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Identity does matter: teacher disciplinary attitudes toward digital games

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Abstract

Teacher gaming experience affects attitudes toward digital games and consequent instructional behaviors, yet the influences of gamer identity from the perspective of teacher-student relationships have received limited research attention. We recruited 683 junior high and elementary school teachers working in Miaoli County, Taiwan to investigate the influences of gaming experience and gamer identity on the ways they regulate student digital game play in terms of time (duration), location, game genre, and playing partners. A game experience questionnaire, gamer identity scale, and digital game discipline scale were used to collect data. Results indicate that respondents with more gaming experience or higher gamer identity scores were more likely to report hands-off attitudes regarding discipline, while teachers with less or no game experience held stricter disciplinary attitudes, especially in terms of game genre and playing partners. Our hope is that the findings support teacher training programs in their efforts to address teacher concerns and negative perceptions of digital games in classroom settings. Additional research is required to clarify how the connection between teacher gaming experience and identity affects classroom learning.

Keywords: Digital games, Classroom discipline, Gamer identity, Gaming experience, Game-based instruction

Introduction

According to a survey conducted by the Taipei Computer Association (2015), schools have become the second most common location for digital game play after family households. Survey results indicate that 81% of respondents started playing digital games between the ages of 7 and 12, suggesting that elementary and junior high schools have become the most important settings for teaching good digital game playing habits. Digital game play helps students and teachers develop positive relationships via shared experiences (Soyoof & McLay, 2019). They can also serve as catalysts for enhancing engagement and fostering

positive interactions between educators and learners (Savvani, 2023). Allowing game play in schools can help teachers gain insights into the needs of individual learners (Liu et al., 2021) and create positive classroom atmospheres (Rodríguez-Ferrer et al., 2023), while still supporting the acquisition of skills that are increasingly important for social and economic participation. However, it is essential to pursue a balance between benefits and potential negative outcomes (Melo et al., 2020), and to understand influencing factors in detail.

Helping students participate in digital game play with a proper mindset is a new and important teacher responsibility. Today's teachers face numerous game-related challenges and classroom management decisions, including which games to allow and motivations for digital game usage (Ben El Moudden, 2021). When first introduced into school systems, the majority of teachers lacked the requisite knowledge of how to properly use digital games (Williamson, 2009), and despite increasing acknowledgment of their benefits and pedagogical potential, stereotypes held by teachers continue to act as barriers to their widespread adoption as learning tools (Kaimara et al., 2021). According to Wallace et al. (2023), teacher competency in digital technology is crucial for student success; however, many teachers believe they lack the necessary skills or resources to effectively support the integration of information technology and gaming into their teaching approaches. Even among the most knowledgeable and experienced educators, insufficient digital literacy can trigger stress regarding technology knowledge, classroom management, and teacher-student interaction (Jong, 2016), thus raising many questions regarding the consequences of educator perceptions and attitudes, as well as how digital games are reshaping traditional instructional methods (Belda-Medina & Calvo-Ferrer, 2022).

Researchers continue to search for correlations between teacher attitudes regarding digital games in general and their pedagogical usefulness (Scherer et al., 2020). By examining the perspectives of teachers regarding digital games, disciplinary attitudes, and behavioral intentions, researchers can gain insights into their willingness to incorporate games into classroom instruction (Hu & Sperling, 2022; Rüth et al., 2022). Generally positive attitudes support favorable perceptions of learning effectiveness and utility (Leonardou et al., 2021), and serve as significant determinants for classroom usage (Hsu et al., 2021; Kaimara et al., 2022). For new teachers entering the profession, classroom usage decisions are increasingly based on the combination of outcome, performance, benefit expectations, and personal gaming experience (Lutfi & Hidayah, 2021). According to Chen et al. (2020), teachers with greater gaming experience are more capable of critically examining games and selecting those that meet the specific learning needs of their students. Toh and Lim (2021) also found that teachers who have a more detailed understanding of digital games are better equipped to guide students in game-based learning activities, while mitigating the potential negative consequences of exposure to undesirable content. As they

explore their role as primary gatekeepers for integrating games into classroom activities, teachers-in-training can benefit from research insights into how their perspectives, attitudes, and behaviors regarding digital games affect their classroom decisions (Hébert et al., 2021; York et al., 2021).

In addition to personal digital gaming experience, teachers are likely influenced by their individual "gamer identities" when making disciplinary decisions involving a mix of flexibility, generosity, and forgiveness (Tajfel, 1972). Since identity serves both recognition and connection functions (Turkle, 1998), teachers with strong gamer identities may feel greater affinity and a stronger sense of connection with their students, which can result in an increased willingness to support digital game play in classrooms—an example of Buchanan's (2015) description of teacher reliance on self-identity to interpret, assess, and adapt to new workplace conditions, and to adjust their disciplinary approaches. However, the relationship between digital gaming experience and sense of gamer identity is ambiguous—according to one survey of 3,000 individuals who reported playing digital games for more than 30 minutes per week, only 42% were willing to describe themselves as "gamers" (New Paradigm Agency, 2020). Since gaming experience is insufficient for self-identification as a gamer, it is essential to recognize and distinguish differences in experience and identity: the first is a behavioral fact, the second a subjective psychological inclination with different impacts. Existing research primarily considers gaming experience as a factor influencing downstream decisions, evaluations, and behaviors; in contrast, identity is a comparatively unexplored research topic in education and information technology.

The present study examines the effects of teacher digital gaming experience and gamer identity on attitudes toward disciplinary actions aimed at managing behaviors associated with learner use of digital games. The guiding assumption is that teachers with greater digital gaming experience and higher degrees of gamer identity are more likely to understand the positive value, potential risks, and related effects of digital game play, and are therefore more capable of differentiating among subtle aspects of game genre, game use location and duration, and playing partners. The study looks at how gaming experience and gamer identity might affect the ways that teachers view their students, possibly resulting in greater flexibility in their approaches to disciplining learners for game-related behaviors. Understanding the impacts of experience and identity will help teachers reflect on digital games and assist in the development of specific training programs aimed at better digital game management and adoption as teaching tools. The study focuses on two research questions:

RQ1. What are the effects of digital gaming experience on teacher disciplinary actions in response to student digital game play behaviors?

RQ2. What are the effects of gamer identity on teacher disciplinary actions involving student digital game play behaviors?

Literature review

Teacher disciplinary attitudes regarding digital game play

The primary roles of teachers are to instill values and knowledge, create positive and productive learning situations, and discipline students within reasonable limits to develop good study and living habits (Gaustad, 1992; Thompson, 1976). The goal of disciplinary actions is to guide students toward self-directed modes by creating pleasant, courteous, and orderly class atmospheres, which in turn supports mutual understanding, empathy, and trust between teachers and students (Bowlby, 1955; Gregory & Ripski, 2008). Poor disciplinary actions tend to be arbitrary, hastily conceived, overly punitive, lacking evidence of effectiveness, and possibly aggravating the behaviors they are intended to eliminate (Mayer, 1999). John Dewey's (1916) recommendations made over a century ago are still relevant in the digital age: they should avoid authoritarian forms of discipline while working to maximize student exploration and participation in activities that support the development of moral judgment and wise action. Over a century later, Dewey's suggestions can still guide teacher efforts to enact the most effective disciplinary actions regarding digital games. Complete prohibitions of game play may be counterproductive, and block opportunities for students to learn good gameplay practices. The goal should be to foster positive teacher-student relationships within welcoming and active learning environments.

While the potential for negative impacts from extreme usage cannot be denied (Griffiths, 2010), playing digital games in moderation is highly unlikely to produce such effects. If negative impacts do occur, it is important to look at the life situations of learners to determine the influences of other social factors or personal characteristics (Quandt & Kowert, 2015). When using disciplinary practices to manage game usage, teachers must remember the goals of cultivating positive values, establishing good habits, and showing learners how to practice self-discipline. To foster proper moral judgment and positive teacher-student relationships, they must avoid the use of extreme punitive actions. As Li et al. (2023) note, if schools are to properly serve as digital education providers, they must do what they can to fully leverage the positive effects of games, and guide students toward reasonable usage and self-management decisions.

Researchers have identified specific areas in which usage patterns and related factors hold greater potential for negative impacts. These include playing time (Aziz et al., 2021; Ciris et al., 2022; Severo et al., 2020; Zhu et al., 2021), game play location (Çakmak & Aktan, 2018; Jiang, 2019; Yang, 2006), game genre (King et al., 2019; Kuss et al., 2012; Melodia et al., 2022), and playing partners (Ask & Svendsen, 2014; Fox & Tang, 2017;

Kowert, 2020). According to Nakayama et al. (2020), problematic gaming risks are positively correlated with the age at which one starts gaming, therefore efforts to prevent problems from becoming established must start as early as possible. These efforts are made more challenging by the observation that for most people playing video games is a positive leisure activity, with negative consequences only arising in a minority of vulnerable users. Thus, interventions need to be based on a controlled use rather than abstinence-based paradigm (Infanti et al., 2023).

This investigation addresses four dimensions that researchers have identified as having greater potential for negative impacts on digital game players:

Location. This refers to the places where digital gaming occurs (e.g., homes, schools, internet cafes) and their respective environmental and management characteristics. From a protective standpoint, teachers may describe schools and homes as acceptable gaming venues because of their controlled access and opportunities to correct inappropriate behaviors in a timely manner. In contrast, internet cafes are viewed as problematic because of their looser restrictions on access to gaming or website content, as well as the potential for consuming tobacco, alcohol or drugs (Gürol & Sevindik, 2007; Wu & Cheng, 2007). Teachers need to assess the safety and management strategies of different gaming locations to understand their varying social impacts on students. We believe that teachers with more gaming experience will adopt flexible disciplinary approaches rather than outright prohibitions in this area. When teachable moments arise, skilled instructors will use them as opportunities for showing students how to make wise decisions, and why (Miller & Szymusiak, 2021).

Playing partners. Playing games with offline friends and family members is believed to strengthen social connections (Domahidi et al., 2014; Padilla-Walker et al., 2012). Interacting with online friends or strangers can help players expand their worldviews, and take advantage of learning opportunities beyond their existing social networks (Nardi & Harris, 2010). These positive factors need to be balanced with the potential for scams, acts of harassment, and other forms of malicious behavior (Ho et al., 2016). Although this is a significant concern for younger and more naive players who cannot distinguish between trustworthy anonymous playing partners and dangerous strangers, experienced teachers are more likely to understand the social benefits of playing games with unidentified others rather than viewing all types of playing partners as potential risks. Digital games may be a problematic activity that requires occasional intervention, but they can also foster new social connections of benefit to individual players (Mandryk et al., 2020).

Playing time. Although evidence exists showing that excessive game play can have negative effects, limiting gaming time may reduce or even eliminate some gaming benefits, in some cases increasing the desire for more playing time (Davies & Blake, 2016). Hamlen (2017) found that increased digital playtime enhances a sense of achievement and success

among players, while Işıkoğlu et al. (2023) describe excessive digital game play as triggering emotions ranging from fun, happiness, anger, sadness and fear to chronic unease—emotional states that can lead to parent-child conflicts. Similar studies have been criticized for the criteria used to evaluate game usage duration (Tejeiro Salguero & Morán, 2002). Experimental and self-report methods have problems in terms of precision and bias, which makes it difficult to accurately determine actual usage patterns, thereby constricting research conclusions (Johannes et al., 2021; Parry et al., 2021). We therefore measured playing time in terms of daily periods during which learners were permitted to play digital games (e.g., lunch breaks, after school) instead of asking teachers to estimate specific playing time durations. We believe this better reflects the extent to which their students are allowed to engage in gaming activity.

Game genre. The literature contains multiple studies indicating that various digital game genres teach different skills and exert different impacts on learners (Dubé & Dubé, 2021), as well as studies suggesting that certain game genres are more addictive than others (Brandtner et al., 2022). According to Elliott et al. (2012), specific game design characteristics dictate that certain genres—especially first-person shooter (FPS), action-adventure, and massively multiplayer online role-playing games (MMORPGs)—are more problematic than others. More recently, Liao et al. (2023) suggest that problems are more likely to develop when the games involved have strong social and competitive components. In contrast, Lin and Chen (2016) and Oei and Patterson (2014) are among researchers reporting several positive effects from playing puzzle games, including enhanced spatial proficiencies, task-switching capabilities, and improved problem-solving and creative thinking skills. In some cases, research findings clearly reflect biases and value judgments (both positive and negative) for specific game genres. In classrooms, instructors can compare game genres to explain what constitutes “good” or “bad” games; it is important for them to abide by those explanations when dealing with discipline questions.

Playing experience, gamer identity and classroom discipline practices

Teacher attitudes, defined as positive or negative judgments about specific resources and the willingness to use them (Pozo et al., 2022), directly impact learner access to and use of digital games (Sardone & Devlin-Scherer, 2010). When digital games were first introduced to classrooms, teacher opposition was primarily based on the combination of inexperience and lack of understanding of their potential benefits (de Aguilera & Méndiz, 2003). Yeo et al. (2022) observed a direct link between elementary school instructor attitudes toward digital games and intention to use them, and indirect links between perceived ease of use, perceived usefulness, and intention. Gibson et al. (2007) found that teachers with prior digital gaming experience were more likely to understand how games can support learning, and more willing to at least try to use them to connect with their students. As shown in a

study by Stieler-Hunt and Jones (2015), the subjective nature of positive gaming experiences affects teacher recognition of the educational value of digital games. Accordingly, teacher involvement in the conceptual design process for courses involving digital games supports a better understanding of their educational potential, as well as fewer concerns and reduced skepticism resulting from a lack of experience (An & Cao, 2017). An (2018) notes that gaming experience and relevant training can increase both teacher comfort with games and their understanding of how games support skill development. Combined, these studies indicate that teacher attitudes toward digital games are influenced by their personal gaming experience and understanding of potential benefits, which in turn influences how they approach game-related issues in their classrooms.

Another factor affecting classroom usage is social categorization, a process in which individuals classify themselves and others in different groups based on similarities and dissimilarities in social factors such as gender, race, age, social status, and occupation (Krueger, 2001), with classification decisions shaping downstream evaluations, behaviors, and attitudes (Stolier & Freeman, 2016). Some researchers are studying the ways that social categorization influences human perception and action (Sternberg & Ben-Zeev, 2001). Liu et al. (2022) found that teacher gamer identity influences perceived game benefits and self-efficacy, resulting in more positive teacher attitudes and beliefs, which significantly influences intentions to integrate games into classroom instruction. Tajfel et al. (1971) describe a tendency among individuals to act according to their identity categories, with behaviors clearly directed toward supporting their ingroup rather than outgroup members. Tajfel (1972) later described how social identity refers to the emotional and value-based meanings of groups. In specific social interactions, any decision to identify oneself as a member of a particular group affects an individual's relationships with others, especially in terms of time, energy, and other internal and external resource investments. Thus, social categories serve as information for judging individuals and for generating (un)favorable descriptions of them, one result of the positive self-images that most individuals possess and consequently project on others perceived as having similar traits (Krueger & Clement, 1994). Since social categories help individuals determine shared goals and interests for further collaboration (McGarty et al., 2015), it stands that teachers who perceive themselves as gamers are likely to hold more positive attitudes toward games and to support student participation in appropriate gaming activities.

The "gamer" social category contains unwritten rules regarding appropriate behaviors that reflect social values and status ranking. Shaw (2012) notes that individuals cannot be categorized as gamers just because they have gaming experience. There are many examples of players who reject a gamer identity due to negative game culture associations involving discriminatory attitudes toward women, people of color, the elderly, and LGBTQ individuals (Soderman, 2017). Some online gaming platforms have become breeding

grounds for extremist ideologies associated with specific gaming cultures, dark triad personality traits, sexism, racism, and aggressive behaviors (Kowert et al., 2022). According to Kuss et al. (2022), some female gamers are reluctant to identify themselves as such due to perceptions of self-images associated with potentially harmful aspects of gaming. As Shaw (2012) notes, it is important to distinguish between behavior and identity, and to approach gamer identity as embedded in relationships rather than actions, even cumulative ones. This view, which is similar to a much earlier observation from Hall (1966) that identity should be defined by individuals rather than others or external conditions, serves as a strong motivation to examine the combined effects of prior gaming experience and gamer identity on instructor attitudes regarding disciplinary decisions. During our investigation we were careful to distinguish between teacher gaming experience and strength of gamer identity in order to better assess their respective impacts on disciplinary attitudes.

Method

Participants

Study participants were recruited from 2,926 elementary and 1,211 junior high school teachers working in Miaoli County, Taiwan. Stratified random sampling was used to identify 600 elementary and 252 junior high school teachers to receive questionnaires; after removing incomplete and unreturned surveys, the final participant numbers were 488 and 195, respectively. Student-teacher ratios in Miaoli County at the time of our research were 13.4 in elementary schools and 12.7 in junior high schools. This measure, which indirectly reflects the amount of attention and resources that teachers can allocate to individual students, is considered an indicator of education quality (lower ratios indicate better quality). According to statistics from the Organisation for Economic Co-operation and Development (OECD, 2018), the average student-teacher ratio in OECD countries is 15 in elementary schools and 13 in junior high schools. While the similarity between Miaoli County and OECD statistics suggest the generalizability of our results, questions arise regarding comparisons of classroom discipline and engagement practices in different geographic locations.

Instruments

Three instruments were used to for data collection:

Basic information and game experience questionnaire. This form was used to collect data on participant gender, age, teaching level (elementary or junior high), overall game-playing experience, and experience playing specific game genres. Results from a pre-test involving 30 study participants indicate that teachers had difficulty describing their

personal game-playing experience using the terms "abundant," "ordinary" or "lacking," therefore the questionnaire was revised to elicit information about the time periods and school grades during which they frequently played digital games: preschool, kindergarten, elementary (grades 1 to 6), junior high (grades 7 to 9), senior high (grades 10 to 12), college (years 1 to 4), and after graduating from university (years 1 to 5)—23 periods in all. Numbers of periods were used to create four experience categories: no, low-level, mid-level and high-level.

Gamer identity scale. This scale was designed by the researchers to measure gamer identity in terms of degree of positive attitude held toward gamer groups and/or game play. Items were initially developed by reviewing the relevant literature on identity theory and examining existing identity scales such as those created by Chen et al. (2005) and Cheek (1989). Scale dimensions include personal identity based on self-experience (reflecting intrinsic tendencies) and social identity shaped by interactions between individuals and their environments (external relationships and behavioral orientations). Personal identity scale item examples include "playing digital games is a meaningful activity," "playing digital games can support exploring one's hidden abilities," and "I can gain a sense of achievement from playing games." Examples of social identity items include "I share things related to digital games with friends or colleagues," "I am more inclined to play digital games in my leisure time compared to other activities," and "I pay attention to information related to digital games." Responses were recorded as 1, strongly disagree; 2, disagree; 3, neither agree nor disagree; 4, agree; or 5, strongly agree. Results from the above-mentioned pre-test were used to revise item wording and ensure comprehensibility. Three scholars and experts in education and information science were recruited to review the 18 items and provide feedback regarding suitability and validity. Revisions were made and three items deleted (e.g., "I would spend money to buy virtual items or game currency") based on their feedback. Corrected item-total correlations for the remaining 15 ranged from 0.221 to 0.552; 13 were identified as positive and exceeding the suggested cut-off value of 0.3, the others as positive but below the cut-off value. Cronbach's alpha for the scale was 0.819 (range 0.799-0.822), indicating high internal consistency. No significant improvement in reliability was noted following the deletion of any single item, therefore all 15 items were retained. Higher scores indicate stronger gamer identity (maximum 75 points).

Digital game discipline scale. This scale was designed to measure teacher disciplinary attitudes regarding student digital game usage in terms of playing time (3 questions), game play location (3), game genre (4), and playing partners (4). Of the 19 original items, 5 were deleted due to low reliability values. Sample items are "students are allowed to play digital games during break times at school," "students are allowed to play digital games on the school grounds," "students are allowed to play online games," and "students are allowed

to play digital games with online friends." Minor wording adjustments were made based on pre-test results. Responses were recorded as 1, strongly disagree; 2, disagree; 3, neither agree nor disagree; 4, agree; or 5, strongly agree. Corrected item-total correlations ranged from 0.570 to 0.699 for the playing time section, 0.703 to 0.794 for the location section, 0.483 to 0.747 for the game genre section, and 0.590 to 0.810 for the playing partner section. All corrected item-total correlations were positive and above the suggested cut-off value of 0.3. Cronbach's alpha values for the time, location, game genre, and playing partner items were 0.788, 0.871, 0.814 and 0.874, respectively (all reliable at >0.7). Higher scores indicate a more open-minded approach to discipline. The highest possible scores for playing time, location, game genre, and playing partner were 15, 15, 20 and 20, respectively.

Procedure

We used the then-current proportion of elementary to junior high school teachers in Miaoli County to create a random sample of 852 (20%) from the potential study population of 4,137 teachers. These individuals received basic study information plus the game experience, gamer identity, and digital game discipline instruments, and were asked to complete and return them within one month. Questionnaires were distributed in March 2009; survey collection was gradually completed from April to May of the same year. A total of 169 teachers did not return their questionnaires or answered them incompletely, resulting in a final sample size of 683 (488 elementary and 195 junior high).

Results and analysis

The results described in this section, including all descriptive statistics and one-way analysis of variance (ANOVA) and multivariate analysis of variance (MANOVA) data, were calculated using SPSS 18.0 statistical software.

Comparative analysis of game experience effect on disciplinary approach

As shown in Table 1, there were 271 male (39.7%) and 412 female (60.3%) respondents among the 488 elementary (71.4%) and 195 junior high school teachers in our sample (28.6%). Age categories were 21-30 (122, 17.9%), 31-40 (358, 52.4%), and 41 and older (203, 29.7%). Digital game playing experience was measured as the total number of time periods for which participants described themselves as frequent players. Of the 683 teachers, 183 (27.7%) reported having no gaming experience, 290 (42.5%) low-level experience (1-4 periods), 103 (15.1%) mid-level (5-8 periods), and 101 (14.8%) high-level (≥9 periods). Approximately 70% reported having digital game-playing experience, with the largest group in the low-level category (Table 2).

A single-factor one-way ANOVA was used to examine differences in disciplinary attitudes regarding playing time, location, game genre, and playing partners among

Table 1 Summary of study participant demographics (n = 683)

Demographic factor	Participant number
Gender	
Male	271 (39.7%)
Female	412 (60.3%)
School level	
Elementary	488 (71.5%)
Junior high	195 (28.5%)
Age	
21-30	122 (17.9%)
31-40	358 (52.4%)
≥41	203 (29.7%)

Table 2 Summary of study participant gaming experience (n = 683)

Experience level (number of periods)	Number of participants
None (0)	189 (27.7%)
Low (1-4)	290 (42.5%)
Mid (5-8)	103 (15.1%)
High (≥9)	101 (14.8%)

Note: The 23 time periods used for this measure were preschool, kindergarten, elementary school (grades 1 to 6, with each grade indicating one period), junior high school (grades 7 to 9), senior high school (grades 10 to 12), university (years 1 to 4), and after graduating from university (years 1 to 5).

Table 3 One-way ANOVA results for disciplinary attitude according to degree of digital gaming experience

	Gaming experience					
	None	Low	Mid	High		Post-hoc Scheffé results
	M	M	M	M	F (3, 679)	
Time	2.08	2.11	2.12	2.17	.319	
Location	2.57	2.65	2.54	2.73	.886	
Game genre	3.00	3.17	3.25	3.42	7.032***	High > Low* High > None**
Playing partner	3.02	3.23	3.39	3.54	11.881***	High > None** High > Low** Mid > None* Low > None*

***$p < .001$, **$p < .01$, *$p < .05$.

teachers with different levels of digital gaming experience. As shown in Table 3, significant differences in mean game genre scores (F (3, 679) = 7.032, $p < .001$) and mean playing partner scores (F (3, 679) = 11.881, $p < .001$) were found among teachers at different experience levels. Significant differences were not observed for disciplinary attitudes regarding playing time and location, although the most experienced teachers had the highest scores for both factors. Scheffé's post-hoc comparison test results indicate

Table 4 One-way ANOVA results for disciplinary attitude based on experience playing more/fewer game genres

Disciplinary factor	More genres group		Fewer genres group			
	M	SD	M	SD	F (1, 362)	η^2
Time	2.16	0.77	2.07	0.70	1.580	.004
Location	2.72	1.02	2.55	0.94	2.680	.007
Game genre	3.32	0.75	3.01	0.80	15.135***	.040
Playing partner	3.49	0.73	3.04	0.77	32.902***	.083

***$p < .001$, **$p < .01$, *$p < .05$.

Note: "More genres group" n = 183, "Fewer genres group" n = 181.

statistically significant differences in mean genre scores between teachers with high levels of experience and those with either no ($p < .01$) or low levels of experience ($p < .05$), but not with any other experience group. Regarding playing partners, Scheffé's post-hoc test results show that the most experienced teachers had significantly higher scores than those with no or low-level experience (both $p < .01$), that teachers with mid-level experience had significantly higher scores than teachers with no experience ($p < .05$), and that teachers with low-level experience had significantly higher scores than teachers with no experience ($p < .05$). As posited in RQ1, the largest differences in disciplinary attitudes among teachers with varying levels of gaming experience were for game genre and playing partners.

Respondents were divided into two groups based on the number of game genres they had played. The 183 teachers who had experience with the widest range accounted for 26.8% of all participants, and the 181 who played the smallest number accounted for 26.5%. As shown in Table 4, those who had played the largest number of game genres had higher scores across all four disciplinary aspects compared to teachers who had experience with the smallest numbers, suggesting more open and flexible attitudes among teachers in the first group. One-way single-factor ANOVA results indicate statistically significant differences between the two groups in terms of game genre ($F (1, 362) = 15.135$, $p < .001$) and playing partner ($F (1, 362) = 32.902$, $p < .001$), but not playing time or location.

Comparative analysis of gamer identity effect on disciplinary approach

Participants were divided into two groups based on their gamer identity scores: high (211 teachers, 30.9%, mean score > 3.05) and low (187, 27.3%, mean score < 2.53). As shown in Table 5, the disciplinary attitude data indicate that the teachers with higher identity scores also had higher scores in all four disciplinary attitude categories. Single-factor one-way ANOVA results reveal significant differences between the two groups for playing time ($F (1, 396) = 127.329$, $p < .001$), location ($F (1, 396) = 136.358$, $p < .001$), genre ($F (1, 396) = 64.179$, $p < .001$), and playing partner ($F (1, 396) = 114.362$, $p < .001$)—evidence of a gamer identity impact on teacher disciplinary attitude.

Table 5 One-way ANOVA results for disciplinary attitude according to high/low gamer identity group

Disciplinary factor	High gamer identity		Low gamer identity			
	M	SD	M	SD	F (1, 396)	η^2
Time	2.48	.75	1.69	.62	127.329***	.243
Location	3.09	.86	2.07	.88	136.358***	.256
Game genre	3.43	.69	2.83	.80	64.179***	.139
Playing partner	3.57	.68	2.79	.77	114.362***	.224

***p < .001, **p < .01, *p < .05.

Note: "High gamer identity group" n = 211, "Low gamer identity group" n = 187.

Table 6 Summary of gamer identity score results according to level of digital gaming experience

Experience level	N	Mean	SD
None	189	2.64	0.42
Low	290	2.81	0.39
Mid	103	2.91	0.42
High	101	3.01	0.46

Table 7 Between-subject effect for disciplinary attitude for teachers with different levels of gaming experience

Disciplinary factor	F	*p*-value
Time	2.519	.057
Location	3.553	.014*
Game genre	1.942	.121
Playing partner	3.183	.023*

***p < .001, **p < .01, *p < .05.

The results show that teachers with more gaming experience had higher gamer identity scores (Table 6). Single-factor one-way ANOVA data also show significant differences in gamer identity scores for teachers across all four levels of game-playing experience ($F(3, 679) = 20.245$, $p < .01$). A MANOVA procedure was used to examine differences in disciplinary attitudes according to level of gaming experience, with gamer identity serving as a control. Results indicate significant differences across gaming experience levels (Wilks' $\lambda = .939$, $F(12, 1786.17) = 3.60$, $p < .05$). Between-subject effect results are presented in Table 7. In the absence of a gamer identity control, teachers with different levels of gaming experience expressed significantly different disciplinary attitudes in terms of genre and playing partner. After controlling for gamer identity, the same teachers showed significant differences in disciplinary attitudes for location and playing partner. In response to RQ2, teachers with different levels of gamer identity expressed different ranges of disciplinary attitudes regarding game genre and playing time.

Discussion

Comparative analysis of game experience effect on disciplinary approach

The study sample was divided into four groups based on gaming experience (high-, mid-, low-level and none) for comparing four aspects of game play that might require disciplinary responses (play location, time, game genre and playing partner). For RQ1, statistical test results indicate that teachers with the most gaming experience were significantly more open-minded regarding permissible game genres than those with little or no gaming experience. For playing partners, teachers in the high/mid/low-level gaming experience groups had more open attitudes than teachers without gaming experience, and teachers in the high-level group had more open attitudes than those in the low-level group. Another finding was that teachers with the most experience playing games in different categories expressed more tolerant attitudes toward their students' game genre and playing partner decisions than those with the least experience. These results provide new support for the idea that gaming experience exerts a significant influence on how teachers perceive digital games, which in turn affects their attitudes toward game-related disciplinary actions (Voulgari et al., 2023).

Study participants with more gaming experience were found to be more open-minded in their disciplinary attitudes regarding game genre and playing partners. No significant differences were observed in terms of playing location or time. These findings agree with previously reported observations that teachers with more gaming experience are better equipped to understand differences among game genres, the collaborative nature of game play, and the requirements of good and sometimes anonymous playing partners—all important determinants of teacher attitudes and approaches to disciplining students for issues involving game play (Prestridge, 2017). In terms of time and location, no statistically significant differences were observed among teachers with different levels of gaming experience, although more experienced teachers did score higher in both areas. A possible explanation is the limited authority that teachers have regarding their students' game playing activities outside of school environments, making them reluctant to comment on game play behaviors they cannot observe. One activity that occupies a space between classroom and extracurricular environments is recess, which usually lasts from 10 to 20 minutes. Our data indicate that the majority of study participants allowed their students to play digital games during recess, which we interpret as evidence of laxity in their disciplinary attitudes.

Comparative analysis of gamer identity effect on disciplinary approach

Studies to date have mostly focused on the impacts of gaming experience rather than gamer identity, which explains our motivation to emphasize the potential effects of gamer identity

on disciplinary approaches. Regarding RQ2, our findings indicate significant differences between teachers with the highest and lowest gamer identity scores for all four disciplinary aspects—specifically, teachers with stronger gamer identities described themselves as having more open attitudes toward discipline. This finding agrees with James and Wright's (2009) observation that teachers who are also gamers tend to be more willing than non-gaming teachers to communicate with students, to use information technology in their classrooms, to establish stronger relationships with students, to explore new ideas, and to take risks in their instructional approaches. Teacher identity has significant implications for learning—Altugan (2015) is one of several researchers reporting positive correlations among factors such as identity and learning motivation, environments, and outcomes. Gamer identities among teachers are particularly important in light of James and Wright's (2009) assertion that today's educators must actively engage with technological environments to maintain learner interest in classroom activities. Capturing and keeping the attention of students has become a major determinant of successful classroom management.

Gamer identity was controlled for in order to examine both its independent effect and the effect of gaming experience. Significant influences from the latter on attitudes regarding playing location and playing partner were observed. When gamer identity was not controlled for, we noted a significant influence from gaming experience on disciplinary attitudes involving genre and playing partner. This suggests that the influence of gamer identity is primarily reflected in disciplinary actions tied to game genre and playing time, thus indicating differences between the impacts of gaming experience and gamer identity on disciplinary attitude. This finding supports Shaw's (2012) emphasis on the need for researchers to acknowledge distinctions between behavioral experience and identity (both of which influence instructional practices), especially decisions regarding appropriate student participation in classroom activities and learner-instructor interactions (Sampson, 2023).

Instead of time, location, or playing partner preferences, a positive attitude toward student play with different digital game genres may be the best indicator of a strong gamer identity among teachers, especially in light of the many studies focused on the negative impacts, real or imagined, of specific game genres. This issue is important when considering the ongoing debate about the potential effects of game genres and their content on young players. Rüth et al. (2022) observed a connection between the combination of perceived social norms/negative influences and teacher intention to use digital games in classroom activities. Many adults take defensive and normative stances against digital games without attempting to fully understand the phenomenon or comprehend the potential benefits (Bowman, 2015). As the number of younger teachers with gamer identities slowly increases, they may be more likely to divert their focuses away from game genre concerns

to other aspects of student gaming behaviors—an example of identity influencing how one perceives and interacts with others (Jenkins, 1996; Tajfel, 1972). Experienced teachers may be able to use violent games to facilitate student understanding, reflection, and classroom discussion of the consequences of violent attitudes and behaviors, thereby enhancing the critical thinking skills of learners regarding media content, and encouraging them to reflect on moral choices and personal behaviors (Jenkins, 2006).

Limitations and suggestions for additional research

Four study limitations and several possible directions for future research deserve mention. First, the results are not applicable to senior high school, vocational school, or university teachers, whose instructional objectives entail specialized knowledge, professional skills, and career training. As Lauermann (2014) has demonstrated, elementary school teachers acknowledge that in addition to being proficient in preparing high-quality lessons and designing teaching-related activities, they are also responsible for learner safety and well-being. The most dedicated elementary school teachers feel a strong sense of responsibility for affecting the lives of their students beyond the confines of school buildings. In contrast, most university instructors must split their time between teaching and research, with their responsibilities aimed at making curriculums as engaging as possible, with little time to get involved with off-campus learner issues (Helker et al., 2018). Thus, future researchers in this topic area may be interested in working with more diverse teacher populations across different school levels and types to examine factors such as teacher-student ratios and instructor and learner gender differences, with the goal of clarifying their effects on classroom expectations, socio-psychological outcomes, teacher evaluations, disciplinary actions, and interactions with students (Wang et al., 2018).

Second, our research method was based on self-reporting questionnaires, a subjective procedure that holds the potential risk of respondents overstating or understating their self-views (Runge et al., 2023; Vidergor, 2023). In the interest of descriptive accuracy, future researchers may prefer qualitative methods such as case studies or in-depth interviews to collect a body of classroom management experiences. This would support observations of specific instructional situations and their respective challenges. In previous studies, many teachers expressed complaints and frustrations associated with selecting and implementing classroom management strategies, and voiced a desire for workshops, training opportunities, pre-planning guidance, and realistic simulations for addressing complex classroom management situations (Ashraf et al., 2022; Mouw et al., 2020; Saleem et al., 2020). These complaints and requests are positive indicators of teacher interest in overcoming constraints, and in accessing resources to help them master the requisite skills for regulating the classroom use of digital games, including proper disciplinary approaches. We believe the application of diverse research methods will likely offer new perspectives,

thus enhancing our understanding of teacher disciplinary attitudes and classroom management strategies regarding digital games, as well as potential challenges for integrating them into regular teaching activities.

Third, the study focus was limited to gaming experience and gamer identity as individual-level factors. Other social factors worthy of consideration include, but are not limited to, school-level digital resources, local digitalization leadership and associated strategic objectives, and social norms and forms of workplace social support (Saikkonen & Kaarakainen, 2021). These external information sources might help investigators gain a deeper understanding of additional influences on teacher disciplinary attitudes. According to Chen et al. (2023), significant differences in the information literacy of elementary and junior high school teachers can be affected by factors such as school type, school property characteristics, and geographic region. Helsper (2019) has described how individuals observe the ways that others within their communities perceive, understand, and use information technology, meaning that researchers also need to focus on the effects of social contexts as the basis for technology engagement norms, values, and practices.

Fourth, all data used in this study were collected in 2009, and significant changes have occurred in both educational environments and digital gaming, changes that likely impact the validity and generalizability of the findings. The educational research literature contains many examinations of teacher competencies and attitudes, challenges to incorporating digital games into curriculums, and the content of training programs aimed at providing instructors with the necessary tools, methods, and confidence to properly introduce games into their classroom activities. Many of these studies were motivated by a desire to foster greater acceptance and understanding of digital games (Gros, 2007; Pivec, 2007). However, the research paradigm has progressively shifted toward examining the effectiveness of game-based learning, the integration and evaluation of diverse teaching tools, and the application of game design and development principles in mobile learning (Chang & Hwang, 2019; Ismaizam et al., 2022; Justo et al., 2022). There is significant encouragement for teachers to embrace new technologies and to add them to their pedagogical and disciplinary approaches. As educational environments evolve, we expect that teachers will increasingly recognize the instructional potential of digital games, and therefore adopt more open and flexible game-related disciplinary approaches.

Issues associated with digital game-playing disciplinary approaches in schools is equally or more important than it was 15 years ago, when instructors were just beginning to experiment with classroom usage, and when mobile games had not yet exploded in popularity. In 2009, smartphones had yet to achieve their current dominant influence in the lives of users. The most popular electronic game that year was *FarmVille*, on Facebook. Its large number of players made it one of the earliest examples of a computer-based activity becoming part of a collective cultural consciousness (Burroughs, 2014).

Disciplinary challenges were arguably much easier to deal with—mostly focused on controlling access to desktop computers. Today's mix of smartphones, diverse gaming devices and platforms, and advancements in game technology support a large number of game genres played on hand-held products, thus presenting significant challenges for teachers wanting to control learner use of digital products during instructional periods (Aslan & Shiong, 2023; McCoy, 2020). Control and monitoring tactics now include limitations and agreements on where and when devices can be used, and lesson plans aimed at teaching students how and when to use them responsibly (Dias & Victor, 2022). Accordingly, attempts to generalize findings such as those presented in this study require consideration of historical context, the successes and failures of previous disciplinary approaches, and their effects on learning, study habits, and playing time management.

There are many examples of disciplinary decisions that did not exist in the age of *FarmVille*. Today's teachers-in-training can benefit from learning about evolving gaming business models, including the distribution of downloadable content (DLC) and monetization strategies for free-to-play games, a primary revenue model for game developers (Bernevega & Gekker, 2022). Such practices raise questions about the use of exploitative and deceptive marketing techniques (Bank, 2023; Petrovskaya & Zendle, 2021) and the need for age-appropriate access restrictions for specific games (Hamilton, 2020), especially those in which player success is dependent on financial resources for making in-game purchases (Cermak, 2020; Darakjian, 2016; Xiao, 2022). This presents a new challenge for the current generation of classroom instructors: how to teach their students about the dangers of in-game spending habits. It is one example of an issue that does not require a great deal of thought or effort regarding an in-class disciplinary approach—it's fairly easy to control learner access to specific game genres. However, it is also an example of a new teacher responsibility to help learners understand the consequences of game-related actions outside the classroom. As predatory monetization tactics in free-to-play games grow more sophisticated, it becomes the responsibility of teachers to educate students on proper spending habits, safeguarding them from manipulative design patterns and compulsive spending behaviors (Goodstein, 2021). In cases where free-to-play games have clear educational benefits, instructors will need to learn how to make the best use of their budgets to help students receive those benefits while tightly managing in-class gaming behaviors.

Conclusion

This study examined the influences of gaming experience and gamer identity on the disciplinary attitudes that teachers express when dealing with digital games in their classrooms. We addressed some of the details regarding teacher roles and obstacles to successful classroom management decisions in support of game-based learning, focusing

on four aspects of game play (time, location, game genre and playing partner) that commonly require some level of disciplinary action, and using collected data to determine which aspects attracted open or conservative disciplinary attitudes from study participants. Overall, teachers with more experience playing digital games expressed greater flexibility in their disciplinary attitudes, especially in terms of game genre and playing partners. Regarding the effects of gamer identity on disciplinary attitude, our data show that study participants who described themselves as having stronger gamer identities were more open-minded about all four aspects compared to those with weaker identities, with the greatest effect noted for game genre. By emphasizing differences between identity and behavioral experience, our statistical data indicate significant variation in the effects of gamer identity and gaming experience on disciplinary attitude. This is a significant finding in light of the large number of studies examining teacher gaming experience without considering gamer identity.

As one teacher generation retires and a new one takes charge of classrooms, we will witness an increasing number of educators with extensive gaming experience and a more complete understanding of their students' game-playing habits. This factor is important because a lack of such knowledge can easily become a barrier to introducing digital games to classroom activities. Younger teachers with extensive digital gaming histories and technology exploration experience will contribute to shifting perceptions and acceptance of digital games as valid instructional tools (Marques & Pombo, 2021). Accordingly, teacher-training schools must address classroom management strategies associated with digital game play, and encourage new teachers to reflect on their personal opinions about digital games and how those opinions affect their teaching and classroom management practices (Gordillo et al., 2021). In their special positions as educators, facilitators, and agents of change (Hidayat, 2022; Spilt et al., 2011), teachers will help determine whether digital games serve as powerful instructional tools rather than distractions competing for learner attention.

Abbreviations

ANOVA: Analysis of variance; DLC: Downloadable content; FPS: First-person shooter; MANOVA: Multivariate analysis of variance; MMORPGs: Massively multiplayer online role-playing games; OECD: Organisation for Economic Co-operation and Development.

Authors' contributions

Chuen-Tsai Sun: Conceptualization, methodology, and supervision. Kuan-Ting Chou: Writing, original draft preparation, reviewing, editing, and project administration. Cheng-Shen Lu: Investigation, data curation, validation, and formal analysis.

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References

Altugan, A. S. (2015). The relationship between cultural identity and learning. *Procedia - Social and Behavioral Sciences*, *186*, 1159–1162. https://doi.org/10.1016/j.sbspro.2015.04.161

An, Y. (2018). The effects of an online professional development course on teachers' perceptions, attitudes, self-efficacy, and behavioral intentions regarding digital game-based learning. *Educational Technology Research and Development*, *66*(6), 1505–1527. https://doi.org/10.1007/s11423-018-9620-z

An, Y.-J., & Cao, L. (2017). The effects of game design experience on teachers' attitudes and perceptions regarding the use of digital games in the classroom. *TechTrends*, *61*(2), 162–170. https://doi.org/10.1007/s11528-016-0122-8

Ashraf, M., Muhammad, Y., & Bokhari, T. B. (2022). Enhancing classroom management skills through critical reflection: A qualitative study of primary teachers. *Journal of Educational Research and Social Sciences Review*, *2*(3), 105–114.

Ask, K., & Svendsen, S. H. B. (2014, October 22–24). *Sexual harassment in online games: Bug or feature?* [Paper presentation]. The 15th Annual Meeting of the Association of Internet Researchers, Daegu, Korea.

Aslan, A., & Shiong, P. K. (2023). Learning in the digital age full of hedonistic cultural values among elementary school students. *Bulletin of Pedagogical Research*, *3*(2), 94–102. https://doi.org/10.51278/bpr.v3i2.515

Aziz, N., Nordin, M. J., Abdulkadir, S. J., & Salih, M. M. M. (2021). Digital addiction: Systematic review of computer game addiction impact on adolescent physical health. *Electronics*, *10*(9), Article 996. https://doi.org/10.3390/electronics10090996

Bank, D. (2023). Problematic monetization in mobile games in the context of the human right to economic self-determination. *Computers in Human Behavior*, *149*, Article 107958. https://doi.org/10.1016/j.chb.2023.107958

Belda-Medina, J., & Calvo-Ferrer, J. R. (2022). Preservice teachers' knowledge and attitudes toward digital-game-based language learning. *Education Sciences*, *12*(3), Article 182. https://doi.org/10.3390/educsci12030182

Ben El Moudden, M. (2021). The integration of games in teaching English as a foreign language in the classroom: Moulay Ismail University as a case study. *International Journal of Language and Literary Studies*, *3*(1), 208–229. https://doi.org/10.36892/ijlls.v3i1.425

Bernevega, A., & Gekker, A. (2022). The industry of landlords: Exploring the assetization of the triple-A game. *Games and Culture*, *17*(1), 47–69. https://doi.org/10.1177/15554120211014151

Bowlby, W. D. (1955). Good discipline: Definition and 26 "tricks of the trade". *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, *29*(8), 480–482. https://doi.org/10.1080/00098655.1955.11475484

Bowman, N. D. (2015). The rise (and refinement) of moral panic. In R. Kowert & T. Quandt (Eds.), *The video game debate: Unravelling the physical, social, and psychological effects of digital games* (pp. 22–38). Routledge. https://doi.org/10.4324/9781315736495-2

Brandtner, A., Antons, S., Liebherr, M., & Brand, M. (2022). How different gaming genres can be described by required skills and motives for playing. *Cyberpsychology, Behavior, and Social Networking*, *25*(9), 613–619. https://doi.org/10.1089/cyber.2022.0019

Buchanan, R. (2015). Teacher identity and agency in an era of accountability. *Teachers and Teaching: Theory and Practice*, *21*(6), 700–719. https://doi.org/10.1080/13540602.2015.1044329

Burroughs, B. (2014). Facebook and FarmVille: A digital ritual analysis of social gaming. *Games and Culture*, *9*(3), 151–166. https://doi.org/10.1177/1555412014535663

Çakmak, V., & Aktan, E. (2018). Internet cafes, young people and game interaction: A study in the context of subculture. *MANAS Journal of Social Studies*, *7*(3), 585–600.

Cermak, D. (2020). Micro-transactions, massive headaches: International regulation of video game loot boxes. *Michigan State International Law Review*, *28*(2), 273–322. https://doi.org/10.17613/rxzb-av26

Chang, C.-Y., & Hwang, G.-J. (2019). Trends in digital game-based learning in the mobile era: A systematic review of journal publications from 2007 to 2016. *International Journal of Mobile Learning and Organisation*, *13*(1), 68–90. https://doi.org/10.1504/IJMLO.2019.096468

Cheek, J. M. (1989). Identity orientations and self-interpretation. In D. M. Buss & N. Cantor (Eds.), *Personality psychology: Recent trends and emerging directions* (pp. 275–285). Springer-Verlag. https://doi.org/10.1007/978-1-4684-0634-4_21

Chen, K.-H., Lay, K.-L., & Wu, Y.-C. (2005). The developmental differences of identity content and exploration among adolescents of different stages. *Chinese Journal of Psychology*, *47*(3), 249–268. https://doi.org/10.6129/CJP.2005.4703.04

Chen, M., Zhou, C., Man, S., & Li, Y. (2023). Investigating teachers' information literacy and its differences in individuals and schools: A large-scale evaluation in China. *Education and Information Technologies*, *28*(3), 3145–3172. https://doi.org/10.1007/s10639-022-11271-6

Chen, S., Zhang, S., Qi, G. Y., & Yang, J. (2020). Games literacy for teacher education: Towards the implementation of game-based learning. *Educational Technology & Society*, *23*(2), 77–92.

Ciris, V., Baskonus, T., Kartal, T., & Tasdemir, A. (2022). A study on digital game addictions of adolescents in the Covid-19 pandemic. *Journal of Education in Science, Environment and Health*, *8*(2), 168–186. https://doi.org/10.55549/jeseh.01113707

Darakjian, S. (2016). Online gaming and the pay-to-win problem: Legal deterrence or industry self-regulation. *Loyola of Los Angeles Entertainment Law Review*, *36*(3), 213–248.

Davies, B., & Blake, E. (2016). Evaluating existing strategies to limit video game playing time. *IEEE Computer Graphics and Applications*, *36*(2), 47–57. https://doi.org/10.1109/MCG.2016.25

de Aguilera, M., & Méndiz, A. (2003). Video games and education: (Education in the face of a "parallel school"). *Computers in Entertainment*, *1*(1), 1–10. https://doi.org/10.1145/950566.950583

Dewey, J. (1916). *Democracy and education: An introduction to the philosophy of education*. Macmillan.

Dias, L., & Victor, A. (2022). Teaching and learning with mobile devices in the 21st century digital world: Benefits and challenges. *European Journal of Multidisciplinary Studies*, *7*(1), 26–34. https://doi.org/10.26417/ejms.v5i1.p339-344

Domahidi, E., Festl, R., & Quandt, T. (2014). To dwell among gamers: Investigating the relationship between social online game use and gaming-related friendships. *Computers in Human Behavior*, *35*, 107–115. https://doi.org/10.1016/j.chb.2014.02.023

Dubé, A. K., & Dubé, N. J. (2021). Policies to guide the adoption of educational games into classrooms. *Educational Technology Research and Development*, *69*(1), 167–171. https://doi.org/10.1007/s11423-020-09835-9

Elliott, L., Golub, A., Ream, G., & Dunlap, E. (2012). Video game genre as a predictor of problem use. *Cyberpsychology, Behavior, and Social Networking*, *15*(3), 155–161. https://doi.org/10.1089/cyber.2011.0387

Fox, J., & Tang, W. Y. (2017). Women's experiences with general and sexual harassment in online video games: Rumination, organizational responsiveness, withdrawal, and coping strategies. *New Media & Society*, *19*(8), 1290–1307. https://doi.org/10.1177/1461444816635778

Gaustad, J. (1992). *School discipline* (ED350727). ERIC. https://files.eric.ed.gov/fulltext/ED350727.pdf

Gibson, D., Halverson, W., & Riedel, E. (2007). Gamer teachers. In D. Gibson, C. Aldrich & M. Prensky (Eds.), *Games and simulations in online learning: Research and development frameworks* (pp. 175–188). IGI Global. https://doi.org/10.4018/978-1-59904-304-3.ch008

Goodstein, S. A. (2021). When the cat's away: Techlash, loot boxes, and regulating "dark patterns" in the video game industry's monetization strategies. *University of Colorado Law Review*, *92*(1), 285–335.

Gordillo, A., Barra, E., López-Pernas, S., & Quemada, J. (2021). Development of teacher digital competence in the area of e-safety through educational video games. *Sustainability*, *13*(15), Article 8485. https://doi.org/10.3390/su13158485

Gregory, A., & Ripski, M. B. (2008). Adolescent trust in teachers: Implications for behavior in the high school classroom. *School Psychology Review*, *37*(3), 337–353. https://doi.org/10.1080/02796015.2008.12087881

Griffiths, M. D. (2010). Adolescent video game playing: Issues for the classroom. *Education Today*, *60*(4), 32–34.

Gros, B. (2007). Digital games in education: The design of games-based learning environments. *Journal of Research on Technology in Education*, *40*(1), 23–38. https://doi.org/10.1080/15391523.2007.10782494

Gürol, M., & Sevindik, T. (2007). Profile of internet cafe users in Turkey. *Telematics and Informatics*, *24*(1), 59–68. https://doi.org/10.1016/j.tele.2005.12.004

Hall, S. (1996). Introduction: Who needs 'identity'? In S. Hall & P. du Gay (Eds.), *Questions of cultural identity* (pp. 1–17). SAGE.

Hamilton, T. (2020). Taking a gamble: Analyzing how the regulation of loot boxes in video games may change a billion dollar industry. *University of Illinois Law Review*, *2020*(2), 727–761.

Hamlen, K. R. (2017). Exploring factors related to college student expertise in digital games and their relationships to academics. *Research on Education and Media*, *9*(1), 28–36. https://doi.org/10.1515/rem-2017-0006

Hébert, C., Jenson, J., & Terzopoulos, T. (2021). "Access to technology is the major challenge": Teacher perspectives on barriers to DGBL in K-12 classrooms. *E-Learning and Digital Media*, *18*(3), 307–324. https://doi.org/10.1177/2042753021995315

Helker, K., Wosnitza, M., Mansfield, C., & Eugster, B. (2018). "I don't have time to do any of the things I am responsible for" – University teachers' sense of responsibility for teaching. *International Journal of Teaching and Learning in Higher Education*, *30*(2), 207–222.

Helsper, E. J. (2019). Why location-based studies offer new opportunities for a better understanding of socio-digital inequalities? In *Desigualdades digitais no espaço urbano: Um estudo sobre o acesso e o uso da internet na cidade de São Paulo* (pp. 19–44). Núcleo de Informação e Coordenação do Ponto BR.

Hidayat, I. K. (2022). Teachers' and parents' viewpoints of game-based learning: An exploratory study. *KnE Social Sciences*, *7*(13), 77–84. https://doi.org/10.18502/kss.v7i13.11647

Ho, S. M., Hancock, J. T., Booth, C., & Liu, X. (2016). Computer-mediated deception: Strategies revealed by language-action cues in spontaneous communication. *Journal of Management Information Systems*, *33*(2), 393–420. https://doi.org/10.1080/07421222.2016.1205924

Hsu, C.-Y., Liang, J.-C., Chuang, T.-Y., Chai, C. S., & Tsai, C.-C. (2021). Probing in-service elementary school teachers' perceptions of TPACK for games, attitudes towards games, and actual teaching usage: A study of their structural models and teaching experiences. *Educational Studies*, *47*(6), 734–750. https://doi.org/10.1080/03055698.2020.1729099

Hu, H., & Sperling, R. A. (2022). Pre-service teachers' perceptions of adopting digital games in education: A mixed methods investigation. *Teaching and Teacher Education*, *120*, Article 103876. https://doi.org/10.1016/j.tate.2022.103876

Infanti, A., Valls-Serrano, C., Perales, J. C., Vögele, C., & Billieux, J. (2023). Gaming passion contributes to the definition and identification of problematic gaming. *Addictive Behaviors*, *147*, Article 107805. https://doi.org/10.1016/j.addbeh.2023.107805

Işıkoğlu, N., Erol, A., Atan, A., & Aytekin, S. (2023). A qualitative case study about overuse of digital play at home. *Current Psychology*, *42*(3), 1676–1686. https://doi.org/10.1007/s12144-021-01442-y

Ismaizam, N. M., Rahman, S. F. A., Ahmad, S. N. S. M., Nazri, N. I. I. M., Idris, N. A. A., Ali, N. A., Rafi, N. F. B. M., Mohamad, S. N. A., Rahim, A. A. A., Rashid, K. K. A., & Aldaba, A. M. A. (2022). An integration of game-based learning in a classroom: An overview (2016 - 2021). *International Journal of Academic Research in Progressive Education and Development*, *11*(1), 1207–1221. https://doi.org/10.6007/IJARPED/v11-i1/12347

James, C. L., & Wright, V. H. (2009). Teacher gamers vs. teacher non-gamers. In R. E. Ferdig (Ed.), *Handbook of research on effective electronic gaming in education* (pp. 295–314). IGI Global. https://doi.org/10.4018/978-1-59904-808-6.ch017

Jenkins, H. (2006). *Fans, bloggers, and gamers: Exploring participatory culture*. NYU Press.

Jenkins, R. (1996). *Social identity*. Routledge.

Jiang, Q. (2019). *Internet addiction among cyberkids in China: Risk factors and intervention strategies*. Springer. https://doi.org/10.1007/978-981-13-3792-5

Johannes, N., Vuorre, M., & Przybylski, A. K. (2021). Video game play is positively correlated with well-being. *Royal Society Open Science*, *8*(2), Article 202049. https://doi.org/10.1098/rsos.202049

Jong, M. S. Y. (2016). Teachers' concerns about adopting constructivist online game-based learning in formal curriculum teaching: The VISOLE experience. *British Journal of Educational Technology*, *47*(4), 601–617. https://doi.org/10.1111/bjet.12247

Justo, R. C., Ramos, R. F., Llandelar, S. M. R., Sanares, R. N., & Rodelas, N. C. (2022). Game-based learning for student engagement: A paradigm shift in blended learning education. *AIP Conference Proceedings*, *2502*(1), Article 050002. https://doi.org/10.1063/5.0109625

Kaimara, P., Fokides, E., Oikonomou, A., & Deliyannis, I. (2021). Potential barriers to the implementation of digital game-based learning in the classroom: Pre-service teachers' views. *Technology, Knowledge and Learning*, *26*(4), 825–844. https://doi.org/10.1007/s10758-021-09512-7

Kaimara, P., Fokides, E., Oikonomou, A., & Deliyannis, I. (2022). Pre-service teachers' views about the use of digital educational games for collaborative learning. *Education and Information Technologies*, *27*(4), 5397–5416. https://doi.org/10.1007/s10639-021-10820-9

King, D. L., Delfabbro, P. H., Perales, J. C., Deleuze, J., Király, O., Krossbakken, E., & Billieux, J. (2019). Maladaptive player-game relationships in problematic gaming and gaming disorder: A systematic review. *Clinical Psychology Review*, *73*, Article 101777. https://doi.org/10.1016/j.cpr.2019.101777

Kowert, R. (2020). Dark participation in games. *Frontiers in Psychology*, *11*, Article 598947. https://doi.org/10.3389/fpsyg.2020.598947

Kowert, R., Martel, A., & Swann, W. B. (2022). Not just a game: Identity fusion and extremism in gaming cultures. *Frontiers in Communication*, *7*, Article 1007128. https://doi.org/10.3389/fcomm.2022.1007128

Krueger, J. (2001). Social categorization, psychology of. In N. J. Smelser & P. B. Baltes (Eds.), *International encyclopedia of the social & behavioral sciences* (pp. 14219–14223). Elsevier. https://doi.org/10.1016/B0-08-043076-7/01751-4

Krueger, J., & Clement, R. W. (1994). The truly false consensus effect: An ineradicable and egocentric bias in social perception. *Journal of Personality and Social Psychology*, *67*(4), 596–610. https://doi.org/10.1037/0022-3514.67.4.596

Kuss, D. J., Kristensen, A. M., Williams, A. J., & Lopez-Fernandez, O. (2022). To be or not to be a female gamer: A qualitative exploration of female gamer identity. *International Journal of Environmental Research and Public Health*, *19*(3), Article 1169. https://doi.org/10.3390/ijerph19031169

Kuss, D. J., Louws, J., & Wiers, R. W. (2012). Online gaming addiction? Motives predict addictive play behavior in massively multiplayer online role-playing games. *Cyberpsychology, Behavior, and Social Networking*, *15*(9), 480–485. https://doi.org/10.1089/cyber.2012.0034

Lauermann, F. (2014). Teacher responsibility from the teacher's perspective. *International Journal of Educational Research*, *65*, 75–89. https://doi.org/10.1016/j.ijer.2013.09.005

Leonardou, A., Rigou, M., Panagiotarou, A., & Garofalakis, J. (2021). The case of a multiplication skills game: Teachers' viewpoint on MG's dashboard and OSLM features. *Computers*, *10*, Article 65. https://doi.org/10.3390/computers10050065

Li, F., Zhang, D., Wu, S., Zhou, R., Dong, C., & Zhang, J. (2023). Positive effects of online games on the growth of college students: A qualitative study from China. *Frontiers in Psychology*, *14*, Article 1008211. https://doi.org/10.3389/fpsyg.2023.1008211

Liao, Z., Chen, X., Huang, S., Huang, Q., Lin, S., Li, Y., Tang, Y., & Shen, H. (2023). Exploring the associated characteristics of internet gaming disorder from the perspective of various game genres. *Frontiers in Psychiatry*, *13*, Article 1103816. https://doi.org/10.3389/fpsyt.2022.1103816

Lin, C.-H., & Chen, C.-M. (2016). Developing spatial visualization and mental rotation with a digital puzzle game at primary school level. *Computers in Human Behavior*, *57*, 23–30. https://doi.org/10.1016/j.chb.2015.12.026

Liu, F., Vadivel, B., Rezvani, E., & Namaziandost, E. (2021). Using games to promote English as a foreign language learners' willingness to communicate: Potential effects and teachers' attitude in focus. *Frontiers in Psychology*, *12*, Article 762447. https://doi.org/10.3389/fpsyg.2021.762447

Liu, X., Wachira, P., Koc, S., & Pourdavood, R. (2022). An exploratory study of predictors of pre-service teachers' intention to integrate computer games in mathematics education. *International Journal of Education in Mathematics, Science and Technology*, *10*(1), 145–161. https://doi.org/10.46328/ijemst.1827

Lutfi, A., & Hidayah, R. (2021). Gamification for science learning media: Challenges of teacher and expectations of students. *International Journal of Interactive Mobile Technologies*, *15*(1), 142–154. https://doi.org/10.3991/ijim.v15i01.15175

Mandryk, R. L., Frommel, J., Armstrong, A., & Johnson, D. (2020). How passion for playing World of Warcraft predicts in-game social capital, loneliness, and wellbeing. *Frontiers in Psychology*, *11*, Article 2165. https://doi.org/10.3389/fpsyg.2020.02165

Marques, M. M., & Pombo, L. (2021). The impact of teacher training using mobile augmented reality games on their professional development. *Education Sciences*, *11*(8), Article 404. https://doi.org/10.3390/educsci11080404

Mayer, G. R. (1999). Constructive discipline for school personnel. *Education and Treatment of Children*, *22*(1), 36–54.

McCoy, B. R. (2020). Gen Z and digital distractions in the classroom: Student classroom use of digital devices for non-class related purposes. *Journal of Media Education*, *11*(2), 5–23.

McGarty, C., Mavor, K. I., & Skorich, D. P. (2015). Social categorization. In J. D. Wright (Ed.), *International encyclopedia of the social & behavioral sciences* (2nd ed., Vol. 22, pp. 186–191). Elsevier. https://doi.org/10.1016/B978-0-08-097086-8.24091-9

Melo, C., Madariaga, L., Nussbaum, M., Heller, R., Bennett, S., Tsai, C.-C., & van Braak, J. (2020). Editorial: Educational technology and addictions. *Computers & Education*, *145*, Article 103730. https://doi.org/10.1016/j.compedu.2019.103730

Melodia, F., Canale, N., & Griffiths, M. D. (2022). The role of avoidance coping and escape motives in problematic online gaming: A systematic literature review. *International Journal of Mental Health and Addiction*, *20*(2), 996–1022. https://doi.org/10.1007/s11469-020-00422-w

Miller, B. G., & Szymusiak, J. (2021). Recognizing and seizing the teachable moment. *Academic Pediatrics*, *21*(5), 767–771. https://doi.org/10.1016/j.acap.2020.08.011

Mouw, J. M., Fokkens-Bruinsma, M., & Verheij, G.-J. (2020). Using virtual reality to promote pre-service teachers' classroom management skills and teacher resilience: A qualitative evaluation. In J. Domenech, P. Merello, E. de la Poza & R. Peña-Ortiz (Eds.), *Proceedings of 6th International Conference on Higher Education Advances (HEAd'20)* (pp. 325–332). Universitat Politècnica de València. https://doi.org/10.4995/HEAd20.2020.11049

Nakayama, H., Matsuzaki, T., Mihara, S., Kitayuguchi, T., & Higuchi, S. (2020). Relationship between problematic gaming and age at the onset of habitual gaming. *Pediatrics International*, *62*(11), 1275–1281. https://doi.org/10.1111/ped.14290

Nardi, B., & Harris, J. (2010). Strangers and friends: Collaborative play in World of Warcraft. In J. Hunsinger, L. Klastrup & M. Allen (Eds.), *International handbook of internet research* (pp. 395–410). Springer. https://doi.org/10.1007/978-1-4020-9789-8_24

New Paradigm Agency. (2020). *State of play*. https://creative.npagency.com/state-of-play

OECD. (2018). *Education at a glance 2018: OECD indicators*. OECD Publishing. https://doi.org/10.1787/eag-2018-en

Oei, A. C., & Patterson, M. D. (2014). Playing a puzzle video game with changing requirements improves executive functions. *Computers in Human Behavior*, *37*, 216–228. https://doi.org/10.1016/j.chb.2014.04.046

Padilla-Walker, L. M., Coyne, S. M., & Fraser, A. M. (2012). Getting a high-speed family connection: Associations between family media use and family connection. *Family Relations*, *61*(3), 426–440. https://doi.org/10.1111/j.1741-3729.2012.00710.x

Parry, D. A., Davidson, B. I., Sewall, C. J. R., Fisher, J. T., Mieczkowski, H., & Quintana, D. S. (2021). A systematic review and meta-analysis of discrepancies between logged and self-reported digital media use. *Nature Human Behaviour*, *5*(11), 1535–1547. https://doi.org/10.1038/s41562-021-01117-5

Petrovskaya, E., & Zendle, D. (2022). Predatory monetisation? A categorisation of unfair, misleading and aggressive monetisation techniques in digital games from the player perspective. *Journal of Business Ethics*, *181*, 1065–1081. https://doi.org/10.1007/s10551-021-04970-6

Pivec, M. (2007). Editorial: Play and learn: Potentials of game-based learning. *British Journal of Educational Technology*, *38*(3), 387–393. https://doi.org/10.1111/j.1467-8535.2007.00722.x

Pozo, J.-I., Cabellos, B., & Sánchez, D. L. (2022). Do teachers believe that video games can improve learning? *Heliyon*, *8*(6), Article e09798. https://doi.org/10.1016/j.heliyon.2022.e09798

Prestridge, S. (2017). The non-gamer teacher, the quiz and pop teacher and the Kinect teacher. In C. Beavis, M. Dezuanni & J. O'Mara (Eds.), *Serious play: Literacy, learning and digital games* (pp. 87–101). Routledge. https://doi.org/10.4324/9781315537658-9

Quandt, T., & Kowert, R. (2015). No black and white in video game land! Why we need to move beyond simple explanations in the video game debate. In R. Kowert & T. Quandt (Eds.), *The video game debate: Unravelling the physical, social, and psychological effects of digital games* (pp. 176–189). Routledge. https://doi.org/10.4324/9781315736495-10

Rodríguez-Ferrer, J. M., Manzano-León, A., Fernández-Jiménez, C., Luque de la Rosa, A., Fernández-Campoy, J. M., & Aguilar-Parra, J. M. (2023). Shall we play together? Game-based learning for engagement and classroom climate in Spanish socially deprived communities. *Frontiers in Psychology*, *14*, Article 1163441. https://doi.org/10.3389/fpsyg.2023.1163441

Runge, I., Lazarides, R., Rubach, C., Richter, D., & Scheiter, K. (2023). Teacher-reported instructional quality in the context of technology-enhanced teaching: The role of teachers' digital competence-related beliefs in empowering learners. *Computers & Education*, *198*, Article 104761. https://doi.org/10.1016/j.compedu.2023.104761

Rüth, M., Birke, A., & Kaspar, K. (2022). Teaching with digital games: How intentions to adopt digital game-based learning are related to personal characteristics of pre-service teachers. *British Journal of Educational Technology*, *53*(5), 1412–1429. https://doi.org/10.1111/bjet.13201

Saikkonen, L., & Kaarakainen, M.-T. (2021). Multivariate analysis of teachers' digital information skills - The importance of available resources. *Computers & Education*, *168*, Article 104206. https://doi.org/10.1016/j.compedu.2021.104206

Saleem, A., Muhammad, Y., & Masood, S. (2020). Classroom management challenges and administrative support in elementary schools: Experiences of novice public-school teachers. *UMT Education Review*, *3*(2), 29–46. https://doi.org/10.32350/uer.32.02

Sampson, G. (2023). Language teachers' cultural identity and its impact on their practice. *International Journal of Social Science and Human Research*, *6*(3), 1611–1613. https://doi.org/10.47191/ijsshr/v6-i3-34

Sardone, N. B., & Devlin-Scherer, R. (2010). Teacher candidate responses to digital games: 21st-century skills development. *Journal of Research on Technology in Education*, *42*(4), 409–425. https://doi.org/10.1080/15391523.2010.10782558

Savvani, S. (2023). Language teacher emotions in game-informed teaching [Doctoral dissertation, University of Essex]. University of Essex Research Repository. https://repository.essex.ac.uk/35443

Scherer, R., Siddiq, F., & Tondeur, J. (2020). All the same or different? Revisiting measures of teachers' technology acceptance. *Computers & Education*, *143*, Article 103656. https://doi.org/10.1016/j.compedu.2019.103656

Severo, R. B., Soares, J. M., Affonso, J. P., Giusti, D. A., de Souza Junior, A. A., de Figueiredo, V. L., Pinheiro, K. A., & Pontes, H. M. (2020). Prevalence and risk factors for internet gaming disorder. *Brazilian Journal of Psychiatry*, *42*(5), 532–535. https://doi.org/10.1590/1516-4446-2019-0760

Shaw, A. (2012). Do you identify as a gamer? Gender, race, sexuality, and gamer identity. *New Media & Society*, *14*(1), 28–44. https://doi.org/10.1177/1461444811410394

Soderman, B. (2017). No time to dream: Killing time, casual games, and gender. In J. Malkowski & T. M. Russworm (Eds.), *Gaming representation: Race, gender, and sexuality in video games* (pp. 38–56). Indiana University Press.

Soyoof, A., & McLay, K. F. (2019). The impact of video game intervention on reducing stress and enhancing language achievement and communication skills. *International Journal of Pedagogies and Learning*, *14*(1), 45–58.

Spilt, J. L., Koomen, H. M. Y., & Thijs, J. T. (2011). Teacher wellbeing: The importance of teacher–student relationships. *Educational Psychology Review*, *23*(4), 457–477. https://doi.org/10.1007/s10648-011-9170-y

Sternberg, R. J., & Ben-Zeev, T. (2001). *Complex cognition: The psychology of human thought*. Oxford University Press.

Stieler-Hunt, C., & Jones, C. M. (2015). Educators who believe: Understanding the enthusiasm of teachers who use digital games in the classroom. *Research in Learning Technology*, *23*, Article 26155. https://doi.org/10.3402/rlt.v23.26155

Stolier, R. M., & Freeman, J. B. (2016). The neuroscience of social vision. In J. R. Absher & J. Cloutier (Eds.), *Neuroimaging personality, social cognition, and character* (pp. 139–157). Academic Press. https://doi.org/10.1016/B978-0-12-800935-2.00007-5

Taipei Computer Association. (2015). *Analysis of children's habit of using digital games*. https://eb1.hcc.edu.tw/edu/pub/downfiles.php?recid=63116&fid=3

Tajfel, H. (1972). La catégorisation sociale. In S. Moscovici (Ed.), *Introduction à la psychologie sociale* (Vol. 1, pp. 272–302). Larousse.

Tajfel, H., Billig, M. G., Bundy, R. P., & Flament, C. (1971). Social categorization and intergroup behaviour. *European Journal of Social Psychology*, *1*(2), 149–178. https://doi.org/10.1002/ejsp.2420010202

Tejeiro Salguero, R. A., & Morán, R. M. B. (2002). Measuring problem video game playing in adolescents. *Addiction*, *97*(12), 1601–1606. https://doi.org/10.1046/j.1360-0443.2002.00218.x

Thompson, G. (1976). Discipline and the high school teacher. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, *49*(9), 408–413. https://doi.org/10.1080/00098655.1976.10118379

Toh, W., & Lim, F. V. (2021). Using video games for learning: Developing a metalanguage for digital play. *Games and Culture*, *16*(5), 583–610. https://doi.org/10.1177/1555412020921339

Turkle, S. (1998). Identity in the age of internet: Living in the MUD. In R. Holeton (Ed.), *Composing cyberspace: Identity, community, and knowledge in the electronic age* (pp. 5–11). McGraw-Hill.

Vidergor, H. E. (2023). The effect of teachers' self-innovativeness on accountability, distance learning self-efficacy, and teaching practices. *Computers & Education*, *199*, Article 104777. https://doi.org/10.1016/j.compedu.2023.104777

Voulgari, I., Lavidas, K., & Komis, V. (2023). Digital games as learning tools: Mapping the perspectives and experience of student teachers in Greek universities. In T. Bratitsis (Ed.), *Research on e-learning and ICT in education: Technological, pedagogical, and instructional perspectives* (pp. 21–38). Springer. https://doi.org/10.1007/978-3-031-34291-2_2

Wallace, J., Scanlon, D., & Calderón, A. (2023). Digital technology and teacher digital competency in physical education: A holistic view of teacher and student perspectives. *Curriculum Studies in Health and Physical Education*, *14*(3), 271–287. https://doi.org/10.1080/25742981.2022.2106881

Wang, S., Rubie-Davies, C. M., & Meissel, K. (2018). A systematic review of the teacher expectation literature over the past 30 years. *Educational Research and Evaluation*, *24*(3–5), 124–179. https://doi.org/10.1080/13803611.2018.1548798

Williamson, B. (2009, March 1). *Computer games, schools, and young people: A report for educators on using games for learning*. National Foundation for Educational Research. https://www.nfer.ac.uk/publications/computer-games-schools-and-young-people-a-report-for-educators-on-using-games-for-learning

Wu, C.-S., & Cheng, F.-F. (2007). Internet café addiction of Taiwanese adolescents. *CyberPsychology & Behavior*, *10*(2), 220–225. https://doi.org/10.1089/cpb.2006.9965

Xiao, L. Y. (2022). Drafting video game loot box regulation for dummies: A Chinese lesson. *Information & Communications Technology Law*, *31*(3), 343–381. https://doi.org/10.1080/13600834.2022.2088062

Yang, S. (2006). An informal discussion on internet matters: Moral construction for children and young people. *Chinese Education & Society*, *39*(1), 65–83. https://doi.org/10.2753/CED1061-1932390106

Yeo, S., Rutherford, T., & Campbell, T. (2022). Understanding elementary mathematics teachers' intention to use a digital game through the technology acceptance model. *Education and Information Technologies*, *27*(8), 11515–11536. https://doi.org/10.1007/s10639-022-11073-w

York, J., Poole, F. J., & deHaan, J. W. (2021). Playing a new game—An argument for a teacher-focused field around games and play in language education. *Foreign Language Annals*, *54*(4), 1164–1188. https://doi.org/10.1111/flan.12585

Zhu, S., Zhuang, Y., Lee, P., Li, J. C.-M., & Wong, P. W. C. (2021). Leisure and problem gaming behaviors among children and adolescents during school closures caused by COVID-19 in Hong Kong: Quantitative cross-sectional survey study. *JMIR Serious Games*, *9*(2), Article e26808. https://doi.org/10.2196/26808

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