Filtering Violence and Sexual Content: The Necessities of Digital Games Content Rating System for Malaysia's Environment

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Abstract—**Numerous studies revealed that playing digital games with adverse contents can lead to negative effects. Therefore, this article presents a review of the harmful contents and the detrimental effects of playing digital games. Violent and sexual contents of digital games, digital games scenarios in Malaysia, and review of existing content rating system are covered. The review indicates that Malaysia should have its own digital games content ratings system to control the contents and inform the users about the contents of the games that they wish to consume.**

Index Terms—**Digital Games; Rating System; Violent Content; Sexual Content.**

I. INTRODUCTION

Today, the popularity of digital games as a source of entertainment competes with television and film. This can be seen with the existence of millions active gamers all over the world [1]. According to the report by Entertainment Software Association [2], 59% of Americans play digital games, that is more than half of Americans population. In fact, on average there are two gamers in each game-playing US household and each US household owns at least one PC, dedicated game console, or smartphone. The growth of online social networking websites and the great capability of mobile devices for gaming purposes also contributed to the increasing of gamers globally.

Digital gaming industry alone contributes to a lucrative income that is billion dollars worldwide. PC Games market reported that game industry revenue is predicted to continuously increase and will achieve USD25.5 billion by the year 2015. These show that the games industry will keep on growing as a part of human culture. This happened due to the technology advancement especially with the existence of the Internet and gadgets which allow digital games to be engaged in people daily life [3].

Furthermore, digital games market is also growing rapidly in the Asia-Pacific. In 2012, Australian-based independent telecom analyst firm, Ovum reported that digital games market in the Asia-Pacific is predicted to be worth US 30.3 billion in 2016 which is more than double [4]. This shows that digital games are not only popular in western countries but also in Asia.

There are three market segments of gaming industry, which are console, personal computer (PC) and mobile/casual. With the rapid advancement of technological convergence, digital games such as Sony's PlayStation, Microsoft's Xbox, and Nintendo's Wii are now moving forward by having a great capability in term of functionality and multimedia [5].

This article discusses the needs of digital games content rating system within Malaysia's environment. Previous studies showed that playing digital games with harmful contents (e.g. sex and violence) may lead to negative effects especially to the youngsters. Therefore, digital games content rating systems were introduced for the purpose of protecting minors and providing advisory information to the users regarding the content that they wish to consume. However, different countries use different content rating systems. This is obviously due to the absence of "one size fits all" approach [6]. This statement is also supported by Engesser and Franzetti [7] which stated that different rating systems are used due to the dissimilarity of the countries in terms of the media and political systems that they are employed in. Since Malaysia does not have its own digital games content rating system [8], this is also supported by Malaysian Communications and Multimedia Commission (MCMC) as shown in Figure 1, thus there is a need for Malaysia to develop one that can fits with the country's necessity.
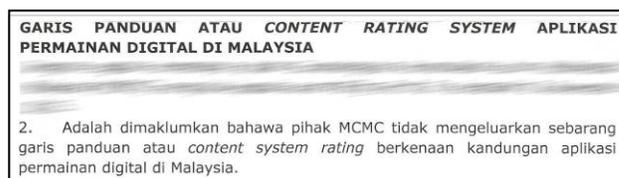

Figure 1: Feedback letter from MCMC regarding digital game content rating system in Malaysia

II. CONTENTS AND EFFECTS OF DIGITAL GAMES

There are numerous researches regarding the effects of playing digital games. Actually, the effects of playing digital games can be both either positive or negative. It depends on the contents of the game itself and also the way consumers deal with it in their everyday life. However, this study only focuses on the violence and sexual content of digital games and effect of playing digital games with violence and sexual themes as both of these negative elements have been served a

lot to the consumer especially children and adolescent [9], [10].

A. *Violence and Sexual Content of Digital Games*

Today, people regardless any ages have been served with a huge amount of violent media via movies, films, television programs, and digital games [6], [11]. Researches regarding possible detrimental effects of violence in the media have been conducted for more than sixty years, and significant agreements have been achieved on some of the most crucial matters. This is also supported by the specialists gathered by the US Surgeon General, which indicated that, "Research on violent television and films, video games, and music reveals unequivocal evidence that media violence increases the likelihood of aggressive and violent behavior in both immediate and long-term contexts" [12]. In addition, based on the reports by the US professional health associations and government health agencies have also shown that they also agreed on the same inference after going through the available scientific facts [11], [13].

Besides violence, digital games also contain sexual contents. "Sexual content is defined as talking about or showing: hooking-up/making out; sexy clothes; nudity; sex (oral, anal, or vaginal); safe sex (condoms, birth control, etc.); sex crimes (rape); homosexuality (gay or lesbian); or anything else sex related" [14], [15].

According to Dietz [16], her research regarding digital games contents focusing on aggression and women depictions in both topmost selling digital games (Nintendo and Sega) revealed that instead of violence toward women, women are also depicted as sex objects in the games. The findings from the study also discovered that the depiction of women as heroic characters in the games is very little and although women are depicted as heroic, the characters were mostly less important or sexualized.

One of the top selling digital games that have sexual contents is Grand Theft Auto or also known as GTA. Woman characters in GTA are mostly portrayed as strippers or prostitutes. Male hero in GTA can hire a prostitute and while engaging with immoral activities, the male hero will be rewarded with points [17]–[21]. Further, other digital games such as Playboy: The Mansion and Leisure Suit Larry: Magna Cum Laude also contains sexual contents. Both of these games have similar goal that is to persuade pretty women avatars to have sex [18]. Even, a real life porn star is used as the main characters in Street Racing Syndicate game [20]. This shows that many digital games coming from western embrace sexual contents which are not suitable for children and adolescents.

B. *Negative Effects of Violence and Sexual Themes in Digital Games*

A report by the Department of Health and Human Services in the US has discovered that compared to the impacts of low IQ, offending parents, being from a family in which the parents have separated, and acquaintance with disruptive peers, the exposure to violent contents in television at the early age of between six to eleven on the advance violent behavior has been found to have greater negative effects [22]. According to Tamborini and Skalski [23], digital game playing is more interactive as it offers great involvement,

immersion and spatial presence compared to television which is passive [24], [25]. Since watching violence through television, which is passive in nature compared to digital game playing, can bring huge negative impacts, therefore it could be assumed that playing violent digital games will obviously bring greater negative impacts. Furthermore, a huge exposure and involvement in violence content is found to have a great relation with the increasing of aggression [26]. Violent behavior is supported in digital games by rewarding the players for aggressive play. Besides, it is also found that exposure of adolescents in the violent media can lead them to turn into more aggressive directly after being exposed, and even become more aggressive adults [12]. Instead of aggression, psychological research on playing digital games also discover other potential harmful effects such as addiction and depression [27].

Past studies have also revealed that viewing sexual material can lead to negative effects. Previous researchers [28], [29] discovered that the exposure to sexual materials can affect self-confidence, psychological health, and body appearance. Furthermore, it can also affect sexual [30] and gender identity [31]. In fact, it is also found that those who viewed woman as sex objects via the media have tended to bear on gender typecasts [32], [33]. Same goes to the men with aged between 17 to 39 who viewed ads containing women depicted as sexual symbols were more advocating of rape myths [34]. Besides, Dills, Brown and Collins [17] also revealed that males who watch the objectified female digital game are highly tolerance of sexual harassment.

III. DIGITAL GAMES SCENARIOS IN MALAYSIA

According to Price Waterhouse Cooper's (PwC's) as reported by Iskandar Malaysia Investment Guide stated that in Malaysia, the digital games market is poised to rise at a compound annual growth of 6.8 percent within 2011 to 2015. This shows that digital games industry is becoming a huge business in Malaysia. Besides, there is also a signal that the development of digital games in Malaysia will continue to evolve and mature as Korea's digital games industry. In fact, it is found that the number of digital game players in Malaysia is increasing compared to past seven years [35].

Digital games can be played either online or offline mode. According to Soh, Yan, Ong, and Teh [36], 90% of Malaysian household in the urban areas owns computers with internet access. In fact, instead of chatting, viewing cyber pornography, social sites and music, adolescents in Malaysia also use internet for playing online violent games.

A study by Glaubke, Miller, Parker, and Espejo [37] regarding violence, gender and race in video games have found that out of 70 games included in the study, nearly half of them contain serious violence. This is also supported by [16], [38] which stated that most of the popular digital games contain violent contents, including carnages as the goal principle to win. Furthermore, a study by Allahverdipour, Bazargan, Farhadinasab and Moeini [39] regarding video games playing among adolescents in an Islamic country found that playing extensively "matured" rated games can lead to aggressive behavior and school problems. A few studies which were conducted within Malaysia's context also found to show

similar findings as abroad especially relating to aggressive behavior [8], [40], [41].

In addition, according to Rajasakran, Wong, Sinnappan, Kumarasuriar, Pangiras, and Koran [8] the increasing of aggressive behavior and juvenile offenses in many developed and developing societies occurred due to the exposure toward violent video games. Besides, Xu stated that (as cited in Zhang [42] "about 14.1%, or nearly 2.5 million of urban young Internet users are addicts . . . online games rely on elements of attack, fight and competition, which can lead gamers to irrationality and immorality, sanctioning the behavior of achieving one's goal by harming others-some violent and pornographic games are often considered as "Electronic Heroin"."

IV. REVIEW OF EXISTING CONTENT RATING SYSTEM

Many countries have introduced their own content rating systems to control inappropriate contents of digital games. ESRB, PEGI and MDA are among the content rating systems implemented by the US, Europe and Singapore respectively based on their needs and suitability. Table 1 shows the distinction between ESRB, PEGI and MDA. This table is adapted from Dogruel and Joeckel [43] and MDA website [44].

Table 1
The Distinction Between ESRB, PEGI and MDA [43], [44]

ESRB	PEGI	MDA
EC (Early Childhood) Content is intended for young children with no material that parents would find inappropriate.	PEGI 3+ Games that do not include any form of violence or fright inducement.	N/A
E (Everyone) Content is generally suitable for all ages. May contain minimal cartoon, fantasy or mild violence and/or infrequent use of mild language.	PEGI 7+ Games that include potential portrayals of nudity in non-sexualized context.	N/A
E10+ (Everyone 10+) Games for children aged 10 and older with more elements of mild, cartoon or fantasy violence.	PEGI 12+ Games that contain prolonged nudity, minor use of swearwords and sexual references.	N/A
T (Teen) Games that are suitable for adolescents of 13 years and older and may contain violence, minimal blood or infrequent use of strong language.	PEGI 16+ Games with realistic depiction of violence, use of swearwords and drugs.	Age Advisory "Suitable for 16 & above" Games that contain some contentious elements that are not recommended for the young (eg, moderate level of violence, portrayal of implied sexual activity, nudity without details).
M (Mature) Games that require users to be at least 17 years old and that may contain intense violence, blood and gore and sexual content.	PEGI 18+ Games with acts of cruelty.	M18 (Mature 18) Games that restricted to persons 18 years and above (eg, depictions of realistic violence, portrayal of sexual activity with some nudity, homosexual activity but only limited to kissing and hugging).
AO (Adults Only) Games for adult users that include prolonged scenes of intense violence and/or graphic sexual content.	N/A	N/A
RP (Rating Pending) Not yet assigned a final ESRB rating. Appears only in advertising, marketing and promotional materials.	N/A	NAR (Not Allowed for All Ratings) Games that contains the elements against with law of Singapore (eg, pedophilia).

ESRB and PEGI were chosen in this study due to their stability and maturity [43] while MDA was selected since Singapore is the one and only nearest neighbourhood country that have its own digital games content rating system.

Issue regarding the detrimental effects of violence and sex in foremost motion pictures has drawn a lot of attention among parents, educators and policymakers as early as 1900s. Furthermore, with the technological advancement especially the capability of modern digital games to graphically portray violence and sexual in a realistic form as well as what can be looked via television this issue continue to captivate public concern [45]. Since violence and sex have entice a lot of attention compared to others classifiable elements such as profanity, tobacco, drug, gambling, alcohol, discrimination and fear, therefore, this study is focusing on these two classifiable elements.

Table 2 and 3 below show the details of violence and sexual elements classified by the ESRB, PEGI and MDA respectively. These tables are adapted from ESRB, PEGI and MDA website [44], [46], [47].

Table 2
The Details of Violence Elements Classified by the ESRB, PEGI and MDA [44], [46], [47]

Existing Rating System	Age Classification	Violence Element
ESRB	EC 0+	No unsuitable element.
	E	May contain minimal cartoon, fantasy or mild violence (Scenes involving aggressive conflict).
	E 10+	May contain more cartoon, fantasy or mild violence (Mild scenes depicting characters in unsafe and/or violent situations).
	T 13+	May contain violence and minimal blood.
	M 17+	May contain intense violence, blood and gore (Graphic and realistic-looking depictions of physical conflict. May involve extreme and/or realistic blood, gore, weapons and depictions of human injury and death).
	AO 18+	May include prolonged scenes of intense violence.
PEGI	3+	Depictions of violence that is humorous and is set in a cartoon, slapstick or child-like setting. Depictions of non-realistic violence towards fantasy characters. Depictions of non-realistic violence towards non-detailed human-like characters.
	7+	Depictions of implied violence to humans where the actual violence (death or injury) is not shown. Depictions of violence that is set in a cartoon, slapstick or child-like setting, and is likely to be disturbing (fierce sounds, nature of the characters, the severity of the violence and/ or dark overtones) to younger children. Depictions of realistic looking violence towards fantasy characters.
	12+	Depictions of non-realistic looking violence towards human-like or animal-like characters. Moving images that depict any minor assault on a human-like character that does not result in any obvious injury or harm (whether or not it is realistic looking violence). Depictions of arcade style or sporting action showing violence.
	16+	Depictions of realistic looking violence towards human-like or animal-like characters. Sustained depictions of death or injury to human-like or animal-like characters (except arcade style or sporting action). Depictions of arcade style or sporting action showing violence containing blood or gore.
	18+	Depictions of gross violence, which includes torture, dismemberment, sadism and horrific depictions of death or injury towards human-like or animal-like characters. Depictions of apparently motiveless killing or serious injury to multiple numbers of innocent human-like characters. Depictions of violence towards vulnerable or defenceless human-like characters.
MDA	16+	Moderate level of violence. This refers to realistic but not excessively graphic violence with depiction of blood which may be included in the gameplay.
	18+	Depictions of realistic violence, such as killing, maiming or causing other serious injury to humanoid characters if the violence is not sadistic, cruel and abhorrent.

Table 3
The Details of Sexual Elements Classified by the ESRB, PEGI and MDA [44], [46], [47]

Existing Rating System	Age Classification	Sexual Element
ESRB	EC 0+	No sexual element.
	E	No sexual element.
	E 10+	No sexual element.
	T 13+	No sexual element.
	M 17+	May contain sexual content.
	AO 18+	May include prolonged scenes of graphic sexual content. (Graphic references to and/or depictions of sexual behavior, possibly including nudity)
PEGI	3+	Depictions of nudity in a non-sexual context. Example: a lady breast feeding baby, topless sunbathing or a nudist beach.
	7+	
	12+	Words or activities that amount to obvious sexual innuendo or explicit sexual descriptions or images or sexual posturing
		Depictions of sexual intercourse without visible genitals.
	16+	Depictions of erotic or sexual nudity. Sexual expletives or blasphemy.
	18+	Depictions of sexual activity with visible genital organs. Depictions of sexual violence or threats (including rape). Sexual expletives or blasphemy.
MDA	16+	Portrayal of implied sexual activity. Nudity without details. Example: no nipples, genitalia or pubic region (includes hair). Still or moving images which may be mildly suggestive may be featured. Example: scantily-clad women in bikinis or lingerie. Portrayal of sexual activity with some nudity, both topless and frontal, if not detailed. Homosexual activity should be limited to kissing and hugging.
	18+	Depiction of topless nudity or occasional full frontal nudity, if not exploitative. Nudity should not titillate or be the main feature of the game. Still or moving images which may be sexually titillating (but does not contain nudity). Example: scantily-clad women shown in a manner that is sexually suggestive, if not excessive or gratuitous.

Table 1, 2 and 3 obviously show that different countries proposed a different system to adapt with their needs and suitability. Although different countries use difference system, their main goal is similar that is to provide a guideline for consumers in determining the game contents and its suitability. Based on the comparison, it can be concluded that there is a need for Malaysia to have its own digital games content rating system. This is due to the differences in terms of culture, religion, law and political aspects. As for example, ESRB allows adolescents as early as 17 years old to be exposed with game contents that contain intense violence, blood and gore and sexual content. Hence, digital games with sexual themes; murder, rape and prostitution in Grand Theft Auto, is legal to be sold in the US market (rated as Mature by ESRB) for adolescents ages 17 and above [17]. Besides, digital games with graphic sexual content (Adult Only rating) are also legal to be market in the US.

Furthermore, different countries also have different standards in defining certain terms. For example, the European media commonly accept a slightly more liberal approach towards sexual content, which can be seen through PEGI that allows digital games for consumers as early as 7 years old to include potential portrayals of nudity.

Although Singapore is among the nearest neighbourhood countries that have many similarities with Malaysia especially in terms of culture, the digital games which contain portrayal of sexual activity with some nudity is allowed for consumers aged 18 years old and above. In addition, homosexual activity, although only limited to kissing and hugging is also allowed. This contradicts with Malaysia's regulation, in which sexual content (homosexual activity) is not only prohibited to the minors but also the majority (18 years old and above).

V. THE PROPOSED MODEL OF DIGITAL GAMES CONTENT RATING SYSTEM FOR MALAYSIA

As suggested by CMCF (see Figure 2), although there is no specific guideline or content rating system for digital games, the Malaysian Communications and Multimedia Content Code can be used as a minimum standards to develop a model of Malaysia digital games content rating system.
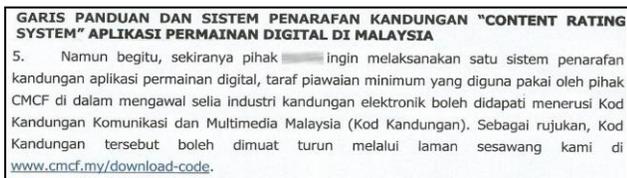

Figure 2: Feedback letter from CMCF regarding digital game content rating system in Malaysia

Below are the details of the content (violence and sex) extracted from the Content Code:

A. Violence
Violence is referred to outrageous acts of terrorism, war, and human conflict both in fact and through popular fiction, the antics of cartoon characters, and more. Besides, Content Code has grouped violence in four broad categories that are:

offensive violence, imitable violence, sexual violence, and violence and young, vulnerable audiences [48].

B. Indecent content
Indecent content is defined as material which is offensive, morally improper and against current standards of accepted behaviour. For example: nudity, and sex and nudity [48].

C. Obscene content
Obscene content is described as content that lewd portrayal and is essentially offensive to one's prevailing notion of decency and modesty. For example: explicit sex acts/pornography, child pornography and sexual degradation [48].

Figure 3 shows the proposed model of the digital game content ratings system for Malaysia's environment. This proposed model is derived based on the comparative analysis of existing digital games content rating system. Besides comparative analysis, the classification elements of the model are also gathered and extract from the Malaysian Communications and Multimedia Content Code, the guideline on film censorship (Film Censorship Board) and the age determination guidelines which delineate common skills and interests of youngsters confines by specified age categories based on the research regarding early childhood and also literature study [49]. This proposed model will be evaluated through expert consultation and finally will be validated via expert review.

VI. CONCLUSION

Today, digital games have become the main source of entertainment and also part of human culture. However, playing digital games, which consist of violence and sexual content, is found to have negative effects especially to the youngsters. Digital games content rating system have been introduced by many countries as a platform to control the content and inform the consumer especially parents regarding the content of the digital games that they wish to buy for their children. However, due to the differences in terms of culture, religion and political aspects, therefore different countries apply different rating system to adapt to their needs. Since Malaysia does not have its own rating systems, thus there is a need to develop our own digital game content rating systems to protect the minors and provide advisory information of the game contents to the consumers especially parents and guardians. Instead of providing information of game contents for parents, digital games content ratings system can also serve as a guideline for games developers in developing their digital games focusing on specific target users for Malaysian market as well as helping the digital games industry in Malaysia to strive forward by protecting the local contents.

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REFERENCES

[1] I. Spence and J. Feng., Video games and spatial cognition, *Review of General Psychology.* 14(2): 92–104, 2010.
[2] Entertainment Software Association. Essential Facts, 2014.
[3] N. M. Sin, O. Talib, T. P. Norishah, A. A. Ishak, and R. Baki., "Male Students and Digital Game: Reason, Motivation and Feeling," *International Journal Information Education Technolology*. 4(1):6–11, 2014.
[4] J. Cheah. Digital Gaming Is Big Money. 1:2012–2014, 2014.
[5] B. Ip., "Technological, Content, and Market Convergence in the Games Industry," *Games Culture.* 3(2): 199–224, 2008.
[6] D. a Gentile, M. Saleem, and C. Anderson., "Public Policy and the Effects of Media Violence on Children," *Social Issues Policy Revision.* 1(1): 15–61, 2007.
[7] S. Engesser and a. Franzetti, "Media systems and political systems: Dimensions of comparison," International Communication Gazette. 73(4): 273–301, 2011.
[8] T. Rajasakran, A. K. C. Wong, S. Sinnappan, V. Kumarasuriar, G. Pangiras, and S. Koran, "Aggressor Games: Of Violent Video Games and Aggression among Higher-income Group Schoolchildren in Malaysia," *Science Technology Social.* 19(3):383–398, 2014.
[9] K. M. Thompson and K. Haninger, "Violence in E-rated video games," *JAMA*. 286(5):591, 2001.
[10] K. Haninger, M. S. Ryan, and K. M. Thompson, "Violence in teen-rated video games," *MedGenMed*. 6(1):1, 2004.
[11] C.Anderson, A. Shibuya, N. Ihori, E. L. Swing, B. J. Bushman, A. Sakamoto, H. R. Rothstein, and M. Saleem, "Violent video game effects on aggression, empathy, and prosocial behavior in Eastern and Western countries: A meta-analytic review," *Psychology Bulletin*. 136(2):151–173, 2010.
[12] C. Anderson, L. Berkowitz, E. Donnerstein, L. R. Huesmann, J. D. Johnson, D. Linz, N. m Malamuth, and E. Wartella, "The influence of media violence on youth," *Psychology Science Public Interest*. 4(81):110, 2003.
[13] V. Smith. Action Agenda : A Strategic Blueprint for Reducing Exposure to Media Violence in Canada, 2004.
[14] A. Bleakley, M. Fishbein, M. Hennessy, A. Jordan, A. Chernin, and R. Stevens, "Developing Respondent Based Multi-Media Measures of Exposure to Sexual Content," *Communication Methods Measurement*. 2(1):43–64, 2008.
[15] M. Hennessy, A. Bleakley, M. Fishbein, and A. Jordan, "Estimating the longitudinal association between adolescent sexual behavior and exposure to sexual media content," *Journal Sex Respiratory.* 46(6):586–96, 2009.
[16] T. Dietz., "An examination of violence and gender role portrayals in video games: Implications for gender socialization and aggressive behavior," *Sex Roles*. 38:425–442, 1998.
[17] K. E. Dill, B. P. Brown, and M. A. Collins., "Effects of exposure to sex-stereotyped video game characters on tolerance of sexual harassment," *Journal of Experimental Social Psychology*. 44(5):1402–1408, 2008.
[18] E. Bertozzi. I Am Shocked , Shocked !": Breaking taboos in digital gameplay, *Loading,* 2007.
[19] A. Gabbiadini, P. Riva, L. Andrighetto, C. Volpato, and B. J. Bushman. Interactive Effect of Moral Disengagement and Violent Video Games on Self-Control, Cheating, and Aggression. *Social Psychology Personal Science*. 5(4):451–458, 2013.
[20] M. K. Miller and A. Summers., "Gender Differences in Video Game Characters' Roles, Appearances, and Attire as Portrayed in Video Game Magazines," *Sex Roles*. 57(9–10):733–742, 2007.
[21] K. E. Dill and K. P. Thill., "Video Game Characters and the Socialization of Gender Roles: Young People's Perceptions Mirror Sexist Media Depictions," *Sex Roles*. 57(11-12):851–864, 2007.
[22] N. L. Carnagey, C. A. Anderson, and B. J. Bushman., "The effect of video game violence on physiological desensitization to real-life violence," *Journal Experimental. Social Psychology*. 43(3):489–496, 2007.
[23] R. Tamborini and P. Skalski., "The Role of Presence in the Experience of Electronic Games. in *Playing Video Games Motives Responses and Consequences"*. 225–240, 2006.
[24] C. A. Anderson and K. E. Dill., "Video Games and Aggressive Thoughts, Feelings, and Behavior in the Laboratory and in Life." 78(4): 772–790, 2000.

[25] P. Fischer, T. Greitemeyer, A. Kastenmüller, C. Vogrincic, and A. Sauer., "The effects of risk-glorifying media exposure on risk-positive cognitions, emotions, and behaviors: a meta-analytic review," *Psychology Bulletin*. 137(3):367–90, 2011.
[26] M. Krcmar and K. Lachlan. "Aggressive Outcomes and Videogame Play: The Role of Length of Play and the Mechanisms at Work," *Media Psychology*. 12(3):249–267, 2009.
[27] I. Granic, A. Lobel, and R. C. M. E. Engels, "The benefits of playing video games," *American Psychology*. 69:66–78, 2014.
[28] G. R. Bessenoff.. Can the Media Affect Us? Social Comparison, Self-discrepancy, and the thin ideal. 30:239–251, 2006.
[29] T. G. Morrison, R. Kalin, and M. A. Morrison. "Body-image evaluation and body-image investment among adolescents: A test of sociocultural and social comparison theories," *Adolescence*. 39(155):571–592, 2004.
[30] S. J. Kirsh. The effects of violent video games on adolescents, *Aggress. Violent Behavior*. 8(4):377–389, 2003.
[31] S. L. Calvert, T. A. Kondla, K. A. Ertel, and D. S. Meisel, "Young adults perceptions and memories of a televised woman hero," *Sex Roles*. 45(1–2):31–52, 2001.
[32] L. M. Ward and K. Friedman. "Using TV as a guide: Associations between television viewing and adolescents' sexual attitudes and behavior," *Journal of research on adolescence*. 16(1):133–156, 2006.
[33] L. M. Ward. "Contributions of Music Video Exposure to Black Adolescents' Gender and Sexual Schemas," *Journal of Adolescent Research*. 20(2):143–166, 2005.
[34] K. Lanis and K. Covell. " Images of women in advertisements: Effects on attitudes related to sexual aggression," *Sex Roles*. 32(9–10):639–649, 1995.
[35] N. M. Jusoh and K. Nor. "Adoption of digital Games in Malaysia : Rasch Difference Item Functioning," *International Journal Interaction Digital Media*. 2(1): 22–26, 2014.
[36] P. C. H. Soh, Y. L. Yan, T. S. Ong, and B. H. Teh. "Digital divide amongst urban youths in Malaysia - Myth or reality?," *Asian Social Science*. 8(15):75–85, 2012.
[37] C. Glaubke, P. Miller, M. Parker, and E. Espejo. Fair Play? Violence, Gender and Race in Video Games. *Children,* 2001.
[38] J. B. Funk, G. Flores, D. D. Buchman, and J. N. German. "Rating Electronic Games: Violence is in the Eye of the Beholder," *Youth & Society*. 30(3):283–312, 1999.
[39] H. Allahverdipour, M. Bazargan, A. Farhadinasab, and B. Moeini. "Correlates of video games playing among adolescents in an Islamic country," *BMC Public Health*. 10:286, 2010.
[40] V. Kumarasuriar, G. Pangiras, S. Sinnapan, and S. Koran. A Study of the Relationship between Violent Video Game Playing and Aggression among Adolescents in the Klang Valley , Malaysia. 20:74–79, 2011.
[41] W. S. Wan Ismail, N. R. Nik Jaafar, H. Sidi, M. Midin, and S. A. Shah. "Why do young adolescents bully? Experience in Malaysian schools," *Comprehensive psychiatry*. 55(1):S114–20, 2014.
[42] L. I. N. Zhang. Productive vs . Pathological : The Contested Space of Video Games in Post-Reform China (1980s – 2012). 7:2391–2411, 2013.
[43] L. Dogruel and S. Joeckel. "Video game rating systems in the US and Europe: Comparing their outcomes," In *International Communication Gazette*. 75(7):672–692, May, 2014.
[44] "Ratings for video games: Video games," 2014. [Online]. Available: http://www.mda.gov.sg/RegulationsAndLicensing/ContentStandardsAnd Classification/Pages/VideoGames.aspx. [Accessed: 15-Nov-2015].
[45] S. L. Smith, E. Moyer-gusé, and E. Donnerstein. Media violence and sex. 541–568, 2002.
[46] "ESRB Ratings Guide," 2014. [Online]. Available: http://www.esrb.org/ratings/.
[47] "Pegi Questionnaire," *PEGI*, 2007. [Online]. Available: www.pegi.info/ch/index/id/1308/media/pdf/354.pdf.
[48] *The Malaysian Communications and Multimedia Content Code*. 2004.
[49] T. P. Smith. Age Determination Guidelines : Relating Children ' s Ages To Toy Characteristics and Play Behavior, 2002.

G

GENERAL (ALL AGES)
Content is normally suitable for all ages (eg. no violence and sexual contents).

6+

AGES 6+
Content is normally suitable for ages 6 and above (eg, animated content for children, can contain non-realistic violence, shall not depict violence as its central theme, and shall not invite dangerous imitation).

15+

AGES 15+
Content is normally suitable for ages 15 and up (eg. games with realistic depiction of violence but mild, minimal blood).

18+

AGES 18+
Content is normally suitable for ages 18 and up (eg. games may contain intense violence and depictions of violence, graphic horror images, mature themes).

X

BANNED
Content is not suitable for all ages/ not suitable to be market in Malaysia (eg. games contain indecent content and obscene content).
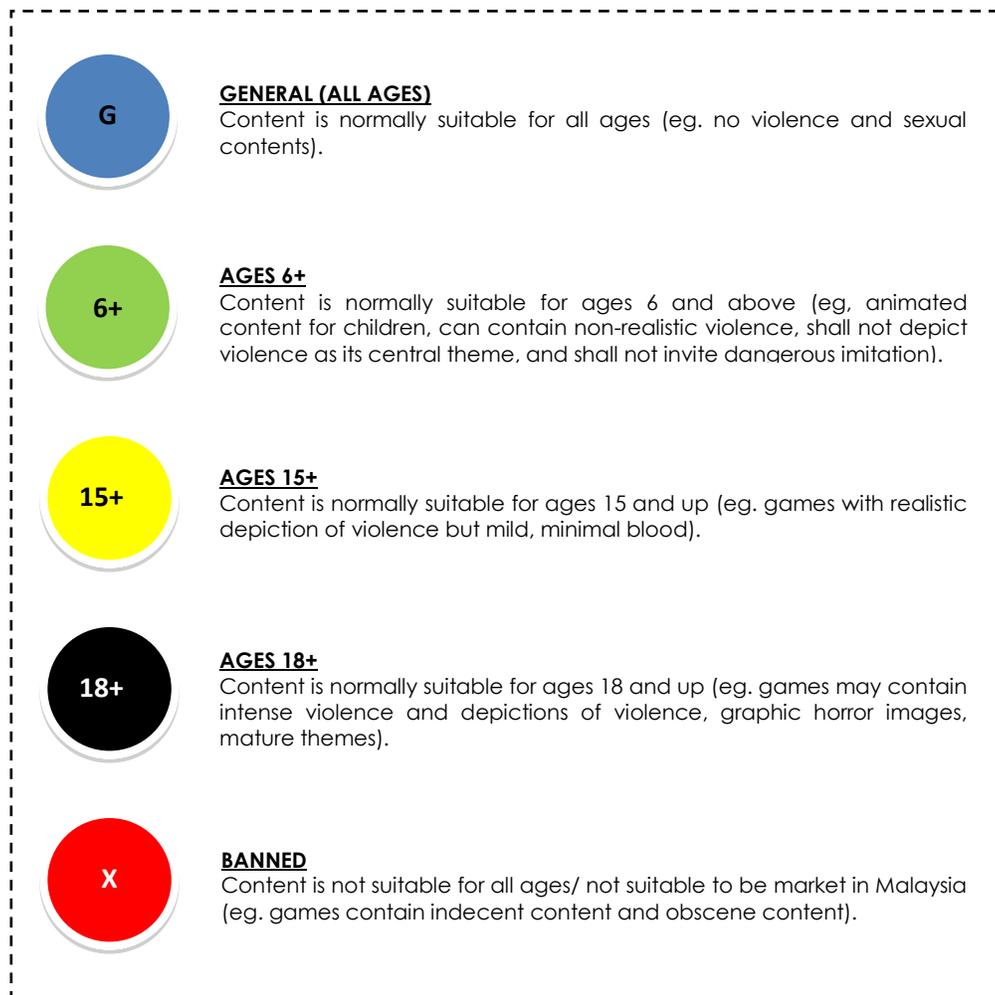
Figure 3: The proposed model of digital games content rating system for Malaysia