.2 Positive Video Gaming Perceptions

There have been relatively few studies on the positive perceptions of video gaming, such as its educational potential or value (Oosting et al.,

2008; Skoien & Berthelsen, 1996). In Sneed and Runco's study (1992), parents claimed they viewed video gaming positively, as it helped increase hand-eye coordination. Oosting et al.'s qualitative study (2008) found that some parents viewed games as "modern entertainment" (p. 3), and considered them "fun and relaxing" (p. 3) to engage in it. Other studies claimed that video gaming helps equip teenagers with a better command of the English language through frequent interaction with other gamers (Skoric et al., 2009). While some studies (Khoo, 2012; Oosting et al., 2008) have suggested other benefits of video gaming, such as acquiring mathematical skills and social skills, and learning historical, political and scientific concepts, little is known about the extent to which parents embrace, or are aware of, such benefits. Hence, this study seeks to fill this void.

While many researchers have examined the impact of video game perceptions on the parental mediation strategies employed, these were typically conducted through surveys (Chakroff & Nathanson, 2009). Curiously, despite the evolvement of video games, little has been done to document parents' perceptual changes in this field; Nikken and Jansz's study (2006) found a very much diluted relationship between parental perceptions of video gaming effects and their practice of mediation, as compared with a more distinct relationship factor between the two in

television mediation studies. This study set out to qualitatively capture the range of perceptions parents have about video gaming, and its impact on parents' selection and application of mediation strategies.

2.3.3 Parental Perception of the Child

Nikken and Jansz (2003, 2006) found that younger children were more likely to be subjected to parental mediation. The finding is consistent with claims in other studies that parents tend to mediate less as their children grow older (Eklund & Bergmark, 2013; Nikken & Jansz, 2013; Shin & Huh, 2011). Livingstone and Helsper's study (2008) confirmed that parents applied more rules and regulations on younger children as compared with the older ones. They also found that, generally, parental mediation varies, due to parental perceptions of their children's overall maturity. Others attributed the parental loosening of controls to a growing trust in their children's ability to handle indiscretions or temptations as they mature, along with parental attempts and gestures at allowing independence (Eklund & Bergmark, 2013; Nathanson, 2002). Others attributed the seeming lack of parental controls as children grow older to the undeniable reality that children tend to spend more time with peers as they grow older, which may lead to a corresponding decrease in the available time spent with their parents; this then poses huge challenges for parental mediation, which supports the previous assertion that

available time influences the strategy applied (Shin & Huh, 2011; R. Warren, 2001).

Invariably, the child's gender also influences parental mediation. Earlier studies found that girls were more likely to be subjected to mediation, particularly through parental restrictions (Nikken & Jansz, 2003, 2006). But this was not conclusive. More recent studies suggest the reverse, that parents were more likely to be more proactive when mediating their sons, attributing this to the fact that boys play more often than girls (Eklund & Bergmark, 2013; Nikken & Jansz, 2013).

While numerous parental mediation studies have looked at gender and age variables, they lacked explanatory strength. This study seeks to probe this gap to discover which aspects of the child influence parental mediation.

2.4 RQ1: How is Parental Mediation Practised?

Thus far, the chapter has emphasised the lack of descriptive power of parental mediation concepts in capturing the various activities parents have had to employ in managing their children's video gaming consumption. This weakness is especially heightened in studies that employ survey methods to account for the increasing challenges placed on parental mediation, specifically with regard to video games. As such, this study has proposed a qualitative exploration into the mediation

processes that parents embark on. This study has also underlined the theory's limitation in accounting for factors that influence parental mediation practices and, as such, proposes three factors for consideration to enhance its explanatory power.

Hence, this study proposes to qualitatively ascertain **RQ1 “How is parental mediation practised?”** to understand the range of strategies employed, and the factors that influence its application specifically in the video gaming sphere. While many studies have sought to compare the effectiveness of individual mediation strategies, it is becoming more apparent that, in reality, parents use a combination of strategies, and there may not be any one optimal strategy. This study posits that examining for possible correlations between mixed parental mediation strategies and the three proposed factors would allow for greater explanatory clarity in our conceptual understanding of when, how, and what types of, mediation strategies parents are likely to employ in the video gaming field. For example, Livingstone and Helsper (2008) found that parents “may implement both social rules (banning or restricting activities) and technical restrictions (filtering or blocking certain activities)” (p. 589). This seemed to confirm Nikken and Jansz's finding (2006) that parents adopted a mixture of methods most of the time. While these findings further support the value and significance of exploring complexities of parental mediation

application (RQ1), it also foregrounds the explanatory weakness associated with mediation's effectiveness claims.

2.5 Contradictory Effectiveness Claims

Another limitation can be seen in the contradictory claims on the effectiveness of mediation strategies (Nathanson, 2008; Valkenburg et al., 1999; R. Warren, 2001). With regard to television, Nathanson (2008) associated restrictive mediation “with positive outcomes, such as less aggression and better comprehension of television plots” (p. 3507). However, usage of this strategy also has unintended effects. First, it was found that restrictive mediation has a curvilinear relationship with children's aggression, which suggests that, “very strict parents create hostilities in their children” (Nathanson, 2002, p. 209). Second, restrictive mediation has the potential to elicit a forbidden fruit response from the children, encouraging them to view undesirable content instead (Nathanson, 2002). Third, restrictive mediation resulted in children possibly viewing—and reacting to—their parents in a less favourable manner. This could be attributed to children perceiving parental imposition of preferences and controls as implying that their parents do not trust them. Nathanson (2002) further suggested that restrictive mediation may be more effective when practised on pre-adolescent children, when “issues of freedom and independence are not particularly important” (p. 221).

Where parental mediation of Internet usage is concerned, there are claims that active mediation is the most effective strategy, while others claim that authoritative parenting, viewed as the most effective parenting style, is associated with restrictive mediation (Eastin et al., 2006). Shin and Huh (2011) found that respondents who received “higher level of game rating checking mediation are likely to play video games more frequently and more likely to engage in deceptive gaming activities” (p. 13), such as the use of game mods and hacks to achieve video gaming goals. They suggested two possible explanations to this observation. First, children, especially teenagers, may view game rating checking as a violation of their autonomy when they disagree with parental views about the game (Shin & Huh, 2011). This is similar to Nathanson’s findings (2002) about the unintended effects of television mediation. Second, as with all other correlational data, it may indicate that parents are more likely to impose restriction mediation if their children exhibit deceptive video gaming behaviours (Shin & Huh, 2011).

While the descriptive weaknesses of the parental mediation concepts may have contributed to contradictory effectiveness claims, “it is logical to suspect that [parental] mediation will be received very differently among adolescents” (Nathanson, 2002, p. 210). Many have suggested that parental mediation “may be more effective when they are delivered in

a way that is more palatable to adolescents” (Nathanson, 2002, p. 224). However, little has been done to find out what adolescents would regard as a more ‘palatable’ delivery, or how adolescents receive parental mediation.

As such, this study argues that examination of children’s responses will provide further understanding on the effectiveness of parental mediation, thereby enhancing the theory’s explanatory strength. A further goal of this study is to explore avenues for effective parental mediation.

Therefore, this study proposes another two research questions:

RQ2: How is parental mediation received?

RQ3: What does effective parental mediation look like?

2.6 RQ2: How is Parental Mediation Received?

Children’s responses to parental mediation are, unfortunately, rarely studied (Nathanson, 2002; Shin & Huh, 2011). Yet, it is nonetheless significant (Nikken & Jansz, 2013). This section reviews the literature on how children respond to parental mediation of video gaming, and the factors that influence their response. Section 2.6.3 explains the importance of capturing children’s responses.

2.6.1 Children’s Responses to Parental Mediation

Livingstone’s study (2007) found that children tended to evade parents’ monitoring activities and restrictions, especially in situations

where the children were more technologically savvy than their parents (Kutner et al., 2008; Livingstone & Bober, 2006). Cole (2001) found that 55% of children selectively disclosed their Internet activities to their parents, while hiding some information. Livingstone (2007) claimed that “parents and children often play a game of attempted control and attempted evasion” (p. 938) during mediation of Internet activities. Children were found to have deleted emails and hidden files in their attempts to evade parental monitoring (Livingstone, 2007).

In Fromme’s study (2003), 25% of children claimed that they did not reveal to their parents what kinds of games they were playing; they also generally did not engage with their parents, especially their mothers, in discussions about their game, but were more likely to confer with their friends (Eklund & Bergmark, 2013; Fromme, 2003).

While rare, some studies have shown that children evade parents’ investigative activities and prefer to engage in discussions with their friends than with parents (Eklund & Bergmark, 2013; Fromme, 2003). In light of the ever-changing video gaming landscape and the resultant mediation adaptations, studies have not accounted for the children’s up-to-date responses. As such, this study seeks to investigate this aspect.

2.6.2 Factors that Influence Children’s Responses

This section highlights several factors known to influence children’s

responses to their parents' management of their media consumption.

First, differences in parents' and children's perceptions of possible negative effects of video gaming have been known to cause parent-child conflicts in the implementation of parental mediation strategies (Linderoth & Bennerstedt, 2007; Livingstone & Bober, 2006). Children typically view video gaming as a recreational activity ((Eklund & Bergmark, 2013; Fromme, 2003). They use this activity to relieve boredom, to relax, or to socialise. Parents, however, even those who are themselves gamers or proficient with technology, typically find video gaming meaningless. Linderoth and Bennerstedt's study (2007) foreground these perceptual differences strongly. An example was a girl who, when confronted by her parent to reduce her gaming time, retorted that the parent's surfing of auction sites was just as meaningless as hers. Another child opposed his parents' insistence that it was more socially acceptable for him to sit and view TV with his family than to interact with friends in online games. He argued that his interactions with friends involved more conversations—and more communication—than watching TV with his family. While parents and children did agree that the time displacement effect of games is unhealthy, the children typically felt that this was not significant (Linderoth & Bennerstedt, 2007). Studies showed that children were aware that video games have the potential to negatively affect their sleep, health, eating

habits and hygiene, but were not as concerned as their parents. Some children claimed to be immune to the adverse effects of video gaming, preferring to believe that it affected other children, in particular, the younger ones (Kutner et al., 2008).

Second, commonly noted in parent-child studies are discrepancies between parent and child reports; as such, it would be invaluable to compare the children's version of their parents' mediation practices with their responses to mediation (Nikken & Jansz, 2013). Studies have shown that, generally, children reported much less mediation than parents did (Eklund & Bergmark, 2013; Livingstone & Bober, 2006). Eklund and Bergmark's study (2013) showed that children reported much less discussions about gaming than their parents did, although other studies have found otherwise (Nikken & Jansz, 2006). Kutner et al.'s study (2008) found that children did not view parental mediation seriously, as they felt their parents were ignorant about video games. As such, this study seeks to capture the children's views of the parental mediation strategies imposed on them, and how they respond to it.

2.6.3 Importance of Capturing Children's Responses

The importance of gathering children's responses to parental mediation cannot be understated. As previously mentioned, a large majority of parental mediation studies have adopted a survey approach.

Additionally, very few of these studies delved into video gaming. Moreover, even studies that focused specifically on video gaming faced considerable epistemological challenges, as they were based on parents reporting on their children's responses to parental mediation, rather than on children's actual responses (see Eklund & Bergmark, 2013; Nikken & Jansz, 2013).

Linderoth and Bennerstedt (2007) and Kutner et al. (2008) were among the notable few who have conducted qualitative studies directly with children on their responses to parental mediation of video gaming. Linderoth and Bennerstedt's study (2007) involved interviews with 17- to 19-year-olds, while Kutner et al.'s study (2008) the following year involved 12- to 14-year-old boys. Yet, given the evolutionary changes in the video gaming scene and the contradictory effectiveness claims surrounding parental mediation theory, more has to be done to qualitatively capture children's responses. Therefore, this study proposes the research question **RQ2: "How is parental mediation received?"**, and will seek to qualitatively capture how children respond to parents' mediation efforts and the factors that influence the responses.

While RQ2 seeks to offer explanatory clarity to parental mediation theory, more has to be done to resolve the contradictory effectiveness claims of parental mediation theory. **RQ3: "What does effective parental mediation look like?"**

While this study has outlined the need for descriptive and explanatory clarity in parental mediation theory, and suggested potential conceptual changes, it has also claimed that parents are likely to adopt a mix of methods in addressing children's video gaming consumption. As such, there may not be any particular optimal strategy, but rather, a mix of strategies that cater to the complexities of the parent-child relationship (represented by the factors that influence their activities). For parents to effectively intervene in the nebulous relationship between child and video gaming media, it is vital to understand the theory's philosophical fundamentals, and what exactly is effective parental mediation.

To achieve this objective, this study will use two instruments: Parenting Style Instrument and Pathological Video Game Use (PVGU) indicator. First, both parenting style and PVGU have been commonly used and widely accepted (Sclafani, 2004; T. Sim, Gentile, Bricolo, Serpelloni, & Gulamoydeen, 2012). Second, effective parental mediation would theoretically be related to optimal parenting style and non-pathological video gaming status. The following sections details the instruments used.

2.6.4 Parenting Style

Parenting style is defined as “a constellation of attitudes toward the child that are communicated to the child and that, taken together, create an emotional climate in which the parent's behaviours are expressed”

(Darling & Steinberg, 1993, p. 488). It has been typically used as a heuristic device to capture the parent-child relational climate, by measuring behaviours that have “potential to alter emotional processes” (Darling & Steinberg, 1993, p. 489).

Baumrind’s (1971) work, which is one of the “most influential and well-studied theories” in parenting literature (Sclafani, 2004, p. 44), involved the observation of instrumentally competent children, with parenting style operationalised as the interaction of two dimensions (Baumrind, 1971; Bigner, 1989; Grolnick, 2003; Holden, 2009a). The first dimension is variously termed warmth, care, acceptance, responsiveness to child and child-centredness (Baumrind, 1971; Darling & Steinberg, 1993; Grolnick, 2003; Parker, Tupling, & Brown, 1979; Sclafani, 2004). “Responsiveness refers to actions which intentionally foster individuality, self-regulation and self-assertion by being attuned, supportive and acquiescent to the child’s special needs and demands” (Baumrind, 1991, p. 748). The various scales used to measure this dimension were warmth versus hostility, warmth versus coolness, child-centredness, caring and empathic versus rejecting and indifferent, involvement, and acceptance versus rejection (Eastin et al., 2006; Grolnick, 2003). It is widely believed that mothers are culturally inclined to be more child-focused (Bigner, 1989). The second dimension is control, which typically refers to the extent to

which parents are demanding, restrictive, overprotective or exert psychological control over the child (Baumrind, 1971; Grolnick, 2003; Parker et al., 1979; Sclafani, 2004). “Demandingness refers to the claims parents make on the child to become integrated into the family whole by their maturity demands, supervision, disciplinary efforts and willingness to confront the child who disobeys” (Baumrind, 1991, p. 748). The various scales that have been used to measure this dimension are democratic versus autocratic, firm versus lax control, psychological control versus psychological autonomy, controlling versus autonomy supportive, and restrictive versus permissive (Grolnick, 2003). It is also widely believed that fathers tend to exert more control on, and expect more from, the child (Bigner, 1989; Cavedo & Parker, 1994; Parker et al., 1979).

These two dimensions—responsiveness and demandingness—interact to produce four typologies of parenting style: authoritative (high demandingness and high responsiveness), authoritarian (high demandingness and low responsiveness), permissive (low demandingness and high responsiveness) and neglectful (low demandingness and low responsiveness). Existing literature has positioned authoritative parenting as the optimal parenting style in the socialisation of children, followed by authoritarian and permissive, with neglectful parenting coming in last (Eastin et al., 2006; Grolnick, 2003;

Holden, 2009a; Lamborn, Mounts, Steinberg, & Dornbusch, 1991; Sclafani, 2004; Steinberg, 2001).

Studies have been conducted on parenting styles as an antecedent to parental mediation. Eastin et al.'s study (2006) on Internet mediation found that authoritative parents practise a mixture of active and restrictive mediation, often using technological filtering as a form of restrictive mediation. Shin's study (2010) on Internet mediation used the two underlying dimensions of demandingness and responsiveness, instead of the four typologies, and found a strong and significant relationship between parental mediation and parenting styles. In particular, positive correlations were established between demandingness and restrictive mediation practices; and responsiveness and active mediation (Shin, 2010). There have also been assertions that parenting styles and parental mediation are closely related (Eastin et al., 2006; Kalmus et al., 2013; Nathanson, 2002; Oosting et al., 2008; R. Warren, 2001), as "the mediation strategies employed by parents should be related to the parents' general ideas and behaviours on child rearing" (Nikken & Jansz, 2003, p. 201). This study addresses parental mediation's effectiveness, by looking specifically at authoritative parents' practices.

2.6.5 Pathological Video Game Use

Currently, there is a paucity of studies on the consequences of

parental mediation of video gaming. Parental mediation literature in other media platforms has frequently measured the effectiveness of any strategy as the extent of content literacy, alleviation of risks, and improvement of academic performance (Chakroff & Nathanson, 2009; Mendoza, 2009; Nathanson, 2002; Shin, 2010, 2013). Few, however, are focused on video gaming. Most video game mediation studies have focused on the relationship between mediation practices and their precursors (Eklund & Bergmark, 2013; Kutner et al., 2008; Linderoth & Bennerstedt, 2007; Nikken & Jansz, 2003, 2006; Nikken et al., 2007; Oosting et al., 2008). While Shin and Huh's study (2011) explored pro-social and deceptive in-game behaviours in relation to parental mediation strategies employed, it did not examine parental mediation's relationship with key parental concerns of academic, time displacement or social issues, frequently cited in literature on video gaming.

To date, there are already a number of instruments that capture the pathological use of video gaming and the extent to which prolonged technological use damages individuals' occupational functioning (T. Sim et al., 2012). While some have used terms such as 'addiction' (Kuss & Griffiths, 2011), others have intentionally substituted such terms to avoid the controversies that surround the use of the term (Kirby, Jones, & Copello, 2014).

These scales were developed based on the Diagnostic and Statistical Manual of Mental Disorders' (DSM) criteria for behavioural addiction. Their conceptual basis stems from similarities shared with gambling addiction, a widely accepted behavioural addiction, in that both are forms of entertainment; are stimulating; produce both negative and positive emotions, and may produce "flow" states. Other shared elements include salience, euphoria/relief, tolerance, withdrawal symptoms, conflict and relapse and reinstatement. Moreover, the use of these scales in many studies produced consistent results (Gentile et al., 2011; Kirby et al., 2014; Kneer & Glock, 2013; Kuss & Griffiths, 2011; T. Sim et al., 2012; Tejeiro Salguero & Morán, 2002). In Gentile's studies (see Choo et al., 2010; Gentile & Anderson, 2010; Gentile et al., 2011), for instance, the Pathological Video Game Use (PVGU) scale measures the occupational functioning of the child, and is congruent to parents' key concerns that prolonged video gaming could negatively impact their children's academic and social functioning. As such, it would be appropriate and relevant to utilise the PVGU¹ scale to examine the effectiveness of parental mediation by investigating the forms effective parental mediation can take. The PVGU scale used in this study is based on DSM-IV.

This study seeks to answer RQ3 specifically with the following:

RQ3A: What is the relationship between, parenting style and PVGU,

¹ Video game addiction has recently been termed "Internet Gaming Disorder" in the DSM-V.

and parental mediation?

RQ3B: What differences exist in parental mediation by authoritative parents over their non-pathological gaming children and that of neglectful parents over their pathological gaming children?

Hence, through RQ3B, this study seeks to examine the effectiveness of parental mediation theory by recording authoritative parents' mediation practices applied to non-pathological video gamers. Group comparison with pathological gamers and their neglectful parents will expand the discourse further.

2.7 Summary

Thus far, this chapter has explored parental mediation literature extensively, highlighting certain key limitations of the theory. First, there are inherent descriptive and explanatory weaknesses to parental mediation theory, which traces its roots to the TV era, and appears inadequate in addressing the evolutionary and fluid changes of media use. As such, this study proposes to ascertain **RQ1 “How is parental mediation practised?”**, to understand the mediation strategies employed by parents and the factors that influence them. Second, contradictory effectiveness claims from various parental mediation studies prompted **RQ2 “How is parental mediation received?”** and **RQ3: “What does effective parental mediation look like?”** As such, this study seeks to

understand the responses of children to parents' management techniques, and examine how non-pathological gamers and their authoritative parents practise parental mediation.

In doing so, this study attempts to provide further descriptive and explanatory strength to parental mediation theory.

CHAPTER 3: RESEARCH METHODOLOGY (QUALITATIVE)

The Research Questions, proposed in the Literature Review (Chapter 2), are summarised as follows:

RQ1: How is parental mediation practised?

RQ2: How is parental mediation received?

This chapter discusses the qualitative research methodology undertaken in this thesis. Section 3.1 explains why the researcher adopted home-based interviews as the method of data collection. Section 3.2 discusses the sampling criteria, while section 3.3 explains the recruitment procedure. Section 3.4 details the data collection procedures, and Section 3.5 documents the data processing procedures.

3.1 Home-Based Interviews

Home-Based Interviews were conducted with parent and child dyads. This was deemed the most appropriate data collection method for the proposed research questions, for the following reasons.

First, face-to-face interviews are ideal for exploring the range of parental mediation techniques and its various nuances, as they allow for probing and clarification (Lindlof, 2002; Wimmer & Dominick, 2011). The technique also benefits this study's objective, of exploring the factors that influence the application of different strategies, and has been used widely to explain how, and why, human actors perform certain actions (Bazeley,

2013; Hesse-Biber, 2010; Lindlof, 2002; Maxwell, 2013; Seale, 1999), resonating with the study's objective to enhance the descriptive and explanatory power of the parental mediation theory. Indeed, Bazeley (2013) claims that this method is suited for developing "causal explanations" (p. 327).

Second, conducting interviews in the home environment gives the researcher deeper insights into where the media (and gaming) devices are located—a pertinent factor in parental monitoring activities—and to discover the possibility of evasive tactics employed by the child. Third, interviewing respondents at home makes it more convenient for parent and child to participate, and aids in their recall of activities when asked.

3.2 Sampling Criteria

To explore the wide range of mediation strategies practised, as well as perceptions of video gaming, the sampling plan included 45 children (five of whom were involved in the pilot studies), equally distributed between male and female, MMORPG and FPS game players, and ages (12-14 years old inclusive, and 15-17 years old inclusive). The study also included the parent who was the main mediator of the child respondent's video gaming activities, so that both adult and child perspectives could be captured.

The age range of 12 to 17 (inclusive) was chosen for several

reasons. First, broadly speaking, that is the age range at which video game playing time peaks (Funk, 2009; Griffiths et al., 2004; Rideout et al., 2010). Second, that age range coincides with the time frame when children begin to exhibit individuation and to negotiate, and stand up for, their rights (Smetana, 2011). As such, parents of children in this age range will tend to exhibit more aggressive and diverse mediation strategies, coinciding with the children's potential use of more evasive tactics, as compared with children below 12, who are more likely to obey their parents. Third, this age range is frequently highlighted in local media (see Chapter 1) as victims of excessive or irresponsible video gaming behaviours. Fourth, this age range is mature enough to understand questions posed by the researcher and to engage effectively in the interviews and, at the same time, they are technologically savvy in challenging their parents. Fifth, it would be consistent with the age sampling criteria of many notable media effects studies conducted in Singapore (Choo et al., 2010; Gentile et al., 2011; Kwan & Skoric, 2012). Studies have found that, as children's age increases, parental mediation practice decreases (Eklund & Bergmark, 2013; Nathanson, 2002; Nikken & Jansz, 2013; R. Warren, 2001). These prior studies have also shown variations in specific mediation strategies as children develop. As such, this study chose to divide respondents into two age groups: 12-14 years

old, and 15-17 years old, to ensure a reasonable spread of responses.

Many studies indicate a difference in parental mediation practices between genders, with parents exerting more control on their sons than on their daughters (Eklund & Bergmark, 2013; Nikken & Jansz, 2013). To test this, the study ensured an equal distribution of boys and girls, so that comparisons could be made.

This study focused on the parent as the main person in the household who practises mediation, so as to enhance the validity of the responses. Typically, the “primary caregivers” (Nathanson, 2002, p. 224) have the most information on the types and range of parental mediation strategies employed (Shin, 2010). Additionally, the study required that the child keep the “primary caregiver” parent in mind when answering the interview questions.

This study focused specifically on MMORPG and FPS players, for several reasons. First, the extensive review in Chapter 1 explained the moral panic and societal concerns caused by these two types of video games in particular. Second, Chapter 1 also highlighted that these video game types pose challenges to parental mediation. As such, focusing on these two types of games allows us to explore more assertive and diverse mediation strategies employed by parents, and to capture the spectrum of parental perceptions of video gaming, from more innocuous to more

violent game types.

Approval was sought and obtained from National University of Singapore's (NUS) Institutional Review Board (IRB). The study engaged the services of a research company, EA Research and Consulting Pte Ltd (EA), with funding resources provided by Ministry of Social and Family Development (MSF), to conduct the recruitment of respondents for the home-based interviews. However, EA's services were terminated towards the end of the recruitment exercise because of poor performance, and the researcher took over the recruitment of the remaining respondents.

3.3 Recruitment Procedures

Invitations to participate in the study were publicised by EA and the researcher through a few channels. First, EA and the researcher tapped into their existing contacts, which helped snowball the sample. Second, EA staff contacted Local Area Network (LAN) Gaming centres and publicised the study to their patrons. Third, the researcher and EA staff posted information about the study on gaming forums, such as Playpark Community Forum (forums.playpark.net), and Facebook pages of various video games, such as *Flame Arrow* (Blackshot Melee Clan) and *Garena League of Legends*.

Interested participants were screened for their eligibility to participate in the study, and interested children (who initiated contact)

were asked for their parent's contact information. For protocol reasons, this was necessary, as the children are minors; hence, at the screening stage (in deciding on suitability) and, subsequently, in scheduling the interviews, this study dealt only with parents. The screening process included asking about the child's three most frequently played video games. The criteria: the child's most frequently played video games must include at least one MMORPG or FPS game. This sampling method was previously used in studies on video gaming adolescents (Nije Bijvank, Konijn, & Bushman, 2012), and is arguably practical, as children have been found to play many video games at a time. The Singapore government's recommended game information sites, such as IGN Asia (IGN Entertainment Inc, 2013), Gamespot Asia (CBS Interactive Inc, 2013), TOUCH Cyber Wellness (TOUCH Cyber Wellness, 2013), and descriptions from the actual game sites, were used to verify that the video game fit the game type (Media Development Authority of Singapore, 2013c).

The respondents in this study played MMORPGs that included *MapleStory* (Asiasoft, 2013), *League of Legends* (Garena Online, 2013b), *AdventureQuest* (Artix Entertainment, 2013), *Minecraft* (Mojang AB, 2013), *Runescape* (Jagex Ltd, 2013) and *Defense of the Ancients* (PlayDotA.com, 2013). The FPS games they played included *Halo* (Microsoft Corporation,

2013), *Call of Duty* (Activision Publishing Inc, 2013), *Battlefield* (Electronic Arts Inc, 2013), *Blackshot* (Garena Online, 2013a), *Team Fortress* (Valve Corporation, 2013b), *Sudden Attack* (CJ Internet Corp, 2013) and *Left 4 Dead* (Valve Corporation, 2013a).

Once the sampling criteria were met, arrangements were made for the research team to interview the respondents in their homes. Please see Appendix A for the Participant Information Sheet and Consent Form (PISCF-Interviews).

Recruitment Challenges

Midway through the recruitment process, the sampling criterion was changed, to lower the target number of female FPS players interviewed to 18, with three representing each of the years from 12 to 17. The planned total number of parent-child dyads was still 40 pairs, of which 18 child respondents were female (three representing each year from 12 to 17), and 22 were male (four representing each year from 12 to 17). This adjustment to the recruitment process was made for several reasons. First, it was difficult to locate female video game players. This is consistent with literature reporting more adolescent males playing video games than females (Choo et al., 2010; Eklund & Bergmark, 2013; Kutner et al., 2008). In their study, Linderoth and Bennerstedt (2007) highlighted that “finding female players was a problem” (p. 24), and they were able to locate just

one female out of 10 respondents. Second, it was even more difficult to locate female FPS players for this study; regardless of efforts by the researcher and EA, very few were found available to participate. Moreover, some of the children who were keen to participate were afraid to let their parents know that they played FPS games, explaining that their parents frowned upon girls who play FPS type of games. As such, attempts to get parents of female game players interested and agreeable to participate in this study were futile.

3.4 Data Collection Procedures

A team of three researchers, who were all co-investigators for the study, and well versed in parental mediation research and interview procedures, conducted the interviews. Upon reaching the respondents' homes, the interviewer would spend the first 10 minutes explaining the study to the parent and child pair, by going over the PISCF-Interviews with them. If the respondents had any questions regarding the study, the questions were addressed; only then were parent and child asked to sign the consent and assent form. The respondents (both parent and child) were assured that there were no right or wrong answers, and the study only sought to capture their personal experiences. The parent was interviewed first, which took approximately 45 minutes to an hour. After the interview, he/she was given a short Post Interview Survey to complete,

during which time the child was separately interviewed. Interviews with the children took approximately 30 to 45 minutes. After the child was interviewed, he/she was given a short Post Interview Survey to complete.

The interviews were conducted in an open or communal area of the home, such as the living room, dining area or kitchen. This is particularly important to ensure that, throughout the interview session with the child, he/she was in full view of their parents, so as to guarantee transparency and protection for the minor. The session was audio-recorded using the interviewers' mobile devices (i.e., tablet or mobile phones). The surveys were conducted after the interview, so that the survey questions would not bias the respondents' answers during the interview.

Upon successful completion of the parent and child interviews, the parents were given S\$50 as a token of appreciation.

3.4.1 Interview Guide

The interview guide was developed based on the literature review in Chapter 2, and divided into several sections. The questions were asked in ascending order of difficulty, starting with the easier questions first. This helped to build rapport between interviewer and interviewee, who might otherwise be unwilling to answer problematic questions in the first instance (C. A. B. Warren & Karner, 2005).

Warm Up Questions

Warm-up questions were introduced to obtain more information about the gaming demographics of the child, and serve to get the respondent to start thinking about video gaming (C. A. B. Warren & Karner, 2005). Questions included how often, during which period of the day, and where, the gaming activity takes place.

General Perceptions

These were followed by questions about perceptions of video gaming. Parents were asked about positive and negative perceptions they had about their child being involved in video gaming. The child was asked about his/her positive and negative perceptions of video gaming.

Parental Restrictions

As prior research has evidenced that restrictive mediation is commonly practised, the interview then dealt with the rules and restrictions parents had for the child's video gaming. The interviewer started by asking what the rules were, followed by questions to draw out possible nuances, such as whether the rules were developed in consultation with the child, to what extent the child was receptive to the rules, how violations and adherences to rules were dealt with, and whether there was a practice of accommodating exceptions. With the child interviewees, rule violations were explored more thoroughly, and the extent to which his/her parent was aware of rule violations. Interviewers probed deeper to discover

reasons for both parent and child actions.

Parental Monitoring / Child Response to Monitoring

Monitoring activities were explored. Parent and child were asked to list the monitoring activities. The parent was also asked to recall and describe instances where the child attempted to hide the video gaming activity from the parent. Correspondingly, the child was asked to describe his/her attempt at concealing the video gaming activity from the parent. This was done to capture the range of evasive tactics employed by the child, as well as the parent's awareness. This set of questions was structured to capture the child's responses to parental mediation. Probing was again done to explore the reasons involved.

Active Mediation

The next set of questions dealt with the parent's active mediation processes. Beyond uni-directional conversations with the child about aspects of video gaming, this section intentionally probed the evidence of bi-directional conversations taking place, by using the word "discussed". Moreover, it explored the nuances of responsiveness and demandingness by asking how these discussions took place: how often, whether it was the parent or child who initiated it, and to what extent the discussion was in response to a rule violation.

Video Game Acquisition

The video game acquisition process was also questioned. This was in response to challenges to parental supervision, due to the increasing affordance of accessibility to video games by the child. Moreover, it was recognised that parents may have rules for game acquisition, which they may not have shared earlier. Again, nuances were explored by observing the decision-making interactions involved in the process.

Alternative Activities / General Difficulties

Alternative activities were investigated to discover the extent to which these were used as a form of diversion from video gaming. Finally, the parent was asked about difficulties they faced in managing their child's video gaming habits, whether additional resources were required, and what they would have done differently to manage it.

Post Interview Surveys

Post-interview surveys sought to capture relevant information that was outside of the verbal interviews, such as basic demographic information.

Parents were asked to indicate their gender, age, and number of family members living with them; their employment status, highest educational level, spouse's employment status, and household type. Each parent also indicated the child with whom he/she was undergoing the study and what video games the child frequently plays.

Children were asked to indicate their gender and age. Each child also indicated the parent with whom he/she was partnering for purposes of the study, video games he/she frequently played, and the number and types of media devices (TVs, Computers, Laptops, Consoles and Smartphones) available at home.

3.4.2 Pilot Test

Prior to commencing the interview part of the study, a pilot study was conducted among five dyads (parent-child pairs) to further test suitability of the questions; the five pairs were chosen because of their close fit with the sampling criteria. Suitability was tested on two fronts: first, whether the questions were asking what they were meant to ask; and second, whether the respondents understood the questions, especially the children. The pilot respondents went through the same consent, interview and post-interview process as the actual ones, and were similarly remunerated. The only difference was that the pilot respondents went through a think-aloud process, where they had to articulate what the questions was asking of them, which resulted in respondents verbally paraphrasing the questions. Suggestions were made regarding the choice of words and the level of difficulty of the questions. Beyond that, the respondents also responded to the questions posed and completed the same post interview surveys.

This process resulted in adjustments, reordering and rewording of some interview and survey questions. Appendix B presents the finalised version (post-pilot think-aloud sessions) of the Interview Guide for Parent; and Appendix C sets out the post-pilot think-aloud version of the Interview Guide for Child.

While the first five respondents were intended to pilot the questions, they underwent the same research procedures as the rest of the respondents. Hence, data from these pilot interviews will also be incorporated for analysis.

Eventually, the distribution of the interview respondents was as follows (Table 1):

Table 1: Distribution of Interview Respondents

		Male	Female
12-14 years old	MMORPGs	6	5
	FPS	6 + 2 pilots	3
15-17 years old	MMORPGs	6	5 + 1 pilot
	FPS	6 + 2 pilots	1

Data Collection Challenges

Data collection presented some challenges. For the first pilot dyad, only the daughter was interviewed. The interviewer adhered to the proper procedure, and the father was deemed sufficiently proficient to undertake interviews in English; but he declined to participate because, based on his understanding of the PIS&CF, he did not feel confident about conversing

in English, and excused himself when he had a last minute appointment to attend to. But he consented to his daughter participating, and completed the Post-Interview Survey before departing. The interviewer went through the think-aloud process with only the daughter. In this case, the S\$50 remuneration was not given. The other four pilot dyads proceeded smoothly; Appendix D presents the characteristics.

3.5 Data Processing Procedures

This section highlights the three key processes through which the data underwent—namely, transcription (Section 3.5.1), coding (Section 3.5.2) and analysis (Section 3.5.3).

3.5.1 Transcription Process

Transcribers were hired to convert the actual interviews' audio recordings into text form. The researcher transcribed the first few pilot interviews to gain experience and troubleshoot the process. This also helped the researcher prepare the briefing notes for the hired transcribers. The initial transcribers were EA staff, the research firm hired to assist with the study; after their services were terminated, NUS students were hired to complete the rest of the transcription. Prior to commencing transcription work, the researcher briefed the transcribers on the purpose of the study, common video gaming terms or language used by adolescents, and the required format for the interview transcripts. They were also briefed on

procedures to handle inaudible portions of the audio recordings: first, the transcribers were required to use software applications to slow down the audio playback so that they could try to figure out what was said, and they were required to attempt to decipher the inaudible parts at least several times; if they still could not make sense of what was said, they were then to make this known to the researcher; if the researcher could not comprehend the inaudible words on the recording either, it was then sent on to the interviewer to clarify, from their recollection, what was said at the interview (Lindlof, 2002). The researcher read every set of parent and child interview transcript, correcting obvious mistakes and aligning the formatting of the interview transcript. This was a necessary part of the process, contributing to the reliability of the study (G. Gibbs, 2007), and consistent with many other studies and recommendations (Lindlof, 2002; Wimmer & Dominick, 2011).

3.5.2 Coding & Analysis Process

This study adopted a concept coding approach, as it was highly recommended, for the goals of this study, to develop concepts (Bazeley, 2000). The researcher coded the transcripts using NVivo software. The data was coded, and further streamlined and narrowed into more specific themes. A drafting code frame was developed, based on the goals of the research and the literature review, consistent with many qualitative studies

(Bazeley, 2013; C. A. B. Warren & Karner, 2005; Wimmer & Dominick, 2011). The researcher's supervisors, who were also co-interviewers, separately analysed the coding frame. The team had frequent discussions and reviews, and made adjustments to the coding frame to accurately represent the themes of parental mediation of video gaming and the goals of the study. As Bazeley (2013) noted, it was an optimal practice to involve the interviewers in the discussion of "priorities and strategies as well as insights in coding and analysis" (p. 91).

To protect the respondents' confidentiality, this study will use an alphanumeric system to identify the pairs—specifically, a one- or two-digit number corresponding to the chronological order in which they were interviewed; and a letter of the alphabet that corresponds with the respondents' status ('M' for mother, 'F' for father, 'G' for girl, and 'B' for boy); each set is preceded by the letter 'R' to represent 'Respondent'. For instance, R1G refers to the daughter of the first dyad pair.

A co-coder, an NUS undergraduate, was then employed to code the interviews, also using Nvivo. This exercise sought to "ensure that different observers make the same interpretations of particular [codes]" (Seale, 1999, p. 41), thereby enhancing the reliability of the findings. As "coding involves regular review and revision of concepts" (Bazeley, 2013, p. 149), the draft coding frame was refined, based on discussions with the co-

coder. These discussions were done mainly in the early phase of the coding, and then again at regular intervals throughout (Bazeley, 2013). Moreover, these regular discussions guarded against “definitional drift” (G. Gibbs, 2007, p. 98) or concerns that coding towards the end of the study may unintentionally drift away from the definition prevalent for those coded at the beginning. For that reason, inter-rater reliability test was also performed, and presented, for R2 to R9 (the earlier interviews), and R39 to R43 (the later interviews), which accounted for more than 30% of the respondents. This method of comparing coding on a sample of the material is frequently practised (Bazeley, 2013; Kutner et al., 2008).

Two values were used as measures of reliability: *kappa* coefficient and percentage of agreement. *Kappa* coefficient has been widely used as a reliability statistics to measure the level of inter coder agreement (Creswell, 2011; Elliott & Woodward, 2007; McBurney, 2007; Wimmer & Dominick, 2011). While *kappa* coefficient is statistically more robust as a measure of reliability, percentage of agreement, which refers to “percentage of codes that are similar” (Creswell, 2011, p. 212), it has also been used as a descriptive and heuristic measure. Nonetheless, consistent with many studies, this study adhered to a minimum *kappa* of 0.75 for its reliability claims (Elliott & Woodward, 2007; McBurney, 2007; Wimmer & Dominick, 2011). The overall inter-coder reliability for the

qualitative phase of this study stood at a *kappa* coefficient of 0.8892 and percentage agreement of 99.2128%. As such, this study satisfied a pre-condition for subsequent validity claims.

The final sample fell short of the original target by two female FPS respondents, resulting in a final sample size of 43 dyads (including the pilot interviews); nevertheless, the coding process, which proceeded parallel to the recruitment process, showed that saturation was reached. While many studies have claimed that a sample size of 30 respondents would be adequate for a qualitative research design, the level of saturation was the more crucial factor in determining when to stop recruitment (S. E. Baker & Edwards, 2012; Hesse-Biber, 2010; Mason, 2010). Bazeley (2013) asserted that saturation point is reached when “the category can be comprehensively described...[and when] no new information is forthcoming” (p. 153). As this study had reached saturation point even before the 43rd dyad, the team ceased recruitment. This is also well above the recommended sample size for interview studies.

Due to some technical issues, the audio recording for R31M’s interview was corrupted, which likely occurred during the uploading and downloading of the digital file. As such, its data could not be used. Moreover, missing data were present in the Post Interview Survey as four parents were reluctant to share their age and/or employment status.

Epistemological issues, which “refers to beliefs about what we take to be true and what counts as knowledge” (Piantanida, 2009, p. 46) needed to be mentioned here, as it is the foundation of qualitative research (Bazeley, 2013). As parental mediation activities of the parents, and gaming patterns and responses of the child, are transparent to both parent and child, it posed no epistemological issue to code both parent and child responses. Moreover, this study’s purpose is to descriptively capture the activities for the purpose of conceptual development. However, where causal explanations are required, such as when coding the various factors that influence the application of parental mediation, only the parents’ responses will be used, as they would be the ones who would know better why they employed a certain method. Yet, some exceptions were made, especially when parents felt pressured, because of social desirability effects, not to reveal information. These exceptions are explained further in the analysis (Chapters 4 and 5). While parents are better placed to explain factors influencing parental mediation, the children were not as articulate or coherent in explaining or discussing the factors influencing their responses to different parental mediation strategies. In such cases, parents’ inputs were used to supplement the findings.

3.5.3 Presentation Process

The transcripts were edited for clarity, although care was taken to

ensure that “ what is removed does not appreciably alter the meaning of what was said” (Poland, 2002, p. 634). Relevant quotations are reproduced *ad verbatim* in Chapters 4 and 5 that discuss the findings. Interview questions that are relevant to the context of the presentation are occasionally included to enhance the comprehensibility of the quotes (Poland, 2002; C. A. B. Warren & Karner, 2005). Use of parenthesis “[]” and footnotes to clarify or elaborate on the quotes is consistent with academic recommendations (C. A. B. Warren & Karner, 2005). In the analysis chapters, underlined portions are used to highlight key points. The data is presented thematically (C. A. B. Warren & Karner, 2005; Woods, 1999), and follows the in-text format prescribed by the American Psychological Association (2010). While external generalisation claims were not the focus of this qualitative phase, this study sought to present the many codes within a concept, for several reasons. First, to demonstrate the wide-reaching responses held by different types of respondents, such as mothers, fathers, or boys and girls. Second, and more importantly, this study sought to comprehensively describe the concept (Bazeley, 2013).

3.6 Summary

This chapter has explained the use of home-based interviews and the research process that was undertaken. It has carefully documented

the sampling and recruitment, and data collection and analysis procedures to which this study has adhered, and the various attempts made to improve research validity and integrity. The next two chapters will discuss the findings of this qualitative research phase.

CHAPTER 4: PARENTAL MEDIATION PRACTICES

This chapter analyses the interview findings to address the following research questions:

RQ1: How is parental mediation practised?

RQ1A: What factors influence parental mediation practices?

RQ1B: What parental mediation activities are practised?

4.1 Interview Sample Characteristics

The final usable sample comprised 41 parent-child dyads. R1's and R31's data were omitted, as they would not yield dyadic information due to the difficulties mentioned in Chapter 3.

Table 2 (below) displays some key sample characteristics of the interview participants. Detailed profiles of each individual dyad can be found at Appendix D.

Table 2: Demographic Profile of Interview Participants

Parents	n	%	Median
Fathers	16	39.0	
Mothers	25	61.0	
Age			45 years old
Number of Family Members			5
Employed	34	82.9	
Unemployed	7	17.1	
Highest Educational Level			Diploma
Housing Type			5-Room Public Housing
Dyad Types			
Father & Son	13	31.7	
Father & Daughter	3	7.3	
Mother & Son	15	36.6	
Mother & Daughter	10	24.4	
Children			
Males	28	68.3	
Females	13	31.7	
MMORPG			
Male players (12-14 year olds)	6	31.6	
Male players (15-17 year olds)	6	31.6	
Female players (12-14 year olds)	3	15.8	
Female players (15-17 year olds)	4	21.0	
FPS			
Male players (12-14 year olds)	8	36.4	
Male players (15-17 year olds)	6	27.3	
Female players (12-14 year olds)	3	13.6	
Female players (15-17 year olds)	5	22.7	

Broad trends could be observed across the respondent pool that will provide a more nuanced context to the interview findings. The findings show that children typically play video games after school hours on weekdays and weekends, and during school and public holidays. The amount of time spent playing video games varied greatly across the respondent pool, from an hour a week, to several hours every day, and some others who play through the night. Some interviewees said they do not play at all during the school term, favouring weekends and school

holidays for extensive game play, affectionately termed by some children as “spam play”. The interviewees typically play at home, in the living room or in smaller, private rooms within the home, such as in their bedrooms or shared studies. Local Area Network (LAN) centres, at relatives’ and friends’ homes were also common locations for video gaming. The types of gaming devices used, which include personal computers, laptops and consoles (attached to TVs), depended on the gaming locality. While the child respondents did use mobile phones for gaming purposes, the phones were used primarily for other activities such as texting, watching videos, searching for information, and social media applications such as Twitter and Facebook.

The child respondents also revealed that over a time period of, say, a few weeks, they tend to play a combination of different MMORPG or FPS games, rather than focusing exclusively on any one game for a stretch of time before moving on to another game.

4.2 RQ1A: What Factors Influence Parental Mediation Practices?

The dyadic interviews explored the range of factors that influence parental mediation practices.

4.2.1 Parental Perceptions of Video Gaming

To begin, this section will describe the various perceptions parents have about video gaming. Parents’ perceptions about video gaming

cannot be neatly dichotomised into positive or negative perceptions, but lie instead along a continuum, depending on the extent of their concerns about this medium. The concerns that parents have about video gaming revolve around four dimensions: time, interactions, content and effects.

First, some parents believe video games provide a helpful tool for children to combat boredom, relieve stress and occupy their time:

R3M (45-year-old mother of 15-year-old FPS gamer boy): He plays quite often. We gather it's his way of relaxation.

R5F (45-year-old father of 13-year-old FPS gamer boy): I think it is the fun and excitement 'Cause previously we have our own house, so usually he will be alone at home for the day, so I think he is bored through the game, at least he spends his time...

R10M (45-year-old mother of 17-year-old MMORPG gamer girl): Because I know, because playing games also one kind [of] relief of the stress. So, I just let them go [play].

Yet, some parents viewed video gaming as a waste of time:

R10M (45-year-old mother of 17-year-old MMORPG gamer girl): They are playing game until their result, because you waste your time, you totally waste your time, I tell them. You still [have] so many years, you know, to enjoy your life. I say how come you don't want to...focus on your...studies, during your young time [youth]. Because time, once gone, is gone already.

R6M (42-year-old mother of 17-year-old FPS gamer boy): Nothing benefit from there [playing video games]. I don't see it benefit anything from there.

R20F (45-year-old father of 15-year-old MMORPG gamer boy): Every time we let you play, you just waste your time. So that's the reasons we gave him.

For many parents, their greatest anxiety is that video gaming negatively impacts their children's academic pursuits and achievements, as they believe that time spent playing video games displaces the child's

study time. This explains why parents favour playing video games on weekends.

R2F (48-year-old father of 15-year-old FPS gamer boy): Of course the hours that he spent playing the game, which could be used to maybe do his homework or his studies and other things.

R4M (40-year-old mother of 13-year-old FPS gamer boy): Usually I'll give them two hours for video games, then stop for one hour to rest. If they want to continue, I'll extend one or two hours. Have to see when it is. After examination time I'll give them more hours to play. If [it is a] normal schooling [period], I'll actually stop them from playing.

Beyond concerns about the negative impact on academic achievements, parents regard video gaming activities as having the deleterious effect of consuming time that could otherwise be spent on other beneficial activities, such as, family time and playing music.

R11M (42-year-old mother of 13-year-old FPS gamer girl): We realised that because of this gaming day [rule] right, we can't go out. We are stuck. And they don't want to go out. They just want to play games. So we don't have family time.

However, parents exhibit a more sanguine attitude when their children play video games with family members or relatives:

R11M (42-year-old mother of 13-year-old FPS gamer girl): I mean we are quite happy they [siblings] play together rather than alone.

Most parents held the view that time spent on video gaming could have been better spent, such as on activities which the parents deemed more beneficial to the child (e.g., studying, time with family, or playing music). While R10M viewed video gaming as a recreational activity that

relieves stress and uses it to keep her child at home, she also held negative perceptions that video gaming is a waste of time and negatively affects the child's scholastic achievements. As such, a sense of ambivalence hung over R10M's decision to moderate her child's video gaming usage.

Second, some parents felt that video gaming can serve as a tool for their children to socialise with friends.

R2F (48-year-old father of 15-year-old FPS gamer boy): So I won't say I like him to play, but I would say that I allow him to play because it is a good exposure. I mean, if he doesn't know how to play at all, I think, he will be, you know, he will look very silly when he goes to school and people talk about it, and he does not what it is all about.

R9F (45-year-old father of 13-year-old FPS gamer boy): Reason why I allow [video gaming] is that... it is something I think should maybe let them try and at least know what is video game about, so that it is something that they can socialise with their friends with....Means that he knows what the friends are talking about, when he meets friends and all that. I think there are some common topics or subjects that they talk to, maybe video games is one of them, so it is just for him to know what it is and experience it.

Yet, parents were also wary of online contacts formed during, or as a result of, video gaming, expressing, in particular, their concern that their children could be betrayed or cheated, or negatively influenced by these contacts.

R5F (45-year-old father of 13-year-old FPS gamer boy): Not so much on that, it is more on who he is playing with, whether is his friend or someone that he don't know. So long I know it is someone that you know is his friend, his classmate, I am not so worried.

R6M (42-year-old mother of 17-year-old FPS gamer boy): Those strangers, sometimes it's not all very good. Sometimes they will have vulgar words and then they will talk like the... XXX [referring to censored materials] like that.... The last time those friends that he's playing with is not... that good. In other words, it's not

very good company... But I think he come across a few times that [he was] betrayed by friends... I think [that's] he worst thing. Hurt by friends or something like that.

R12M (37-year-old mother of 15-year-old MMORPG gamer girl): I mean, being a girl, I'm worried that she [my child] mixed with the wrong company...

Third, parents in the study viewed video gaming as offering some measure of educational content, whether in the sense of skills picked up from playing the game, or learning from interactions with other gamers. Such benefits were recognised by some parents.

R5F (45-year-old father of 13-year-old FPS gamer boy): They will find out how to play the game, and how to be good in it, so it is something that will encourage them to do something.

Interviewer: Like they have a goal, they have a mission, and working towards something?

R5F: In that sense, it is good. Other than if they are spending too much time [on the game], then [that's] not good.

R6M (42-year-old mother of 17-year-old FPS gamer boy): For those [other gamers who are] like 20-over-years old... 23, 24, 26 like that, he [my son] told me that those friends that he is gaming or going out with...it's like they have different jobs. They have some sales [jobs] or are lawyers or something like that. ...because they [such acquaintances] can tell you more, what is life and things like that. Then he will learn from there.

R10M (45-year-old mother of 17-year-old MMORPG gamer girl): I think [it] is to develop their... logical thinking, and ability or capacity for... problem-solving, I think this is a good way...just enhance mental alertness, I understand the game normally [requires] skill for fast decision making.

R11M (42-year-old mother of 13-year-old FPS gamer girl): I think when she plays these games, [she develops] very good strategy. She's very quick to react.

R12M (37-year-old mother of 15-year-old MMORPG gamer girl): I would see that it teaches them how to trade.... How to barter trade, or even how to negotiate.

R19M (47-year-old mother of 13-year-old MMORPG gamer boy): There's certain things they pick up, certain vocab [vocabulary] or certain general knowledge that they pick up from there [video games].

Yet, some parents were especially concerned about the violent or sexual nature of game content, believing that such harmful content may

result in their children picking up or imitating those behaviours. Some parents were also distressed about content that promotes negative values, such as greed, or that goes against religious convictions:

R2F (48-year-old father of 15-year-old FPS gamer boy): I think there are a few things. One, of course is, depending on what kind of games he plays, if it is violent games, of course.... If he does play over a long period of time, it may cause him to react sometimes violently, in terms of, you know, the influence of the game.... Of course, not sure whether there are games that are...sexually explicit, or those type of games.... that [encourages] you to pick up all the bad valuesgreed....[to be] selfish, self-centred....or disrespectful to parents...

R3M (45-year-old mother of 15-year-old FPS gamer boy): Okay anything that's too violent. Anything that basically goes against the, say, religion or even our values, belief systems.

R8M (48-year-old mother of 16-year-old MMORPG gamer boy): Don't want them to see these types of...brutal... sexual... things. But those types of normal games, I don't mind. As long as not these types, because it will affect their mind.

R15F (47-year-old father of 16-year-old FPS gamer boy): I keep telling him all those are too violent.... All the Xbox games are too violent... all these are chopping, shooting, you know. Blood everywhere. I say it's too violent, so at the end will impact your mindset.

Fourth, parents maintained positive opinions about the effects of video games on their children. Some parents regarded video games as a childcare management tool that helps keep the children at home and out of trouble, and prevents them from mixing with bad company outside of the home. Parents also use video gaming as a reward or motivational tool for other desirable behaviours, reflecting their appreciation of the incentivising value of video games and its ability to keep them meaningfully occupied:

R4M (40-year-old mother of 13-year-old FPS gamer boy): Actually when they play, they won't fight. They'll just sit down there and play for one to two hours

with no violence, I don't need to control them.

R8M (48-year-old mother of 16-year-old MMORPG gamer boy): At least he play computer at home, I know that he's still at home. He doesn't go out and mix with those other friends that I don't know.

R10M (45-year-old mother of 17-year-old MMORPG gamer girl): I don't allow them to go out with friend, because you do not know, hanging out outside, what friends they mix with. You do not know, so that's why better let them stay at home.

R4M (40-year-old mother of 13-year-old FPS gamer boy): Because I force them to study, [and] after their studies, this is a gift for them to relieve their stress.

However, considering the long periods of time video gaming tends to consume, some parents are also concerned about its adverse effects on their child's health in terms of their eyesight, quality and quantity of sleep, as well as their general well-being.

R4M (40-year-old mother of 13-year-old FPS gamer boy): Usually I'll give them two hours for video games, then stop for one hour to rest. If they want to continue, I'll extend one or two hours.

R6M (42-year-old mother of 17-year-old FPS gamer boy): Yes. It's [sleeping routine] all messed up... I don't really like, because very stressful [to] the eyes.

R12M (37-year-old mother of 15-year-old MMORPG gamer girl): You know sometime you can't stay in front of the computer screen for too long, is not good for your eyes... Because she won't have enough sleep, she has to get up like, 5 [am].

R15F (47-year-old father of 16-year-old FPS gamer boy): I talk to him and say 'All these will impact your health because you sleep so late. And then, when you play games, your nerves are very intense you know.'

Moreover, other than diminished concentration on their studies, parents were also concerned that the prolonged attention and focused concentration that video gaming demands of the player could affect other aspects of the child's behaviour as well. Several parents complained that

their child's absorption and immersion in games had made them boorish and rude, which was another negative perception parents hold about prolonged video gaming:

R6M (42-year-old mother of 17-year-old FPS gamer boy): When you keep on asking him to go and eat, eat, eat, then he will [imitates son's shouting] "Arrrrhhh" then he blow his top. He become very easily get agitated, very angry, then keeps on [imitates son] "Nag nag nag. Don't nag at me" this and that. [Imitates son] "You see, you talk to me I die [in the game] already." Something like that. That's very bad [behaviour].

R8M (48-year-old mother of 16-year-old MMORPG gamer boy): I find he's very impatient type. Because the way I see him playing, because sometimes I talk to him, I ask him something, [imitates son] "Don't talk to me! Don't talk to me!" Very excited. [Imitates son] "Don't talk to me! I said don't talk to me!". When he's playing and you talk to him, he's very agitated. Like you cannot talk to him when he's playing, then he will be very angry.

R9F (45-year-old father of 13-year-old FPS gamer boy): What do I dislike ah? I think that this gaming thing is something where he gets very antisocial when he gets too addicted. That means it becomes the main and only activity that he does and nothing else, so he [is] completely cut off from what's going on... oblivious of what's going on.

R11M (42-year-old mother of 13-year-old FPS gamer girl): Because some games can be quite violent. And ...very exciting, and then... they are very agitated. And then, it's like non-stop, and then they don't take dinner. Really you know. Sometimes, they really forgot their dinner. So we told them it's time for dinner, you have to stop, pause and then they can continue... We actually discussed and we find that Saturday is the only ideal time. Because Sunday is actually to prepare the next day's lesson. So we don't want them to be so engrossed, and then they can't sleep well over the night. Because sometimes after playing they got this leftover residual [effect], you know. Then, they can't sleep well, then the next day they wake up on Monday they will [be] haywire. So we think Saturday is the ideal time lah.

Additionally, most parents do not want their children to spend money on video games, which was why free games were most commonly allowed.

R10M (45-year-old mother of 17-year-old MMORPG gamer girl): Just don't play with money. I [do] not allow to... She always download those free games.

Besides illuminating the various perceptions that parents hold, the findings also show that parental perceptions of video gaming have some measure of influence on the mediation strategies used. Typically, this study noted that negative perceptions of video gaming elicit concerns among parents and result in mediation processes that seek to limit the negative impacts on the child. Accordingly, positive perceptions of video gaming tend to be reflected in greater permissiveness towards video gaming. Parents who do not hold negative perceptions tend not to impose restrictions on the child.

R4M (40-year-old mother of 13-year-old FPS gamer boy): At the moment, I don't think so. Because I haven't heard about any games that got problems with kids so I won't control them too much.

In light of concerns about their child's academic performance, parents typically practise some form of gatekeeping, restricting usage to certain time periods and limiting the game play duration. Some use their child's academic grades as a gauge: if their grades are poor, parents typically exercise more restrictions and monitoring. Yet, recognising that video gaming offers their children an avenue for relaxation, parents tend to allow for more extensive game play after they have finished their examinations.

R2F (48-year-old father of 15-year-old FPS gamer boy): During the normal curriculum of the academic year, he is not allowed to play except for school holidays.

R7F (53-year-old father of 17-year-old FPS gamer boy): It gives him an outlet to relieve stress and I don't think it is right for us to totally restrict him.

R3M (45-year-old mother of 15-year-old FPS gamer boy): We monitor his studies, so far he's been okay. I mean of course there's a condition, if he doesn't do well, then we tell him that we may have to withdraw certain privileges like time on the computer.

Parents sometimes impose time limits out of concern for their children's health:

R17M (42-year-old mother of 13-year-old FPS gamer boy): I think it's about four hundred plus degrees [referring to her child's eyesight]. So, have to control [the video gaming usage] a bit.

Content concerns have prompted parents to use discussions and technological means to monitor and manage children's exposure to video games.

R2F (48-year-old father of 15-year-old FPS gamer boy): Those that involve too much violence... promoting bad values, you know, have spiritual connotations, sexually explicit and whatever those things. Then we will tell the child, you know, not to get exposed to those games.

R3M (45-year-old mother of 15 year old FPS gamer boy): I think not now, but earlier on we had some... parent thing to keep track of. Some website.... Website where they'll control where he goes to. But I think we've gone past that stage already because we were a bit concerned like, they might go and hit a pornographic website.

Other parents impose rules about online interactions out of concerns about possible negative socialisation.

R6M (42-year-old mother of 17-year-old FPS gamer boy): But besides that, no gaming friend is allowed to stay overnight. Because he used to have gaming friends down here. They have got three, four sets of computers here. Then they [for the] whole night, they will just [sit] down here gaming all this and that.

Discussion

First, the perceptions parents in this respondent pool hold largely cohere with prior studies (Khoo, 2012; Kutner et al., 2008; Oosting et al., 2008; Shin & Huh, 2011; Skoien & Berthelsen, 1996; Skoric et al., 2009). The findings indicate that, while parents do appreciate the benefits of video gaming, it also suggests, consistent with prior studies, that parents are mainly concerned that prolonged video gaming could result in displacement of time intended for homework or studies. However, some parents noted that they sometimes used video games as a childcare management tool and reward, in hopes it would motivate the child to exhibit other positive behaviours. In sum, the interview findings indicate that parents hold mixed views about video gaming, and their perceptions of video games are characterised by a sense of ambivalence. This equivocal position stems from parents' simultaneous appreciation of the benefits and costs of children's video game play, and has also been noted in other studies of children's ICT use (see, for example, S. S. Lim, 2008; S. S. Lim & Soon, 2010) and video gaming mediation (Oosting et al., 2008). Their perspectives vary with the season and duration of play, with whom the player (child) is interacting, and the type of content.

Second, Chapters 1 and 3 highlighted the theoretical motivation for

exploring two game genres, MMORPGs and FPS games, in part because of the moral panics of addiction (MMORPG) and violence (FPS) surrounding these game types. However, the finding was not conclusive, as parents in this study did not identify a positive link between their knowledge of the effects of specific game genres and their intended mediation practices. There are several possible reasons. First, as suggested by Eklund & Bergmark (2013), parents are not familiar with genre classification and, as such, were not able to attribute or use it for mediation purposes. Second, parents in this study mediate consistently for all games their children play. Third, the children play many different games within the same season, and do not limit themselves to any particular game or genre; hence, for practical reasons, parents tend to mediate consistently for all genres of video games, instead of adjusting mediation strategies according to the game. While it was necessary to sample these two game genres for the purpose of qualitatively investigating the range of parental mediation strategies applied, future studies could ignore this requirement. As such, this study removed this sampling requirement in its quantitative phase.

4.2.2 Parental Perceptions of the Child

The interview findings revealed that parental perceptions of the child influence the nature and extent of mediation that parents apply.

These are perceptions that focus specifically on three aspects: the child's capacity for self-regulation (as manifested in their ability to manage video game play), the child's general level of maturity, and gendered expectations of the child.

Recent studies (Eklund & Bergmark, 2013; Nikken & Jansz, 2013; Shin & Huh, 2011) have consistently found that younger children are subjected to more mediation than older ones, and have attributed the findings to the increased independence and autonomy accorded to older children. Yet, from this study's respondent pool, it was found that notions of independence and autonomy seem to be characterised by two aspects. The first aspect is the parent's trust in the child's ability to handle his/her video gaming use, such as whether the child demonstrates self-control, and knows when to stop playing. The second aspect is that parents seem to attach certain expectations on children as they grow older and, as such, the extent and frequency of parental mediation tend to be inversely proportional to the child's age.

First, it was found that trust and confidence in the child's ability to handle the perceived negative aspects of video gaming typically resulted in decreased mediation engagement for some parents. For example, the child's ability to distinguish between real and virtual worlds helps allay parental concern about violence in video games:

R9F (45-year-old father of 13-year-old FPS gamer boy): I think for him, I can understand that he can understand that it's just a game. So I'm okay [for him to play video games].

Trust in the child's ability to handle mature or negative content also resulted in lowered parental monitoring activities and restrictions:

R3M (45-year-old mother of 15-year-old FPS gamer boy): But I think we've gone past that stage already [where we monitor him] because we were a bit concerned like, they might go and hit a pornographic website. But it doesn't appear to be an issue with both my children. I mean we have trust, complete trust in them.

R41M (43-year-old mother of 16-year-old FPS gamer boy): Actually now is not so much of supervision, it is more of trust and actually we allow him to have the freedom himself because even though he is not using the computer.

R39M (36-year-old mother of 15-year-old FPS gamer boy): It's just something that I don't like to be controlled. The more I control, the more it'll be bad. I just I would rather trust them. But if I know something is not right, I would go back.

A parent who did not set any rules for his child trusted his child to know how or when to exert self-control and manage his time.

R7F (53-year-old father of 17-year-old FPS gamer boy): I tell him that he has to manage his time well and not be addicted. It's okay to play, but he has to have good time management. He has self-control though, and I like that. He knows how to set a specific period for playing video games.

The reverse was also revealed: parents who felt that their children are unable to control their video gaming are more likely to adopt more restrictive measures.

R6M (42-year-old mother of 17-year-old FPS gamer boy): Because he cannot control himself. He always told me that he cannot control himself, so he needs somebody to control him. That's why I have to help him to control himself.

R4M (40-year-old mother of 13-year-old FPS gamer boy): For my elder son, we will control him lesser. Because now he's in [Secondary] One already. We try to say like, you're a teenager already. You try to control yourself. Don't make us

control you. So I will be a bit lenient to them.

A parent's lack of trust in the child's ability to handle social interactions could also result in increased parent-child discussions on that issue:

R6M (42-year-old mother of 17-year-old FPS gamer boy): Because he is somebody who don't know how to reject. His character is somebody who don't know how to say "no". He will never say "no", that's why I always say I must help you to say "no". I always tell him, you must learn how to say "no" to somebody.

Parents of hyperactive children tend to pay special attention to their child's needs, which also determines parental mediation strategies. Often, parents would not trust their child with certain games. One parent restricted video games that are too engaging (R12). Another parent chose to restrict the amount of time her son was allowed to spend on video games, because he had been diagnosed with Attention Deficit Hyperactivity Disorder (ADHD) (R8).

R12M (37-year-old mother of 15-year-old MMORPG gamer girl): This game maybe is too active, not suitable for hyperactive kids, maybe.

R8M (48-year-old mother of 16-year-old MMORPG gamer boy): But for him, because he has ADHD so he cannot concentrate studying. If he don't study, we don't know what he can do.

As such, while the study seemed to confirm that parents are more likely to allow their older children more independence, the parent will mediate if they have reason to believe that the child has abused their trust.

This suggests that parents place trust in their children's ability to manage their video gaming habit as the primary and most appropriate explanation for the independence granted to the children:

R10M (45-year-old mother of 17-year-old MMORPG gamer girl): Because as long as you can manage your study, you can cope well with your study, okay. I'll close two eyes. Is not close one eye, I close two eyes... Because I know you are self-disciplined. Now you are, I mean, independent, know how to control, how to manage your time, I close two eyes.

R24F (40-year-old father of 17-year-old MMORPG gamer girl): As I told you, I, I mean I trust my kids, they should know what they suppose to play and [where they are] going to, I mean they are old enough to decide for themselves and to do what they like.

Second, as children grow older, parents tend to hold certain expectations, while at the same time decreasing intervention on their children's media habits, out of respect for their children's privacy.

R12M (37-year-old mother of 15-year-old MMORPG gamer girl): I do respect her privacy a lot, so I don't look at her phone, I don't know what's her password on her phone.

R11M (42-year-old mother of 13-year-old FPS gamer girl): We know that they want the time to leave them alone. We will not disrupt them [during their video game time] by asking them to do other things. We respect their privacy, they also respect our privacy.

One parent placed less restriction on her child's use of the computer when his school required that students use computers to complete their homework and assignments.

R41M (43-year-old mother of 16-year-old FPS gamer boy): Because I guess he is older and we are more busy with our own schedule to remember to keep that give it [password] to him and because he also need the PC [personal computer] for some of his work so we left it there.

Moreover, over time, children are expected to be familiar with their parents' requirements and rationales on their video gaming consumption, and parents would reasonably expect to discuss or negotiate less on these matters.

R12M (37-year-old mother of 15-year-old MMORPG gamer girl): So, you are actually, after secondary school, you are going to tertiary or even junior college, you are considered a teenage already, so you must know how to think, and you must know that too much of these is not good for your eyes as well and you should actually put your homework as priority, even after you finished your homework, by right you should revise. Don't force me to do anything that you are not, that you are not happy with.

Yet, a father said he spends more time discussing with his child, now that his son is mature enough to understand the discussion topic:

R15F (47-year-old father of 16-year-old FPS gamer boy): I think he can understand now. That's why depends on the maturity. Like now, he is more mature, so he kind of understands what I'm trying to tell him.

Third, parental perceptions of their children vis-à-vis their video game play also appear to be influenced by the child's gender; specifically, parents' understanding of gender norms with which the child should accord. Prior studies also found that gender stereotypes may result in increased mediation (Eklund & Bergmark, 2013; Nikken & Jansz, 2003, 2006, 2013). Similarly, the interview findings showed that parental mediation strategies are influenced by parental perceptions of gender-

appropriateness, i.e., whether various aspects of video games are suitable for particular genders and the distinct vulnerabilities of each gender.

Vulgar language used in video games was deemed acceptable, and possibly even beneficial for boys' development, but not so for girls:

R14F (42-year-old father of 13-year-old FPS gamer boy): Actually, personally, I'm okay [with the vulgar language used in video games]. Because... being a man... he should know—he ought to know all this kind of languages [vulgarities].

R37M (42-year-old mother of 14-year-old FPS gamer boy): But for the girl I always tell her just to be more aware of the language that the guys or someone else [use] that you not familiar with. Because the boys I think is lesser issue here. Women... I mean girls are... I am more careful about it [watching over girls' language].

The acts of aggression required of video game players are also thought to be fine for boys, but not for girls, although such parental stereotyping was not always welcomed by the girls that were interviewed:

R12G (16-year-old MMORPG gamer girl with 37-year-old mother): But, she [my mother] will actually tell me, "What are you doing playing this kind of games [MMORPG]? You are a girl."

R43G (15-year-old FPS gamer girl with 53-year-old mother): They are like "You are girl. You should not be playing these games [FPS]". But I think that's wrong. That's sexist.

However, there are gender stereotypes surrounding not only the gender-appropriateness of video game content, but also the distinct preferences that boys and girls have with regard to the games they play:

R29M (41-year-old mother of 14-year-old MMORPG gamer girl): For girls, probably the games that they play are very mild. All the kiddy-kiddy, very cute games.

R20F (45-year-old father of 15-year-old MMORPG gamer boy): Because boys

are very different from girls. So my girls... apparently, they are just not interested in those too violent games. But boys are different. They like the adrenaline. So boys may need more restrictions.

Parents also hold gender stereotypes about their children's

compliance:

R13F (50-year-old father of 16-year-old MMORPG gamer girl): They [girls] normally obey. Sometimes she ask, "Can we play game or not?" Especially she. But the guy [his son], he seldom asks [for permission]... Girls, easy.

Discussion

Concurring with Livingstone & Helsper's (2008) claim that parents' perception of the children's maturity influences parental mediation of Internet use, this study has revealed evidence of the influence in the video gaming sphere. Additionally, this study's parents have highlighted distinct aspects of trust that motivates or de-motivates parental mediation. While prior studies (Eklund & Bergmark, 2013; Nikken & Jansz, 2013) sought to explain why girls were more likely to be subjected to mediation (Nikken & Jansz, 2003, 2006), this study found possible explanations beyond the fact that boys play more often than girls.

4.2.3 Parental Challenges

The evolution of video games has imposed challenges on parental mediation (highlighted in Chapters 1 and 2) and the interview findings demonstrate that parents have had to adapt their mediation strategies

accordingly.

First, some parents simply lack the competency to play games and this has impact on co-playing as a form of mediation.

R3M (45-year-old mother of 15-year-old FPS gamer boy): I tried *MapleStory* but I didn't go very far. That was a first attempt and the last. He even helped me create a character. I wanted to.... It's just too fiddly, like controlling the characters with the backward forward, it's just too much for me.

R4M (40-year-old mother of 13-year-old FPS gamer boy): Sometimes I'll pop in, try to play with them [to monitor them]. But their game is more complicated. So for a while, I'll just, say okay you all ownself play [play by yourselves]. I don't like these type of games. I'll join them to know what they're playing. But it's not my interest. So after awhile, I'll pop out and say, "Okay you all continue."

R16F (49-year-old father of 13-year-old MMORPG gamer boy): Can't understand actually. What you are supposed to do? Last time at least I have the control [manual]. Now doesn't, you know. Now it's not just the alphabet, [you] must do this, must do that, you know. Do so many things at one go.

Without the competency to understand the game, let alone play it, parents' ability to talk to their children about video games and to engage in active mediation is severely impeded.

R19M (47-year-old mother of 13-year-old MMORPG gamer boy): I do wish that I could understand or play the game better. Understand and play the game. And maybe I can relate to him better.

R37M (42-year-old mother of 14-year-old FPS gamer boy): That's what I said. I did ask him like what's this game and all, but he explain already I am like still don't understand, I said okay never mind.

When asked if not knowing the game was an issue in parental mediation, a parent replied:

R13F (50-year-old father of 16-year-old MMORPG gamer girl): Yes, very difficult. At one stage, I really give up on him [referring to his son].

Second, the amount of available time affects the ability of parents to

engage in monitoring, co-playing, or active mediation. It also affects the ability of some parents to pursue other healthy alternative activities with the child, as illustrated by R5's experience:

R5F (45-year-old father of 13-year-old FPS gamer boy): No. I think I need to set some rules. But whether he follows or not, I don't know. Because he will be at home, I will be at work. So it is all up to him to whether he wants to follow.... At least I can play with him, at least I know what he is doing. After a while, I mean I don't have so much time to play with him.

R5F (45-year-old father of 13-year-old FPS gamer boy): I am not sure. He may like to do some other things, but it is just that...he is always alone...and by the time I come home it is like evening, so not much we can do.... There is one period we use to fix like every Thursday we go for a run, but that only lasted for a short period, and because of my work all these.... Hopefully, some of the days I can come back earlier. One would be like going jogging. And maybe other things would be like just spending time with him, talking with him. Just to know what is going on around him, his school, what kind of friends he is mixing, what kind of topic they are talking, because some times when they use certain short term [abbreviations], you don't know what is that?

The lack of available time is another factor in parental mediation.

Some noted that lack of time cramped their ability to apply restrictions on the child or monitor the child's video gaming activities:

R13F (50-year-old father of 16-year-old MMORPG gamer girl): On the parents' side, we try to stop [the child from buying video games], but of course we are all working. My wife's working, I am also working. Last time we also travel overseas. My job required me to travel. For the last 5 years, I travelled quite extensively. Then cannot control my son [referring to his son]. In the end, he over-control us.

R42F (46-year-old father of 17-year-old MMORPG gamer boy): Hard [to monitor video gaming habits], because we are all working. The only time that we see them is when we are off work, weekends, and during day times, they finish school, they come back, we are not in.

R20F (45-year-old father of 15-year-old MMORPG gamer boy): Lack of time for parents to supervise their kids.

R21F (46-year-old father of 16-year-old FPS gamer boy): I don't watch that, I simply got no time.

R27M (46-year-old mother of 13-year-old MMORPG gamer boy): I really [have] no time to go and monitor.

Third, the parents' level of technological competence also affects the mediation strategies they can apply, especially the use of technological mediation tactics. One father had to decrease his monitoring strategies for that reason.

R2F (48-year-old father of 15-year-old FPS gamer boy): We...checked his so called...what you call that? History. History. From history, we can see where did he go [online], you know, which website did he go, you know. So...we did, of course now he is smarter, he erase all his history. Unless I am good enough to go to the cache. I am not IT [technologically] savvy enough to go to the cache and check where he goes....I wish we knew [how to use technology], but we don't.

As this father's plaintive lament indicates, his lack of game and technological competency has undermined his application of technological methods. The hindered deficit of such competencies also compromises the effectiveness of parental monitoring, as children are able to engage in evasive technological tactics. As such, the technological sophistication of video games and the complexity of the online environment exceed the capabilities of many parents, and they find their "traditional roles as teachers, guardians, decision-makers and gatekeepers challenged" (S. S. Lim & Tan, 2004, p. 57).

Discussion

Prior studies (Nikken & Jansz, 2006; Nikken et al., 2007; R. Warren, 2001) have hinted that available time may influence parents' mediation choices. This study found possible evidence of this relationship. The

findings also provide possible evidence of Livingstone & Helsper’s claim (2008) that “Internet-skilled parents were more active mediators of their child’s Internet use” (p. 592) may apply also to the video gaming sphere.

4.3 RQ1B: What Parental Mediation Activities are Practised?

This section describes the various parental mediation processes that parents employ, including gatekeeping, diversionary, discursive and investigative. These terms were developed after the first five pilot interviews, and through extensive discussions with the research team, comprising the researcher and his supervisors. While the overall inter-coder reliability had a *kappa* coefficient of 0.8892 and percentage agreement of 99.2128%, it would be useful to observe inter-coder reliability for each of the newly developed concepts. As such, the inter-coder reliability is highlighted below (Table 3) for the newly developed concepts, and their conceptual definitions used in this study.

Table 3: Coding Results for Parental Mediation Processes

Mediation Process	Conceptual Definition	Kappa Coefficient	Inter-coder Agreement (%age)
Discursive	Consultative behaviours to arm the child with necessary thoughts/values to deal with positive/negative effects of video gaming.	0.8071	98.4219
Diversionary	Parental practices intended to divert the child away from video gaming.	0.7541	99.4100
Gatekeeping	Allowance or restrictive practices placed directly by the parent to manage the flow of video gaming input to the child.	0.8065	98.2415
Investigative	Behaviours that serve to inform the parent in order for the exercise of parental mediation practices. These behaviours include finding	0.8559	98.7012

	more information about the game and/or its effects and the effectiveness of mediation processes applied.		
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The term “process” is used to denote a series of mediation activities that parents employ. The findings suggest that when parents exercise mediation, they tend not to utilise any one particular mediation strategy in isolation. Instead, they engage in a concurrent application of multiple mediation tactics that may be further complemented by other strategies in “fluid” (Nikken & Jansz, 2013, p. 15) application. This finding is consistent with prior studies (Livingstone & Helsper, 2008; Nikken & Jansz, 2006) that also found that parents that typically employ a mix of mediation methods.

4.3.1 Gatekeeping Processes

The parent respondents were avid users of the gatekeeping approach. Gatekeeping refers to the latitude or controls that parents exercise to directly manage their children’s exposure to media. These specific controls, which parents impose on their children’s video gaming experience, can be seen in rules and restrictive practices, approximating the restrictive mediation approach that is commonly mentioned in literature.

The interview findings show that the gatekeeping process manifests itself in the following ways. First, parents have rules for *when* the child can play video games. Typically, the parent respondents favour video gaming during school holidays or after the school examinations. During the school

term, rules are typically imposed for children to play during weekends, or at specific times, and not too late into the night on weekdays. Second, these parents typically set limits on the duration of video game play. These limits are typically raised during holidays, after school exams, or on weekends:

R2F (48-year-old father of 15-year-old FPS gamer boy): During the normal curriculum of the academic year, he is not allowed to play except for school holidays... And then also the, like normally the last [test/exam] paper of the CA1 [continual assessment], or SA1 [end-of-semester assessment] or CA2, SA2, then we normally let him play, some hours like four hours... Because it is the last paper of the exam, so normally he comes back to de-stress by allowing him to play.

Some parents in this study preferred to use software technology to control media consumption, such as through the use of passwords and filters, and hardware technology, such as hiding certain game devices components (power cable and Internet modem etc.), believing that this gives them better control of their children's video game consumption:

R4M (40-year-old mother of 13-year-old FPS gamer boy): Yes. Because all the computers, I actually shut out with password.

R6M (42-year-old mother of 17-year-old FPS gamer boy): But we once...we sort of [turned] off the Internet modem.

R9F (45-year-old father of 13-year-old FPS gamer boy): Sometimes, I tend to feel like he is playing too much then I will stop him also. One of the ways in which I try to control is that I also try to... hide the controller, is that what you call?

R11M (42-year-old mother of 13-year-old FPS gamer girl): Because we also set password also for them. So after 9 o'clock, there's no way they can access in with their password. We use the password to control their time on the computer.

Third, some parents tend to require that certain obligations be

completed prior to video gaming, also referred to as behaviour contingency. Typically, children are required to complete their school work, have their meals, and shower before playing with video games:

R11M (42-year-old mother of 13-year-old FPS gamer girl): Every Friday they must complete their homework. Their homework they must complete. So...that's their school homework only... Then, they can only play on weekend, on Saturday.

Fourth, the parent respondents have rules on those with whom the child can interact during video gaming. Typically, playing with strangers and friends who are known to be compulsive gamers is forbidden, but gaming with relatives and family members is encouraged:

R2B (15-year-old FPS gamer boy with 48-year-old father): And also depending on the type of friends that I have... like if my friends are...those kind of like more compulsive gamers, then they won't allow me to play with them.

R12M (37-year-old mother of 15-year-old MMORPG gamer girl): Yes, I was [glad that the husband and son were bonding].

Fifth, the parent respondents have certain content restrictions for video games their child plays, often prohibiting games that are too violent or not age-appropriate:

R10M (45-year-old mother of 17-year-old MMORPG gamer girl): Try to self-discipline and then don't play those just now I mentioned, the three types games...[violent,] porn and bloody... the rest, okay, up to you.

Sixth, parents seem to be apprehensive about spending too much money on video gaming and, as such, forbid their children to purchase

video games and, at times, in-game equipment as well:

R13F (50-year-old father of 16-year-old MMORPG gamer girl): Usually I advise them, those online games [that] you have to pay [for]...don't play.

While the Gatekeeping Process mainly captures the restrictive practices imposed on the child, it also encompasses strategies that open the “gate” to allow for video gaming under particular circumstances. In other words, gatekeeping processes allow parents to directly intervene in the relationship between video gaming (media) and their children, by opening and closing the “gate” to relax and constrict the media flow.

Notably however, and consistent with prior literature (Kutner et al., 2008; Nikken & Jansz, 2006; Oosting et al., 2008), this study found no evidence of parents pro-actively encouraging their children to play video games; none of the parents in this study encouraged their children to play more, or to even begin playing video games. Rather, it was more a case of allowing the child to play, by relaxing the rules on when they are allowed to play, and for how long. Such relaxation of restrictions was also motivated by an appreciation that their children would be disadvantaged in peer socialisation if they were completely in the dark about video games.

However, the practice of gatekeeping is highly nuanced. The parent-respondents varied in their emphasis on or enforcement of restrictions, with some using corporal punishment to ensure adherence, to

the preparation of written parent-child contracts. On the other extreme, there were parents who preferred a laissez faire approach.

R10M (45-year-old mother of 17-year-old MMORPG gamer girl): Yes, I use [a] cane [to enforce the rules].

R6M (42-year old mother of 17-year-old FPS gamer boy): Then later when it come to black and white, it's more like officially that you have to keep to this rule. You have a copy, I have a copy, both of us sign, my husband signs, three persons sign, everybody signs. Then, it's just like a contract between us.

R18F (44-year-old father of 13-year-old FPS gamer boy): So as long as he obeys the rules, we are quite easy on him. Sometimes if he exceeds a bit, we are [still] fine.

R13F (50-year-old father of 16-year-old MMORPG gamer girl): I don't really control. Frankly speaking, to me, I don't want to control, like, when you can eat, when you can sleep. So usually I give them [my children] a guideline.

R5F (45-year-old father of 13-year-old FPS gamer boy): I think the main thing is I didn't really enforce it.

Discussion

Prior parental mediation studies (see earlier discussion in Chapter 2) have documented parents imposing restrictions on their children's media behaviours. However, this concept needs to be broadened to include various nuances, such as the measure of specificity on the rules, and the degree of consequences involved. While parents have certain ideas about how much time their children should be spending on video games, they tend to communicate it as a guideline rather than as a rule. Moreover, some of these 'rules' may not result in any consequences when violated. Therefore, it is termed as 'gatekeeping', which describes the dimension of allowance or restrictions placed directly by the parent to

manage the flow of video gaming input to the child, to convey the notion that various nuances are present in parents' imposed restrictions.

While Eastin et al.'s study (2006) singled out technological mediation as a stand-alone strategy for management of Internet use, this study subsumed the use of technological means to manage video gaming consumption under gatekeeping. A few reasons led to this decision. First, there is no theoretical motivation to single it out of the gatekeeping concept. Second, the use of technological means as gatekeeping would enhance parental mediation theory's parsimony, and would also be consistent with many other video gaming mediation studies (Eklund & Bergmark, 2013; Gentile & Walsh, 2002; Kutner et al., 2008; Nikken & Jansz, 2003, 2006; Nikken et al., 2007; Oosting et al., 2008; Shin & Huh, 2011; Strasburger, Wilson, & Jordan, 2009).

4.3.2 Diversionary Processes

The practice of diversionary processes emerged from the interviews, wherein parents engage in mediation activities that enabled them to intentionally direct their children away from video gaming. Through this approach, parents encourage their children to pursue alternative activities, typically those that are deemed more healthy, wholesome, pro-social, or beneficial. These activities include going outdoors, participating in the school's Co-Curricular Activities (CCA), reading books, playing musical

instruments, bonding activities with family members, after-school tuition classes and sports.

R2F (48-year-old father of 15-year-old FPS gamer boy): Yes. I mean it is something he likes, and it is something we think that is... healthy curriculum, it is a healthy CCA... It is not looking at the screen and playing these types of games.

R5F (45-year-old father of 13-year-old FPS gamer boy): When you spend time on other things, it will cut down the time that he has for his gaming.

R7B (17-year-old FPS gamer boy with 53-year-old father): They [parents] will prefer me to go out and exercise then to stay at home and use the computer.

R8M (48-year-old mother of 16-year-old MMORPG gamer boy): My husband got ask him to form a music group. "You go and form a music group. It's better for you [than playing video games]!"

R12M (37-year-old mother of 15-year-old MMORPG gamer girl): I brought up once, twice or three times that do you want to learn hip-hop dancing, maybe I also can learn with you, so that at least bonding is there, you see? Yes, and she can exercise at the same time and I would think that's a healthy exercise, and it also brings her away from the computer.

R13F (50-year-old father of 16-year-old MMORPG gamer girl): When we find that she's so addicted to the phone or games, so usually we would try to bring her out to do some outdoor activity. Play some games... badminton games... Or encourage her to meet up with my nephew.

As these parents' views evince, they tried to divert their children's attention from video games by actively encouraging alternative activities that were more positive and edifying.

Discussion

This study proposed the concept "diversionary processes" to refer to practices intended to divert the child away from video gaming.

Alternatives, such as sports and religious activities, have been widely known in parenting literature (Holden, 2009b; Sclafani, 2004) to be used to steer children away from harmful behaviours, but such a construct is not

present in the parental mediation literature. The interview findings show that some parents have intentionally diverted their children away from video gaming, so as to limit their consumption. These children are intentionally diverted to other activities that are deemed a better use of their recreational time, such as sports, exercise, reading, family bonding and outdoor activities. As such, this study argues that diversionary process is an important concept in the parental mediation theory, providing relevant description of how parents manage their children's video gaming consumption.

4.3.3 Discursive Processes

Some of the parent-respondents also made it a point to discuss issues related to video gaming with their children as a way of managing their children's exposure to the medium. This discursive approach is marked by various characteristics.

First, parent-child discussions are usually initiated by the child and typically centre on whether to buy video games or in-game items that involve actual financial outlay. Such discussions appear to be well accepted by families:

R2F (48-year-old father of 15-year-old FPS gamer boy): Those he download from Internet, I guess...he decide on his own... Those that he buy of course is in consultation.

R3B (15-year-old FPS gamer boy with 45-year-old mother): It's like I find the game which I want, I'll ask my mother. My mother will ask my father, whether he allows it. And I'll have to wait till my mother feels it's the right time, then she'll pass me, not pass me, she'll come over to the computer and type in her credit

card details and then she'll let me purchase it and then I'll download it.

Beyond just assessing the suitability of purchasing particular video games, parents have also used these opportunities to dispense financial wisdom to their children:

R15F (47-year-old father of 16-year-old FPS gamer boy): Now, because he got savings, he will just tell me 'I want to go buy game'. Then sometimes I say 'The game is so expensive. Why not you just go for second-hand shop get the same title for half price. Or maybe you can share among with your friends... A few guys buy and then you all can pass around'. Now, he starts doing all those things.

Second, the content of the video game is frequently discussed.

These discussions typically occur when parents notice unhealthy content elements in the video game:

R4B (13-year-old FPS gamer boy with 40-year-old mother): Actually it's like, whether my brother agrees with it [the game to purchase] and I agree with it. Then after that it's like going through my mother, like whether the game is too violent or we'll get addicted to it.

R4M (40-year-old mother of 13-year-old FPS gamer boy): No, because when they play the game, they'll tell me what is this game...what is it like. They'll actually explain to me what they are playing. So I think that, if the game [does not have] too much violence, I'll let them play.

R5F (45-year-old father of 13-year-old FPS gamer boy): I didn't really like talk to him about this...I watch over it [the game]...and if it is too violent...then I will just talk to him.

Parents also highlight to their children the negative values that some games promote:

R39M (36-year-old mother of 15-year-old FPS gamer boy): I said that one [*Grand Theft Auto*] is not a very good game 'cause it teach you all the wrong ideas and the language is bad, and the idea is that you're supposed to knock down policemen to get points for knocking down policemen and the more you steal the

more you win. I think the logic is all wrong. He said it's just a game but I said it's a game but still not right...

While some discussions were a reaction to a parent's discovery about games, or arose during acquisition and purchase, some parents were proactive about broaching discussions about video games with their children, so as to inculcate them with the right values. For example, despite one father's lack of understanding about game content, he proactively taught his child about proper attitudes to adopt towards sex, violence and religious beliefs.

R2F (48-year-old father of 15-year-old FPS gamer boy): Because...as parents...we are not familiar exactly with all the different games, and then...what each game is all about, so we go by more a general kind of way of telling our child what they can play and what they should not play...So the... the same principles as I said earlier, you know, those [games] that involve too much violence, or...you know, too much, if there is any, promoting bad values... have spiritual connotations, [are] sexually explicit and whatever ... Then we will tell the child, you know, not to get exposed to those games.

Some parents also shared that they used high-profile incidents to teach their children to distinguish between the virtual and the real:

R10M (45-year-old mother of 17-year-old MMORPG gamer girl): Because I understand nowadays the children do not like to read newspapers, so I'll tell them the stories from the newspaper. So, they'll slowly... sometimes I understand they slowly pick up from my stories... [I] just tell them...the game I say, is fake...real life is totally different.

Third, parents also discuss issues related to interactions with other online video game players and the gaming community, often advising their

children not to meet with, or trust in, strangers they got to know online, and not to succumb to the use of vulgarities in the gaming community:

R6M (42-year-old mother of 17-year-old FPS gamer boy): No, I always told him...when he wants to meet some friends...don't give your whole heart to your friend, because you don't know what they are, who they are, where they come from, actually what they want...

R19M (47-year-old mother of 13-year-old MMORPG gamer boy): We did tell him there's a lot of cheats online.

R39M (36-year-old mother of 15-year-old FPS gamer boy): Cause we discussed about it... Because from a very young age, we don't use a lot of vulgarities in the house. But the moment they started going to school, it was very obvious that they had this kind of influence.... So I will explain to them... Other people they can talk like that but we don't talk like that. This family, we don't allow. As simple as "Wah lau", a lot of people don't know what it means. As simple as words like "Ji xiao xiao"... There is a deep connotation in dialect that they don't understand so I explain. And things like, F-U-C-K fuck... I literally used the whole phrase to explain.

Fourth, parents would discuss with their children their concerns about time displacement and addiction:

R2B (15-year-old FPS gamer boy with 48-year-old father): I started playing some of these games, then my parents found out about it and...they started to teach me about all these things and stop me from playing ...these kinds of games so that I won't be addicted to it.

R2F (48-year-old father of 15-year-old FPS gamer boy): Yes. We will discuss with him...obviously we will ask him "why the deviation [from the rule]?" "Why [do] you want to play more?" "What is the reason?".

R3M (45-year-old mother of 15-year-old FPS gamer boy): So if it's nearing computer time, I'll just tell him, "It's exam time, since you're the senior, shouldn't you set a good example by telling your friends hey it's time to stop, we should go and study. When we're done with studying we can come back to the game". So, try to explain in that way. Whether he takes it as a nag, I really do not know. But I think I've put across the message I want to him already.

Discussion

The discursive process is therefore conceptualised as consultative

behaviours parents embark upon to arm children with the parents' preferred thoughts or values to help the children cope with positive or negative effects of video gaming. Typically, these discussions centre around parents' concerns about the effect of video gaming on the child. While this has previously been captured as active mediation, "discursive" would provide better description for two reasons. First, as new media platforms are interactive (highlighted earlier in chapter 2) and constantly evolving, parents' mediation efforts cannot be cast in stone but must be an ongoing process of rationalising for the child the changing nature of media and the consequent response. Hence, 'discursive mediation' captures the dynamic nature of the mediation process, as well as the dyadic parent-child engagement that is involved. Second, "discursive" helps distinguish these dialogic discussions from gatekeeping activities, where parents simply remind or inform their children of their restrictions without engaging the views of the child (Nikken & Jansz, 2013). While 'discursive' and 'active' share certain conceptual similarities, this study's conceptualisation of 'discursive' would be consistent with other attempts at further refining the concept of active mediation (Eastin et al., 2006; Fujioka & Austin, 2002; Kirwil, 2009; Mendoza, 2009; Nathanson, 2008; Valkenburg et al., 1999).

Additionally, this study found that some of these discussions

revolve around mediation practices as well: parents were found to engage in dialogue with their children on why they were enforcing video gaming restrictions, thus going beyond merely talking about the beneficial or harmful effects of video gaming. Taking discussions on mediation practices into account serve a few important purposes in clarifying the discursive mediation concept. First, in light of parents' ignorance about video games, consultations with the child may help them to better understand the medium, and to therefore apply more appropriate, mediation strategies. Second, consistent with many parenting studies (Baumrind, 1971; Grolnick, 2003; Parker et al., 1979; Sclafani, 2004), discussions and negotiations on parental requirements demonstrate responsiveness on the part of the parents, and parental responsiveness is widely known to be associated with favourable child outcomes, thereby potentially contributing to the effectiveness of parental mediation. In other words, discursive mediation may be considered a productive mediation strategy given the opportunity for parents to display responsiveness.

Also, this study found that the nature of discussions varies greatly, with some being proactive, whereas others are reactive. Some focused on general issues of positive values, while others are specific with regard to the projection of such values onto the video game in question. Some parents also inject teachings about financial prudence into their

discussions with their children about whether to buy video games.

4.3.4 Investigative Processes

The parent-respondents also engaged in activities that inform them about mediating their children's video gaming activities. These activities sought to update them about video games, how the child is responding to the games, or how the child is reacting to their mediation strategies.

Investigative processes typically involved several activities.

First, parents engage in visual inspections to check on the video gaming content, the time spent, and the extent to which the computer is used for video gaming versus doing homework or other activities. These checks may be at planned intervals or unplanned timings, or covertly done:

R2B (15-year-old FPS gamer boy with 48-year-old father): Yes, they would sometimes make spot checks when I am using the computer. Most of the time when I am using my computer, I would claim that I would be doing school assignments, some of which is, really I am at the computer for school assignments. And then to make sure that I am not gaming, they will come and, about maybe once an hour, to try and check whether I am doing anything.

R6M (42-year-old mother of 17-year-old FPS gamer boy): Usually we will, on [and] off, go inside and take a look... Stand there and see.

R7F (53-year-old father of 17-year-old FPS gamer boy): Most of the time it's me doing the watching. I just sit next to him and watch him play.

R8M (48-year-old mother of 16-year-old MMORPG gamer boy): For my husband, every half an hour he will say "Hey, you still playing?" Quite frequent.

R10M (45-year-old mother of 17-year-old MMORPG gamer girl): Sometimes I just... "Girl, do you like to have drink? Girl, have you pick-up...your anything, pretend walk behind her, try to [be] like a friend to talk to her. Because sometime they are quite alert, you know?"

Most of the parent-respondents deliberately situate video gaming devices at highly visible locations within the house, or insist that if the game is played in a separate room, the child has to keep the room door open, so as to facilitate visual inspection by the parent.

R3M (45-year-old mother of 15-year-old FPS gamer boy): Because it's [the computer] in a very visible area, it's hard to ignore... So when I feel he's been there way too long, I'll just say, "David it's time to get off [the computer]" That's my definition of monitoring.

R2F (48-year-old father of 15-year-old FPS gamer boy): So the laptops are all outside their rooms at the common area, where we place all our computers. So.... we can check on them anytime because they are outside. And sometimes we do spot check on them.

R11M (42-year-old mother of 13-year-old FPS gamer girl): And the games they download or playing we will know... While we watch on them also. Because we want them to play within the vicinity. So, they are not supposed to close the door. So we actually put some [computers] in the sitting room, some here, so that it's all over the place, so that when we walk pass right, we can take a look on what they are playing. So that's very visible.

Having devices placed in visible areas of the house also aids in parents hearing what is going on while their children are video gaming.

R3M (45-year-old mother of 15-year-old FPS gamer boy): I know who he plays with, because sometimes he'll talk on the mic [microphone], mention someone's name. I know some of them are his peers....

Second, parents have been known to ask their children directly about their activities, and even require that their children account regularly about their video gaming. This appears to be so, even when the parents are able to visually witness what their children are up to, perhaps out of habit, or so that the children will learn responsibility. One parent even

required his child to prepare written records of his game playing duration.

R2B (15-year-old FPS gamer boy with 48-year-old father): [My parent] frequently asks me what am I doing on the comp [computer].

R7F (53-year-old father of 17-year-old FPS gamer boy): I monitor what type of games he is playing, the genre of the video game. Sometimes I'll ask him. Even though I may not know just by looking or even after asking him, but I still want him to tell me about the game himself.

R40F (53-year-old father of 13-year-old FPS gamer boy): So I give him a boundary...five to 10 minutes [from] the moment you play, you are supposed to write it down. If you don't write it down, I penalise him with one week [of] no play.

While some parents have embarked on investigative strategies by observing their children during video game play, they have also attempted other avenues of information-seeking outside of the child's video playing session and does not involve the child. Such investigative practices include checking the browser history, use of monitoring software, consulting friends, relatives, and even game retailers about the game (specifically) or game playing (generally), checking game rating databases and various media sources such as newspapers and Internet, attending public parenting talks, and playing the video game itself. These investigative efforts enhance the parents' understanding of video game play:

R2F (48-year-old father of 15-year-old FPS gamer boy): Yes. We had checked his so called... History. From [browser] history, we can see where...where did he go, you know, which website did he go, you know...

R3M (45-year-old mother of 15-year-old FPS gamer boy): I think not now, but earlier on we had some... some parent thing to keep track of. Some website.

R4M (40-year-old mother of 13-year-old FPS gamer boy): I'll actually check with my cousin [regarding information on the video game].

R12M (37-year-old mother of 15-year-old MMORPG gamer girl): I will find out like...if let says she says, okay, she plays this game, then I will ask maybe my friends or my colleagues...[do] your children at this age play this game or not?

R4M (40-year-old mother of 13-year-old FPS gamer boy): I'll actually check with him [my son] first, then I'll actually check with the shop keeper, is it too violent or not.

R41M (43-year-old mother of 16-year-old FPS gamer boy): Probably I notice this because I was looking for this [game ratings] when we were purchasing something... I guess so that's why I actually noted all these [gaming ratings].

R3M (45-year-old mother of 15-year-old FPS gamer boy): What other information? I think once... I googled to find out the reviews from other parents. I don't know about the website, it's some parenting website... That's one avenue. Then, the other way would be, so far I've attended one cyber wellness talk that's organised by the school. So that's more general information...whatever I read in the newspapers. These are the places I get information [about video games].

R4M (40-year-old mother of 13-year-old FPS gamer boy): Usually I'll search all these on YouTube, on Google, to see what all these games are all about.

R5F (45-year-old father of 13-year-old FPS gamer boy): At least I can play with him, at least I know what he is doing.

While some parents reported that they personally played video games, others said they found tremendous difficulty playing video games of this era.

Discussion

“Investigative processes” refers to actions that serve to inform the parent to ensure proper and appropriate parental mediation. These behaviours include finding more information about the game and/or its effects and the effectiveness of mediation processes applied. Prior to this study, monitoring activities were subsumed under restrictive mediation. These monitoring activities sought to inform the parents on whether their rules were obeyed. Yet, this study found that monitoring activities have led

parents to discuss issues (discursive mediation) with their children, and not just to check on the children's measure of obedience to the restrictions, or to inform the rule-making process. As such, it would be too limiting to subsume monitoring activities under restrictive mediation.

This study also found parents engaging in more varied investigative activities compared to findings in previous parental mediation studies (Eklund & Bergmark, 2013; Kirwil, 2009; Livingstone & Helsper, 2008; Nathanson, 2002; Nikken & Jansz, 2003, 2013; Shin & Huh, 2011). Examples include asking friends for their opinions about particular video games or asking relatives about their child's gaming activities, checking various sources such as the Internet, newspaper or game ratings, and using child accountability systems, which Nikken & Jansz (2006) broadly observed as an emerging trend.

Moreover, some parents reported that they play video games in their attempts to understand it better. As such, situating co-playing under an investigative construct would be conceptually more appropriate for video game mediation. This study further elaborates on the argument.

The original concept of co-viewing accommodates instances (in TV viewing) where parents introduce educational television programmes to the children and view along with them. While this practice is understandably prevalent for television viewing, the interview findings do

not suggest that co-playing is a well-used mediation process for video games. First, this study found that most children are the initiators of game play, game purchases or game acquisition. Second, this study found that some parents do not play the kind of video games their children are involved in nowadays, and if parents do play, they play different games. The emerging thread is that parents who have personal experience with video game playing find that the games their children play are markedly different from the kinds they had played previously when they were younger. As such, the act of recommending or introducing video games to their children is inconceivable. Third, another group of parents simply have no interest in video games; and fourth, children expressed resistance to their parents playing with them.

R16F (49-year-old father of 13-year-old MMORPG gamer boy): No, he doesn't [play with me]. Usually he said, "You don't know how to play. You're too slow. You caused me to lose. You are too antique".

Instead, parents were more likely to play the role of gatekeeper, granting permission on which video games their children are allowed to play, especially when the parents have positive opinions about the game, rather than introducing video games to them. Hence, the findings suggest that co-playing is of limited utility in the context of the parental mediation of video games and that gatekeeping practices are more salient.

Instead, this study found that parents who actually played video

games—rather, attempted to play—with their children, did so not with the intention of introducing educational or beneficial games to their children, but with the goal of finding out more about the game, so as to decide on how to manage their children’s video game playing. As such, this study proposes that co-playing of video games should be viewed not from the frame of parent-child sharing of media content, but from the frame of investigative fact-finding by parents to inform their supervision and/or mediation efforts. Instead, it would seem more appropriate to situate these activities under an investigative concept. Yet, this study acknowledges that its sampling may have prejudiced the removal of co-playing as a stand-alone construct. As console games are designed—and, thus, favoured—for co-playing, strict sampling of console gamers and their parents may have elicited support for co-playing. This study’s sample does include some console gamers, as it was found that children typically play several games simultaneously during a season, while parents seldom play console games with their children.

In summary, the findings of this study suggest that a concept centring around investigative process can be illuminating. This is especially pronounced in a media platform such as video games, where parents face increasing challenges in understanding and monitoring.

4.4 Summary for RQ1: How is parental mediation practised?

This chapter has revealed, based on interviews from the respondent pool, some factors which influence parents' mediation processes. These factors include the parents' perception of video games and its effect on their children, the perception of their children's maturity and ability to manage these perceived video gaming effects, and the challenges that parents face in appreciating the video game features. Yet, these concepts and relationships will be further examined in Chapters 6 and 7.

This chapter also accounted for the various activities that were conducted to manage the children's video gaming habits, and suggested conceptualizing these activities into gatekeeping, discursive, investigative and diversionary mediation. Doing so, this chapter attempted to address **RQ1: "How is Parental Mediation Practised?"** The next chapter will discuss **RQ2: "How is Parental Mediation Received?"**

CHAPTER 5: HOW IS PARENTAL MEDIATION RECEIVED?

This chapter highlights the interview findings for RQ2 and discusses its implications. Table 2 in Chapter 4 (p. 112) highlighted the sample characteristics of respondents. Appendix F captured detailed profiles on each individual dyad. The section below discusses the child respondents' reactions to parental mediation processes. Section 5.2 illustrates various factors that may account for these responses. Section 5.3 relates the findings to literature reviewed in Chapters 1 and 2.

5.1 Children's Responses to Parental Mediation

Parents in this study reported that they adopt a combination of processes to mediate their children's video game play. Thus, the following sections will not present the children's responses to specific mediation practices. Instead, this chapter analyses the children's responses to mediation by classifying their behaviours according to the measure of adherence to parental mediation. To make the most of the dyadic approach, parents' and children's views will be presented in tandem.

The children manifested varying levels of compliance with parental requirements or restrictions, with some children attesting to complete compliance:

R3B (15-year-old FPS gamer boy with 45-year-old mother): Well, my parents

decided to keep the computer inside the living room and we abide to it.

R11G (13-year-old FPS gamer girl with 42-year-old mother): Of course [I always follow the rules].

Others expressed difficulties doing so, and revealed that they practised selective compliance, obeying only on some occasions, or adhering only to some rules. Some chose to negotiate with their parents.

R32G (12-year-old FPS gamer girl with 46-year-old mother): Sometimes [obey the rules].

R12M (37-year-old mother of 15-year-old MMORPG gamer girl): Not all the... not all the time.

R20B (15-year-old MMORPG gamer boy with 45-year-old father): Depends, if my match ending, then end [and I will obey].

R3B (15-year-old FPS gamer boy with 45-year-old mother): Which was limited to about, maximum two hours a day? But, I didn't really care about it and I still kept playing after the time was up.... At first it came off as a rule, but [after negotiation] they somehow changed it to more of a guideline.

R16F (49-year-old father of 13-year-old MMORPG gamer boy): But then he will negotiate... it's a bit more, a bit more. I just started this new game, I need to finish off, this kind of thing.

Yet, others revealed that they would ignore parental requirements, or would even engage in evasive tactics, such as downloading or purchasing video games or in-game items with their own pocket money, in effect acting contrary to their parents' wishes. While potential social desirability concerns may hinder children from admitting to such behaviour during the interview, some in fact did so. Some parent interviewees also claimed to be aware of such practices.

R11M (42-year-old mother of 13-year-old FPS gamer girl): Because sometimes without our knowledge they just go and download any games.

R19B (15-year-old MMORPG gamer boy with 47-year-old mother): No, because every month ...is my pocket money is ... monthly, so I choose how much, however to spend.

R20B (15-year-old MMORPG gamer boy with 45-year-old father): No. They don't know what [I spend my money on], it's my pocket money.

R10G (17-year-old MMORPG gamer girl with 45-year-old mother): No! She'll get very pissed off [if she finds out I used my own money for gaming]!

One father shared that his son stole money to purchase game play.

The interview with the father was about his daughter, who was participating in the study, but he made it a point to mention this particular incident involving his son.

R13F (50-year-old father of 16-year-old MMORPG gamer girl, discussing about his son): Last time [the son played] until he stole my wife's money... Because she is very busy, she doesn't always check her wallet got how much. And this guy very smart, he take by ten dollar, ten dollar, so my wife never noticed.

Some children engaged in other evasive behaviours, such as deception. Several revealed that they employed vague reporting, so as to give their parents the impression that their game play accords with their requirements. As one parent puts it:

R12M (37-year-old mother of 15-year-old MMORPG gamer girl): She will try to like [avoid answering me directly about her usage], she'll say, "After dinner... what time... sometime she'll say that... I stop for a while and I have dinner... so, after that I do a bit of my homework... so, I will never know the truth.... [she will be very vague about her answer].

Some children admitted to visually concealing their gaming activities by playing only when their parents are not at home, when their

parents are asleep, or when the gaming devices were not within their parents' view.

R2B (15-year-old FPS gamer boy with 48-year-old father): Just play when he is not noticing... or if he goes out.

R8M (48-year-old mother of 16-year-old MMORPG gamer boy): Lately, he will come to the room and close the curtain, close everything. Then I say, "You play games close curtain?" I also don't know what sort of games he's playing... He will close, and lock the door.

R9B (13-year-old FPS gamer boy with 45-year-old father): Usually [hide my gaming activities and play only] when they're not around.

R14B (13-year-old FPS gamer boy with 42-year-old father): I play my computer in my bedroom [to avoid my parents finding out].

R15B (16-year-old FPS gamer boy with 47-year-old father): Sometimes I'll play in the night, when they all [parents] go to sleep.

R4B (13-year-old FPS gamer boy with 40-year-old mother): Because it was late at night... [she was already] sleeping.

R24G (17-year-old MMORPG gamer girl with 40-year-old father): Like in the middle of the night when they sleep then we turn off the volume then play softly.

R34G (14-year-old MMORPG gamer girl with mother): Actually it's quite hard [to see me playing video games]. I would go to the side of my bed on the floor [with my laptop]. Because my bed is quite tall so it managed to cover my computer.

Some parents claimed that their children actively lie to them about their video gameplay, particularly when they know they should be studying instead:

R25M (45-year-old mother of 13-year-old MMORPG gamer boy): ... they lied to me [about their video gaming consumption], so I ...shout ... at them.

R4M (40-year-old mother of 13-year-old FPS gamer boy): He'll say, "Mummy, I got homework in my computer." So he'll actually do his homework for a while only. Then after we walk off, or we are not actually looking at them, he'll start playing games. All these games he'll hide.

R22M (45-year-old mother of 13-year-old MMORPG gamer boy): ...usually he told us that he studying in the night, he sleeps late you see, so we actually monitor why he sleeps late. Actually he is playing games instead of studying.

R27M (46-year-old mother of 13-year-old MMORPG gamer boy): When they are not supposed to play game, they'll just tell you, "I need to do homework" or "I

need to discuss things with friends, I need to use the computer". The next moment when you go and peep [at him], you see the game screen is there.

A number of children readily admitted to doing just that:

R24G (17-year-old MMORPG gamer girl with 40-year-old father): Like when they ask [about whether we have finished playing] then [we] say finish already, but actually [we] haven't. We just continued playing.

R10G (17-year-old MMORPG gamer girl with 45-year-old mother): Sometimes if the homework is like... [the] easy kind, I would game and do work at the same time... I pretend to ut the things there [pointing to a particular place], then later I just do [play video games]... my parents wouldn't really notice, because they are there [another place].

Some continued with their playing when they were supposed to be asleep.

R4B (13-year-old FPS gamer boy with 40-year-old mother): Fake sleep. She often call us to sleep at 9:00 [pm] during the school days. Then after that I'll like, cos I also want to use my phone. So I'll like sleep, but after that my eyes will be like closed, but not really closed. So during the period of time between 9 to 10, when she's awake, she'll come in and check on us. It's like when she comes in, I'll immediately close my eyes and fake sleep. After that when she goes out I'll take my phone out..... [I will do the same for video games] it is like during school holidays right, my mum, due to my bad grades she doesn't allow me to use it. Then after that I...took out my computer, use my blanket, cover it. And I played at 11:30 when she's asleep.

R13F (50-year-old father of 16-year-old MMORPG gamer girl): But my boy [referring to his son], he plays till 2, 3 o'clock [in the morning], then he [turns] off the light, then he pretends that he's sleeping but actually he [is] on the game.

Besides such efforts to engage in game play on the sly, other children also took advantage of their technological knowledge to avoid detection.

R2B (15-year-old FPS gamer boy with 48-year-old father): When they [my parents are] not home or when they are doing something in their room, when they lock the door, then I will just play. Then when they come out, I will just close

[minimise the screen].

R10M (45-year-old mother of 17-year-old MMORPG gamer girl): Quickly, they scroll down the bar, put below the bar [minimise the screen]. So, that's why.

R25B (13-year-old MMORPG gamer boy with 45-year-old mother): When my parents come, I just... change the screen of the game [toggle screen].

R27M (46-year-old mother of 13-year-old MMORPG gamer boy): He knows. Sometimes you walk past, suddenly the game screen disappeared. He minimise it. I say, "You don't pretend, you think I [am] computer illiterate....I know." Zoom, next moment [he responds] "I [am] doing [homework], studying, I [am] reading a book you know?"

R43M (53-year-old mother of 15-year-old FPS gamer girl): We suspect but... she is very quick to change the screens.

Overall, it appeared that many children practise selective adherence, of which parents seemed to be aware and accepting, if not somewhat resigned:

R6M (42-year-old mother of 17-year-old FPS gamer boy): He can keep [to]... I mean, 70 percent of it [video gaming requirements]. 70 to 75 percent okay. It's more than enough.

Discussion

In this study, it was found that the children's immediate response to parental gatekeeping was to comply with their parents' wishes—or, conversely, practise evasiveness. Some children adhered selectively to certain rules while disregarding others, or complied with parental requirements only on certain occasions. Others were found to evade parents' monitoring by lying, vague reporting, or hiding. Not surprisingly, video gaming devices—being smaller and portable—make it easier for children to use conceal and/or evade tactics—which supports a point made in Chapter 1 that video game evolution challenges traditional

parental mediation methods.

The qualitative finding that children use evasive tactics resonates with findings in previous studies (Eklund & Bergmark, 2013; Fromme, 2003; Kutner et al., 2008; Livingstone, 2007; Livingstone & Bober, 2006). Fromme (2003) and Eklund & Bergmark (2013) employed quantitative methods to study children in the video gaming sphere; this study complements their quantitative findings by accounting for these behaviours and its nuances within a qualitative context. This is especially important in today's context, which necessitates that parental mediation strategies and tools evolve along with the media. In this regard, the study has made some descriptive contributions to the field. To further improve on the explanatory strength of parental mediation theory, it is crucial to understand the factors that influence children's responses.

5.2 Factors Influencing Children's Responses

The study also explored some of the factors influencing children's responses to parental mediation. Prior studies (Linderoth & Bennerstedt, 2007; Livingstone & Bober, 2006; Nikken & Jansz, 2006) hinted that a child's response to parental mediation is influenced, in part, by differences between how parent and child perceive video games, as well as discrepancies between parent and child reports of parental mediation. While this study coheres largely with those findings, it has attempted to

contribute further through interviews. Hence, this study describes these factors as the children's perceptions of video games (Section 5.2.1), perceptions of the parenting approach (Section 5.2.2), and the children's personal challenges with regard to their reaction towards video game features (Section 5.2.3).

5.2.1 Children's Perceptions of Video Games

To some extent, the children's perceptions of video games mirror those of their parents.

First, some children do have concerns that video gaming will negatively impact their studies and will endeavour to comply with their parents' requirements.

R2B (15-year-old FPS gamer boy with 48-year-old father): I wasn't really affected [by the restrictions] because I knew that these games would be a major distraction to my studies, so I told myself that it was just normal.

R11G (13-year-old FPS gamer girl with 42-year-old mother): Because exam must do well.

R14B (13-year-old FPS gamer boy with 42-year-old father): The system [of parental restrictions] is good... If I change the system to be... more towards playing, then maybe my grades would be very bad. Will turn bad.

R27B (14-year-old MMORPG gamer boy with 46-year-old mother): [during] Exam period I don't really play much because [I] need to study.... I [am] scared that when I play I will think too much during exam.

While some children readily recognised the value of parental restrictions, others only came to appreciate the benefit over time:

R39B (15-year-old FPS gamer boy with 36-year-old mother): But slowly right, I think it's beneficial for me because it allows me to study and make some time for the rest of the things.

R21B (16-year-old FPS gamer boy with 46-year-old father): At first like I didn't like [my parents' rules], but after that, when I think back, I [do] play too long...[there are] no benefits [to me].

R23B (13-year-old MMORPG gamer boy with 46-year-old father): At first, I felt [that my parents' rules were] quite... troublesome, but now, I feel that it's actually for my own good.

Yet, some children view video gaming as a relaxation and recreational tool. While consistent with other studies (Eklund & Bergmark, 2013; Fromme, 2003), this study found that the children make a direct link between video gaming for relaxation and the stress they experience in school. This sentiment is perhaps reflective of the societal valorisation of academic achievement in many Asian societies including Singapore, and the consequent high levels of pressure that students experience, thus resonating with prior research conducted in China and Korea (see S. S. Lim, 2008).

R4B (13-year-old FPS gamer boy with 40-year-old mother): Relax myself after a long period of time studying.

R14B (13-year-old FPS gamer boy with 42-year-old father): It's fun and relaxing. Soothes the brain.

R20B (15-year-old MMORPG gamer boy with 45-year-old father): Because I'm not doing homework, so de-stress.... Every day school ends very late, then I still need to stay back to do homework and remedial. I come back around 6 plus again, I don't feel like doing anything—[so I play video games to] de-stress.

Not unlike their parents, some children also have concerns about video game content.

R2B (15-year-old FPS gamer boy with 48-year-old father): Content wise, especially when it comes to FPS, usually when you, sometimes when you, play

stuff like Call of Duty or maybe those games that use guns.... I am afraid that the games may influence me to actually do what it is in the game, like what happens in a game.

R4B (13-year-old FPS gamer boy with 40-year-old mother): I don't really feel sad or something [regarding restrictions]... I only see my cousin play, I don't really like to play those too violent games.

However, most of the child respondents in this study said they regard violent and/or explicit content as a given in video gaming and/or feel they are immune to its effects.

R8B (16-year-old MMORPG gamer boy with 48-year-old mother): [Sexually explicit content does not bother me] Because I got a lot of people sending me those [sexually explicit] calendar from Hotmail, those strangers from overseas. Then when I see them I just delete straight away.

R13G (16-year-old MMORPG gamer girl with 50-year-old father): I don't know, because to me, I'm okay. Because [it] is just a game.

R14B (13-year-old FPS gamer boy with 42-year-old father): I'm not so much affected by all this [content].

R15B (16-year-old FPS gamer boy with 47-year-old father): I'm not really affected by the content inside. All these stuff [content ratings] is like, to warn you about the violence and all that stuff, but I don't think I'm very affected by all this stuff.

R18B (13-year-old FPS gamer boy with 44-year-old father): But violence I can tolerate a bit.

R41B (16-year-old FPS gamer boy with 43-year-old mother): Don't really care... it's part of the game.

One interviewee shared that he finds gory scenes in video games acceptable because he felt he was doing morally good deeds in the game.

R5B (13-year-old FPS gamer boy with 45-year-old father): I don't really bother so much about goriness, it is just the excitement that you manage to do good.

Some children were able to articulate their personal thresholds for violent content in video games, drawing the line at content that was overly

graphic or realistic:

R17B (13-year-old FPS gamer boy with 42-year-old mother): Cartoon [violence is fine].

R24G (17-year-old MMORPG gamer girl with 40-year-old father): Think [the violence and killing among fictional characters, such as zombies and aliens] is okay but among human and human then a bit wrong, unless it is wrestling, then ok.

R29G (14-year-old MMORPG gamer girl with 41-year-old mother): Violence? If it's very little violence like just a punch or slap I don't really mind but if like you use sword and blood just start splattering out... I don't really like it.

Some child respondents appear to have positive perceptions about video game's learning potential, citing cooperative and teamwork skills, reaction time for army training, learning financial prudence, social skills, communication skills, typing skills, and improving their English and speech as some of the learning benefits of playing video games. Several children attempted to justify certain video games with what they perceived to be its educational benefits.

R4B (13-year-old FPS gamer boy with 40-year-old mother): It's like, for army, [video games] can train skills....Then it can make our minds think faster because [for] *Blackshot* you need to try to scope fast and shoot people fast, [or] else people will shoot you first.

R10G (17-year-old MMORPG gamer girl with 45-year-old mother): For like *RuneScape*, you have to earn money...in that game, like get good armour and stuff to train, so it is like, actually like its teaching me how to... invest your stuff on something... I know it's a game, but you can learn something from the game also.

R10G (17-year-old MMORPG gamer girl with 45-year-old mother): Benefit indirectly in the sense that, like I learn how to deal with all those immature people... there are really a lot of immature kids online.

R16B (13-year-old MMORPG gamer boy with 49-year-old father): Well sometimes like first person shooter, you must have great reaction time. Then you can shoot the person first.

R19B (15-year-old MMORPG gamer boy with 47-year-old mother): Teamwork.... Because communication is very important in almost like everything.

R29G (14-year-old MMORPG gamer girl with 41-year-old mother): Team games like, it teaches me to be more team, like, have more teamwork and stuff like that.

R30G (16-year-old MMORPG gamer girl with father): Certain games like, I think that Audition actually trains your reacting [reaction time] because... just need to be quick, everything need to be quick... like press the buttons and keyboard like certain timing and stuff it's quite fast. Everything is fast.

R39B (15-year-old FPS gamer boy with 36-year-old mother): It's like you can look at the screen then type at the keyboard.

R6B (17-year-old FPS gamer boy with 42-year-old mother): Because usually when you play with the Europeans and stuff, if you don't speak proper English they will not understand. When you Ventrilo² you play 5v5³, then when you start speaking Singaporean English they will not understand....[So I] speak better English than normal.... When I first started out playing—using Ventrilo, I spoke in a very Singaporean accented way. So they were like, pretty much scolding me and like, telling me off because they don't understand what I'm saying. So when they talk to me, I don't understand them as well, because they are speaking really good English.

R7B (17-year-old FPS gamer boy with 53-year-old father): Because some of my friends are from different races so we communicate in English then will improve.

R19B (15-year-old MMORPG gamer boy with 47-year-old mother): Because you need to think twice about what you say because if not, very heavy backlash.

Third, some children were aware that prolonged concentrated video game play could adversely affect their health:

R29G (14-year-old MMORPG gamer girl with 41-year-old mother): Sometimes when I play computer games I will get a headache.... it gets me painful... [due to] staring at the computer screen too long.

R30G (16-year-old MMORPG gamer girl with father): Eyesight, how it worsens my eyesight... it's like sometimes I play in the dark.... Posture, not the game itself, but like whatever you do when you play the game to me.

R12G (15-year-old MMORPG gamer girl with 37-year-old mother): When I play, I cannot go and sleep. ...[but] I haven't finished the game yet. When I finished the game, right? Then I'll be tempted to start a new one, if I lose [the game] or... there's a feeling to start a new one. Then I won't go to sleep. But I need sleep, I want sleep.

In the case of R12G above, there is a clear struggle on her part to

² Software used in video gaming that allows team members to verbally communicate with each other.

³ Five players against five players. This is a common format for competitive play.

resist the urge to play another game when she so badly needs to satisfy her body's need for rest. Interestingly however, she does acknowledge this constant predicament she places herself in when she plays video games, suggesting that she recognises the downsides to video gaming and an interest to self-regulate.

Fourth, a number of child interviewees were also wary of online gaming contacts, with one sharing that he had previously been cheated:

R23B (13-year-old MMORPG gamer boy with 46 -year-old father): Sometimes, there are also problems [like when] people ask for your account passwords.

R25B (13-year-old MMORPG gamer boy with 45-year-old mother): There're always some cheaters and liars, like, for example they say they give you, uh, free thing but in the end they end up hacking into your account... They said that they will give me a very rare item in the game, but in the end, they ended up hacking my account.... They stole everything in my [gaming] account, that means they took out everything.

R34G (14-year-old MMORPG gamer girl with mother): Because sometimes who won't know who the players are, like they could be bluffing [about] their age and gender. Because like that game is open to the whole world, so you won't know who you will be talking to. Might be someone dangerous or something.

While most are wary that online strangers may not be who or what they claimed to be, from gaming, some children have acquired useful experiences while interacting with online strangers, thereby gaining a more beneficial impression of video gaming. Some children found that video gaming has socialisation benefits beyond bonding with friends they already know in real life, and had also found friendship with strangers they met online. Some children claimed to see the benefit of making new acquaintances as it exposes them to the outside world and helps them

appreciate different lifestyles:

R29G (14-year-old MMORPG gamer girl with 41-year-old mother): I like meeting new people, like people from different countries, people from Singapore. I just like making new friends.

A boy who had interest in law found it useful to interact with his new online friend, a law student in Australia.

R6B (17-year-old FPS gamer boy with 42-year-old mother): You get to know more people from different countries, and they will teach you [about] different lives [lifestyle]. They have different lifestyle so you can actually...connect with each other and just talk about things. Sometimes when you are not playing and waiting for the game to start or something, you can just talk about your life and stuff, so you can get to know more things.... I got online friends that are in...in Australia. They are studying [for their] law degree right now... They talk about their law life.

Another boy shared that he found that some things were better shared with strangers online than with his friends.

R26B (17-year-old MMORPG gamer boy with 55-year-old mother): Something like you don't want to share with your real life friends you can share with strangers online.

Discussion

First, while some children are aware that video gaming content has negative impacts, they feel immune to it, especially so for violent content. While this observation is consistent with Kutner et al.'s study (2008), some children in the interview respondent pool have gone further and expressed that violence is a necessary part of the video gaming experience. Second,

this study has found that some children claimed to have experienced many benefits in video gaming, beyond what prior mediation studies (Eklund & Bergmark, 2013; Fromme, 2003; Kutner et al., 2008; Linderoth & Bennerstedt, 2007) have stated. Examples such as improving their speech and language, and gaining a better understanding of career choices from their interactions with online friends, are new to the literature. Third, unique to Singapore, which requires male citizens to enlist in the army at 18, some boys found that video games would help them prepare for military life, such as learning weapon names and training their shooting reaction times.

As such, while some children are generally wary of the negative impact of video gaming, these feelings were rationalised to some measure (Khoo, 2012).

5.2.2 Conflicting Expectations of Video Gaming Requirement

This section discusses conflicting expectations that parents and children have with regard to parent-imposed video gaming regulations. Parenting studies have suggested that conflicting parent and child reports of parenting practices are likely to influence children's responses (Linderoth & Bennerstedt, 2007; Livingstone & Bober, 2006; Nikken & Jansz, 2006). Hence this study sought to explore this specific aspect of parental mediation of video gaming.

This study's design, in which parent and child were interviewed separately at the same session, made it possible to explore parent and child perceptions of parenting practices (without parent or child influencing each other's responses).

R5F (45-year-old father of 13-year-old FPS gamer boy): Violence? I think that one I will restrict him.

R5B: He never tells me [anything about violent video games].

R9F (45-year-old father of 13-year-old FPS gamer boy): We don't set rules because I think rules they don't follow.

R9B: [The rules are] cannot really play during the weekdays and when there's school.

Interviewer: Does your parent have any rules for your video gaming?

R19B (15-year-old MMORPG gamer boy with 47-year-old mother): Not really, just finish homework first.

Interviewer: Coming back to the topic of video games, do you have any rules for his video game play?

R19M: No.

Parental practices within households vary, even between spouses, resulting in children responding differently to meet different parents' expectations:

R13F (50-year-old father of 16-year-old MMORPG gamer girl): Like me and my wife, we both want to manage our child, but we share different views. So that is the problem... Because of my family's [upbringing], when we [my siblings] were young, we were very disciplined. If 8:00 to 10:00 pm is meant for study, it means study. Not even at 9:55 [pm] you can keep your things. So for me, I try to come up with the same rules and regulations for my children, but of course I also try to be more flexible, but at least the time requirement is there, for them to follow. Whereas my wife don't [doesn't] agree... My wife's view is that children should play games, then they can juggle with work. That is why [she says] "You see, you let him play games, his results better." He's got very good results. I said, "I also know, but you must also have the discipline."

Discrepancies also arise between parents' and children's

understanding of what regulations have been imposed, and to what extent. For one family, the child claimed that her mother did not allow her to play video games at all, while her mother claimed that it was an ‘unspoken rule’ that her daughter can play if she finishes her homework.

R43G (15-year-old FPS gamer girl with 53-year-old mother): They don’t let me play [video games] at all.

R43M (53-year-old mother of 15-year-old FPS gamer girl): Oh, yes. Definitely. ‘Homework is done’ is one of the unspoken rules that she knows of. Mostly she will stick to playing games [even with] homework not finished [completed].

The interview findings also indicate that, while some parental requirements are generally clear and straightforward, consequences of non-compliance were not well articulated or understood. .

R3M (45-year-old mother of 15-year-old FPS gamer boy): You mean the rules? Sometimes I feel that the rules are as good as not being there. I think it’s come to an age where he feels like he wants to make his own decision.

R3B: Well, there’s not really much of response. They just kind of expect me to follow the rules. But if I don’t follow the rules, it’s just kind of indifference. But they just accept it if I break the rules.

R11M (42-year-old mother of 13-year-old FPS gamer girl): If she violates the rules then we will take away the [video game play] time the next time. That means the next week they can’t play.

R11G: They just say don’t do it again.

Interviewer: Do they have any sentence, say, like ‘You exceeded your playing time, next week you can’t play at all’?

R11G: No.

Discussion

Consistent with prior parenting studies (Linderoth & Bennerstedt, 2007; Livingstone & Bober, 2006), this study has found conflicting

perceptions between parents and children with regard to the extent of parental mediation being exercised in the household. However, these discrepancies could also result from nuances that prevail in parent and child interpretations of parental requirements or rules, such as whether those are intended to be mandatory rules that must be adhered to at all costs, or merely guidelines that the child should ideally, but not necessarily, meet. Hence, it was not surprising to discover that the children's confusion over parental expectations resulted in differing levels of adherence. Moreover, the findings also suggest that children had favourable attitudes toward parental mediation when it was consistent with past parental practices, and unfavourable attitudes when it was inconsistent.

These findings are congruent with many parenting style studies (Baumrind, 1971; Grolnick, 2003; Parker et al., 1979; Sclafani, 2004) that suggest that strict enforcement of parental requirements leads to intended child behavioural outcomes. This relationship is explored more fully in Chapter 7 detailing the quantitative findings of this study.

5.2.3 Children's Challenges

This section will highlight the challenges children face in responding to parents' management of their video gaming habits. These challenges can be narrowed to ways in which children cope with the affordances of video games (see Chapter 1), such as multitasking, and learning video

game requirements, and the social influences to which they are exposed consequently.

Some children found it difficult to manage time spent on video gaming because they were multitasking with other activities (both online or off-line):

R3B (15-year-old FPS gamer boy with 45-year-old mother): I'm fine with all the rules, it's just, computer time. Because I do a lot of things on the Internet, and a lot of friends I try to spend time with. So it is a bit hard, to do everything which I want to do within the time frame that they give me so I'll just end up going way over time.

R12M (37-year-old mother of 15-year-old MMORPG gamer girl): I think probably she finds it difficult to remember exactly also. Because like... sometimes that in between she will to go to shower break, or maybe she go for dinner break then after that play for a while then go for shower break. She has to do all these what, definitely, before I come back home. So, then she, she may not able to tell [how much time was spent].

Children faced other temptations as well, such as video games designed to allow continuous play without an end in sight, and the possibility of achieving higher in-game levels within the same game play ("levelling up"), making it compelling for children to violate parent-imposed time limits:

R43G (15-year-old FPS gamer girl with 53-year-old mother): I don't like that it [video games that requires long playing times] takes up a lot of my time and I just lose track of time completely when I play.

R10G (17-year-old MMORPG gamer girl with 45-year-old mother): I would force myself to level up at least one level, then I would log off. Then sometimes it would take very long... then I would just waste time.

One child noted that he found it challenging to adhere to the time limit, especially when he and his team-mates have not reached a

satisfactory conclusion, and the game does not allow them to continue where they left off.

R6B (17-year-old FPS gamer boy with 42-year-old mother): Because the game hasn't really ended. We couldn't stop the game in the middle... For example, like that we are having this team fight, then after that suddenly it's 10 o'clock and we haven't ended the game, we haven't destroyed the enemies so we couldn't actually end the game. Then usually we can't reconnect back right, then like, you cannot pause the game as well. There's no pause to the game. Because it's actually... it's more of an online game where people go versus... and you have to wait for the whole game to end actually, you cannot stop in the middle and stuff, you will be considered abandoning.... Because sometimes, in games like *League of Legends*, we have to complete the game, or else it will be considered abandoning the game. And you will be abandoning your team as well. So usually when we play as five right, if someone has to leave right, we will do our best to finish the game. So sometimes we don't have a choice. We have to continue finishing the game. Because once you leave, you can't join the game anymore. You will have to wait until the next day. And you will be on low priority. So it will actually mess up your account. You will have a black mark there. So sometimes it's not that I don't want to stop, but I have no choice.

Another child echoed his sentiment:

R18B (13-year-old FPS gamer boy with 44-year-old father): When my friends play right, sometimes we [as a gaming team] may need to finish some stuff [in game requirements]. Then, I need a bit more time to play.

As such, some children justified their time infractions by noting that some video game features impose in-game penalties for non-completion or pre-mature termination of a quest, with social penalties for abandoning the team.

Children's responses to parental mediation can also be influenced by the peers' attitudes, for which there are both positive and negative influences. Parents noted that negative peer pressure contributed to a

greater tendency to engage in extended play, and inability to resist the allure of video gaming:

R8B (16-year-old MMORPG gamer boy with 48-year-old mother): It's [the rules] fine. Because my friends and their parents also did the same thing to them.

R4B (13-year-old FPS gamer boy with 40-year-old mother): It's like, tell them [parents] go to friend's house do project or do homework. Then after that, my friend is like, keep tempting me to touch his or her computer, to join them play.

R15F (47-year-old father of 16-year-old FPS gamer boy): It's just like addiction. This game thing is like after awhile they get addicted. And then depends on what kind of company they have. If they have friends also playing games, I tell you, he will whole day sitting there playing games.

R19B (15-year-old MMORPG gamer boy with 47-year-old mother): For example like friends 'jio' [strongly initiate and encourage play] then they short of one person then sometimes just play.... Like sometimes is was planned very long already then last minute got test come up, then parents say cannot. Then we'll just play. Because we already... as in like just play for what we planned.

R33G (14-year-old MMORPG gamer girl with 44-year-old mother): Because addicted then like the game a lot then like sometimes your school friends ask you to play then you cannot play so you have the urge to play.

R42F (46-year-old father of 17-year-old MMORPG gamer boy): Because it is very addictive. Even you want to get out, friends say no, no, no, stay. It happens a few times.

Discussion

This study has found that some children faced challenges that affected their responses to parental mediation of their video gaming consumption. Evidently, children in the respondent pool struggled with managing parental demands, and the demands of the game features and social relations. While some parents seem to be attuned to social pressures on their children to play video games, they do not seem aware of the difficulties their children faced with the evolved game features (see Chapter 1). While Linderoth & Bennerstedt's study (2007) captured

struggles that children face, this study's findings further complements theirs.

The next section discusses the implications of RQ2's findings.

5.3 RQ2 (How is parental mediation received?) Discussion

First, RQ2 offers possible explanations on why parental mediation decreases as children grow older. While Chapter 4 revealed that, in some cases, notions of independence were directly related to parental perceptions of their children's ability to handle certain concerns about video gaming, this chapter found that some children took time getting used to obeying parental restrictions, which they saw as a benefit over time. Hence, these children do not require much mediation, especially investigative and discursive.

Second, while some children have been found to generally share their parents' major perceptions of video games, some differences were noted from this respondent pool. For instance, some children expressed the belief that they were immune to the negative effects of violent video games, claiming that it is a necessary learning curve of the gaming experience. Also, while some parents were concerned that video gaming would displace time spent on other healthy alternatives, such as social interactions with their peers, most children were concerned only with time displacement and its consequence on their studies. This could be partly

explained by Linderoth & Bennerstedt's (2007) finding that some children perceive meaningful socialisation taking place when they play video games, such as when they play with their immediate or extended family and, as such, do not see how prolonged video gaming could cause them to lose out on real life social activities. For example, R12G claims that playing video games "is also actually bonding with [her] brother and [her] father". Moreover, some children believed that video gaming contributed positively to their study routine, allowing them to relief stress and "soothe the brain". Hence, several considered video gaming an essential part of—and complementary to—their studies. Nevertheless, the study also found that some children were concerned about the negative effects, although to a lesser extent than their parents, and their positive perceptions were more salient. The resultant net effect is that children have more positive vibes about the effects of video gaming than their parents, which may be a contributing factor to whether, and the extent to which, they adhere to parental mediation. Taken in context with many parents' perceptions that video gaming is a "waste of time", further widens this gap between parent and child.

Third, in Chapter 1, the point was made that, as video games evolved, they have continued to pose increasing challenges to parental mediation. This study revealed that available affordances for players to

multitask video gaming with other activities (both online and off-line) may explain why some children found it difficult to track their time usage, resulting in time violations. Moreover, some children revealed that the evolved video game features penalise players if he or she chooses to stop before the quest or mission has ended. And these penalties extend beyond the in-game environment, as their team-mates will also be penalised, thereby negatively impacting social relationships. While these findings shed light on the challenges children face in response to parental mediation, the findings also argue favourably for the position taken in Chapter 1: that evolved game features of interactivity and sociability have made it difficult for players to stop video game play in the middle of a quest. Yet, some parents do not fully appreciate this effect on their children's social relationships, which further explains Kutner et al.'s (2008) claim that children view parents as ignorant of game features.

5.4 Summary of RQ1 (How is parental mediation practised?) & RQ2 (How is parental mediation received?)

The interviews suggest a possible correlation between parental perceptions of video gaming and parental mediation processes; similarly, parental mediation may also be influenced by the parent's perceptions of the child's ability to handle the effects of video gaming, and various challenges associated with the parent's implementation of mediation. The study also indicates that children's responses (such as whether they obey,

cheat, evade or violate time limits) to parental mediation may be influenced by the following: children's perceptions of video gaming; parental implementation of mediation processes; and challenges (such as those imposed by evolved game features) these children faced in complying with parental mediation. Chapter 6 and 7 will explore the quantitative relationship between these factors.

CHAPTER 6: RESEARCH METHODOLOGY (QUANTITATIVE)

To make generalisation claims on the relationships, found in the earlier chapter, among parental mediation, child responses and the factors that influence them, this chapter explains the research methodology applied and highlights the research methods used to descriptively answer **RQ3: “What does effective parental mediation look like?”**

While Chapter 3 focused on the qualitative approach, this chapter analyses the findings using the quantitative survey method. The quantitative survey was the most appropriate method for these purposes: to test the generalisability of claims made in earlier chapters, and to descriptively answer RQ3 (Wimmer & Dominick, 2011). Chapter 3 highlighted the sampling justifications and requirements. Generally, quantitative research guidelines recommend a sample size of 1,000 dyads to be considered “excellent” (Wimmer & Dominick, 2011, p. 103) multivariate analysis (Comrey, 1992). As such, this study sought to survey a sample of 1,000 parents and their children, aged between 12 and 17, who play video games at home. Chapter 4 already highlighted justifications for eliminating the game genre sampling requirement.

Section 6.1 documents the instruments used and its development process. Section 6.2 lists various hypotheses developed from the findings

of previous chapters to further inform RQ1 and RQ2, and Section 6.3 specifically documents how RQ3 will be explored. Section 6.4 engages the recruitment procedure, and Section 6.5 discusses the data collection procedures. Section 6.6 documents the challenges encountered through this phase of study, and section 6.7 summarises the chapter.

6.1 Instrument Development and Usage

Based on findings from previous chapters, questions were developed to capture parental practices in gatekeeping, investigative, discursive and diversionary mediation. This resulted in two versions of the parental mediation measurement battery—one for the child, and one for the parent. Items were developed to capture three key factors that influence parental mediation: parental perceptions of video games, and of the child, and parental challenges. Also developed were items for three key factors that influence the children’s responses—the child’s perception of video games, his or her impression of the parent’s ability to mediate, and challenges the child experienced. Questions for demographical and video game consumption data were also developed. Two other instruments were used: parenting style and parental involvement scale; and pathological video game use. These instruments are widely used and have been tested for their reliability and validity; nevertheless, they still underwent the same process as the scales developed for this study.

The questions developed were subjected to a think-aloud and purification process with 14 adults, and six children aged between 12 and 17. The adults and children had to articulate what the questions asked of them, to assess the questions' clarity and intention. They were also asked to sort the questions into appropriate mediation categories. As such, the questions went through several revisions, which included feedback from supervisors. On average, parent and child took about 15 minutes each to answer the questions.

The questions were further refined to ensure a decent measure of reliability. It was found that for every construct, Cronbach's Alpha (α) did not fall below 0.70, which is considered an acceptable reliability standard in social science literature (Gliner, 2009; Rubin, 2008; Wimmer & Dominick, 2011).

The following sections document the final instruments used. The instruments were intended to measure behaviours visible to both parent and child, such as the parental mediation process and parenting style, and were posed separately to parent and child. Many studies have recommended that the child's report be taken more seriously, in light of many writings that use only the parent's account (Nathanson, 2001; T. Sim et al., 2012). Gentile, Nathanson, Rasmussen, Reimer and Walsh (2012) discussed that, while young children may face cognitive immaturity in

accounting for parental practices, parents have been known to frequently offer socially desirable reports. Nikken & Jansz (2006) claimed that “children’s views are not necessarily better, or more reliable than parent’s views, or *vice versa*” (p. 199) and proposed that the actual parental practice (both mediation and style) is somewhere between the child’s and parent’s accounts. The study also found that the proposed version, combining the parent and child accounts, showed higher reliability for parental mediation and parenting style constructs, compared to either adopting only the child’s or parent’s report. As such, and consistent with many studies’ recommendations (Gentile et al., 2012; Nikken & Jansz, 2006), this study adopted the average of the child’s and parent’s accounts for statistical computation of these constructs.

6.1.1 Parenting Style and Parental Involvement Scale (PSPIS)

This scale consists of 15 items measuring responsiveness and 14 items measuring demandingness of parenting style, with some items reverse-scored. It also included a parental involvement scale, consisting of three subscales: seven items measuring achievement values, six items measuring interest in schoolwork, and two items measuring involvement in school, with some items subsequently recoded (Paulson, 2001). The response scale ranged from very unlike (1) to very like (7), with 4 being neither like nor unlike. Paulson’s Parenting Style and Parental Involvement

Scale (1994, 2001) was adopted, as parents in Singapore place high expectations on their children's academic performance and, as such, the researcher felt it would be valuable to observe the parental involvement scale's interaction with other data. Moreover, it was easy to read and understand, as it has been successfully used on adolescents and their parents.

While the original scale had an additional item in the demandingness scale, an additional item in the achievement values scale, three additional items in both the involvement in school and interest in school work scales, they were found to be unreliable, and eventually discarded. Moreover, the think-aloud session surfaced potential confusion over what the demandingness item ("I have a few rules for my child") is asking—such as whether it implies many rules or, conversely, very little rules. Please see Appendix E for the adapted PSPIS.

6.1.2 Pathological Video Game Use Scale (PVGU)

This scale consists of 10 items measuring the impact of video gaming activity on the child's social and academic functioning (Choo et al., 2010; Gentile, 2009; Gentile et al., 2011; T. Sim et al., 2012). The response scale consisted of three input options of "yes", "no" and "sometimes" answers, with the intention of classifying pathological video game usage. A "yes" response represented a 1-point score, "sometimes"

response a 0.5-point score, and “no” gave a zero score. A total score of 5 points and above indicate pathological video gaming status. The scale and scoring method was successfully used previously on Singaporean adolescent sample and was, therefore, easy to read and understand (Choo et al., 2010; Gentile et al., 2011). Yet, due to NUS IRB’s concern that response to a question in the original scale could be viewed as admission to having committed a ‘crime’, the words “stolen” were changed to “taken without permission”. Please see Appendix F for the adapted PVGU. Consistent with this instrument’s design, this study collected data only from the child respondent.

6.1.3 Parental Mediation Processes and Perceptions of Video Games

Both versions (parent and child) of the parental mediation instruments comprised 13 items for gatekeeping mediation, 10 items for investigative mediation, six items for discursive mediation, and four items for diversionary mediation. Respondents were asked to rate, on a 7-point scale, how often the mediation processes were employed, anchored from “never” (1), to “very often” (7). Correlational analysis among the four types of parental mediation processes was performed to assess the degree of overlap. Strong correlations ($r > 0.80$) indicate multicollinearity, which would not provide unique information (Gliner, 2009). While this study expected to see some strength in correlations among the mediation

processes, due to the practice of mixed-methods, it did not satisfy the multicollinearity condition. A summated parental mediation score reflecting gatekeeping, investigative, discursive and diversionary mediation was also computed.

Both versions' survey also included 13 items for Video Games Perceptions with a 7-point scale from "Strongly Agree" (1), to "Strongly Disagree" (7).

Table 4 (below) presents the measurement items described in this section.

Table 4: Parental Mediation Processes Measurement and Video Game Perceptions

Measurement	Items for Parents	Items for Children
Gatekeeping Mediation (13-items)	<ol style="list-style-type: none"> 1. I impose a time limit on my child's video gaming. 2. I allow my child to play video games only when I deem appropriate. 3. I allow my child to play video games only when his/her homework is completed. 4. I allow my child to play video games only when he/she has completed some other activities (e.g., cleaning his/her room, bathing etc.). 5. I do not allow my child to play video games with online strangers. 6. I allow my child to play video games only after he/she seeks permission from me. 7. I require my child to account to me the time he/she spends on video gaming. 8. My child only plays video games after I "unlock" the gaming device (computer/console) with my password. 9. I do not allow my child to play video games in private by him/herself (e.g., in a room with the door closed). 10. I use device restrictions to keep my child from playing video games (e.g., keeping the laptop, router or charging cable). 11. I do not allow my child to play video 	<ol style="list-style-type: none"> 1. My parent imposes a time limit on my video gaming. 2. My parent allows me to play video games only when he/she deems appropriate. 3. My parent allows me to play video games only when I have completed my homework. 4. My parent allows me to play video games only when I have completed some other activities (e.g., cleaning my room, bathing etc.). 5. My parent does not allow me to play video games with online strangers. 6. My parent allows me to play video games only after he/she grants me permission. 7. My parent requires me to account to him/her for the time I spend on video gaming. 8. I play video games only when my parent unlocks the gaming device (computer/console) with a password. 9. My parent uses device restrictions to keep me from playing video games (e.g., keeping the laptop, router or charging cable). 10. My parent does not allow me to play video games in private by myself (e.g., in a room with the door closed). 11. My parent does not allow me to play

	<p>games outside our home (e.g., in LAN centres or friend's home).</p> <p>12. I do not allow my child to purchase/install any video games without my permission.</p> <p>13. I do not allow my child to purchase any in-game items (e.g., accessories or weapons) without my permission.</p>	<p>video games outside our home (e.g., in LAN centres or friend's home).</p> <p>12. My parent manages the video games that I play.</p> <p>13. My parent does not allow me to purchase any in-game items (e.g., accessories or weapons) without his/her permission.</p>
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Investigative Mediation (10-items)	<ol style="list-style-type: none"> 1. I view my child's computer screen when he/she is playing video games. 2. I listen in on what my child is saying when he/she plays video games. 3. I check on what video games my child is playing. 4. I check on whom my child is playing video games with. 5. I check on how much time my child has spent playing video games. 6. I use technological means to check on my child's video game play (e.g., checking time logs, checking browser history). 7. I seek friends' and/or relatives' opinion about the video games my child is playing. 8. I check the Internet to learn more about the video games my child is playing. 9. I check game ratings to learn more about the video games my child is playing. 10. I play video games with my child to understand more about the effects of the game on my child. 	<ol style="list-style-type: none"> 1. My parent views my computer screen when I am playing video games. 2. My parent listens in on what I am saying to fellow players when I play video games. 3. My parent checks on what video games I am playing. 4. My parent checks on whom I am playing video games with. 5. My parent checks on how much time I have spent playing video games. 6. My parent uses technological means (e.g., computer log, to check on my video game play). 7. My parent asks friends' and/or relatives' opinion about the video games I am playing. 8. My parent checks the Internet to learn more about the video games I am playing. 9. My parent checks game ratings to learn more about the video games I am playing. 10. My parent plays video games with me to understand more about the effects of the game on me.
Discursive Mediation (6-items)	<ol style="list-style-type: none"> 1. I have conversations with my child about violent content in video games. 2. I have discussions with my child about the time s/he spends playing video games. 3. I explain my opinions about sexually explicit content in video games to my child. 4. I have discussions with my child about interacting with online strangers in video games. 5. The rationale for the restrictions I place on my child's video gaming activities are clearly explained to him/her. 6. I have dialogues with my child about new games he/she purchased/installed. 	<ol style="list-style-type: none"> 1. My parent has conversations with me about violent content in video games. 2. My parent has discussions with me about the time I spend playing video games. 3. My parent explains his/her opinions about sexually explicit content in video games to me. 4. My parent has talks with me about interacting with online strangers in video games. 5. The rationale for the restrictions placed on my video gaming activities were clearly explained by my parents. 6. My parent has dialogues with me about the new games I purchased/installed.
Diversionsary Mediation (4-items)	<ol style="list-style-type: none"> 1. I involve my child in his/her school's CCAs so that he/she spends less time on video games. 2. I get my child involved in music lessons or tuition classes so that he/she spends less time on video games. 3. I exercise with my child so that he/she spends less time on video games. 4. I get my child involved in sports so that he/she spends less time on video 	<ol style="list-style-type: none"> 1. My parent involves me in my school's CCAs so that I spend less time on video gaming. 2. My parent gets me involved in music lessons or tuition classes so that I spend less time on video gaming. 3. My parent exercises with me so that I spend less time on video gaming. 4. My parent gets me involved in sports so that I spend less time on video gaming.

	games.	
Video Game Perceptions (13-items) <i>Items 8-13 scoring are reversed, such that higher scores indicate more negative perceptions of video gaming.</i>	<ol style="list-style-type: none"> 1. Video gaming will help my child improve his/her language. 2. Video gaming will help my child improve his/her reaction time. 3. Video gaming will help my child improve his/her problem solving skills. 4. Video gaming will help my child relax. 5. Video gaming will help my child improve his/her popularity in school. 6. Video gaming will keep my child from mixing with bad company. 7. Video gaming will help my child improve his/her relationship with friends. 8. Video gaming will make my child more violent and aggressive. 9. Video gaming will make my child more vulgar in speech. 10. Video gaming will make my child spend less time on studies. 11. Video gaming will make my child spend less time with family. 12. Video gaming is a waste of time. 13. Video gaming is a waste of money. 	<ol style="list-style-type: none"> 1. Video gaming helps me improve my language ability. 2. Video gaming helps me improve my reaction time. 3. Video gaming helps me improve my problem solving skills. 4. Video gaming helps me relax. 5. Video gaming helps me improve my popularity in school. 6. Video gaming keeps me from mixing with bad company. 7. Video gaming helps me improve my relationship with friends. 8. Video gaming makes me more violent and aggressive. 9. Video gaming makes me more vulgar in my speech. 10. Video gaming makes me spend less time on studies. 11. Video gaming makes me spend less time with family. 12. Video gaming is a waste of time. 13. Video gaming is a waste of money.

6.1.4 Factors That Influence Parental Mediation

Additionally, for the parent, there were seven items that asked for their perception on the child’s maturity to handle their video gaming habits and six items for parental challenges to parental mediation. Respondents were asked to rate, on a 7-point scale, from “strongly agree” (1), to “strongly disagree” (7). The following table presents the measurement items described in this section.

Table 5: Factors That Influence Parental Mediation

Measurement	Items
Perception of Child’s Maturity (7-items)	<ol style="list-style-type: none"> 1. My child is mature enough to handle his/her video gaming time. 2. My child possesses self-control when it comes to video gaming. 3. My child is trustworthy enough to handle interactions with online strangers. 4. My child will not be affected by the negative content (e.g., violence, sexual, vulgarity) in video games. 5. I trust my child to handle him/herself properly in video games. 6. My child does not hide his/her video gaming activities from me.

	7. My child does not lie about his/her video gaming activities to me.
Parental Challenges (6-items)	<ol style="list-style-type: none"> 1. It is difficult to understand the storyline, and/or objective of the video games my child plays nowadays. 2. It is difficult to use the many keys and controls to play the video games my child plays. 3. It is difficult to understand the gaming language my child uses when he/she plays video games. 4. The video games my child plays are too fast-paced for me to join in the game play. 5. I do not have enough time to monitor my child's video gaming habits properly. 6. It is difficult to keep track of my child's video gaming time because he/she is multitasking (e.g., doing homework/social networking at the same time).

6.1.5 Children's Responses and Factors that Influence It

Additionally, for the child, 19 items were used to measure the child's responses towards parental mediation, consisting of 13 items to measure their level of adherence (or disobedience) to the gatekeeping mediation, and six items measuring the frequency of evasive tactics (evasiveness) adopted by the child. For the disobedience scale, respondents were asked to rate, on a 7-point scale, how often they obey their parent's requirement, from "never obey" (1), to "very often obey" (7), on the gatekeeping mediation instrument for the child.

Three key factors were found to influence the children's responses. First, discrepancies in parent and child understanding of video gaming rules affect the measure of disobedience. As such, this study adopts the difference (child score minus parent score) in parent and child reports of gatekeeping mediation, as a proxy measure of the children's vagueness in understanding parental requirement for their video gaming consumption, accounting for nuances in implementation of gatekeeping revealed in the interview findings. Second, this study adopts the difference (child score

minus parent score) in the parents' and child's reports of demandingness, as a proxy measure of the child's perception of consistency with parent's general parenting demands. For both these differences in gatekeeping and demandingness, a negative score would suggest that the parent has a more stringent view of the gatekeeping requirement and demandingness. As such, to uncomplicated these two scorings, a value of 7 would be added to remove the potential negative scores. This would mean that a high score would imply that the child has more strict view of the gatekeeping requirement, and view that the parent is more demanding, compared to the parent's report. Quantitative analysis of differences has been used successfully in studies that capture parent and child reports (Gentile et al., 2012; Nikken & Jansz, 2006).

Second, the children's perception of video games would be associated with their responses. This measure has been highlighted in Section 6.1.3.

Third, the challenges children face would be associated with their responses as well. This measurement consists of three items that reflect the social and achievement motivations for playing video games, found prevalently in Chapters 5, that make it difficult for children to adhere to the rules set by their parents.

Table 6 (below) presents the measurement items representing the

child’s evasive tactics (evasiveness) and children’s challenges, scored on a 7-point frequency scale from “never” (1) to “very often” (7). High scores on the evasiveness and children’s challenges measure would indicate more evasiveness and greater difficulties experienced respectively.

Table 6: Measurement For Evasiveness and Children’s Challenges

Measurement	Items
Evasiveness (6-items)	<ol style="list-style-type: none"> 1. I hide my video gaming activities from my parent by: 2. Playing when my parent is not around. 3. Being vague/unclear about my gaming activities when my parent asks. 4. Lying about my video gaming activities when my parent asks. 5. Multitasking with homework/social networking. 6. Using my own money to pay for video games or in-game items I purchase or download. 7. Using technological means.
Children’s Challenges (3-items)	<ol style="list-style-type: none"> 1. I find it difficult to obey my parent's video gaming restrictions. 2. I find it difficult to stop playing video games because I will let my video-game playing team/friends down. 3. I find it difficult to stop playing video games because I need more time to reach the next level or complete the game.

6.1.6 Demographical Information

Parents were asked to state their educational level, household type and number of family members at home, as a proxy measure of social economic status. These measures were adapted from a few local studies (Choo et al., 2010; Skoric et al., 2009). The parent was also asked about his/her video gaming consumption.

Children were required to enter their scholastic achievement based on three most common subjects (English, Mathematics and Science) undertaken by that age group (Skoric et al., 2009). The average of the scores for English, Mathematics and Science formed the Scholastic Achievement Score.

Both parent and child were required to state their age and gender; three video games played by the child in order of decreasing frequency. Parent and child also had to state the child's video gaming consumption, a requirement adapted from several studies (Gentile et al., 2012; Oliver, 2012; Shin, 2010); the time parent and child spent together, as a surrogate measure of their available time together. The average of both parent and child reports were used.

6.2 Summary of Hypotheses for RQ1 (How is parental mediation practised?) and RQ2 (How is parental mediation received?)

This section lists the hypotheses this study attempts to explore. The first set of hypotheses seeks to lend support to the qualitative findings of RQ1. From this study's qualitative respondent pool, it was found that some parents exercise more mediation when they hold negative perceptions of video gaming – which is consistent with other quantitative findings. Parents were also found to exercise less mediation when they view their children as mature enough to handle video gaming or when they (parents) are faced with many challenges to their mediation efforts.

As such, the following hypotheses were proposed, which also seeks to generalise the findings of RQ1:

H1: Parents' perception of video gaming, and of the child (encompassing the child's maturity to handle video gaming, expectations of the child in terms of age and gender) and parental challenges faced

(including available time) with mediation, would be associated with the levels of parental mediation (gatekeeping, investigative, discursive and diversionary mediation).

H1(a): More negative parental perceptions of video gaming would be associated with higher levels of parental mediation (gatekeeping, investigative, discursive and diversionary mediation).

H1(b): More favourable parental perceptions of children's ability to handle video gaming would be associated with lower levels of parental mediation (gatekeeping, investigative, discursive and diversionary mediation).

While some measure of parents' perception of their children's ability to handle video gaming was posited to be associated with parental mediation, the interview respondent pool also revealed that, as children get older, some parents tended to have certain expectations of their children and would not mediate as much. This study also explored whether:

H1(c): Child's age would be negatively correlated to the levels of parental mediation (gatekeeping, investigative, discursive and diversionary mediation).

Moreover, gender expectations of children have been found to influence some parent respondents. It was revealed through the interviews

that some parents perceived that their daughters were more likely to choose parent-approved video games and/or were more compliant to parental requirements and these parents would mediate less. As such, this study also explored whether:

H1(d): Girls would experience less mediation than boys.

H1(e): More parental challenges would be associated with lower levels of parental mediation (gatekeeping, investigative, discursive and diversionary mediation).

The literature review and the interview findings suggest that parents' available time with their children was one of the challenges parents faced, implying that with more available time, parents were likely to mediate more. As such, this study explored whether:

H1(f): Amount of available time (weekday and weekend) with the child would be positively correlated with the levels of parental mediation (gatekeeping, investigative, discursive and diversionary mediation).

The second set of hypotheses (H2 and H3) seeks to further support the qualitative findings of RQ2, and to make generalisation claims: that children's responses are influenced by their perception of video games, their impression of their parents and the challenges they experience. From this study's qualitative respondent pool, it was found that children are found to evade parental mediation when they have positive impressions

about video gaming or face some challenges in managing their video gaming habit.

H2: Children's perception of video gaming and the challenges they face would be associated with the levels of evasiveness.

H2(a): More negative child perceptions of video gaming would be associated with lower levels of evasiveness.

H2(b): Challenges experienced by children would be associated with higher levels of evasiveness.

Additionally, differences in parent and child understanding of video gaming expectations may result in the child unconsciously violating parental restrictions, but may not necessarily result in the child being evasive. As such, this study posits the following hypotheses:

H3: Children's perception of video gaming, the challenges they face, and differences in parent and child reports of gatekeeping mediation and demandingness, would be associated with the level of obedience.

H3(a): More negative child perceptions of video gaming would be associated with lower levels of obedience.

H3(b): Challenges experienced by children would be associated with higher levels of obedience.

As mentioned in the qualitative findings, discrepancies in parent and child understanding of video gaming rules and consistency of parental

demands affect the measure of disobedience. As such, proxy measures were established and tested in H3(c) and H3(d).

H3(c): Differences in parent and child reports (child score minus parent score) of gatekeeping mediation would be positively associated with the levels of obedience. As such, children's stricter view of gatekeeping requirements, compared with the parents', would be associated with higher levels of obedience. This would be a proxy measure of children's vagueness in understanding parental requirement for their video gaming consumption.

H3(d): Differences in parent and child reports (child score minus parent score) of demandingness (parenting style) would be positively associated with the levels of obedience. As such, children's stricter view of parents' demandingness, compared with the parents', would be associated with higher levels of obedience. This would be a proxy measure of children's perception of consistency with parents' general parenting demands.

6.3 Exploring RQ3 (What does effective parental mediation look like?)

As mentioned earlier, RQ3 consists of the following RQs:

RQ3A: What is the relationship between, parenting style and PVGU, and parental mediation?

RQ3B: What differences exist in parental mediation by authoritative

parents over their non-pathological gaming children and that of neglectful parents over their pathological gaming children?

RQ3A will be examined through correlational analysis. Correlational analyses will observe the relationship between parenting style (through instrument PIPIS) and pathological video gaming status (through instrument PVGU), with parental mediation. Due to the theoretical expectation that more authoritative parenting style and fewer video game pathological behaviours would be associated with more parental mediation, this study posits the following:

H4(a): More authoritative parenting style would be associated with more parental mediation.

H4(b): Less video game pathological behaviours would be associated with more parental mediation.

RQ3B was examined by comparison between two groups of respondents. The respondents were grouped based on their parenting style and pathological video gaming usage. The group of authoritative parents with their non-pathological video game use children was compared with the group of neglectful parents with their pathological video game use children, to ascertain differences in parental mediation processes applied and other salient characteristics.

The grouping criteria are highlighted here. Consistent with many

studies, the median split technique was employed (Garcia & Gracia, 2009; Huver, Otten, Vries, & Engels, 2010). Demandingness and responsiveness above or equal to the median will be labeled as high demandingness and high responsiveness respectively. Doing so, parents who scored high on demandingness and responsiveness were classified as authoritative parents, and those who scored below both means were deemed neglectful parents. Permissive (low demandingness and high responsiveness) and authoritarian (high demandingness and low responsiveness) parents were not relevant as the study seeks to use the extreme ends of the parenting style typology to solicit clearer comparisons. Second, PVGU scores of five and above were deemed pathological video gamers. This is in accordance with the instrument's usage design.

The parental mediation processes adopted and its factors were then used to make comparisons. The children's responses and its influencing factors were examined in this light. Other demographic factors, such as age and media device ownership of the child, parental involvement, and household income status, were also used as comparison. As such, this study paints a picture of how effective parental mediation looks like, in answer to **RQ3: "What does effective parental mediation look like?"**

6.4 Recruitment Process

With such a large sample size, the study sought to recruit the respondents through Secondary Schools in Singapore: this was deemed reasonably efficient and consistent with many large-sample-sized local studies (Choo et al., 2010; Gentile et al., 2011; Skoric & Kwan, 2011; Skoric et al., 2009). Approval was obtained from Ministry of Education (MOE) Singapore before recruitment in Secondary Schools commenced. Approval was also obtained from NUS IRB (Reference No. 11-357). Je Ne Sais Quoi Research Solutions (JNSQRS) was hired to host the online surveys and to subsequently clean the data. NUS hired two RAs to assist the researcher in preparation and recruitment of participants. This was made possible with funding from the MSF.

Secondary schools were approached, initially by phone calls to the general line and emails, with equal geographical distribution (north, south, east and west) in mind (Choo et al., 2010; Ministry of Education, 2014). Equal distribution of gender was also sought by initiating contact with equal number of single-gendered schools. Gender distribution would be reasonably achieved in dual-gendered schools. There was also an attempt to achieve a good spread of age representation by recruiting from every secondary level, i.e., from Secondary One to Five. As an incentive, the researcher offered each participating school a one-hour presentation of the survey results after the study was completed. This resulted in over 100

Singapore secondary schools called to participate.

Due to the tight three-month timeline, between obtaining the Education Ministry's approval and the MSF's funding deadline, the researcher first sought out and obtained approval from principals (or vice principals) he personally knew, or through friends who had contacts with decision-making personnel in the schools.

At the student recruitment phase, the researcher and two NUS research assistants visited the participating secondary schools during regular school hours to brief the students and to distribute the participant information sheet (PIS), consent form (CF) and Letter to Parents. The letter to parents explained the purpose of the study, with details elaborated in the PIS. Please see Appendix G for the PIS&CF survey and Appendix H for the letter to parents. The documents also gave instructions on how to access and complete the online surveys, which took approximately 15 minutes each. Each parent and child pair had to complete individual online surveys, which captured an identifying matching code (MC) generated by the researcher and printed on the consent form portion of the PIS&CF - Survey. Each parent and child dyad shared the same MC. The MC was deleted after all the data had been collected and successfully processed. This ensured anonymity for the respondents, as there was no way to identify participants of the study from the data subsequently.

6.5 Data Collection Procedures

Depending on the school's schedule, anywhere from several days to a week later, the researcher, with the help of the school, collected the completed and signed CF. The signed CF captured the parent's consent, and child's assent. During collection, the researcher then verified the MC with a list the research firm JNSQRS had generated. This list contained the MCs of data that had been properly and completely filled, based on online information. If the data was properly completed, a cash payment of S\$20 (US\$15.70) was given to the respondent, and the CF kept. The respondent was required to sign a receipt acknowledging that he/she had received the S\$20 disbursement. If the data was incomplete, for whatever reason, and the participant was still willing to participate in the study, the CF was then returned to the respondent. They were then given a second chance to complete the online survey, which entailed another school visit by the researcher and the two RAs. Having proposed and planned this, the researcher was made aware that a number of schools may not be able to provide the manpower for some, or all, of the required procedures. As such, the data collection procedures were highly dependent on the school.

Appropriate arrangements were made with the schools a few weeks before the recruitment date, and the schools indicated the anticipated response rate, which ranged from approximately 50% to 70%. Based on the schools' estimations, the study adopted a conservative estimate of

50% response rate, and set out to recruit at least 2,000 dyads via the students (child). Interest from the schools was high, and the study was able to recruit approximately 4,690 students.

6.6 Recruitment and Data Collection Challenges

Despite support and interest from the schools on the recruitment and data collection plan, the study experienced challenges. First, schools were not able to provide equal distribution, in terms of gender and/or age, for recruitment.

Second, respondents' varying levels of interest and their time commitment/schedules impaired the response rate. Regrettably, recruitment was scheduled too close to students' examination dates or during the post-examination week (when schools were understandably cluttered with other activities). Students' feedback indicated that some were too focused on their examination preparations to be interested in participating in the survey. The majority of students who did not participate cited lack of interest as the main factor. Other reasons (such as parents who were out of town, or lack of Internet access) were cited, but affected only a very small number of respondents. JNSQRS monitored the response rate on a daily basis, and schools were apprised of it as well. To increase the response rate, the schools sent frequent reminders to the students, and availed more time slots for the researcher and RAs to

engage directly with the students. It appears the unexpectedly low response rate was due to respondents' lack of interest. JNSQRS supported this reasoning: their online analysis showed that the number respondents who viewed the landing page on the online survey, without successfully completing the survey, was relatively low.

There were some other issues that cropped up initially that were quickly resolved. First, some online surveys were re-set (refreshed to the online survey landing page) halfway through the survey, as a result of prolonged inactivity. Some students and parents claimed that they completed the survey, but the data was not captured. With the technical data provided by JNSQRS, the situation was explained and closure was achieved. Second, a number of respondents filled in the wrong MC. With information (age, gender, time at which the survey was taken, and the top three most frequently played video games) provided by the respondents when the CF was collected, the data was successfully matched. Subsequently, some modifications were made during the briefing for students so as to minimise such incidents.

6.7 Summary

This chapter documented the quantitative instruments used, the proposed hypotheses for testing, and the recruitment and data collection procedures that the study underwent. While this chapter identified the

challenges the researcher encountered in recruiting respondents, it has also discussed how these difficulties were resolved. The next chapter will analyse the study's findings.

CHAPTER 7: QUANTITATIVE ANALYSIS

This chapter highlights the quantitative findings for RQ1, RQ2 and RQ3; and discusses the implications of those findings. Section 7.1 provides descriptive statistics of the sample under investigation. Section 7.2 illustrates the findings and accounts for all hypotheses proposed. Section 7.3 specifically answers RQ3, and section 7.4 discusses and relates the findings to prior chapters. Section 7.5 summarises this chapter.

7.1 Descriptive Statistics

Approximately 4,690 dyads were recruited through nine secondary schools in Singapore. Of the nine schools, three were from north zone, three from south zone, two from east zone and one from the west (Ministry of Education, 2014). While most of the schools were dual-gendered, one was a boys-only school. Recruitment was from mid-April to mid-July 2014, with a month-long break in June corresponding with the school holidays. The study had a participation rate of approximately 9.23% because many students were not interested in participating in the study. The reasons for non-participation were captured during the reimbursement phase of the project, when the author interacted with a number of students and teachers.

The final sample comprised 433 parents and 433 children, which is

considered “good” (Wimmer & Dominick, 2011, p. 103) for multivariate analysis. Table 7 (below) displays some generic sample characteristics.

Table 7: Survey Sample Characteristics

Characteristics		n	%	M	SD
Children	Son	247	57.0		
	Daughter	186	43.0		
	12 years old	29	6.7		
	13 years old	103	23.8		
	14 years old	97	22.4		
	15 years old	119	27.5		
	16 years old	69	15.9		
	17 years old	16	3.7		
	Average Weekday VG Time Spent (hrs) ⁴			2.18	1.874
	Average Weekend VG Time Spent (hrs)			3.42	2.434
Parents	Father	163	37.6		
	Mother	270	62.4		
	Age			46.24	5.989
	Primary School Leaving Examination [1]	71	16.4		
	‘O’ Levels [2]	146	33.7		
	‘A’ Levels [3]	26	6.0		
	Diploma [4]	71	16.4		
	Degree [5]	85	19.6		
	Post Graduate [6]	34	7.9		
		Average Weekday VG Time Spent (hrs)			0.72
	Average Weekend VG Time Spent (hrs)			0.96	1.867
Family	Father & Son	110			
	Father & Daughter	53			
	Mother & Son	137			
	Mother & Daughter	133			
	Single-Income	144			
	Dual-Income	271			
	Both Unemployed	18			
	1-3 Room Public Housing [1]	77	17.8		
	4 Room Public Housing [2]	161	37.2		
	5 Room Public Housing [3]	131	30.3		
	Private Housing [4]	64	14.7		
	Average Number of Television Sets Per Household			2.01	
	Average Number of Desktops Per Household			0.93	
	Average Number of Laptops Per Household			2.11	
Average Number of Game Consoles Per Household			0.85		
Average Number of Smartphones Per Household			4.08		
	Average Weekday Time Spent Together (hrs)			4.86	2.791
	Average Weekend Time Spent Together (hrs)			9.50	4.965

“[]” denotes the scoring

A majority of the sample involved sons (57.0%) and mothers

⁴ While this study attempted to minimise unrealistic time entries by averaging the parent and child reports, some were still detected. Working on the assumption that teenagers sleep, on average, seven hours (Tang, 2010), and spend approximately seven hours in school on weekdays, time data was capped at 10 hours for weekdays and 16 hours for weekends, to indicate a reasonable maximum video gaming time or time spent with the parent. While less than 5% of the time entries exceeded the cap, data was not discarded, as it was meaningful and important for analysis. The data treatment method is in line with many data handling recommendations (Bickman & Rog, 2009; Gliner, 2009; McBurney, 2007; Nolan & Heinzen, 2012).

(62.4%). Nearly seven in 10 (67.5%) live in 4-room and 5-room subsidized public housing (HDB) flats. More than three in 10 (33.7%) parents listed their education as ‘O’ levels, consistent with other local studies that sampled children of the same age range (Choo et al., 2010; Kwan & Skoric, 2012).

The following section presents findings that employ correlational and regression techniques for analysis. However, due to the nominal character of gender, H1(d) was examined through independent samples t-test and regression. Adjusted R-square value was used as a measure of explanatory power of H1, H2 and H3, which is often regarded as a conservative estimate for the population value (George & Mallery, 2009). Consistent with many social science studies, a statistical significance score (*p*-value) of less than 0.05, and 0.01, was reported and accepted (Gliner, 2009; McBurney, 2007; Wimmer & Dominick, 2011).

7.2 Findings for RQ1 (How is parental mediation practised?) & RQ2 (How is parental mediation received?)

This section presents the quantitative findings of RQ1 by way of H1, and RQ2 via H2 and H3.

Table 8 below captures the descriptive and reliability statistics for the relevant constructs used in H1, H2 and H3.

Table 8: Descriptive and Reliability Statistics for relevant constructs used in H1, H2 and H3

Constructs	M	SD	Cronbach’s Alpha
Gatekeeping Mediation	4.23	1.166	0.918

Investigative Mediation	3.40	1.095	0.918
Discursive Mediation	3.90	1.337	0.923
Diversiónary Mediation	3.79	1.341	0.863
Summated Mediation	3.83	1.041	0.959
Parental Video Game Perceptions	4.36	0.870	0.801
Perception of Child's Maturity to Handle Their Video Gaming Habit	3.42	1.248	0.910
Parental Challenges	3.63	1.200	0.878
Evasiveness	3.02	1.359	0.837
Obedience	4.34	1.382	0.934
Children's Video Game Perceptions	3.85	0.846	0.712
Challenges Faced by the Child	3.14	1.652	0.858

H1: Parents' perception of video gaming, and of the child (encompassing the child's maturity to handle video gaming, expectations of the child in terms of age and gender) and parental challenges faced (including available time) with mediation, would be associated with the levels of parental mediation (gatekeeping, investigative, discursive and diversionary mediation).

Correlational and Multiple Linear Regression analysis was done on all the parental mediation constructs with its influencing factors. The following table summarises the results for H1.

Table 9: Correlational and Regression Analysis for H1

Mediation Constructs	Gatekeeping	Investigative	Discursive	Diversiónary	Summated
Influencing Factors					
Parental Video Game Perceptions	$r=0.039$	$r=-0.078$	$r=0.019$	$r=-0.092$	$r=-0.033$

Perception of Child's Maturity to Handle Their Video Gaming Habit	$r=-0.167^{**}$ $\beta=0.118^{**}$	$r=0.179^{**}$ $\beta=0.146^{**}$	$r=-0.062$ $\beta=0.017$	$r=0.183^{**}$ $\beta=0.156^{**}$	$r=0.173^{**}$ $\beta=0.132^{**}$
Age of Child	$r=-0.299^{**}$ $\beta=-0.262^{**}$	$r=-0.138^{**}$ $\beta=-0.116^*$	$r=-0.192^{**}$ $\beta=-0.173^{**}$	$r=-0.125^{**}$ $\beta=-0.089$	$r=-0.222^{**}$ $\beta=-0.188^{**}$
Gender of Child	$\beta=-0.072$	$\beta=-0.005$	$\beta=-0.027$	$\beta=-0.078$	$\beta=-0.055$
Parental Challenges	$r=0.161^{**}$ $\beta=0.137^{**}$	$r=0.204^{**}$ $\beta=0.174^{**}$	$r=0.175^{**}$ $\beta=0.171^{**}$	$r=0.125^{**}$ $\beta=0.096^*$	$r=0.195^{**}$ $\beta=0.170^{**}$
Available Time (Weekday)	$r=0.139^{**}$ $\beta=0.029$	$r=0.133^{**}$ $\beta=0.134^*$	$r=0.126^{**}$ $\beta=0.044$	$r=0.088$ $\beta=0.037$	$r=0.143^{**}$ $\beta=0.069$
Available Time (Weekend)	$r=0.192^{**}$ $\beta=0.160^*$	$r=0.105^*$ $\beta=0.005$	$r=0.150^{**}$ $\beta=0.110$	$r=0.115^*$ $\beta=0.092$	$r=0.167^{**}$ $\beta=0.111$
Adjusted R-Square Value	0.150 ^{**}	0.083 ^{**}	0.074 ^{**}	0.059 ^{**}	0.117 ^{**}

* Correlation is significant at 0.05 level (2-tailed)

** Correlation is significant at 0.01 level (2-tailed)

β is the Unstandardized Coefficient Beta

H1(a) which states that more negative parental perceptions of video gaming would be associated with higher levels of parental mediation, was not supported. The findings show that parents' video game perceptions had no statistically significant effect on any of the parental mediation processes. Further investigation revealed that there was no statistical significant correlation found between parents' video game perceptions and parents' report of any parental mediation processes.

H1(b) which states that more favourable parental perceptions of children's ability to handle video gaming would be associated with lower levels of parental mediation, was partially supported. Parents' perception of their children's ability to handle their (children's) video gaming habit was found to have a positive effect on gatekeeping, investigative, diversionary and the summated mediation. This implies that gatekeeping, investigative,

diversionary and overall mediation increased in frequency for children perceived to be less able of handling their video gaming habit. Parents' perception of their children's ability to handle their (children's) video gaming habit showed no statistically significant effect on discursive mediation.

H1(c) which states that child's age would be negatively correlated to the levels of parental mediation, was supported. Consistent with prior studies, the children's age was found to have a negative effect on all mediation processes and the summated parental mediation.

H1(d) which states that girls would experience less mediation than boys, was partially supported. Independent samples t-test, $t(431)=2.056$, $p<0.05$, revealed that there was statistically significant difference only for gatekeeping mediation. Girls ($M=4.10$, $SD=1.200$) experienced less gatekeeping than boys ($M=4.33$, $SD=1.132$)

H1(e) which states that more parental challenges would be associated with lower levels of parental mediation, was supported. Challenges to parental mediation were found to have negative effect on all parental mediation processes, including summated mediation. This implies that mediation increased in frequency, as parents felt less challenged.

H1(f) which states that the amount of available time (weekday and weekend) with the child would be positively correlated with the levels of

parental mediation, was partially supported. Notably available time was found to positively influence all parental mediation processes, except when diversionary mediation was examined with available weekday time. As such, with more available time, parents generally practise more mediation.

In summary, the findings for RQ1 showed that parental perception of a child's maturity to handle his/her video gaming habit, the child's age, parental challenges, available time (weekday and weekend) had statistically significant influence on summated parental mediation process, and on at least three parental mediation processes. The child's age, parental challenges faced, and the available weekend time, had the most statistically significant correlations with all five processes, followed by parental perception of the child's maturity, and available weekday time, with four each. Parents' video game perceptions had no statistically significant effect on any parental mediation processes or its summation.

H1 which states that parents' perception of video gaming, and of the child (encompassing the child's maturity to handle video gaming, expectations of the child in terms of age and gender) and parental challenges faced (including available time) with mediation, would be associated with the levels of parental mediation, was partially supported. Parental perceptions of video gaming did not show any association with

parental mediation processes and, as such, was removed from the regression analysis. While parental mediation processes did not show any variance with the child's gender, parental challenges was found to be the strongest predictor, with statistically significantly high β values for summated parental mediation and all the other processes. While the age of the child had higher β values than the parental challenges, it was not statistically significant for diversionary mediation. Perception of the child's maturity to handle video gaming and the child's age each predicted the summated parental mediation and three other processes. Weekend and weekday available time had statistically significant prediction for gatekeeping and investigative mediation process respectively. Gatekeeping and investigative mediation were each predicted by four variables, followed by the summated mediation, with three variables, and then discursive and diversionary with two variables each. While the adjusted R-square value was found to be statistically significant for the summated parental mediation score, only 11.7% of the variance was explained by the independent variables. A hierarchical regression analysis was performed to find out if the conclusions still hold true after controlling for several demographic variables (entered in the following order: parents' age, parents' gender, parents' education and housing type). Findings show that the child's age ($\beta=-0.182$, $t=-4.047$, $p<0.01$), parental

challenges ($\beta=0.150$, $t=3.288$, $p<0.01$), available weekend time ($\beta=0.138$, $t=3.061$, $p<0.01$), parent's age ($\beta=-0.138$, $t=-3.063$, $p<0.01$), parent's educational level ($\beta=0.122$, $t=2.727$, $p<0.01$) and parental perception of the child's ability to handle video gaming effects ($\beta=0.123$, $t=2.690$, $p<0.01$) were able to explain 14.5% (adjusted R-square value of 0.145**).

As such, while the variance was low, the model showed statistical significance, and had relatively strong explanatory power, compared to other parental mediation models (Shin, 2010; Shin & Huh, 2011).

H2: Children's perception of video gaming and the challenges they face would be associated with levels of evasiveness.

H3: Children's perception of video gaming, the challenges they face, and differences in parent and child reports of gatekeeping mediation and demandingness, would be associated with the level of obedience.

Correlational and Multiple Linear Regression analysis was done on Children's Responses constructs with its influencing factors. The following table summarises the results for H2 and lists the reliability statistics for the constructs used.

Table 10: Correlational and Linear Regression Analysis for H2 & H3

Child Response Construct	H2: Evasiveness	H3: Obedience
Children's Video Game Perceptions	$r=-0.002$	$r=-0.017$
Challenges Faced By the Child	$r=0.615^{**}$ $\beta=0.615^{**}$	$r=-0.063$
Difference in Parent and Child Reports of Gatekeeping (Child Score Minus Parent score)		$r=0.205^{**}$ $\beta=0.169^{**}$
Difference in Parent and Child Reports of Demandingness (Child Score Minus Parent score)		$r=0.166^{**}$ $\beta=0.112^{*}$
Adjusted R-Square Value	0.376**	0.049**

** Correlation is significant at 0.05 level (2-tailed)*
*** Correlation is significant at 0.01 level (2-tailed)*
 β is the Unstandardized Coefficient Beta

H2(a) and H3(a) which states that more negative child perceptions of video gaming would be associated with lower levels of evasiveness and obedience respectively, were not supported. While the paired sample t-test, $t(432)=-9.483$, $p<0.01$, of the survey findings support the claim (made in Chapter 5) that children ($M=3.81$, $SD=0.846$) generally have more positive vibes about the effects of video gaming than their parents ($M=4.36$, $SD=0.870$), children's perception of video gaming was not correlated to their expression of obedience or evasiveness.

H2(b) which states that challenges experienced by children would be associated with higher levels of evasiveness, was supported. The challenges children face had significant effect on evasiveness. However, H3(b) which states that challenges experienced by children would be associated with higher levels of obedience, was not supported. As such, the challenges children face had no significant effect on obedience.

H2 was partially supported. Children's video game perception was removed (due to insignificant correlational finding) from the equation, and for the same reason highlighted previously, hierarchical regression analysis was performed again with the same few demographic variables (entered in the following order: children's age, children's gender, parents' age, parents' gender, parents' education and housing type). Findings

show that age of the child ($\beta=0.122$, $t=3.215$, $p<0.01$) and the challenges children faced ($\beta=0.632$, $t=16.641$, $p<0.01$) was able to explain 39.0% (adjusted R-square value of 0.390**), which only accounted for a 1.4% increase in variance explanation, with the child's age included.

H3(c) which states that children's stricter view of gatekeeping requirements, compared with the parents', would be associated with higher levels of obedience, was supported. Difference in parent and child reports of gatekeeping mediation had significant effect on the levels of obedience. H3(d) which states that children's stricter view of parents' demandingness, compared with the parents', would be associated with higher levels of obedience, was also supported. Difference in parent and child reports of demandingness (parenting style) had significant effect on the levels of obedience. The statistics here measure the magnitude of the differences, and was shown to increase as the level of obedience increases. This means that the levels of obedience increases as the child views the parent's gatekeeping requirements more strictly, and views the parent as more demanding than what the parent reported.

H3 was partially supported. Findings show that the difference in parent and child reports of both gatekeeping requirements and demandingness positively predicted the level of obedience. Again, a hierarchical regression analysis was performed using the same few

demographic variables (entered in the following order: children’s age, children’s gender, parents’ age, parents’ gender, parents’ education, housing type). Findings show that the child’s age ($\beta=-0.192$, $t=-4.164$, $p<0.01$) was the best predictor, followed by difference in gatekeeping expectations ($\beta=0.164$, $t=3.371$, $p<0.01$) and then difference in demandingness ($\beta=0.107$, $t=2.191$, $p<0.05$). These variables were able to explain 8.4% (adjusted R-square value of 0.084**).

Table 11 below summarises the hypotheses results.

Table 11: Summary of Hypotheses (H1, H2 and H3) Results

Hypotheses	Results
H1: Parents’ perception of video gaming, and of the child (encompassing the child’s maturity to handle video gaming, expectations of the child in terms of age and gender) and parental challenges faced (including available time) with mediation, would be associated with the levels of parental mediation (gatekeeping, investigative, discursive and diversionary mediation).	Partially supported.
H1(a): More negative parental perceptions of video gaming would be associated with higher levels of parental mediation.	Not supported.
H1(b): More favourable parental perceptions of children’s ability to handle video gaming would be associated with lower levels of parental mediation, was partially supported.	Partially supported.
H1(c): Child’s age would be negatively correlated to the levels of parental mediation.	Supported.
H1(d): Girls would experience less mediation than boys.	Partially supported.
H1(e): More parental challenges would be associated with lower levels of parental mediation.	Supported.
H1(f): The amount of available time (weekday and weekend) with the child would be positively correlated with the levels of parental mediation.	Partially supported.
H2: Children’s perception of video gaming and the challenges they face would be associated with the levels of evasiveness.	Partially supported.
H2(a): More negative child perceptions of video gaming would be associated with lower levels of evasiveness.	Not supported.
H2(b): Challenges experienced by children would be associated with higher levels of evasiveness.	Supported.
H3: Children’s perception of video gaming, the challenges they face, and differences in parent and child reports of gatekeeping mediation and demandingness, would be associated with the level of obedience.	Partially supported.
H3(a): More negative child perceptions of video gaming would be associated with lower levels of obedience.	Not supported.

H3(b): Challenges experienced by children would be associated with higher levels of obedience.	Not supported.
H3(c): Children's stricter view of gatekeeping requirements, compared with the parents', would be associated with higher levels of obedience.	Supported.
H3(d): Children's stricter view of parents' demandingness, compared with the parents', would be associated with higher levels of obedience.	Supported.

7.3 Findings for RQ3 (What does effective parental mediation look like?)

This section presents the findings of RQ3, which descriptively paints a picture of effective parental mediation. First, RQ3A was examined and the following table shows the results of the correlational analysis.

Table 12: Correlational Analysis for H4

Mediation Constructs	Gatekeeping	Investigative	Discursive	Diversionsary	Summated
Other Constructs					
Parenting Style	$r=-0.435^{**}$	$r=0.196^{**}$	$r=0.372^{**}$	$r=0.263^{**}$	$r=0.377^{**}$
Pathological Video Game Use	$r=-0.099^*$	$r=-0.032$	$r=-0.018$	$r=0.036$	$r=-0.013$

* Correlation is significant at 0.05 level (2-tailed)

** Correlation is significant at 0.01 level (2-tailed)

H4(a) which states that more authoritative parenting style would be associated with more parental mediation, is supported. As parents' parenting style increases in authoritativeness (higher demandingness and higher responsiveness), they were found to employ more mediation (all mediation processes, including the summated parental mediation). This finding is not surprising as parenting style and parental mediation are closely related (Eastin et al., 2006; Kalmus et al., 2013; Nathanson, 2002;

Oosting et al., 2008; R. Warren, 2001), yet it did not satisfy the multicollinearity condition. As such, its use in RQ3 would provide unique and useful information.

H4(b) which states that less video game pathological behaviours would be associated with more parental mediation, is partially supported. Children who demonstrated less pathological video gaming behaviours were found to have received more gatekeeping. The relationship between pathological video gaming behaviours and the rest of the mediation processes, including the summated parental mediation, were statistically insignificant. This finding is not surprising as parents in the qualitative respondent pool were found to practise a mixture of mediation methods, as such, explaining the lack of statistical significance between the specific mediation processes and pathological video gaming behaviour.

RQ3B seeks to describe the differences between the group (GofAN) of authoritative parents with their non-pathological video game use children, and the group (GofNP) of neglectful parents with their pathological video game use children. To group the parents into various parenting styles, the medians for demandingness ($\alpha = 0.782$) and responsiveness ($\alpha = 0.810$) were found to be 4.21 and 4.33 respectively. Parenting styles were determined based on “median splits” (Huver et al., 2010, p. 397): parents who scored equal, and above, the median on both

demandingness and responsiveness scales were labeled as authoritative parents, and those who scored below the median on both demandingness and responsiveness scales were labeled as neglectful parents. The rest were labeled as authoritarian and permissive.

A two (pathological video game use: pathological gamers versus non-pathological gamers) by three (parenting style: authoritative, authoritarian and permissive, versus neglectful) analysis of variance (ANOVA) was conducted to examine parental mediation's variance with pathological video gaming status and parenting style (Elliott & Woodward, 2007). There was statistically insignificant interaction noted [$F(2,427)=0.886, p=0.413$]. As such, parenting style's effect on parental mediation is independent of pathological video gaming behaviour and parental mediation did not vary along with the pathological gaming status of the child. As such, making comparisons between groups of GofAN and GofNP would provide further information from that already found in RQ3A. The detailed findings for RQ3B are highlighted in the following sections.

7.3.1 Child, Parent and Family Characteristics

This section describes the difference in the characteristics of parents, children and family. Section 7.3.2 examines differences in the parental mediation process applied and its influencing factors. Finally, Section 7.3.3 explores differences in children's responses, and its

influencing factors. The following table groups the sample based on their parenting style and PVGU scores, and shows that as parenting styles moved from authoritative, authoritarian and permissive, to neglectful, the sample witnessed more pathological gamers.

Table 13: Grouping Size Based on PVGU and Parenting Style

Groups	Pathological Gamers (Child)	Non-Pathological Gamers (Child)	% Age of Pathological Gamers
Authoritative	12	134 (GofAN)	8.2%
Authoritarian & Permissive	24	127	31.4%
Neglectful	50 (GofNP)	86	36.8%
Total	86	347	19.9%

*GofAN= the group of authoritative parents with their non-pathological video game use children
GofNP= the group of neglectful parents with their pathological video game use children*

The tables below summarise differences, through use of independent samples t-test, in characteristics of child (Table 14), parent (Table 15) and family (Table 16), respectively, between GofAN and GodNP.

Table 14: Means Comparison For Child Characteristics

Characteristics	GofAN (n=134)	GofNP (n=50)	Difference
CHILD			
Age	13.99 (SD=1.271)	14.96 (SD=1.261)	-0.97**
English Exam Score	65.90 (SD=11.761)	59.30 (SD=11.939)	6.60**
Mathematics Exam Score	67.49 (SD=18.232)	68.76 (SD=15.740)	Not Sig.
Science Exam Score	69.43 (SD=14.991)	64.70 (SD=15.176)	Not Sig.
Scholastic Achievement Score (Average of English, Mathematics and Science scores)	67.61 (SD=12.937)	64.25 (SD=12.701)	Not Sig.
Average Week Day Video Game Time (hrs)	1.87 (SD=1.463)	2.83 (SD=2.417)	-0.96**
Average Week End Video Game Time (hrs)	2.95 (SD=2.077)	4.43 (SD=3.266)	-1.48**
Length Of Time Video Gaming Pattern Has Lasted (years)	2.34 (SD=1.743)	2.76 (SD=2.026)	Not Sig.

** Correlation is significant at 0.05 level (2-tailed)*

*** Correlation is significant at 0.01 level (2-tailed)*

The findings in Table 14 show that children in GofAN are generally younger, and score better in their English language examinations. They

also spent less time on video games, regardless of whether it was during the weekdays or in the weekend, as compared with GofNP.

Table 15: Means Comparison For Parent, Child and Family Characteristics

Characteristics	GofAN (n=134)	GofNP (n=50)	Difference
PARENT			
Age	46.16 (SD=5.464)	47.78 (SD=10.771)	Not Sig.
Highest Educational Level	3.60 (SD=1.599)	3.04 (SD=1.862)	0.56*
Average Week Day Video Game Time (hrs)	0.57 (SD=1.213)	1.19 (SD=1.748)	-0.62**
Average Week End Video Game Time (hrs)	0.68 (SD=1.267)	1.68 (SD=2.435)	-1.00**
Length Of Time Video Gaming Pattern Has Lasted (years)	2.97 (SD=6.763)	2.94 (SD=7.299)	Not Sig.
Achievement Values ($\alpha=0.930$)	6.00 (SD=0.781)	4.04 (SD=0.712)	1.96**
Interest In School Work ($\alpha=0.898$)	5.91 (SD=0.716)	4.07 (SD=0.767)	1.84**
Involvement In School ($\alpha=0.894$)	2.95 (SD=1.441)	3.68 (SD=0.662)	-0.73**

* Correlation is significant at 0.05 level (2-tailed)

** Correlation is significant at 0.01 level (2-tailed)

Parents in GofAN were generally found to be better educated, spent less time on video games, and had higher achievement values for their children and higher interest in their child's school work, but lower involvement in the children's school work, when compared with GofNP. The parents' age and the length of time parents spent playing video games were not found to be statistically different.

Table 16: Means Comparison For Family Characteristics

Characteristics	GofAN (n=134)	GofNP (n=50)	Difference
FAMILY			
Household Type	2.57 (SD=0.920)	2.20 (SD=0.948)	0.37*
Media Devices In the House	9.95 (SD=3.995)	10.50 (SD=5.997)	Not Sig.
Media Devices Exclusively Used by Child	1.28 (SD=1.301)	1.76 (SD=1.572)	-0.48*
Income Status	2.43 (SD=0.555)	2.36 (SD=0.598)	Not Sig.
Average Weekday Time Spent Together (hrs)	5.02 (SD=2.733)	4.84 (SD=2.950)	Not Sig.
Average Weekend Time Spent Together (hrs)	10.19 (SD=4.691)	4.69 (SD=4.787)	2.14**

* Correlation is significant at 0.05 level (2-tailed)

** Correlation is significant at 0.01 level (2-tailed)

Moreover, GofAN was found generally in larger households that spent more weekend time together as a parent and child pair. GofAN's

children were also given less exclusive use of media devices in the household, compared with the children of GofNP. There was no statistically significant difference between parents' income levels, media devices present in the household, and the amount of time parent and child spent together on weekdays.

7.3.2 Parental Mediation Characteristics

Table 17 (below) summarises differences in parental mediation processes and its influencing factors, between GofAN and GodNP.

Table 17: Means Comparison For Parental Mediation Characteristics

Characteristics	GofAN (n=134)	GofNP (n=50)	Difference
PARENTAL MEDIATION PROCESSES			
Gatekeeping	4.78 (SD=1.051)	3.66 (SD=0.780)	1.12**
Investigative	3.67 (SD=1.102)	3.48 (SD=0.840)	Not Sig.
Discursive	4.60 (SD=1.335)	3.56 (SD=0.873)	1.04**
Diversionsary	4.30 (SD=1.368)	3.65 (SD=0.903)	0.65**
Summated Parental Mediation	4.34 (SD=0.959)	3.59 (SD=0.788)	0.75**
INFLUENCING FACTORS			
Parents' Video Game Perceptions ($\alpha=0.801$)	4.47 (SD=1.008)	3.97 (SD=0.391)	0.50**
Perception of Child's Maturity to Handle Their Video Gaming Habit ($\alpha=0.910$)	3.41 (SD=1.442)	3.71 (SD=0.870)	Not Sig.
Parental Challenges ($\alpha=0.878$)	3.73 (SD=1.255)	3.70 (SD=0.963)	Not Sig.

* Correlation is significant at 0.05 level (2-tailed)

** Correlation is significant at 0.01 level (2-tailed)

The findings in Table 17 show that all of the parental mediation processes, except investigative, was practised more often for the GofAN than the GofNP. The difference was especially more pronounced for gatekeeping and discursive mediation processes. While parents of the GofAN held more negative perceptions of video gaming than parents of the GofNP, differences in their perception of their children's maturity to handle video gaming, and the challenges faced by the parents, were not

statistically significant.

7.3.3 Children Response Characteristics

Table 18 (below) summarises differences in children’s responses and its influencing factors, between GofAN and GodNP.

Table 18: Means Comparison For Child Responses

Characteristics	GofAN (n=134)	GofNP (n=50)	Difference
CHILDREN RESPONSES			
Obedience	4.83 (SD=1.419)	3.67 (SD=1.030)	1.16**
Evasiveness	2.75 (SD=1.308)	3.71 (SD=0.971)	-0.96**
INFLUENCING FACTORS			
Children’s Video Game Perceptions ($\alpha=0.712$)	3.83 (SD=0.941)	3.96 (SD=0.547)	Not Sig.
Challenges Faced by the Child ($\alpha=0.858$)	2.79 (SD=1.716)	3.70 (SD=1.215)	-0.91**
Difference in Parent and Child Reports of Gatekeeping (Child Score Minus Parent Score)	6.56 (SD=1.337)	7.01 (SD=1.040)	-0.45*
Difference in Parent and Child Reports of Demandingness (Child Score Minus Parent Score)	6.89 (SD=0.886)	6.96 (SD=0.308)	Not Sig.

* Correlation is significant at 0.05 level (2-tailed)

** Correlation is significant at 0.01 level (2-tailed)

Table 18 findings show that children in the GofAN were generally more obedient, practised less evasive tactics, and faced fewer challenges. The discrepancy between parents’ and children’s understanding of gatekeeping requirements is larger for the GofAN than for the GofNP, with GofAN parents having a stricter view of gatekeeping than their children. Differences in video game perceptions between both sets of children were not statistically significant. Moreover, the difference in magnitude of discrepancies between parent and child reports of demandingness was not statistically different.

7.4 Discussion

This section discusses the qualitative and quantitative findings of

RQ1, RQ2 and RQ3.

7.4.1 Discussion for RQ1 (How is parental mediation practised?)

This section discusses the findings for RQ1. While Chapter 4 found a relationship between the factors represented by H1, only some of its factors were generalisable.

First, quantitative findings showed that parents' perceptions of video games had no association with their parental mediation processes. This observation was consistent, even when taking into account only the parents' report of their parental mediation activities. While the variable showed high reliability as a construct, it is likely due to the ambivalent nature of parents' perceptions of video games that explains this phenomenon (S. S. Lim & Soon, 2010). However, this finding contradicts many studies that found otherwise (Mendoza, 2009; Nikken & Jansz, 2003, 2006, 2013; Shin & Huh, 2011). The expense of the construct, represented by the variety and the number of questions, and the response range (on a 7-point Likert scale) adopted in this study, arguably illuminates this ambivalence very well. The inconsistent direction of the correlational data (r) displayed across the parental mediation processes may suggest further support for the ambivalent nature of the video game perceptions held by parents, but this is to be noted with caution, as it was not found to be statistically significant.

Second, while the child's age has been frequently cited (see Eklund & Bergmark, 2013; Livingstone & Helsper, 2008; Nathanson, 2002; Nikken & Jansz, 2003, 2006; Nikken & Jansz, 2013; Shin & Huh, 2011) as an antecedent to parental mediation, for which some measure of support was found, this study has improved on its explanatory power. Qualitative and quantitative findings suggest that parent's perception of the child's ability to handle the effects of video gaming influenced and predicted the level of gatekeeping, investigative and diversionary tactics employed: the more trust parents had in their children, the less often these tactics were practised. It would not be surprising to find that parents who were not able to trust their children with video gaming would tend to impose out-of-bounds markers, check on them more frequently and try to engage them in other healthy alternative activities, instead of giving their child full autonomy. However, this was not the case for discursive mediation. Gleaned from the interview respondent pool, it appears that, as parents who do not believe their children are able to handle video gaming effects may also feel their children are not sufficiently mature to understand any discussion they might have as to the parents' concerns, This may explain the negative effect found between discursive mediation and parents' general perception of children's immaturity to handle video gaming effects. Again this has to be interpreted with caution, as the analysis did not yield

statistically significant influence.

This study also found that the child's age negatively influence parental mediation, which can be further explained: the interview findings suggest that some parents had higher expectations of their older children, which encouraged the parents to mediate less. Some studies (see Nikken & Jansz, 2003; Nikken & Jansz, 2006) have found that girls experienced more mediation, while more recent ones showed the reverse (Eklund & Bergmark, 2013; Nikken & Jansz, 2013). While this study found that Singaporean boys were subjected to more gatekeeping processes, parental mediation did not vary with gender. As such, gender's influence on parental mediation is not generalisable. It is likely that gender stereotypes are not consistently held, and vary from parent to parent. Moreover, gender effects are also dependent on the video game content, as some parents revealed during the interviews. Some measure of explanation was achieved by exploring a possible relationship between the child's age and gender influencing parental mediation; explanatory power can be further improved when future studies explore this newly charted area of parents' perceptions of the children's maturity in handling video gaming effects.

Third, the study revealed that challenges parents face with parental mediation did influence their employment of parenting strategies in

managing their children's video gaming habits. It appears that parents who found video games easier to understand, tend to mediate more. This phenomenon was witnessed in every mediation strategy and its summation. However, it was not the case when the available weekday interaction time (a subset of the challenges parents faced) between parent and child was examined for possible influence on the practice of diversionary mediation. It is likely that during weekdays, parents get their children involved in school activities, tuition and/or enrichment classes and, as such, do not require significant time investment on the parent for diversionary tactics. However, during the weekends, it is expected that parents themselves may get themselves directly involved by engaging their children in exercise or in other family activities and, as such, would be influenced by how much time the parents have.

Thus far, this study has answered RQ1A through qualitative and quantitative approaches. To further inform RQ1B's explanatory clarity, a discussion about the adjusted R-square needs to be pursued.

The seemingly weak association between the dependent and independent variables in the regression analysis can be attributed to parents adopting a mix of methods in dealing with their children's video gaming behaviour. By practising a variety of methods, a particular variable would have diluted its predictive strength on each parental mediation

strategy, thereby lowering the “systemic variance” (Singleton & Straits, 2005, p. 503) that can be predicted. Also, it could be expected that each parental mediation strategy would be predicted by different variables, as different factors influence the mediation processes differently. As such, these observations lend support to the use of the word “process” to denote a series of mediation activities parents can use. While the association between the parental mediation processes and its influencing factors appears weak, it was relatively higher than that found in Shin’s study (2010), which had perceptual variables accounting for 1% to 7% of parental mediation.

7.4.2 Discussion for RQ2 (How is parental mediation received?)

This section discusses the findings for RQ2. Chapter 5 found a relationship between the factors represented by H2 and H3, and this study found them mostly generalisable.

First, in this study, children’s video game perceptions were more positive than those held by their parents, but there was no statistically significant association found with children’s practice of evasive tactics. This finding further illustrates the muted effect of children’s perceptions of video games due to their rationalisation. As such, any negative perceptions children hold of video games were, to some extent, rationalised (i.e., negative video game effects do not affect them, and it is

part of the game feature), and did not influence their decision to evade parental monitoring or their measure of obedience. Instead, the practice of evasive behaviours was found strongly predicted by the challenges children faced. In fact, the predictive strength of the challenges children face ($\beta=0.632$, $t=16.641$, $p<0.01$) was more than five times stronger than the predictive strength of the child's age ($\beta=0.122$, $t=3.215$, $p<0.01$). Both the child's age and the challenges faced positively predicted the extent to which they would practise evasive tactics, accounting for 39.0% of the variance. This is relatively high by social science standards (Wimmer & Dominick, 2011). As such, the more difficulties children faced and, as they grew older, the more often they would evade parental monitoring. This supports the findings in Chapter 5.

Second, obedience to parents' gatekeeping requirements was negatively predicted by the child's age, but positively predicted by the difference in parent and child reports of demandingness and gatekeeping. This means that, when a child views the parent's gatekeeping requirements and demandingness more strictly than does the parent in implementing those mediation procedures, and for every year's reduction in the child's age, it can be reliably predicted that this would result in an incremental measure on the child's part to obey those rules. While the extent to which the difference in parent and child reports of gatekeeping

and demandingness was valid, proxy measures for differing expectations and inconsistency with general parenting practices had face validity; still, the result has to be interpreted with caution.

Thus far, the study has, qualitatively and quantitatively, explored RQ1 and RQ2, which resulted in some descriptive and explanatory contributions to parental mediation theory. However, as mentioned earlier, the theory's effectiveness need further elaboration, which this study undertook through RQ3.

7.4.3 Discussion for RQ3 (What does effective parental mediation look like?)

This section discusses the findings for RQ3. Chapters 2 and 6 described the use of two instruments (PIPIS and PVGU) in painting the picture of **RQ3: “What does effective parental mediation look like?”** It was necessary to first observe the relationship between parenting styles and pathological video game behaviours with parental mediation (RQ3A). It was found that while authoritative parents practise parental mediation more frequently, it may not necessary lead to favourable video game behaviours. Again, this finding lends support to a mixed method approach in effective parental mediation and bodes well for the research method used in examining RQ3B. The following sections discuss the findings of RQ3B.

First, parents who practised effective mediation were found to have

higher educational levels and lived in better household types, as compared with those who did not practise effective mediation, which could correspondingly indicate a higher social economic status (Choo et al., 2010). These parents generally played less video games and had more negative video gaming perceptions of children that played video games. Notably, these parents had higher achievement values for their children, and were more interested in their children's school work but, ironically, were found to be less involved in their children's school activities. As such, while these parents were typically very concerned about their children's academic performance, they typically do not attend many of the events at their children's schools compared with the other group of parents. However, parents who practised effective mediation were not much different from those who did not, in terms of their age, length of time as a video gamer, and their perception of their children's ability to manage video gaming effects. More interestingly, there was no difference in the amount of time parent and child spent together on a weekday, and whether they came from a single income or dual income family. Undoubtedly, this finding has positive implications for working parents who are time-starved in managing their children's video gaming habits; this suggests that effective parental mediation does not seem to require huge investments of weekday time, which most working parents may not be

able to provide. Moreover, there were no difference in the appreciation of video game features (challenges that parents faced) between those who practised effective parental mediation and those who did not. While media-rich households present challenges to monitoring and management of media habits, no statistically significant difference was detected between parents who practised effective parental mediation and those who did not, in terms of the number of household devices.

Second, children who received effective mediation were found to have higher English language test scores, were more obedient to their parents' video gaming behavioural requirements, and practised less evasive tactics, compared to those who received less effective mediation. Many parents would undoubtedly consider these characteristics favourable, which would support the appropriateness of the instruments used. These children were also typically younger, found to play less video games, and did not face as much difficulties resisting various video game attractions. As such, it is not surprising that, as children get older, they typically desire more autonomy and, as such, parents' expectation that their children practise unconditional obedience would likely result in contentious situations. Interestingly, pathological gaming children had a stricter view of their neglectful parents' gatekeeping requirements than that held by non-pathological gaming children of their authoritative parents'

gatekeeping requirements. It is likely that the non-pathological gaming children were already comfortable with the gatekeeping requirements and did not find them problematic to obey and, as such, did not feel that the requirements were that stringent. However, children who received effective mediation were no different from those who did not, in terms of the video game perceptions they held and the inconsistency they experienced with their parents' demandingness.

Third, effective mediation was characterised by the practice of more gatekeeping, discursive and diversionary mediation. The difference was notably greatest for gatekeeping and discursive mediation, and lowest for diversionary mediation. This suggests that, for effective mediation to take place, gatekeeping and discursive mediation should be emphasized, followed by diversionary mediation. However, there was no difference in the practice of investigative mediation between the two groups. With gatekeeping requirements in place, frequent discussions and promotion of healthy alternative activities, it is not surprising to find authoritative parents removing emphasis on the monitoring of their non-pathological gamer children.

Since this study is satisfied that parental mediation is characterised by the practice of mixed methods, and in order to pursue RQ3B deeper, the means of individual items were compared to precisely determine which

specific actions mattered for effective parental mediation. Those items that had no statistically significant difference are highlighted in Table 19 below.

Table 19: Statistically Insignificant Difference For Parental Mediation Items

Processes	Items for Parents
Gatekeeping	8. My child only plays video games after I “unlock” the gaming device (computer/console) with my password. 10. I use device restrictions to keep my child from playing video games (eg. keeping the laptop, router or charging cable).
Investigative	1. I view my child’s computer screen when he/she is playing video games. 2. I listen in to what my child is saying when he/she plays video games. 7. I seek friends’ and/or relatives’ opinion about the video games that my child is playing. 8. I check the Internet to learn more about the video games my child is playing. 9. I check game ratings to learn more about the video games my child is playing.
Diversionsary	2. I get my child involved in music lessons or tuition classes so that he/she spends less time on video games. 3. I exercise with my child so that he/she spends less time on video games.

The findings from Table 19 show that, while the majority of the items in the parental mediation scale matters for effective mediation, there are two actions from gatekeeping, five actions from investigative mediation and two actions from diversionsary mediation that did not matter for effective parental mediation. A few noteworthy conclusions can be derived from these nine items.

First, two items in gatekeeping were conceptualised as technological mediation in some circles (see Eastin et al., 2006 for further explanation); in Chapter 4, a point was made to maintain these two items under gatekeeping. The findings in Table 19 suggest that these two items did not matter much for effective mediation, further supporting the justifications put forth in Chapter 4.

Second, five items on the investigative mediation scale in Table 19

suggest that parental checking of external sources for more information about video games is not as relevant to effective mediation as when the parent actually played the video game with the child to find out more about the effects. For effective mediation, it matters that parents check on the type and duration of the video game, as well as any online friends encountered. However, Table 19 suggests that checking can be done remotely and not intrusively.

Third, for effective mediation to take place, the findings suggest that it helps to involve children in the school's core curricular activities and sports. And it does not matter as much whether parents participate in physical exercise with their children. Again, this has positive implications for time-starved parents. Along with the finding that it does not matter for parents to get involved in school functions themselves, this suggests that effective mediation can take place remotely, reinforcing that there is no difference in time demands for effective parental mediation.

7.5 Summary

This chapter quantitatively examined the qualitative claims made in Chapters 4 and 5. While most relationships were generalisable, others were explained in this chapter. Through comparisons made between two groups of data, the nature of effective parental mediation was established; as was further support for the conceptualisation of the parental mediation

processes.

CHAPTER 8: CONCLUSION

Over the years, the growth of video games has accelerated tremendously in number, variety and consumer market penetration, encroaching more aggressively into the domestic realm. The nature and types of video games continue to evolve, which has elicited growing concerns among parents and experts, and imposed many challenges to parental mediation efforts. This effect is even more pronounced in Singapore, where video game consumption among youths (especially among the 12- to 17-year-old) is high.

Yet, parental mediation theory, rooted in the TV era, has failed to adequately capture these evolutionary changes, and has resulted in certain descriptive and explanatory weaknesses. Additionally, contradictory effectiveness claims from research findings on parental mediation studies leave a gap that challenges the philosophical underpinnings of the parental mediation theory. As such, this study sought to address these issues through following research questions:

RQ1: How is parental mediation practised?

RQ2: How is parental mediation received?

RQ3: What does effective parental mediation look like?

This study, using qualitative and quantitative research methods

conducted on parent and child pairs, has provided descriptive clarity and explanatory strength to parental mediation theory. The study summarises that gatekeeping, investigative, discursive and diversionary mediation adequately captures parents' activities that seek to manage the relationship between the child and video gaming. Distinction between children's responses into obedience to parental requirements for video gaming, and evasive tactics used to circumvent parental monitoring efforts, was also achieved. This study also examined the factors that influence parental decisions on mediation processes, and their children's responses to parental mediation.

The following sections summarise the study's two main contributions to the parental mediation theory.

8.1 Descriptive Clarity Contributions

This study enhances the descriptive ability of parental mediation in several ways.

First, this study has argued the limitations associated with the prevailing concepts of parental mediation (restrictive, active and co-use mediation) and asserts that re-conceptualising these as gatekeeping, investigative, discursive and diversionary mediation processes would more adequately capture the evolutionary changes in parental strategies applied to the video gaming landscape. In this regard, investigative mediation was

conceptualised to capture the varied monitoring activities parents used to handle evolutionary affordances of multitasking and portability of media devices. Moreover, investigative mediation also accounts for the activities parents undertake to seek information about the video game or its effects. The creation of a new concept, termed 'diversionary' mediation, also proved to be useful. Diversionary processes were found to be extremely relevant to the effectiveness claims of parental mediation theory, to effectively moderate the media effects on children.

Second, earlier discussions have highlighted the ability of these newly refined concepts to individually distinguish themselves from each other. Co-playing was subsumed under investigative mediation, because it was evident that parents frequently play video games to better understand how to mediate appropriately. For investigative purposes, co-playing was also found to be very relevant for effective parental mediation.

Third, this study discovered that children's response to parental mediation falls into one of two categories: obedience to parental requirements—or the use of evasive tactics. This study complements other studies (Cole, 2001; Eklund & Bergmark, 2013; Fromme, 2003; Kutner et al., 2008; Livingstone, 2007; Livingstone & Bober, 2006) on children's responses towards parental mediation.

Thus, while the study's main thrust was to enhance the descriptive

ability of parental mediation theory, it strove to exhaustively account for all relevant practices employed by parents in managing their children's video gaming consumption, and conceptualised as gatekeeping, investigative, discursive and diversionary mediation processes.

8.2 Explanatory Power Contributions

The explanatory power of parental mediation has also been enhanced.

First, while many studies (see Kirwil, 2009; Kutner et al., 2008; Livingstone & Helsper, 2008; Mendoza, 2009; Nikken & Jansz, 2003, 2006, 2013; Shin & Huh, 2011; Skoien & Berthelsen, 1996; R. Warren, 2001) found that parental perceptions of video games influence the mediation strategy applied, this study did not find generalisable support for it. While acknowledging the relevance of parents' video game perceptions to effective mediation, this study found that parents' perceptions are characterised by a sense of ambivalence, which may explain the lack of quantitative support for claims made in prior studies. Arguably, this finding should invoke policy considerations on greater public education efforts to educate parents about video games so as to arrive at more conclusive ideas about its effects.

Second, studies have consistently found that the type and frequency of parental mediation are dependent on the child's age; this

study further elucidated on this phenomenon. It found that the parent's perception of the child's ability to handle the video gaming effects, and certain distinct expectations associated with the child's age, influences parental mediation to some measure. Apparently, gendered expectations have also been found to influence how some parents mediate. Thus, this study has further explained how parents' opinions of the child influences the parents' mediation efforts. As such, this study charted a trajectory for future studies to follow, in efforts to further explain this phenomenon.

Third, this study argued and found that parents' appreciation of (or lack of appreciation for) video game features and the available time they have to spend with their children, encompassed as parental challenges, also influence parental mediation. While prior studies (see Livingstone & Helsper, 2008; R. Warren, 2001) hinted at these relationships in relation to the TV and the Internet, this study contributed by examining—and extending—the phenomenon in the video game medium.

Fourth, this study found that children's evasiveness towards parental mediation may have arisen from certain challenges the children experience—such as the child's difficulty in managing video game achievement and social motivations—and this finding is extremely significant in predicting children's practice of evasive tactics.

Fifth, this study discovered that children's perception of video

games have, to some extent, been rationalised. While children's perceptions of video games were qualitatively found to influence the degree to which they would obey or comply with expressed parental wishes, it was not generalisable. Moreover, it was not found to be statistically relevant to effective mediation. Yet, this study's contribution was significant in at least two ways. The study made the epistemological contribution of directly capturing children's responses, thereby supplementing many other studies (Eklund & Bergmark, 2013; Nikken & Jansz, 2013; Shin, 2013) that accounted for children's responses via their parents. The study also had stronger generalisable claims: it quantitatively captured children's responses, supplementing other qualitative studies (Kutner et al., 2008; Linderoth & Bennerstedt, 2007) that capture children's responses.

Sixth, discrepancies in parent and child reports of parenting practices were found to strongly influence children's measure of obedience. While many studies (Eklund & Bergmark, 2013; Livingstone & Bober, 2006; Nikken & Jansz, 2013) accounted for the presence of these differences in parent and child reports, its relationship claims with children's responses were lacking. This study illuminated this lacuna on both qualitative and quantitative fronts.

Perhaps the most significant contribution to the explanatory power

of parental mediation was uncovered through RQ3. The effectiveness claims of parental mediation theory have been littered with contradictions in attempts to find which strategy would be most effective for mediation. However, this study found that parents employ a combination of methods in mediation. Through a triangulation method, by comparing characteristics between authoritative parents of non-pathological gamers, and neglectful parents of pathological gamers, this study has painted a picture of a parent who practises, and a child who receives, effective mediation, and the range of mediation processes applied. Claiming that the parenting style and pathological video game measures applied to bring forth effective mediation characteristics satisfy some measure of validity, the study has highlighted the extent to which certain practices and characteristics contribute to, and are relevant for, effective mediation.

These findings, surfaced extensively by RQ3, have significant implications for parent education, counseling and guidance. Notably, this study found that time, which is a rare commodity for many working parents, along with knowledge and an understanding of game features, which confounds many parents, did not really matter for mediation to be effective. As such, effective mediation does not discriminate against time-deficient or game-ignorant parents. This information would arguably alleviate anxieties about parenting children in the digital age.

Yet, being in-tune with technology and understanding of game features, is key to more effective parental mediation. As such, education efforts would do well to focus on apprising parents of video game features. Doing so would also help parents to more accurately assess the effects of video gaming.

8.3 Limitations and Suggestions for Future Research

While this study has made some contributions to the descriptive ability and explanatory power of the parental mediation theory, it acknowledges some limitations, which also point the direction for future research.

There is a “rich interplay of variables that makes family life complex” (Gentile & Walsh, 2002, p. 158); as such, this study is extremely cautious about claiming that it has exhaustively accounted for the explanatory factors. Three noteworthy examples about this point will be highlighted.

First, this limitation made it difficult to explain some unexpected findings, such as parent and child perceptions of video games, and their effects on parental mediation and children’s responses respectively. Future research would do well to further examine the ambivalent nature and rationalisation of video game perceptions held by the parent and child respectively.

Second, during the interviews, the children frequently highlighted their friends' influence on their responses, but this was not examined quantitatively, as the study had limited reach. Future studies may increase the explanatory power of the parental mediation theory by investigating friends' influences on children's responses.

Third, there are also other factors, such as the consistency of mediation techniques over time, between parents, between siblings and between different dyadic pairs (Gentile & Walsh, 2002), which could have been explored, but was limited by the nature of cross-sectional survey.

While this study interviewed children in full view of their parents, as a way to ensure transparency and protection for the minor, it may have caused the children to feel that their responses were not confidential, thereby affecting the validity of the children's responses. Future studies may look into balancing these objectives by allowing the children to be seen, but not heard by the parents.

This study has limitations on its generalisation claims. Findings cannot be generalised to other age groups, or people from different cultural backgrounds, as this study dealt specifically with Singaporean children aged 12 to 17. The study also faced certain sampling challenges, which were discussed in earlier chapters. Future studies could consider expanding the sampling criteria so as to achieve more generalisable

claims.

This study attempted to capture the amount of time in the surveys; whether it may be the time parents and children spent together, as a function of available time; or the time spent video gaming. The researcher found it difficult to appropriately word the question to enquire about the amount of dedicated and uninterrupted time that parents and children spent together and/or video gaming time; there is greater likelihood that respondents found it difficult to accurately recall, or to distinguish between, the exact number of hours parent and child spent amidst multitasking with other activities. Moreover, certain nuances, such as the way gatekeeping and discursive mediation was administered, that surfaced during the qualitative phase, were not adequately captured in the quantitative phase. While these limitations are commonly faced by survey research (Wimmer & Dominick, 2011), future ethnographic studies could further complement these two aspects of the study's findings.

This study's use of parenting style and pathological video game measure to characterise effective mediation is not exclusive. While this study could have used the obedience and evasiveness measure to further refine the character of effective parental mediation, two reasons led to both being left out of RQ3's inquiry process. First, the parenting style and pathological video game measure have been frequently tested and are,

therefore, more robust as an instrument, than obedience and evasiveness measure, which were only recently developed from the qualitative phase of this study. Second, the addition of obedience and evasiveness measure would further reduce the sample size of both extreme groups of data (GofAN and GofNP), negatively impacting the generalizability of the data. Future studies could consider the addition or use of other valid measures, to further inform the nature of effective mediation.

8.4 Concluding Remarks

Parental mediation theory applies to all media domains. Yet, this study only examined the activities parents engage in as they mediate their children in the video gaming space. Even so, this study suggests that these concepts may be applied to all media platforms, and not just video gaming. This study has found some evidence, through the interviews, that parents apply mediation strategies consistently across all media platforms, whether Internet, video gaming or TV viewing. With TV and Internet, parents could reasonably be expected to discuss their perceptions of media with the child; to apply some gatekeeping strategies, diversionary tactics; and to investigate their consumption. As such, these concepts “could be part of a general parental mediation construct that applies to all kinds of media” (Nikken & Jansz, 2013, p. 2). Future studies would do well to explore these concepts in other media domains.

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Appendix A:

Parent and Child Information Sheet and Consent Form (For Interviews)

PARENTAL AND CHILD INFORMATION SHEET & CONSENT FORM (for Interviews)



1. **Project title:** Parental Perceptions and Mediation of Computer Gaming in Singapore

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3. **What is the purpose of this research?**

You and your child are invited to participate in a research study. This information sheet provides you and your child with information about the research. The Principal Investigator, his Co-Investigators or Research Assistants, will also describe this research to you and answer all of your questions if you have further queries. Please read the information below and ask any questions about anything you don't understand before deciding whether or not you and your child should take part. You may refer to the above information for the investigator(s)' contact details.

This study seeks to explore how parents manage their children's computer gaming habits. This study will also explore parental perceptions of computer gaming. The child's experience and views will also be captured along with his/her gaming behaviour.

4. **Who can participate in the research? What is the expected duration of my participation? What is the duration of this research?**

Children aged between 12-17 years who play Massively Multiplayer Online Role Playing Games (MMORPGs) or First Person Shooter (FPS) games, and their parent (mother or father) may participate in this study, involving an interview and survey for each participant.

You will not be eligible to participate in this research study if you:

- are blind or physically challenged ; OR
- do not agree for your interview to be audio-recorded; OR
- do not agree to photographs capturing the placement and location of gaming devices in your homes to be taken.

Home-based, face-to-face interviews will be conducted with each parent for 60 to 90mins followed by the child (45-60mins approximately) in the same session. The duration mentioned includes photo-taking and filling completing a short survey.

5. **What is the approximate number of participants involved?**

A total of 60 children aged between 12-17 years, together with their parent (mother or father) will be involved in the study.

6. What will be done during participation in this research?

Interviews will be conducted by a trained researcher who will ask you about your experiences of mediation of computer gaming. The interviews will be audio-recorded and photographs will be taken of the placement and location of gaming devices.

After the interviews, you and your child will both be invited to complete a short 5-mins survey. Although you and your child need not complete this survey to be reimbursed for your time, we request that you complete **ALL** questions in the survey should you and your child decide to participate. You will have the opportunity to view the survey questions before deciding whether or not you and your child wish to participate.

7. How will the participant's privacy and the confidentiality of my research records be protected?

Only the principal investigator and his appointed researchers have you and your child's identifiable information (e.g. names and contact information), none of which will be released to any person outside of the research team. All your identifiable information will be kept strictly confidential and will be destroyed once the research has been completed.

8. What are the possible discomforts and risks of participation?

There are no foreseeable risks in your participation in this research.

9. What is the compensation for any injury?

No injury is expected in this research.

10. Will there be reimbursement for participation?

Each parent and child dyad who successfully completes the interviews (regardless of whether the surveys are completed) will receive a \$50 reimbursement.

11. What are the possible benefits to the participant?

There is no direct benefit to you and your child from participating in this research. However, you may derive a better understanding of your child's gaming habits and your parenting style.

12. Can my child and/or I refuse to participate in this research?

Yes. Participants can withdraw from the research at any time without giving any reasons, before the acknowledgment of the receipt of the \$50 reimbursement. However, you will not be able to withdraw your data after you have received the reimbursement. Withdrawal of participation will result in the deletion of all data associated with you and your child.

13. Whom should I call if I have any questions or problems?

Please contact the Corresponding Principal Investigator, Jiw Hee Jhee at telephone 97697363 and email jhee@nus.edu.sg for all research-related matters and enquiries.

For an independent opinion regarding the research and the rights of research participants, you may contact a staff member of the National University of Singapore Institutional Review Board (Attn: Mr Chan Tuck Wai, at telephone 6516 1234 or email at irb@nus.edu.sg).

**P A R E N T & C H I L D
C O N S E N T / A S S E N T F O R M (f o r I n t e r v i e w s)**



Project title: Parental Perceptions and Mediation of Computer Gaming in Singapore

Corresponding Principal Investigator contact information:

Jiow Hee Jhee
Department of Communications and New Media, NUS
Mobile: 97697363
jhee@nus.edu.sg

For parent

I hereby acknowledge that:

1. I have agreed to take part in the research highlighted above, together with my child, _____ (name).
2. I have received a copy of the information sheet that explains the objectives and nature of this research. I understand its contents and agree to participate in this research, together with my child.
3. I can withdraw myself or my child, from the research at any point of time before the acknowledgement of the receipt of the \$50 reimbursement, by informing the Principal Investigator and/or his Research Assistants and all our data will be discarded.
4. I will not have any rights to any commercial benefits that result from this research.

Name and Signature (Parent)

Date

For child

I agree to participate in this research study.

I understand that my participation is voluntary and that I can stop my participation at any time.

Name and Signature (Child)

Appendix B:

Interview Guide For Parents

Warm Up Questions	Remarks
<ol style="list-style-type: none"> 1. What time does your child usually return home from school? 2. What does s/he usually do after coming home from school? 3. How often does s/he play video games? 4. What video game does your child play? 5. Does your child play with other people or alone? 6. WHEN does your child normally play? Why? 7. WHERE does your child normally play? Why? 	<p>This section serves as an ice-breaker.</p>
General Perceptions	Remarks
<ol style="list-style-type: none"> 1. What do you think your child enjoys about playing video games? 2. What do you like about your child playing video games? 3. What do you dislike about your child playing video games? 4. Besides playing video games, what else does your child do in his/her free time? 	
Parental Restrictions	Remarks
<ol style="list-style-type: none"> 1. Coming back to the topic of video games, do you have any rules for your child's video game playing? 2. Who in your home supervises your children's video game playing more, you or your spouse? 3. What are these rules? <ol style="list-style-type: none"> a. Time limits? b. Setting conditions e.g., must complete homework first? Only on weekends or public holidays? Not during exam periods? 4. How did you first establish these rules? <ol style="list-style-type: none"> a. Independently? b. In consultation with your spouse? c. In consultation with your child? 5. How receptive was s/he to these rules? <ol style="list-style-type: none"> a. Does s/he normally obey them? 	<p>The purpose is to get the parent to list as many things s/he does to manage his/her child's video gaming habit. Take note also HOW this is done and communicated to the child— whether there is bi-directional communication.</p>

<ol style="list-style-type: none"> 6. What happens when s/he obeys them? <ol style="list-style-type: none"> a. Reward? b. How? E.g., verbal or other incentives such as gifts or more gaming time? 7. What happens when s/he violates them? <ol style="list-style-type: none"> a. Punish? b. How? E.g., further restrictions on gaming, confiscation of device, etc.? 8. Have you seen the need to change these rules since you first introduced them? <ol style="list-style-type: none"> a. How? b. Why? c. Under what circumstances? d. If these rules were introduced since your child was much younger, how have they changed over the years? 	
Parental Monitoring	Remarks
<ol style="list-style-type: none"> 1. Do you monitor/check on/keep an eye on your child's video gaming usage? 2. What aspects of their video gaming usage do you monitor/check on/keep an eye on? <ol style="list-style-type: none"> a. Duration of use b. Type of game c. Expenses incurred d. People they play with e. People they may encounter f. Content of game 3. Does s/he know you are monitoring/checking on/keeping an eye on their video gaming usage? 4. How do you monitor/check on/keep an eye on your child's video gaming usage? <ol style="list-style-type: none"> a. Ask him/her to play somewhere visible? b. Use technological means, e.g., set passwords on computer, set time limits? c. Ask him/her to discuss their video game play with you? 5. Have you ever experienced your child attempting to hide his/her video game play activity from you or your spouse? <ol style="list-style-type: none"> a. Can you describe the circumstances? 	<p>The purpose is to get the parent to list as many monitoring techniques s/he employs. Even those that are done covertly.</p>
Video Game Acquisition	Remarks
<ol style="list-style-type: none"> 1. Have you played/seen the MMORPG/FPS game 	

<p>that s/he has played most recently</p> <p>2. Who in the family usually decides on which games to purchase?</p> <ol style="list-style-type: none"> You? Your spouse? Your child? Jointly? What is the usual decision-making process, e.g., your child requests, you discuss, you decide independently after your own research? If it is your child, does s/he consult you before purchasing? 	
Video Game Content	Remarks
<p>1. As a parent, which aspects of video games concern you?</p> <ol style="list-style-type: none"> Sexually-explicit content Violence and gore Substance abuse Others, please elaborate 	
Alternative Activities	Remarks
<p>1. Besides video gaming, does s/he like to do other things?</p> <p>2. Do you encourage him/her to take up other activities?</p> <ol style="list-style-type: none"> How? For what activities? 	
General Difficulties	Remarks
<p>1. Have you ever experienced any difficulties in supervising your child's video gaming habits?</p> <p>2. If yes, can you explain the circumstances? (How was it difficult? Why was it difficult?)</p> <ol style="list-style-type: none"> Lack of time? Is your lack of time leading you to supervise your child's game playing in particular ways? Don't know much about video games? Games are too varied Games changing too quickly Games are too difficult to understand and play Game devices not conducive for co-playing or supervision, e.g., screen size limited, buttons too small Any others? Please elaborate. 	
Wrap-Up	Remarks

<ol style="list-style-type: none">1. Thank you for your time!2. Do you have any questions for us?3. We would require some other information from you, such as your age, working status, etc. Please take some time to fill up this form while we prepare to interview your child.	
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Appendix C:

Interview Guide For Children

Warm Up Questions	Remarks
<ol style="list-style-type: none"> 1. What time do you usually return home from school? 2. What do you usually do after coming home from school? 3. How often do you play video games? 4. What video game(s) do you play? 5. Do you play with other people or by yourself? 6. WHEN do you normally play? Why? 7. WHERE in the home do you normally play? Why? 8. Do you play video games outside of home, e.g., LAN game centre, friends' home, school, etc? 	<p>This section serves as an ice-breaker.</p>
General Perceptions	Remarks
<ol style="list-style-type: none"> 1. What do you enjoy about playing video games? 2. What do you dislike about playing video games? 3. Besides playing video games, what else do you do in your free time? 	
Parental Restrictions	Remarks
<ol style="list-style-type: none"> 1. Coming back to the topic of video games, do your parents have any rules for your video game playing? 2. What are these rules? <ol style="list-style-type: none"> a. Time limits? b. Setting conditions; e.g., must complete homework first? Only on weekends or public holidays? Not during exam periods? c. Play only in a part location, e.g., only at home. 3. How were these rules first made? <ol style="list-style-type: none"> a. By your parents without first discussing with you? b. By your parents in consultation with you? 4. How did you feel when your parents first set these rules? <ol style="list-style-type: none"> a. Like? E.g., think they are bearable, think they help you, think they are necessary? b. Dislike? E.g., think they are too harsh, don't think you need them? 	<p>The purpose is to verify the rules associated with gaming. Take note also HOW this is done and communicated to the child— whether there is bi-directional communication.</p>

<ol style="list-style-type: none"> 5. Do you usually obey them? <ol style="list-style-type: none"> a. If so, how? b. If not, how and how often? Describe the circumstances. 6. When you obey these rules, how do your parents respond? <ol style="list-style-type: none"> a. Reward? b. How? E.g., verbal or other incentives, such as gifts or more gaming time? 7. When you don't obey these rules, are your parents aware? <ol style="list-style-type: none"> a. If they are aware, how do they respond? <ol style="list-style-type: none"> i. Punish? ii. How? E.g., further restrictions on gaming, confiscation of device, etc? b. If they are unaware, why are they unaware? <ol style="list-style-type: none"> i. No time to enforce? ii. Don't know that you are disobeying because they don't understand the technology? iii. Other reasons? c. If you could change these rules, how would you do so? 	
<p>Parental Monitoring/Child Response to Monitoring</p>	<p>Remarks</p>
<ol style="list-style-type: none"> 1. Does your parent monitor/check on/keep an eye on your video gaming usage? 2. What aspects of your video gaming usage do your parent monitor/check on/keep an eye on? <ol style="list-style-type: none"> a. Duration of use b. Type of game c. Expenses incurred d. People you play with e. People you may encounter online and offline as a result of your game playing f. Content of game, e.g., violence, sex, drugs, etc 3. How does your parent monitor/check on/keep an eye on your video gaming usage? <ol style="list-style-type: none"> a. Ask you to play somewhere visible in the home? 	<p>The purpose is to get the child to list as many monitoring techniques that s/he is aware. Even those that are done covertly. The child may reveal his/her evasive tactics here instead of during the monitoring part.</p>

<ul style="list-style-type: none"> b. Use technological means, e.g., set passwords on computer, set time limits? c. Ask you to discuss your video game play with them? <p>4. Have you ever attempted to hide your video game play activity from your parent?</p> <ul style="list-style-type: none"> a. If yes, how do you do so? b. Can you describe some examples when you did so? c. Do your parents know that you are hiding from them? 	
Video Game Acquisition	Remarks
<p>1. Who in the family usually decides on which games to purchase?</p> <ul style="list-style-type: none"> a. You? Your mom? Your dad? Jointly? b. What is the usual decision-making process, e.g., you request, they discuss, they decide independently after their own research? c. If you are the one who makes the purchase, do you consult your parent before purchasing? d. If not, how do you request the money to buy the game? <ul style="list-style-type: none"> i. Do your parents ask you more about the game before providing you with the money? What questions do they ask? ii. Do you tell voluntarily tell your parents more about the game when you request the money? What do you tell them? 	
Video Game Content	Remarks
<p>1. Which aspects of video games do you dislike?</p> <ul style="list-style-type: none"> a. Sexually-explicit content? Why? b. Violence and gore? Why? c. Substance abuse? Why? d. Others, please elaborate. 	
Alternative Activities	Remarks
<p>1. Besides video gaming, do you like to do other things?</p> <p>2. Does your parent encourage you to take up other activities?</p>	

<ul style="list-style-type: none"> a. How? b. For what activities? 	
Wrap-up	Remarks
<ul style="list-style-type: none"> 1. Thank you for your time! 2. Do you have any questions for us? 3. We would require some other information from you, such as your age, gaming frequency, etc. Please take some time to fill up this form. 	

Appendix D:
Respondents' Profiles

Respondent	R2
Household Type	Terrace
Number of Household Members	4
Household Media Devices	Television Sets: 3 Desktop Computers: 1 Laptops: 3 Console Gaming Devices: 1 Smartphones: 5
Parent	48-year-old Father
Parent's Highest Education Level	Post-Graduate
Parents' Employment Status	Respondent is Employed, and the spouse is Unemployed.
Parent's Gaming Status	Non-Gamer
Child	15-year-old Son
Child's Game Type	FPS
Child's Game Preference (in order of decreasing frequency of play)	1) <i>Team Fortress 2</i> 2) <i>Call of Duty</i> 3) No Data
Child's Gaming Pattern	Once a week, during weekends.

Respondent	R3
Household Type	Condominium
Number of Household Members	4
Household Media Devices	Television Sets: 2 Desktop Computers: 2 Laptops: 2 Console Gaming Devices: 0 Smartphones: 4
Parent	45-year-old Mother
Parent's Highest Education Level	Post-Graduate
Parents' Employment Status	Respondent is Employed, and the spouse is Employed.
Parent's Gaming Status	Non-Gamer
Child	15-year-old Son
Child's Game Type	FPS
Child's Game Preference (in order of decreasing frequency of play)	1) <i>Team Fortress 2</i> 2) No Data 3) No Data

Child's Gaming Pattern	Everyday, about two hours if there is homework, and 3-4 hours if there is no homework.
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Respondent	R4
Household Type	HDB 5-Room
Number of Household Members	4
Household Media Devices	Television Sets: 2 Desktop Computers: 1 Laptops: 4 Console Gaming Devices: 2 Smartphones: 4
Parent	40-year-old Mother
Parent's Highest Education Level	'A' Levels
Parents' Employment Status	Respondent is Employed, and the spouse is Employed.
Parent's Gaming Status	Non-Gamer
Child	13-year-old Son
Child's Game Type	FPS
Child's Game Preference (in order of decreasing frequency of play)	1) <i>BlackShot</i> 2) <i>MapleStory</i> 3) No Data
Child's Gaming Pattern	Unable to play during school term, limitless playtime after the exams.

Respondent	R5
Household Type	HDB 5-Room
Number of Household Members	2
Household Media Devices	Television Sets: 2 Desktop Computers: 0 Laptops: 4 Console Gaming Devices: 1 Smartphones: 6
Parent	45-year-old Father
Parent's Highest Education Level	Degree
Parents' Employment Status	Respondent is Employed, and the spouse is Employed.
Parent's Gaming Status	Non-Gamer
Child	13-year-old Son
Child's Game Type	FPS
Child's Game Preference (in order of decreasing frequency of play)	1) <i>Left 4 Dead</i> 2) <i>BlackShot</i> 3) <i>Call of Duty</i>
Child's Gaming Pattern	Play every day, usually four hours, from 6:00 to 10:00 pm when free.

Respondent	R6
Household Type	HDB 4-Room
Number of Household Members	3
Household Media Devices	Television Sets: 3 Desktop Computers: 0 Laptops: 3 Console Gaming Devices: 2 Smartphones: 4
Parent	42-year-old Mother
Parent's Highest Education Level	'A' Levels
Parents' Employment Status	Respondent is Employed, and the spouse is Employed.
Parent's Gaming Status	Non-Gamer
Child	17-year-old Son
Child's Game Type	FPS
Child's Game Preference (in order of decreasing frequency of play)	1) <i>BlackShot</i> 2) <i>Diablo</i> 3) <i>World of Warcraft</i>
Child's Gaming Pattern	Vague, child was not sure.

Respondent	R7
Household Type	HDB 4-Room
Number of Household Members	5
Household Media Devices	Television Sets: 2 Desktop Computers: 1 Laptops: 1 Console Gaming Devices: 0 Smartphones: 5
Parent	53-year-old Father
Parent's Highest Education Level	'O' Levels
Parents' Employment Status	Respondent is Employed, and the spouse is Employed.
Parent's Gaming Status	Gamer
Child	17-year-old Son
Child's Game Type	FPS
Child's Game Preference (in order of decreasing frequency of play)	1) <i>BlackShot</i> 2) <i>MapleStory</i> 3) No Data
Child's Gaming Pattern	Twice during weekdays. On weekends, 3-4 hours after midnight.

Respondent	R8
Household Type	Condominium
Number of Household Members	5
Household Media Devices	Television Sets: 2 Desktop Computers: 2 Laptops: 3 Console Gaming Devices: 0 Smartphones: 5
Parent	48-year-old Mother
Parent's Highest Education Level	'A' Levels
Parents' Employment Status	Respondent is Unemployed, and the spouse is Employed.
Parent's Gaming Status	Non-Gamer
Child	16-year-old Son
Child's Game Type	MMORPGs
Child's Game Preference (in order of decreasing frequency of play)	1) <i>Defence of the Ancients</i> 2) No Data 3) No Data
Child's Gaming Pattern	4-5 times a week, 5-6 hours.

Respondent	R9
Household Type	Condominium
Number of Household Members	5
Household Media Devices	Television Sets: 3 Desktop Computers: 1 Laptops: 1 Console Gaming Devices: 1 Smartphones: 2
Parent	45-year-old Father
Parent's Highest Education Level	Post-Graduate
Parents' Employment Status	Respondent is Employed, and the spouse is Employed.
Parent's Gaming Status	Gamer
Child	13-year-old Son
Child's Game Type	FPS
Child's Game Preference (in order of decreasing frequency of play)	1) <i>Halo</i> 2) <i>Call of Duty</i> 3) No Data
Child's Gaming Pattern	Three times a week during school term usually weekends, every day during school holidays.

Respondent	R10
Household Type	HDB 4-Room
Number of Household Members	4
Household Media Devices	Television Sets: 1 Desktop Computers: 3 Laptops: 1 Console Gaming Devices: 1 Smartphones: 4
Parent	45-year-old Mother
Parent's Highest Education Level	Degree
Parents' Employment Status	Respondent is Employed, and the spouse is Employed.
Parent's Gaming Status	Non-Gamer
Child	17-year-old Daughter
Child's Game Type	MMORPGs
Child's Game Preference (in order of decreasing frequency of play)	1) <i>Runescape</i> 2) <i>Audition</i> 3) <i>Club Penguin</i>
Child's Gaming Pattern	Once or twice a week; on weekends.

Respondent	R11
Household Type	Executive Condominium
Number of Household Members	5
Household Media Devices	Television Sets: 3 Desktop Computers: 2 Laptops: 3 Console Gaming Devices: 3 Smartphones: 4
Parent	42-year-old Mother
Parent's Highest Education Level	Post-Graduate
Parents' Employment Status	Respondent is Employed, and the spouse is Employed.
Parent's Gaming Status	Non-Gamer
Child	13-year-old Daughter
Child's Game Type	FPS
Child's Game Preference (in order of decreasing frequency of play)	1) <i>Team Fortress 2</i> 2) <i>Minecraft</i> 3) <i>No Data</i>
Child's Gaming Pattern	Saturdays 3:00-9:00pm

Respondent	R12
Household Type	HDB 4-Room
Number of Household Members	4
Household Media Devices	Television Sets: 1 Desktop Computers: 1 Laptops: 1 Console Gaming Devices: 0 Smartphones: 2
Parent	37-year-old Mother
Parent's Highest Education Level	Degree
Parents' Employment Status	Respondent is Employed, and the spouse is Employed.
Parent's Gaming Status	Gamer
Child	15-year-old Daughter
Child's Game Type	MMORPGs
Child's Game Preference (in order of decreasing frequency of play)	1) <i>Defence of the Ancients</i> 2) <i>MapleStory</i> 3) <i>Geand Thief Auto</i>
Child's Gaming Pattern	3-4 hours on a weekday, from 4:00-7:00pm.

Respondent	R13
Household Type	Executive Condominium
Number of Household Members	4
Household Media Devices	Television Sets: 0 Desktop Computers: 0 Laptops: 1 Console Gaming Devices: 0 Smartphones: 1
Parent	50-year-old Father
Parent's Highest Education Level	'A' Levels
Parents' Employment Status	Respondent is Unemployed, and the spouse is Employed.
Parent's Gaming Status	Non-Gamer
Child	16-year-old Daughter
Child's Game Type	MMORPGs
Child's Game Preference (in order of decreasing frequency of play)	1) <i>MapleStory</i> 2) <i>League of Legends</i> 3) No Data
Child's Gaming Pattern	Vague, child was not sure.

Respondent	R14
Household Type	Executive Condominium
Number of Household Members	3
Household Media Devices	Television Sets: 4 Desktop Computers: 1 Laptops: 3 Console Gaming Devices: 1 Smartphones: 4
Parent	42-year-old Father
Parent's Highest Education Level	Post-Graduate
Parents' Employment Status	Respondent is Employed, and the spouse is Employed.
Parent's Gaming Status	Non-Gamer
Child	13-year-old Son
Child's Game Type	FPS
Child's Game Preference (in order of decreasing frequency of play)	1) <i>Fifa13</i> 2) <i>Call of Duty</i> 3) No Data
Child's Gaming Pattern	2-3 hours on weekends.

Respondent	R15
Household Type	Condominium
Number of Household Members	6
Household Media Devices	Television Sets: 2 Desktop Computers: 1 Laptops: 4 Console Gaming Devices: 1 Smartphones: 4
Parent	47-year-old Father
Parent's Highest Education Level	Post-Graduate
Parents' Employment Status	Respondent is Employed, and the spouse is Employed.
Parent's Gaming Status	Non-Gamer
Child	16-year-old Son
Child's Game Type	FPS
Child's Game Preference (in order of decreasing frequency of play)	1) <i>Call of Duty</i> 2) <i>Counter Strike</i> 3) No Data
Child's Gaming Pattern	2-3 hours a day on weekdays, 8 hours in LAN shop some times.

Respondent	R16
Household Type	Condominium
Number of Household Members	4
Household Media Devices	Television Sets: 1 Desktop Computers: 1 Laptops: 3 Console Gaming Devices: 0 Smartphones: 4
Parent	49-year-old Father
Parent's Highest Education Level	Post-Graduate
Parents' Employment Status	Respondent is Employed, and the spouse is Employed.
Parent's Gaming Status	Non-Gamer
Child	13-year-old Son
Child's Game Type	MMORPGs
Child's Game Preference (in order of decreasing frequency of play)	1) <i>Minecraft</i> 2) <i>Team Fortress 2</i> 3) <i>Battlefield3</i>
Child's Gaming Pattern	3 hours on weekdays and 5 hours on weekends.

Respondent	R17
Household Type	HDB 4-Room
Number of Household Members	4
Household Media Devices	Television Sets: 2 Desktop Computers: 2 Laptops: 0 Console Gaming Devices: 0 Smartphones: 4
Parent	42-year-old Mother
Parent's Highest Education Level	'A' Levels
Parents' Employment Status	Respondent is Employed, and the spouse is Employed.
Parent's Gaming Status	Non-Gamer
Child	13-year-old Son
Child's Game Type	FPS
Child's Game Preference (in order of decreasing frequency of play)	1) <i>BlackShot</i> 2) <i>League of Legends</i> 3) No Data
Child's Gaming Pattern	Vague, child was not sure.

Respondent	R18
Household Type	HDB 5-Room
Number of Household Members	5
Household Media Devices	Television Sets: 2 Desktop Computers: 0 Laptops: 5 Console Gaming Devices: 1 Smartphones: 5
Parent	44-year-old Father
Parent's Highest Education Level	Post-Graduate
Parents' Employment Status	Respondent is Employed, and the spouse is Unemployed.
Parent's Gaming Status	Non-Gamer
Child	13-year-old Son
Child's Game Type	FPS
Child's Game Preference (in order of decreasing frequency of play)	1) <i>Minecraft</i> 2) <i>Fifa13</i> 3) <i>Halo</i>
Child's Gaming Pattern	Every day, about 30 minutes to an hour.

Respondent	R19
Household Type	Condominium
Number of Household Members	4
Household Media Devices	Television Sets: 2 Desktop Computers: 1 Laptops: 3 Console Gaming Devices: 3 Smartphones: 4
Parent	47-year-old Mother
Parent's Highest Education Level	Post-Graduate
Parents' Employment Status	Respondent is Employed, and the spouse is Employed.
Parent's Gaming Status	Non-Gamer
Child	15-year-old Son
Child's Game Type	MMORPGs
Child's Game Preference (in order of decreasing frequency of play)	1) <i>League of Legends</i> 2) <i>DragonNest</i> 3) No Data
Child's Gaming Pattern	2-3 hours on weekdays and about the entire day on weekends.

Respondent	R20
Household Type	Condominium
Number of Household Members	6
Household Media Devices	Television Sets: [Missing Data] Desktop Computers: 1 Laptops: 1 Console Gaming Devices: [Missing Data] Smartphones: 1
Parent	45-year-old Father
Parent's Highest Education Level	Degree
Parents' Employment Status	Respondent is Employed, and the spouse is [Missing Data].
Parent's Gaming Status	Gamer
Child	15-year-old Son
Child's Game Type	MMORPGs
Child's Game Preference (in order of decreasing frequency of play)	1) <i>League of Legends</i> 2) <i>MapleStory</i> 3) No Data
Child's Gaming Pattern	Friday evenings, Saturday nights and Sunday afternoons.

Respondent	R21
Household Type	HDB 5-Room
Number of Household Members	5
Household Media Devices	Television Sets: 2 Desktop Computers: 0 Laptops: 3 Console Gaming Devices: 0 Smartphones: 4
Parent	46-year-old Father
Parent's Highest Education Level	'A' Levels
Parents' Employment Status	Respondent is Employed, and the spouse is Employed.
Parent's Gaming Status	Non-Gamer
Child	16-year-old Son
Child's Game Type	FPS
Child's Game Preference (in order of decreasing frequency of play)	1) <i>SuddenAttack</i> 2) <i>Need for Speed</i> 3) <i>Blackshot</i>
Child's Gaming Pattern	Three times a week, on Wednesdays, Thursdays and Fridays from about 4.30-7:00pm.

Respondent	R22
Household Type	HDB 5-Room
Number of Household Members	4
Household Media Devices	Television Sets: 2 Desktop Computers: 0 Laptops: 1 Console Gaming Devices: 2 Smartphones: 4
Parent	45-year-old Mother
Parent's Highest Education Level	'A' Levels
Parents' Employment Status	Respondent is Unemployed, and the spouse is Employed.
Parent's Gaming Status	Non-Gamer
Child	13-year-old Son
Child's Game Type	MMORPGs
Child's Game Preference (in order of decreasing frequency of play)	1) <i>BlackShot</i> 2) <i>MapleStory</i> 3) No Data
Child's Gaming Pattern	1-2 hours every day during school holidays.

Respondent	R23
Household Type	HDB 5-Room
Number of Household Members	3
Household Media Devices	Television Sets: 2 Desktop Computers: 2 Laptops: 1 Console Gaming Devices: 0 Smartphones: 2
Parent	46-year-old Father
Parent's Highest Education Level	Post-Graduate
Parents' Employment Status	Respondent is Employed, and the spouse is [Missing Data].
Parent's Gaming Status	Non-Gamer
Child	13-year-old Son
Child's Game Type	MMORPGs
Child's Game Preference (in order of decreasing frequency of play)	1) <i>AdventureQuest</i> 2) <i>Minecraft</i> 3) No Data
Child's Gaming Pattern	3-4 hours in the afternoons during school holidays.

Respondent	R24
Household Type	HDB 4-Room
Number of Household Members	6
Household Media Devices	Television Sets: 3 Desktop Computers: 0 Laptops: 4 Console Gaming Devices: 0 Smartphones: 5
Parent	40-year-old Father
Parent's Highest Education Level	'O' Levels
Parents' Employment Status	Respondent is Employed, and the spouse is Employed.
Parent's Gaming Status	Non-Gamer
Child	17-year-old Daughter
Child's Game Type	MMORPGs
Child's Game Preference (in order of decreasing frequency of play)	1) <i>MapleStory</i> 2) No Data 3) No Data
Child's Gaming Pattern	3-4 hours everyday.

Respondent	R25
Household Type	HDB 5-Room
Number of Household Members	4
Household Media Devices	Television Sets: 4 Desktop Computers: 2 Laptops: 1 Console Gaming Devices: 1 Smartphones: 2
Parent	45-year-old Mother
Parent's Highest Education Level	Diploma
Parents' Employment Status	Respondent is Employed, and the spouse is Employed.
Parent's Gaming Status	Non-Gamer
Child	13-year-old Son
Child's Game Type	MMORPGs
Child's Game Preference (in order of decreasing frequency of play)	1) <i>MapleStory</i> 2) <i>Minecraft</i> 3) No Data
Child's Gaming Pattern	Three times a week.

Respondent	R26
Household Type	HDB 4-Room
Number of Household Members	5
Household Media Devices	Television Sets: 2 Desktop Computers: 1 Laptops: 2 Console Gaming Devices: 0 Smartphones: 3
Parent	55-year-old Mother
Parent's Highest Education Level	'O' Levels
Parents' Employment Status	Respondent is Employed, and the spouse is Employed.
Parent's Gaming Status	Non-Gamer
Child	17-year-old Son
Child's Game Type	MMORPGs
Child's Game Preference (in order of decreasing frequency of play)	1) <i>League of Legends</i> 2) No Data 3) No Data
Child's Gaming Pattern	Play games normally when at home.

Respondent	R27
Household Type	HDB 5-Room
Number of Household Members	5
Household Media Devices	Television Sets: 1 Desktop Computers: 1 Laptops: 2 Console Gaming Devices: 0 Smartphones: 5
Parent	46-year-old Mother
Parent's Highest Education Level	'A' Levels
Parents' Employment Status	Respondent is Employed, and the spouse is Employed.
Parent's Gaming Status	Non-Gamer
Child	14-year-old Son
Child's Game Type	MMORPGs
Child's Game Preference (in order of decreasing frequency of play)	1) <i>MapleStory</i> 2) <i>Minecraft</i> 3) <i>League of Legends</i>
Child's Gaming Pattern	1-1.5 hours in the afternoon or night during weekdays.

Respondent	R28
Household Type	Executive Condominium
Number of Household Members	5
Household Media Devices	Television Sets: 2 Desktop Computers: 2 Laptops: 3 Console Gaming Devices: 0 Smartphones: 4
Parent	46-year-old Mother
Parent's Highest Education Level	'A' Levels
Parents' Employment Status	Respondent is Unemployed, and the spouse is Employed.
Parent's Gaming Status	Non-Gamer
Child	17-year-old Son
Child's Game Type	MMORPGs
Child's Game Preference (in order of decreasing frequency of play)	1) <i>Defence of the Ancients</i> 2) <i>DragonNest</i> 3) <i>Pristan Tale</i>
Child's Gaming Pattern	Every day, for about 2-3 hours.

Respondent	R29
Household Type	HDB 4-Room
Number of Household Members	4
Household Media Devices	Television Sets: 3 Desktop Computers: 1 Laptops: 2 Console Gaming Devices: 1 Smartphones: 5
Parent	41-year-old Mother
Parent's Highest Education Level	Diploma
Parents' Employment Status	Respondent is Employed, and the spouse is Employed.
Parent's Gaming Status	Gamer
Child	14-year-old Daughter
Child's Game Type	MMORPGs
Child's Game Preference (in order of decreasing frequency of play)	1) <i>Minecraft</i> 2) <i>Transformice</i> 3) <i>PlantsVsZombies</i>
Child's Gaming Pattern	Vague; child was not sure.

Respondent	R30
Household Type	HDB 4-Room
Number of Household Members	3
Household Media Devices	Television Sets: 2 Desktop Computers: 0 Laptops: 4 Console Gaming Devices: 2 Smartphones: 4
Parent	[Missing Data] year-old Father
Parent's Highest Education Level	'O' Levels
Parents' Employment Status	Respondent is Employed, and the spouse is Employed.
Parent's Gaming Status	Non-Gamer
Child	16-year-old Daughter
Child's Game Type	MMORPGs
Child's Game Preference (in order of decreasing frequency of play)	1) <i>TetrisBattle</i> 2) <i>Audition</i> 3) <i>MapleStory</i>
Child's Gaming Pattern	Does not play during the school term, and does not have a fixed playing time during school holidays.

Respondent	R32
Household Type	HDB 5-Room
Number of Household Members	5
Household Media Devices	Television Sets: 4 Desktop Computers: 1 Laptops: 1 Console Gaming Devices: 1 Smartphones: 4
Parent	46-year-old Mother
Parent's Highest Education Level	Diploma
Parents' Employment Status	Respondent is Employed, and the spouse is Employed.
Parent's Gaming Status	Non-Gamer
Child	12-year-old Daughter
Child's Game Type	FPS
Child's Game Preference (in order of decreasing frequency of play)	1) <i>SIMS</i> 2) <i>PlantsVsZombies</i> 3) <i>BlackShot</i>
Child's Gaming Pattern	Depending on schedule, once or twice a

	month when busy.
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Respondent	R33
Household Type	HDB 5-Room
Number of Household Members	6
Household Media Devices	Television Sets: 2 Desktop Computers: 1 Laptops: 3 Console Gaming Devices: 3 Smartphones: 3
Parent	44-year-old Mother
Parent's Highest Education Level	'O' Levels
Parents' Employment Status	Respondent is Unemployed, and the spouse is Employed.
Parent's Gaming Status	Gamer
Child	14-year-old Daughter
Child's Game Type	MMORPGs
Child's Game Preference (in order of decreasing frequency of play)	1) <i>Minecraft</i> 2) <i>CandyCrush</i> 3) No Data
Child's Gaming Pattern	1-2 hours per session, depending on the mood.

Respondent	R34
Household Type	HDB 5-Room
Number of Household Members	5
Household Media Devices	Television Sets: 3 Desktop Computers: 1 Laptops: 3 Console Gaming Devices: 4 Smartphones: 4
Parent	[Missing Data] year-old Mother
Parent's Highest Education Level	'O' Levels
Parents' Employment Status	Respondent is Employed, and the spouse is [Missing Data].
Parent's Gaming Status	Non-Gamer
Child	14-year-old Daughter
Child's Game Type	MMORPGs
Child's Game Preference (in order of decreasing frequency of play)	1) <i>MapleStory</i> 2) No Data 3) No Data
Child's Gaming Pattern	Every day, for about one hour or less.

Respondent	R35
Household Type	HDB 4-Room
Number of Household Members	5
Household Media Devices	Television Sets: [Missing Data] Desktop Computers: 1 Laptops: 5 Console Gaming Devices: 0 Smartphones: 5
Parent	34-year-old Mother
Parent's Highest Education Level	'O' Levels
Parents' Employment Status	Respondent is Employed, and the spouse is Employed.
Parent's Gaming Status	Gamer
Child	15-year-old Daughter
Child's Game Type	MMORPGs
Child's Game Preference (in order of decreasing frequency of play)	1) <i>TempleRun</i> 2) <i>MapleStory</i> 3) No Data
Child's Gaming Pattern	No fixed time, about once/twice a day.

Respondent	R36
Household Type	Terrace
Number of Household Members	7
Household Media Devices	Television Sets: 4 Desktop Computers: 0 Laptops: 3 Console Gaming Devices: 6 Smartphones: 12
Parent	41-year-old Mother
Parent's Highest Education Level	Degree
Parents' Employment Status	Respondent is Employed, and the spouse is Employed.
Parent's Gaming Status	Gamer
Child	12-year-old Daughter
Child's Game Type	FPS
Child's Game Preference (in order of decreasing frequency of play)	1) iPhone Games 2) <i>Halo</i> 3) <i>Dance Central</i>
Child's Gaming Pattern	Two hours depending on schedule and one hour once per month for console games.

Respondent	R37
Household Type	HDB 5-Room
Number of Household Members	5
Household Media Devices	Television Sets: 1 Desktop Computers: 0 Laptops: 1 Console Gaming Devices: 0 Smartphones: 4
Parent	42-year-old Mother
Parent's Highest Education Level	'O' Levels
Parents' Employment Status	Respondent is Employed, and the spouse is Employed.
Parent's Gaming Status	Gamer
Child	14-year-old Son
Child's Game Type	FPS
Child's Game Preference (in order of decreasing frequency of play)	1) <i>League of Legends</i> 2) <i>Blackshot</i> 3) No Data
Child's Gaming Pattern	Vague; child was not sure.

Respondent	R38
Household Type	HDB 5-Room
Number of Household Members	4
Household Media Devices	Television Sets: 2 Desktop Computers: 1 Laptops: 2 Console Gaming Devices: 1 Smartphones: 4
Parent	45-year-old Mother
Parent's Highest Education Level	Degree
Parents' Employment Status	Respondent is Unemployed, and the spouse is Employed.
Parent's Gaming Status	Gamer
Child	14-year-old Son
Child's Game Type	MMORPGs
Child's Game Preference (in order of decreasing frequency of play)	1) <i>League of Legends</i> 2) No Data 3) No Data
Child's Gaming Pattern	Four times a week.

Respondent	R39
Household Type	HDB 5-Room
Number of Household Members	6
Household Media Devices	Television Sets: 2 Desktop Computers: 1 Laptops: 0 Console Gaming Devices: 1 Smartphones: 4
Parent	36-year-old Mother
Parent's Highest Education Level	Degree
Parents' Employment Status	Respondent is Employed, and the spouse is Employed.
Parent's Gaming Status	Gamer
Child	15-year-old Son
Child's Game Type	FPS
Child's Game Preference (in order of decreasing frequency of play)	1) <i>Team Fortress 2</i> 2) No Data 3) No Data
Child's Gaming Pattern	Five times a week, about 30 minutes per session.

Respondent	R40
Household Type	Executive Condominium
Number of Household Members	3
Household Media Devices	Television Sets: 4 Desktop Computers: 1 Laptops: 4 Console Gaming Devices: 3 Smartphones: 6
Parent	53-year-old Father
Parent's Highest Education Level	Diploma
Parents' Employment Status	Respondent is Employed, and the spouse is Employed.
Parent's Gaming Status	Non-Gamer
Child	13-year-old Son
Child's Game Type	FPS
Child's Game Preference (in order of decreasing frequency of play)	1) <i>Call Of Duty</i> 2) No Data 3) No Data
Child's Gaming Pattern	Three hours a week.

Respondent	R41
Household Type	HDB 4-Room
Number of Household Members	6
Household Media Devices	Television Sets: 2 Desktop Computers: 0 Laptops: 4 Console Gaming Devices: 1 Smartphones: 4
Parent	43-year-old Mother
Parent's Highest Education Level	'A' Levels
Parents' Employment Status	Respondent is Employed, and the spouse is Employed.
Parent's Gaming Status	Gamer
Child	16-year-old Son
Child's Game Type	FPS
Child's Game Preference (in order of decreasing frequency of play)	1) <i>Blackshot</i> 2) No Data 3) No Data
Child's Gaming Pattern	Fridays, Saturdays and Sundays about 3 hours per day.

Respondent	R42
Household Type	HDB 5-Room
Number of Household Members	4
Household Media Devices	Television Sets: 1 Desktop Computers: 1 Laptops: 1 Console Gaming Devices: 1 Smartphones: 4
Parent	46-year-old Father
Parent's Highest Education Level	Post-Graduate
Parents' Employment Status	Respondent is Employed, and the spouse is Employed.
Parent's Gaming Status	Gamer
Child	17-year-old Son
Child's Game Type	MMORPGs
Child's Game Preference (in order of decreasing frequency of play)	1) <i>Batman</i> 2) <i>MapleStory</i> 3) No Data
Child's Gaming Pattern	Two hours every day during school holidays.

Respondent	R43
Household Type	Terrace
Number of Household Members	5
Household Media Devices	Television Sets: 1 Desktop Computers: 0 Laptops: 4 Console Gaming Devices: 2 Smartphones: 10
Parent	53-year-old Mother
Parent's Highest Education Level	Degree
Parents' Employment Status	Respondent is Unemployed, and the spouse is Employed.
Parent's Gaming Status	Non-Gamer
Child	15-year-old Daughter
Child's Game Type	FPS
Child's Game Preference (in order of decreasing frequency of play)	1) <i>Left 4 Dead</i> 2) <i>Call of Duty</i> 3) <i>Oblivion</i>
Child's Gaming Pattern	Highly dependent on parents' consent.

Appendix E:

Parental Style and Parental Involvement Scale

Scale: Very Unlike (1) ... Neither Like nor Unlike (4) ... Very Like (7)

Items for Parents	Items for Children
I have rules for my child about watching TV.	My parent has rules for me about watching TV.
I would describe myself as a strict parent.	I would describe my parent as a strict parent.
It is ok with me if my child does not follow certain rules.	It is ok with my parent if I do not follow certain rules.
When my child does something that is wrong, I usually do not punish him/her.	When I do something that is wrong, my parent usually does not punish me.
I discipline my child a lot.	I think my parent disciplines me a lot.
I usually want to know where my child is going.	My parent usually wants to know where I am going.
I give my child a lot of freedom.	My parent gives me a lot of freedom.
I make most of the decisions about what my child is allowed to do.	My parent makes most of the decisions about what I am allowed to do.
I give my child chores to do around the house routinely.	My parent gives me chores to do around the house routinely.
I let my child do pretty much what he/she wants without questioning his/her decisions.	My parent lets me do pretty much what I want without questioning my decisions.
I rarely give my child orders.	My parent rarely gives me orders.
I expect my child to be home at a certain time after school or in the evening.	My parent expects me to be home at a certain time after school or in the evening.
It does not really matter to me whether or not my child does assigned chores.	It does not really matter to my parent whether or not I do assigned chores.
I sometimes tell my child that my decisions should not be questioned.	My parent sometimes tells me that his/her decisions should not be questioned.
I sometimes criticize my child for what he/she does.	My parent sometimes criticizes me for what I do.
I expect my child to tell me when he/she thinks a rule is unfair.	My parent expects me to tell him/her when I think a rule is unfair.
I encourage my child to look at both sides of an issue.	My parent encourages me to look at both sides of an issue.
It is hard for me to admit that sometimes my child knows more than I do.	It is hard for my parent to admit that sometimes I know more than he/she does.
I do not think that my child should help with decision-making in the family.	My parent does not think that I should help with decision-making in the family.
I encourage my child to talk with me about things.	My parent encourages me to talk with him/her about everything.
I do not believe that I should have my own way all the time, and I expect the same from my child too.	My parent does not believe that he/she should have his/her own way all the time, and he/she expects the same from me too.
I would rather my child not tell me his/her troubles.	My parent would rather I not tell him/her my troubles.

I expect my child to do what I say without my having to tell him/her why.	My parent expects me to do what he/she says without having to tell me why.
I seldom praise my child for doing well.	My parent seldom praises me for doing well.
I believe my child has a right to his/her own point of view.	My parent believes I have a right to my own point of view.
I take an interest in my child's activities.	My parent takes an interest in my activities.
I encourage my child to talk to me honestly.	My parent encourages me to talk to him/her honestly.
I usually tell my child the reasons for the rules I set.	My parent usually tells me the reasons for rules.
I do not believe my child should have a say in making rules.	My parent does not believe I should have a say in making rules they set for me.
I try to get my child to do the best in everything that he/she does.	My parent tries to get me to do my best in everything I do.
I think that education is a very important part of adolescence.	My parent thinks that education is a very important part of my teenage life.
I usually set high standards for my child to meet.	My parent usually sets high standards for me to meet in whatever I do.
I am involved in school programmes for parents.	My parent is involved in school programmes for parents.
I sometimes volunteer at my child's school.	My parent sometimes does volunteer work at my school.
I think homework is a very important part of school.	My parent thinks homework is a very important part of school.
When my child gets poor grades, I encourage him/her to try harder.	When I get poor grades, my parent encourages me to try harder.
I make sure that my child does his/her homework.	My parent makes sure that I complete my homework.
I usually know the grades my child gets.	My parent usually knows the grades I get.
I think my child should go to university.	My parent thinks I should go to university.
Hard work is very important to me.	It is very important to my parent that I am hardworking.
I have high aspirations for my child's future.	My parent has high aspirations for my future.
When my child gets poor grades, I offer help.	When I get poor grades, my parent offers help.
When my child asks for help with his/her homework, I usually give it to him/her.	When I ask for help with my homework, my parent usually gives it to me.
I think that getting ahead in life is very important.	My parent thinks that getting ahead is very important.

Appendix F:

Pathological Video Game Use Scale

<i>We would like you to think about the impact of video games on you over the past 6 months.</i> In the PAST 6 months
Has your schoolwork suffered because you played video games excessively?
Have you ever skipped your studies or co-curricular activities to play more video games?
Did you need to spend more and more time and/or money on video games to feel the same amount of excitement?
Have you played video games to escape problems, bad feelings, or stress?
Are you thinking about video games more and more?
Have you ever taken, without permission, a friend's video game, or money from your parents, to buy a video game?
Have you tried to play video games less often or for shorter periods of time, but are unsuccessful?
Have you become restless or irritable when trying to cut down or stop playing video games?
Have you ever lied to family or friends about how much you play video games?
Have you ever needed to borrow money so you could buy or play video-games?

Appendix G:
Parent and Child Information Sheet and Consent Form
(For Surveys)

**PARENTAL AND CHILD INFORMATION SHEET
& CONSENT FORM (for Surveys)**



1. **Project title:** Parental Perceptions and Mediation of Computer Gaming in Singapore

2. **Principal Investigator:**
Dr. Lim Sun Sun
Department of Communications and New Media, NUS (CNM, NUS)
Telephone: 65161175; Email: sunlim@nus.edu.sg

Co-Investigators
Dr. Julian Lin
CNM, NUS
Telephone: 65168226; Email: lin@nus.edu.sg

Jiow Hee Jhee
CNM, NUS
Mobile: 97697363; Email: jhee@nus.edu.sg

3. **What is the purpose of this research?**
You and your child are invited to participate in a research. This information sheet provides you and your child with information about the research. The Principal Investigator, his Co-Investigators or Research Assistants, will also describe this research to you and answer all of your questions if you have further queries. Please read the information below and ask any questions about anything you don't understand before deciding whether or not you and your child should take part. You may refer to the above information for the investigator(s)' contact details.

This study seeks to explore how parents manage their children's computer gaming habits. This study will also explore parental perceptions of computer gaming. The child's experience and views will also be captured along with his/her gaming behaviour.

4. **Who can participate in the research? What is the expected duration of my participation? What is the duration of this research?**
Children aged between 12-17 years who play video games at home, and their parent (mother or father) may participate in this study.

You will not be eligible if you are blind or physically handicapped.

Both parent and child will be required to complete an online survey. Each survey will take approximately 15 mins to complete.

5. **What is the approximate number of participants involved?**
A total of 3000 children aged between 12-17 years, together with their parent (mother or father) will be involved in the study.

6. **What will be done during participation in this research?**
You and your child (between 12-17 years old inclusive) are invited to take a SIMILAR online questionnaire SEPERATELY so as not to influence each other's responses. To manage these 2 objectives, a **Matching Code** system will be employed to enable proper matching of both your responses. Please note the following for proper implementation of the online survey mechanism:
a) Please ensure that the **Matching Code** is properly filled in both the parent and child's version of the online questionnaire. The **Matching Code** can be found at the end of this document.

-
- b) As **ALL** questions in the questionnaire need to be completed, both you and your child can VIEW **ALL** the questions at the URL (website) mentioned before you decide whether or not to participate in this research.
 - c) Please ensure that **ALL** questions in the online questionnaires are properly filled.
 - d) Each online questionnaire will take approximately 15 mins to complete. The URL (website) for the questionnaires are highlighted at the end of this document.
 - e) Upon completion of BOTH online surveys, please hand in the signed consent and assent form through the school.
 - f) The appointed researchers will be in school, with a list of successfully completed **Matching Codes**, to collect the signed consent and assent form, and give out the reimbursement. The child would be required to provide a signed acknowledgement of the reimbursement.

7. How will the participant's privacy and the confidentiality of my research records be protected?

Only the principal investigator and his appointed researchers have you and your child identifiable information (e.g. names, contact numbers) and this will not be released to any other person outside of the research team. All your identifiable information will be kept strictly confidential and will be destroyed once the data has been matched and the reimbursement process completed. The instruments used in this research are not diagnostic in nature, but exploratory.

8. What are the possible discomforts and risks of participation?

There are no foreseeable risks.

9. What is the compensation for any injury?

No injury is expected in this research.

10. Will there be reimbursement for participation?

Each parent and child pair who successfully completes the Surveys will receive a \$20 reimbursement.

11. What are the possible benefits to the participant?

There are no direct benefits to you or your child. However, parents may get a better understanding of their parental supervision/guidance habits.

12. Can my child and/or I refuse to participate in this research?

Yes. Participants can withdraw from the research at any time without giving any reasons, before the acknowledgement of the receipt of the \$20 reimbursement. Withdrawal of participation has to be done as a parent-child pair, resulting in the deletion of all data associated with you.

13. Whom should I call if I have any questions or problems?

Please contact the Corresponding Principal Investigator, Jiw Hee Jhee at telephone 97697363 and email jhee@nus.edu.sg for all research-related matters and enquiries.

For an independent opinion regarding the research and the rights of research participants, you may contact a staff member of the National University of Singapore Institutional Review Board (Attn: Mr Chan Tuck Wai, at telephone 6516 1234 or email at irb@nus.edu.sg).

Project title: Parental Perceptions and Mediation of Computer Gaming in Singapore

Corresponding Principal Investigator contact information:

Jiow Hee Jhee
Department of Communications and New Media, NUS
Mobile: 97697363
jhee@nus.edu.sg

For parent

I hereby acknowledge that:

1. I have agreed to take part in the research highlighted above, together with my child, _____ (name).
2. I have received a copy of the information sheet that explains the objectives and nature of this research. I understand its contents and agree to participate in this research, together with my child.
3. I can withdraw myself or my child, from the research at any point of time before the acknowledgement of the receipt of the \$20 reimbursement, by informing the Principal Investigator and/or his Research Assistants and all our data will be discarded.
4. I will not have any rights to any commercial benefits that result from this research.

Name and Signature (Parent)

Date

For child

I agree to participate in this research study.

I understand that my participation is voluntary and that I can stop my participation at any time.

Name and Signature (Child)

MATCHING CODE : 123456

PARENT SURVEY : www.parent-vgmediation.com

CHILD SURVEY : www.childvgmediation.com

Appendix H:

Letter To Parents

Letter to Parents

Dear Parents/Guardian,

You and your child are invited to participate in a research study that we are conducting online titled "***Parental Perceptions and Mediation of Computer Gaming in Singapore***". This study seeks to explore how parents manage their children's computer gaming habits. This study will also explore parental perceptions of computer gaming. The child's experience and views will also be captured along with his/her gaming behaviour.

Children aged between 12-17 years who play video games at home, and their parent (mother or father) may participate in this study. You will not be eligible if you are blind or physically handicapped. Both parent and child will be required to complete an online survey. Each survey will take approximately 15 mins to complete. Each parent and child pair who successfully completes the online surveys will receive a \$20 reimbursement.

Please see the attached **Participant Information Sheet & Consent Form** for details of the research and the instructions for participation.

Upon successful completion of the online surveys by you and your child, please return the signed Consent Form to the school on **to be confirmed**. Should you have any enquiries, please feel free to contact Mr. Jio w Hee Jhee at jhee@nus.edu.sg or 97697363. Thank you for your time.

Yours sincerely,

Jio w Hee Jhee (on behalf of the research team)
Doctoral Candidate
Department of Communications and New Media
National University of Singapore

Version 2 dated 29 Jul 2013