Differences in Parental Involvement and Perception of Video Games: A Pilot Study on American-Born and Immigrant Parents

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ABSTRACT

As more and more students from diverse families populate 21st century classrooms, the need for more culturally sensitive pedagogical approaches intensifies. Although literature suggests that differences of parenting styles between immigrant and native-born American parents will influence children's learning, classroom teaching, and policy making, little is known about whether there is any difference in parental involvement in the video game process and parental perceptions of integrating video games into the regular classroom. In this aspect, an online survey was conducted. Consistent with our hypotheses, although the sampled native parents were more likely to hold an overall negative attitude toward violence in games, they were less worried about the integration of video games in the classroom than immigrant parents were. Results also suggested that the sampled immigrant parents were less involved in the game playing process than their counterpart native-born parents were. Additional correlation analyses revealed that if parents held more negative attitudes toward social effects brought on by the violence in video games, they would most likely use stricter mediation techniques toward their children's video game playing. On the other hand, the more negative the attitude was, the more involved parents were in their children's gameplay. Implications, limitations and future research opportunities were discussed.

Keywords: parental attitude, cultural diversity, video game violence, technology integration

INTRODUCTION

In the last decade, scholars have advocated the adoption of video games for learning and instruction (Wouters et al., 2013). A significant body of research has studied the effects of video game play on children's academic development (Burguillo, 2010; Kebritchi et al., 2010; Shaffer, 2006), cognitive development (Eow et al., 2009), and social development (Skoien & Berthelsen, 1996). According to the meta-analysis conducted by Wouters et al. (2013), serious games are found to be more effective in terms of learning and retention. On the other side, increasing evidence has concluded that there was no relation between violent games and societal aggression or violence (Markey et al., 2014; Przybylski et al., 2014; Ferguson, 2015; Ferguson et al., 2015). For instance, Ferguson et al. (2015) conducted three experiments and none of them provided evidence for concerns linking violent video games to aggression or reduced empathy in youth aged 12–18. Their studies also show that personal experience with games was associated with more positive attitudes toward video games.

However, literature on digital game-based learning suggests that negative parental perceptions are often influencing decisions that teachers and policy makers make in terms of video game integration into the regular classrooms (Bourgonjon et al., 2011). Research also demonstrates that the overall perception that games have a potentially damaging effect on children has contributed to the public debates about excessive violence in video games (Oosting et al., 2008). According to Kutner & Olson (2008), parents are oftentimes left behind when it comes to video games and their impact on children, and parental ignorance about video games is often overlooked. As Jenkins (2006) stated, there is a huge disconnect between parental perception of video games and what the research shows.

Contribution of this paper to the literature

- Although the sampled native parents were more likely to hold an overall negative attitude toward violence in games, they were less worried about the integration of video games in classroom than immigrant parents were.
- The sampled immigrant parents were less involved in the game playing process than their counterpart native-born parents were.
- If parents held more negative attitudes toward social effects brought on by the violence in video games, they would most likely use stricter mediation techniques toward their children's video game playing.

Besides violence concern, families' own history, socioeconomic status, and socio-cultural knowledge are also identified as important factors that influence parental attitude toward video games (Skoien & Berthelsen, 1996; Bourgonjon et al., 2011). As more and more students from diverse families populate 21st century classrooms, the need for more culturally sensitive pedagogical approaches intensifies. Although differences in parenting styles between immigrant and native-born American parents (e.g. "Tiger Mom" vs. "Panda Dad") have instigated public debates, there is still little research on parental attitudes toward video games in the classrooms.

According to the US Census report (2011), 13% of the U.S. population (40.4 million) was foreign born in 2011, and the numbers were 12% and 37.2 million in 2007; this indicates that the volume of migration to the United States is increasing. In 2011, over half (53%) of all foreign-born individuals were born in Latin America and the Caribbean. The second largest group came from Asia, which represented 29% and the next largest was from Europe representing 12% (US Census, 2011). The increasing number of immigrant population is changing the structure of the classrooms. As Moreno & Chuang (2011) suggested, immigrant parents either willingly or unwillingly bring their preexisting cultural values and beliefs into their parenting behaviors. Today's classrooms not only require teachers to educate students of different national origins, cultural upbringing, native language and learning differences (Gollnick & Chinn, 2002), but also cater to the needs of culturally diverse parents (Joshi et al., 2005). Therefore, this study was designed as a first step in investigating the differences in perceptions of video games integration into the classroom between American born and immigrant parents. In the following sections we will present the synopsis of the literature, state the hypotheses, describe methodology, report findings and discuss implications for future research.

CONCEPTUAL FRAMEWORK

Parental Perceptions of and Involvement in Video Game Play

A great majority of research tends to concentrate on how digital games affect children's development and wellbeing (Kim & Hong, 2007), as well as the impact of video game integration into the regular classroom (Gee, 2007). Many scholars have found that the introduction of video games into the classroom is a necessary and invaluable step that will help schools to better cater to the needs of today's generation (Gee, 2007; Jukes et al., 2010a). There are also educators who see great potential in integrating digital gameplay across academic subjects (Jukes et al., 2010a and 2010b; Prensky, 2006; Gee, 2007, Gee, 2009). For example, a positive relationship has been found between time spent on videogames and a child's intelligence (van Schie & Wiegman, 1997; Whitebread et al., 2012). Research also found that the full potential of game play could only be activated when both teachers and parents are actively involved as participants (Whitebread et al., 2012). However, literature on digital game-based learning suggests that the integration of video games into the classroom is often influenced by negative parental attitudes (Bourgonjon et al., 2011).

Parental attitudes play an important role in students' and eventually educators' approaches toward gaming (Skoien & Berthelsen, 1996; Whitebread et al., 2012). Green et al. (2009) find that if parents accept a certain non-traditional digital learning tool, then their children would most likely have a similar attitude toward it. Prior studies have identified that parental involvement in scholastic activities in and outside of school has a positive correlation with high-achieving youth (Kao & Tienda, 1995). Several researchers agreed that parental involvement and mediation were significant factors in contributing to the overall educational effect of multimedia in general and video games in particular (Neuman, 1995; Rideout, 2014; Singer & Singer, 1983; Skoien & Berthelsen, 1996; Turkay et al., 2014; Whitebread et al., 2012).

Skoien & Berthelsen (1996) suggested that the socio-cultural environment in which people exist affects their attitudes therefore people always strive to do what is considered to be socially acceptable. Therefore the examination of parental perceptions, attitudes, and other contextual backgrounds of families in relation to video games might provide a good basis for understanding of how educators, administrators and researchers can

influence the level of acceptance of video game integration into the regular classroom among culturally diverse families (Skoien & Berthelsen, 1996).

Concerns about Violence and Cultural Diversity

Research shows that there are several factors that influence parental attitudes toward video games. One of them is media coverage on video game violence, which paints a rather negative image of the impact that the violence in digital games has on children's well-being (van Schie & Wiegman, 1997). Research demonstrates that public debates about the excessive violence in video games also contribute to the overall perception that games have a potentially damaging effect on children (Oosting et al., 2008). Researchers find that parents are prone to having a few pre-conceived notions that are based primarily on what they see on the screen when their children play video games, although many of those notions proved incorrect or are applicable only to a very small group of children (Oosting et al., 2008; van Schie & Wiegman, 1997; Whitebread et al., 2012). Furthermore, Ferguson et al. (2015) finds that there is no consensus in beliefs about games among parents. It is worth noting that parental attitudes toward violent games are diverse. Following this thread, we define violent video games in terms of having aggressive (Bartholow et al., 2005; Fischer et al., 2010) or violent content (Funk et al., 2003; Gentile et al., 2004; Harvard Health Publications, 2010) in video games. However, we want to mention that there are controversies regarding those broad definitions of violent games. A notable example is one scholar had to admit on the stand of a murder trial that Pac-Man could be considered a "violent video game" as the way people define it. The U.S. Supreme Court in a 2011 decision overturning a California statute that restricted the sale or rental of violent video games to minors dismissed the expert's conclusions about potentially harmful effects of violent video games, finding that any effects are "both small and indistinguishable from effects produced by other media" (Rushton, 2013).

Another factor that may influence parental attitude is families' own history, socioeconomic status, and socio-cultural knowledge. According to Skoien and Berthelsen (1996), parental involvement is a complex process, which is influenced not only by socioeconomic status of the parents but also by their cultural values. Difference of parenting styles between immigrant and native-born American parents is not only discussed as anecdotes (e.g. "Tiger Mom" vs. "Panda Dad"), but also as an increasingly significant research topic. Previous research suggests that divergent cultural backgrounds impact (1) parental involvement in children's lives and choices children make, (2) discipline methods used, (3) the independence/interdependence of a child within a family, (4) academic expectations, (5) parental attitude toward "play," and (6) content censorships when it comes to TV, books, games, etc. (Green et al., 2009; Kim & Hong, 2007; Sharif, 2009). Behavioral differences between native and immigrant parents are identified as essential factors in explaining the different performance levels between native and immigrant youth (Kao & Tienda, 1995). Immigrant parents cannot avoid bringing their preexisting cultural values and beliefs to their parenting behaviors, although sometimes their own values and practices may conflict with those of the new country (Moreno & Chuang, 2011). However, when it comes to demographics and parental perception, the majority of research is concentrated on (1) statistical figures on the average number of hours children play (Green et al., 2009); (2) socioeconomic status of families (Green et al., 2009); and (3) parental mediation techniques (Kim & Hong, 2007; van der Voot et al., 1992). Unfortunately, the parental perception of video games' importance continues to be one of the areas that need to be explored further and in detail (Green et al., 2009). Since parents play an important role in students' and eventually educators' attitudes toward gaming, we hope that exploration of differences in parental thinking and attitudes will provide beneficial insight into how parents can help educators and researchers to better accommodate video games for learning in diverse classrooms.

Hypotheses

As Moreno & Chuang (2011) stated, "parents want a better life for their children" (p. 239), so for many immigrant families an opportunity to provide better educational opportunities is a main factor that motivates the migration. For example, Dreby (2009) find that one main reason for Mexican migrants to move to the United States is that they expect to enhance their children's opportunities through continued labor force participation. High expectations might result in immigrant parents being more involved in their children's education. But as video games are generally perceived as a negative factor that affects children's academic performance, and as Whitebread et al. (2012) found, gameplay is often seen as contrasted with "work" and characterized as a type of activity that is essentially unimportant, trivial, and lacking in any serious purpose, we hypothesize:

H1a: Integration of video games into the classroom is perceived more negatively by immigrant parents than American born parents.

H1b: Immigrant parents are more concerned about the educational potential of video games than American-born parents are.

H2: Immigrant parents are more likely to have lower tolerance levels toward video game violence than American-born parents do.

However, research on parental involvements shows obscure results. Immigrant parents were found in some research to be more involved in their children's education relevant activities. According to Lopez et al. (2000), unlike U.S.-born parents, parents born in Mexico are more likely to indicate that they are engaged in helping their children with schoolwork and are more involved in parent-school communication. However, some researchers find opposite results. Immigrant status has been found to be a barrier rather than impetus to parental involvement. Turney & Kao (2009) find that in comparison to native-born parents, minority immigrant parents suffer more barriers to participation, such as a lack of time and limited English language proficiency, and as a result, are less likely to be involved in school activities. Based on the limited findings on this topic, in the present pilot study, we propose a two-directional hypothesis:

> *H3:* There is a difference in the level of involvement in video game play between immigrant and American-born parents.

Furthermore, immigrant parents are found to set stricter rules when it comes to household discipline and academic performance due to their higher expectations (Lopez et al., 2000). Therefore, we hypothesize that

> *H4:* Immigrant parents will utilize stricter mediation techniques when it comes to their children video game play than American-born parents.

METHODOLOGY

Participants and Procedure

An online survey was conducted on Qualtrics.com. The online data collection lasted 30 days, from November 1, 2012 to November 30, 2012. Respondents were recruited through (1) the two researchers' personal email invitations, (2) one researcher's personal Facebook distribution, and (3) Email requests sent to Arts and Technology Institutes' parental database of 420 people.

Given the goal of the present study, a parent in the survey was defined as an individual who has at least one school-aged child. A school-aged child was defined as a boy or a girl, ages 5-18. The survey consisted of three major parts. Part I contained screening questions that helped us determine if the respondent was qualified to participate in the survey. Part II—the main body of the questionnaire—allowed us to collect data and explore the research question itself. Part III consisted of questions that captured the demographic information, such as age and sex, of the respondents.

A total of 94 people agreed to participate in the survey. Forty-nine of them were qualified to continue the survey. The final sample included 45 parents, two thirds (n = 29) of whom were native-born American parents and one third (n = 16) of whom were immigrant parents. Half of these 45 respondents (n = 24) were 25 to 34 years old; 15.6% of them (n = 7) were 35 to 45 years old; and 13.3% of them (n = 6) were 24 years of age or younger. Of the 45 qualified participants, 60% (n = 27) were female and 22.2% (n = 10) were male. 17.8% (n=8) did not answer this question as they abandoned the survey before completion.

Immigration Status

We measured each respondent's immigrant status by two criteria (1) whether one was born in the United States and (2) whether one came to the United States before the age of 14. The respondents who met both criteria were qualified as American parents. The cut off age of 14 was selected based on several factors. According to Papalia and Feldman (2003), adolescence starts roughly at 11-12 and peaks at 14. Additionally, based on Piaget's *Cognitive Development* theory, adolescents at the age of 14 can develop hypothetical and deductive reasoning, and establish firm beliefs. A parent who came to the United States at or after 14 will be categorized as immigrant parent since even though adolescent immigrants are mostly well integrated into mainstream culture they are still aware of their native heritage and what is expected of them in their private community (Güngör, 2011).

Based on our review of the literature, we conceptualized *parental perception* across two dimensions: (1) Parental attitudes toward video games in education, which are measured across two sub-dimensions: a. The potential of the integration of video games in the classroom; b. Parental concerns about games in the educational settings; (2) Parental attitudes toward violent video games.

Parental Involvement has been measured across two dimensions: (1) Parental involvement in their children's game play and (2) Parental mediation of their children video game play.

Perception of Education Potential of Video Games

The attitude toward games in education was measured across two subscales: (1) parental perceptions of the potential of the integration of video games in the classroom and (2) the concerns about games in the educational

settings. The measurements were adapted from Wlodarczyk (2012) who used modified version of the "Games in Education Teacher Survey" scale originally developed at the University of Connecticut in 2003.

Parental Attitudes toward Violent Video Games

We measured this variable as parental perceptions of the affordances of video games, utilizing the scales adapted from Attitude Scales toward Violence on Televisions, created by Çitak (2009). This set of scales included three dimensions: (1) items related to attitudes toward individual effects of violent video games; (2) items related to attitudes toward social effects of violent video games; (3) and items related to attitudes toward social control of violent video games. We modified the original 17 items to fit with our research questions. We added seven items to "individual effects," according to previous related findings (i.e., Ferguson, 2007; Guerra et al., 1995, as cited in Funk, 2000). Our instrument measured this part with Likert-type scales, asking the respondents to choose from 1=*strongly disagree* to 5=*strongly agree* with each statement.

Parental Mediation and Involvement

For this study, parental involvement was measured across two sub-dimensions: (1) parental mediation (e.g., mediation techniques, rule setting) and (2) parental involvement (e.g., playing video games with the child; buying games for the child). Both of these measures have been adapted from a scale developed by van der Voot and Nikken's (1992). The same scale was adapted once before by Skoien and Berthelsen (1996) to study parental beliefs about video games.

Parental mediation has been defined as methods by which parents guide their youngest child's video game playing behavior (van der Voot & Nikken, 1992). Five items from the television scale (van der Voot & Nikken, 1992) have been directly transferred to the new scale by substituting words where necessary. Followed the original scale, we employed the four-point rating instrument with response options from 1=*Never, 2=Occasionally, 3=Often,* to 4=*Always.*

Parental involvement scale was adapted from van der Voot and Nikken (1992) and Skoien & Berthelsen (1996). As adapted, these questions were (1) How often do you discuss your child's interest in the video game; (2) How often do you watch while your child plays a video game; (3) How often do you encourage the child to play a video game you enjoy; (4) How often do you talk about the differences between video games and real life; (5) How often do you discuss the video game played or about to be played; (6) How often do you play video games with your child; (7) How often do you play video games with your child for the benefit of the child; and (8)How often you do you play video games with your child at the request of the child. Followed the original scale, we employed the four-point rating instrument with response options from 1=Never, 2=Occasionally, 3=Often, to 4=Always.

RESULTS

Preliminary Analyses

Table 1 presents the means and standard deviations of all the dependent variables used in the analyses by status (native-born parents or immigrant parents). For all the dependent variables, the standard deviations of immigrant parents were relatively larger than those of native-born parents. On the average, the former group also showed higher diversity than the latter group did.

A two-way contingency table analysis was conducted to evaluate whether children of native-born parents played games more often. The two variables were: (1) status (native-born and immigrant parents) and (2) video game play at home (play and not play). Status and video game play were found to be significantly correlated, Pearson χ^2 (1, N = 45) = 6.90, p = .01. The results suggested that the children of sampled native families play video games more often than the children of sampled immigrant families. No significant correlations between status and other independent variables, such as age, education, gender, and race/ethnicity were found.

Table 1. Means and Standard Deviations for Variables of Native and Immigrant Parents

	Native		Immigrant	
	M	*SD*	*M*	*SD*
Parental mediation [ns] (1→5: less → more mediation and monitoring)	2.60	.79	2.68	.90
Parental involvement ** (1→4: less → more involved)	2.17	.42	1.82	.55
Concern about video games in classroom* (1→5: less → more negative concerns)	2.87	.51	3.36	.76
Individual effect of violence in video games (original scale)* (1→5: less → more perceived negative effects)	3.83	.96	3.11	1.02
Individual effect of violence in video games (new scale)[ns] (1→5: less → more perceived negative effects)	3.88	.89	3.35	1.05
Social effect of violence in video games ** (1→5: less → more perceived negative effects)	4.25	.55	3.64	.68
Social control of violence in video games [ns] (1→5: less → more perceived social controls)	3.48	.91	2.95	1.12
Attitude toward violence in video games (original scale)* (1→5: less → more negative attitude)	3.93	.67	3.30	.70
Attitude toward violence in video games (new scale)* (1→5: less → more perceived negative effects)	3.93	.70	3.38	.78

Note: Native = parent born in the United States or immigrated to the United States before the age of 14; Immigrant = parent born outside the United States or immigrated to the United States at or after the age of 14. *M* = mean; *SD* = standard deviation. * significant at the 0.05 level. ** significant at the 0.01 level.
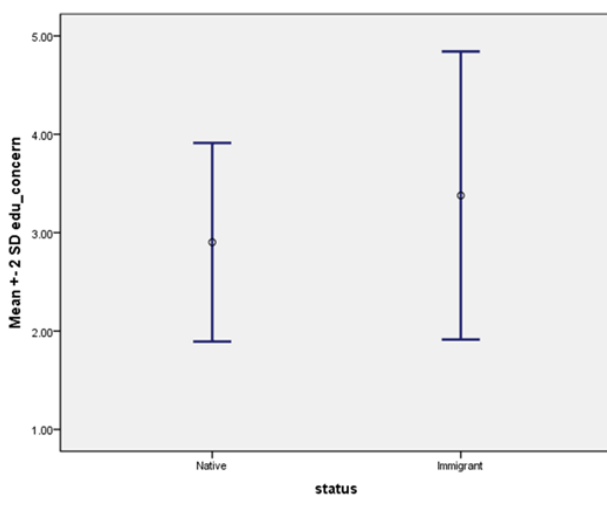
Figure 1. Differences in the level of concern for video game integration into the classroom.
Native = parent born in the United States or immigrated to the United States before the age of 14; Immigrant = parent born outside the United States or immigrated to the United States at or after the age of 14. SD = standard deviation; edu_concern = parental concern about the use of video games in the classroom.

Status and Perception of Educational Potential of Video Games

We tested the first hypothesis across two dimensions by using two separate subscales to measure: (1) whether immigrant parents are more negative about the integration of video games into the classroom; and (2) whether native-born parents are more positive toward the educational potential of video games.

Two independent-sample *t* tests were conducted. The correlation between status and concern was significant (*t* (43) = -2.92, *p* = .02.). The results show that immigrant parents were more negative (*M* = 3.38, *SD* = .73) about the integration of video games in classroom than native parents were (*M* = 2.90, *SD* =. 50). The 95% confidence interval for the difference in means ranged from -.88 to -.07. The η^2 index indicated that 13.4% of the variance of the level of concern was accounted for by whether a parent held immigrant or native-born status. **Figure 1** shows the distribution for the two groups. Therefore H1a was accepted. However, the difference in the perceptions regarding the education potential of video games was not significant between the two groups.
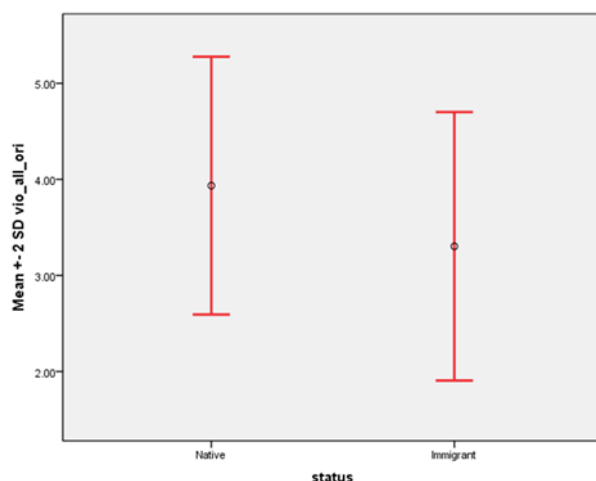
Figure 2. Differences in attitudes toward violence in video games.
Native = parent born in the United States or immigrated to the United States before the age of 14; Immigrant = parent born outside the United States or immigrated to the United States at or after the age of 14. SD = standard deviation; vio_all_ori = parental tolerance of violent video gameplay.

Status and Attitudes toward Violence in Video Games

As explained above, to address the question of tolerance toward video games, we implemented three sets of subscales: (1) attitudes toward individual effect; (2) attitudes toward social effect; and (3) attitudes toward social control of violence in video games.

With the first set of scales, we added five new items to the original five items of Çitak's scale of "Attitude toward violence in television" (2009). To ensure internal reliability, we calculated a split-half coefficient, expressed as a Spearman-Brown corrected correlation. Spearman-Brown corrected correlation was calculated to be .97 whereas alpha coefficient was .97 as well. The overall nineteen-item scale of violence coefficients were .87, .74, and .95 respectively, each indicating satisfactory reliability.

Given two scales of individual effect, two independent-sample t tests were conducted. Interestingly, when the original five-item scale was used, parental attitudes toward individual effect were found significantly correlated with status (t (43) = 2.11, p = .04). Native parents (M = 3.83, SD = .96) were more worried about the negative individual effect of violence in video games than immigrant parents were (M = 3.11, SD =1.02, p = .02). However, when the new ten-item scale was adopted, no significant correlation was found.

Parental attitudes toward the social effect of violence in video games were found to be significantly different between the two groups (t (43) = 2.94, p = .01). Native parents were more likely to hold negative attitudes toward the social effect of violence in games (M = 4.25, SD = .55) than immigrant parents were (M = 3.64, SD = .68). However, there was no significant correlation between the status (native or immigrant) and the attitude toward social control of violence in video games.

Figure 2 shows the distribution for the two groups. Based on our nineteen-item scale, native-born parents (M = 3.93, SD = .70) were more negative toward violence in video games than immigrant parents were (M = 3.38, SD = .78), t (43) = 2.20, p = .04.) Therefore, H2 was accepted.

Status and Parental Participation in Video Game Play

The third hypothesis addresses whether immigrant parents and native-born parents had different degrees of involvements in video game play. Parental involvement scale including eight items was used and the internal consistency estimate of reliability was computed. Alpha coefficient value was .83 indicating satisfactory reliability. Independent-sample t test was conducted. Hypothesis 3, native-born parents and immigrant parents differ in the amount of their involvement in gameplay with their children, was supported (t (43) = 2.57, p = .01). On average, **immigrant parents were less involved (M = 1.83, SD = .49) in the playing process than their counterpart native-born parents were (M = 2.19,** SD = .43). **Figure 3** shows the distribution for the two groups.
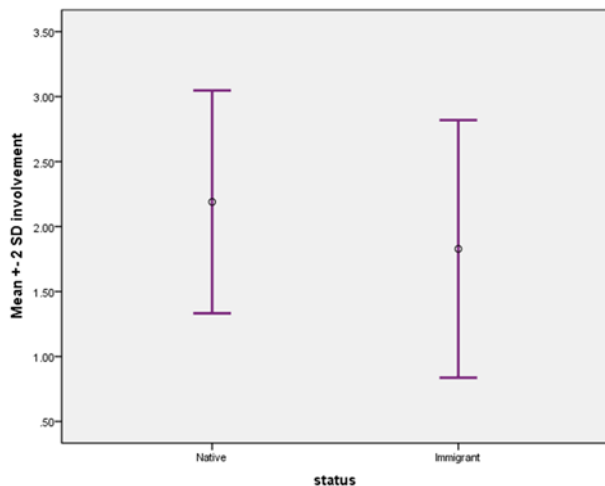
Figure 3. Differences for the native-born vs. immigrant parent groups.
Native = parent born in the United States or immigrated to the United States before the age of 14; Immigrant = parent born outside the United States or immigrated to the United States at or after the age of 14. SD = standard deviation; Involvement = parental participation in gameplay.

Table 2. Correlations Among Dependent Variables

	1	2	3	4	5	6	7	8	9	10
1. mediation	_	.223	-.165	.170	.192	.206	.355*	.205	.292	.278
2. involvement		_	.096	-.172	.215	.299	.494**	.291	.383*	.394*
3. edu_potential			_	-.564**	-.282	-.299	.002	-.255	-.214	-.252
4. edu_concern				_	.209	.212	-.070	.250	.149	.175
5. vio_indi_ori					_	.960**	.487**	.763**	.908**	.929**
6. vio_indi_new						_	.471**	.775**	.885**	.954**
7. vio_soci							_	.494**	.771**	.689**
8. vio_contr								_	.862**	.856**
9. vio_all_ori									_	.977**
10. vio_all_new										_

Note. * Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

Status and Parental Mediation of Video Game Play

Parental mediation scale with five items was used (Alpha coefficient = .83). Independent-sample *t* tests were conducted to evaluate the hypothesis that immigrant parents will set more stricter rules for digital gameplay. However, the result shows no significant difference between the two groups. H4 was not supported.

Correlations of Dependent Variables

Correlation coefficients were computed among the ten variables. The results of correlational analyses presented in **Table 2** show that 20 out of the 45 correlations were statistically significant and were greater than or equal to .355. The significant correlation between mediation and attitude toward social effect suggested that if parents held more negative attitudes toward social effects brought on by the violence in video games, they would most likely use stricter mediation techniques toward their children's video game playing. On the other hand, the more negative the attitude was, the more involved parents were in their children's gameplay.

DISCUSSION

Current research findings suggest that there are differences in the perception of video games between American born and Immigrant parents. Those differences seem significant in some areas and, surprisingly, are non-existent in others. For example, in contrast to our original hypothesis, we found no significant differences between parental mediation techniques. However, the correlation between the negative attitude toward social impact of violent video games and stricter mediation techniques suggest that no matter what the parental status is, stricter rules for video

game play might stem from the belief that violence in games is harmful for society. Although, according to the research program funded by the U.S. Department of Justice, there is no connection between video game violence and real world violence (Kutner & Olson, 2008).

Another interesting finding is that no matter what the status is (immigrant or American-born), the more involved they are in the game play itself, the more negative parents feel toward video games. This result may imply at least two possible interpretations: (1) some parents consider being involved as part of their mediation techniques, or (2) when parents are involved they are more exposed to the potential violence or questionable situations within the game narrative. This result seems contradictory to the assumption that the deeper parental knowledge of the game-play is the easier it would be to justify their decisions when it comes to monitoring and restrictions. However, a possible explanation for the negative relations found between involvement and attitude might be the established negative perception of video games due to personal beliefs and/or social norm. As Whitebread et al. (2012) found, gameplay is often regarded as "fun activity" and frequently contrasted with "work". Oftentimes, games are characterized as something that only children do and will outgrow once they become adults. Therefore gameplay must be essentially unimportant, trivial and lacking any serious purpose. Therefore, questions for further research might include the following: How does the amount of time parents spend playing games with their children affect parental perceptions toward integration of video games into their child's education, and why?

As we expected, immigrant parents are more concerned about the integration of video games into the classroom. It would be useful to understand what aids in shaping the parental beliefs and negative attitudes toward the social impact of video games and video game integration into the classroom. Our hypothesis that unlike American-born parents, immigrant parents were not much involved in their children's video game play was also supported by the data collected. We can only speculate as to why this disproportion exists since no data have been collected on parental language ability or current living situation. However, as presented in the literature review section, there are several barriers that may stand in the way of immigrant parents' involvement in their child's game play. Language deficiency might be one of them. We noticed that 19% of immigrant respondents abandoned the survey when the language used in questionnaire became progressively more complicated. Another barrier might be the number of other burdens carried by immigrant parents. Examples are lower socioeconomic status, inequality, discrimination, and parental legal status in the country. According to Santrock (2004), Socioeconomic status (SES) refers to "the categorization of people according to their economic, educational, and occupational characteristics" (p.134). Previous research suggests that the differences in SES between immigrant and native-born parents always play a significant role in parental involvement in their children's daily activities. For example, Menjívar and Abrego (2009) suggested that legal instability brings tremendous pain to immigrant families not only because of limited opportunities but also because of physical and emotional insecurities as well. Future study can include SES questions to explore the question in-depth. Future study could also collect more background data of the parents and their families beyond SES, such as number of children and parental involvement in the child's schooling. Research can further explore the differences in attitudes toward video games among diverse cultural groups within immigrant population since this pilot study has shown that immigrant groups are not homogeneous. In addition, idiosyncrasies of each group might be an interesting topic to explore further. Researching different ethnic groups (i.e. Chinese, Indian, eastern-Europeans) might aid in creating a stronger profile for each immigrant subculture. One more area for future research might include the exploration of different methods used to educate diverse ethnic and cultural groups within American society about the impact of video games and other digital media on children and society. For example, whether and how techniques educators, administrations, and policy makers can implement to engage and educate parents from different ethnic and cultural backgrounds about the potential benefits of video games in the classroom. This type of research might also be useful for educators and administrators to better understand where their students are coming from and how they can cater to their needs. In addition, this further research might provide valuable information for video game design companies in developing and marketing their products to different populations.

Furthermore, the results of the present study should be treated with some caution due to a few limitations. First, a cross-sectional approach was adopted, based on a limited number of samples through convenience sampling method. The authors conducted a strict screening procedure and defined "immigrant parents" based on literature. The immigrant age and the cultural localization of immigrant parents are fully considered. Besides, we limited the children age at 5-18. However, these strict conditions lowered the number of effective data. However, caution is advised when trying to generalize these findings to a broader population. Second, the survey builds on self-report instruments to study attitudes and behaviors. Third, the correlational analysis chosen for the pilot study could not provide insight into the reasons behind certain attitudes and behaviors. Liaw (2008) suggests a multidisciplinary approach to collect quantitative data, as well as trustworthy qualitative research methodology. Therefore, to further investigate the topic in question, mixed methods research involving either structured or unstructured interviews might be needed. Furthermore, the study focused both on general video game perception and digital game-based learning, according to Bourgonjon et al. (2010), which might have introduced response bias because respondents might feel not that easy to think of video games "in general". Especially, we defined violent video games in a broad

way that may include all the games with violent elements or contents. Therefore, future research could focus on specific beliefs concerning specific types of video games.

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