

# Repurposing Video Games as Discussion Tools

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## ABSTRACT

Numerous video games marketed entirely for entertainment purposes, also known as commercial, off-the-shelf (COTS) titles, can serve as an effective tool for teaching students complicated skills such as executive functioning, hypothesis testing, and critical analysis. In this phenomenological case study, I outline a pedagogical approach that harnesses the trinity of content knowledge, discursive prowess, and video game aptitude by capitalizing on pupils' preference for digital integration. Video game titles were selected according to their scores on Rice's (2007) "Video Game Higher-Order Thinking Evaluation Rubric" and "Video Game Cognitive Viability Scale," with lessons tied to Florida's Next Generation Sunshine State Standards for social studies. The implication of this study is that COTS titles offer an alternative curricular entry point, which can elicit higher-order discussions when paired with pointed, teacher-led inquiry. This methodology, if properly harnessed, could transmit subject matter more effectively and create critically reflective, game-based learning cohorts.

## KEYWORDS

Social Studies Education, Curriculum and Instruction, Digital Game-Based Learning, Social Constructivism, Instructional Technology, Open World Video Games

## INTRODUCTION

Prior to the 21st century, discussions surrounding digital gaming were frequently sensationalized by media outlets as behavior associated with addiction, sexism, violence, isolation, obsession, and mindlessness (Squire, 2004). As a result, the educational research community has primarily elected to disassociate itself from the controversial practice, ignoring the conspicuous connections between the long tradition of paper-based games and simulations utilized in social studies classrooms (Fisher, 2010). In recent years, however, many of these stigmatizing myths have been debunked, with longitudinal studies like Kühn et al.'s (2019) providing strong evidence that no linkage exists between gaming and aggressive tendencies. Moreover, numerous video games marketed entirely for entertainment purposes, also known as commercial, off-the-shelf (COTS) titles, can act as an effective tool for teaching students complicated skills such as executive functioning, hypothesis testing, and critical analysis within the confines of a relaxed virtual venue (Gee, 2005). COTS games, while brimming with technological affordances, have yet to be earnestly studied in classroom contexts. This investigation proposes an alternative method for teachers and students to meaningfully explore critical social studies themes by using open world simulation games that feature well-researched, three-dimensional environments.

According to the most current National Assessment of Educational Progress (2022), better known as "The Nation's Report Card," only 13%, 25%, and 20% of eighth graders performed at or

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above the proficient level in U.S. history, geography, and civics, respectively. This score represents no significant change from the previous exam (2018), which begs the following question: How can social studies educators provide inventive opportunities for pupils to interact with state-mandated content and reverse this trend of academic stagnation?

By incorporating virtual, interactive media in the classroom, otherwise known as game-based education, teachers can create an interdisciplinary nexus between social studies content and the cultural correlations present within these titles. Gaming simulations have a history of being employed in American school settings as a learning model to frame discussion around authentic tasks and new literacies (Metzger & Paxton, 2016). These activities are virtually revitalized in the form of semi-historical games, which draw upon historical concepts but are not bound to specific times or places (Wright-Maley, 2015). While the emphasis on utilizing mock-ups of reality for academic gains has led to an assortment of digital game-based learning (DGBL) research, most educators have neglected the expansive social contexts of classroom communities, choosing to myopically examine individual student's interactions with COTS (Carretero et al., 2022).

The Entertainment Software Association (2023) reported that 65% of American households own a video game console, which amounts to 212 million individuals gaming for at least an hour a week. 75% of this demographic play regularly, understood as four or more hours per week, with puzzle titles being the most popular genre. Gilbert (2019) surveyed a diverse cross-section of U.S. teenagers and found that 97% reported being regular consumers of video games, with nearly 50% responding affirmatively to playing a video game in the past 24 hours. Additionally, female gamers now comprise 46% of the American market share, further discrediting the stereotype that this is a destructive, male hobby (Entertainment Software Association, 2023). Educators should harness this enthusiasm for digital entertainment by connecting it to pivotal classroom content that corresponds with the themes espoused by the National Council for the Social Studies (NCSS) and their C3 Framework, designed to prepare learners for college, careers, and civic life (2013a). Pupils should be encouraged through active, reflective participation, ensuring their observations are logged, analyzed, and discussed to stage teachable moments that explicitly connect the game to course instruction, seamlessly integrating the entirety of the learning experience (McCall, 2016).

Barab et al. (2009) declare that video games require students to engage in problem solving, ask insightful questions, adapt to new environments, and reflect on how their decisions affect their goals. The objective of game-based learning is to motivate people to change their behavior, develop skills, or drive innovation, thus allowing the educational institution to achieve its objectives (Burke, 2014). In his dissertation using the turn-based strategy title *Civilization III* (Firaxis Games, 2001) to teach high school world history, Squire (2004) determined that after engaging in discussion tailored around the learning goals of gameplay, student responses promoted greater understanding of social studies concepts, such as reading a map and recognizing the consequences of warfare.

While enthusiasm for the prospect of incorporating DGBL into classrooms does exist, Maguth et al. (2015) discovered that most literature on this topic is opinion-based, and the limited classroom duration demonstrates low retention rates, as the data analysis skills rarely transfer to other learning situations. In addition, video games as instructional tools are hampered by the difficulty to decipher substantial findings, as interpretations of important verbiage are skewed or conflicting across research paradigms (Gaydos, 2015). McCall (2016) upholds that if teachers recognize that these COTS video games function as an interpretation of the past and are treated critically in the same manner as a primary or secondary source, there is great promise for their continued application for instructional methods.

## **THEORETICAL FRAMEWORK**

The philosophical model known as cultural consensus theory supposes that an external truth exists in the domain under investigation, meaning that learners share common experiences which comprise their reality (Weller, 2007). While consensus theory applies controlled questioning geared

towards objective knowledge rather than perceptions, its assumptions are still relevant to open-ended queries dealing with personal beliefs (Guest et al., 2006). Subsequently, this study drew upon the collective culture to construct an ethnography of the gaming experiences of the participants during and separate from the study.

Given that classroom activities occurring outside of the game environment (conversations, research, knowledge sharing) are as critical as the game itself, a theoretical model that accounts for both student-game exchanges and student-student exchanges was ideal for this study. The neo-Vygotskian cultural-historical activity theory (CHAT) permits researchers to investigate not only the role of the game in the simulated learning experience but also how social structures mediate classroom activity (Gilbert, 2017).

Since video games have shed much of their former media-driven reputation as the source of “what’s wrong with adolescent culture” (Fisher, 2010, p. 26) in recent years, they now appear primed to take center stage as a potentially beneficial resource for education. As Ferdig et al. (2020) advised, educators must consider unconventional approaches to reach students afflicted by the social and academic repercussions from the COVID-19 pandemic. With content area literacy declining across various student demographics (Martinez et al., 2022), teacher-led video game-based lessons function as an engaging, pragmatic resource for classrooms with limited technology access. Aligned with sociocultural theory, CHAT proposes that through a collective transition away from the psychology of the individual in isolation, we can exemplify the richness of how a person constructs themselves culturally, historically, and institutionally (Wertsch, 1991).

While Wertsch applies this broader social outlook solely to cognitive analysis, linguists such as Gee (1996) have been inspired to reinterpret literacy itself, asserting that the ability to decipher or produce printed language serves only in a perfunctory capacity. Instead of simply “assuaging the feelings of people committed to reading and writing as decontextualized and isolable skills” (Gee, 1996, p. 153), Gee makes the case for a more liberating type of fluency with the capability to expand far beyond the classroom setting. The unconscious exposure to lessons organized around “saying-doing-believing-valuing” in a meaningful environment allows for a more critical, morally just discourse.

Video games act as crucial counterparts to Gee’s ideology since they put the player in charge of their level of processing, informing them how and why they can improve their gameplay (Prensky, 2001a). Interactive software aligns with these self-regulatory mechanisms to serve as the link between learning and motivation. Since video games principally rely on an anticipatory proactive system rather than reactive negative feedback, they provide an untapped entry point into social cognitive frameworks such as CHAT (Wright-Maley et al., 2018). Driscoll (2005) affirms that effective instruction is contingent upon four characteristics: (1) teachers must manufacture engagement through student exploration and reflection; (2) the three-dimensional environment must provide students an opportunity to role-play; (3) teachers must shape proactive, collaborative discussions that employ multiple perspectives; and (4) the simulation must be set in a realistic, authentic context.

## Research Questions

Educational advantages abound through the harnessing of virtual environments with a collaborative user interface, potentially enhancing pupil retention and overall enjoyment of state-mandated content (Şahbaz & Özköse, 2018). Once educators are outfitted with the prerequisite mastery of teacher-led, game-based instruction, they can encourage students to utilize digital, discursive tools and share their experiences in an authentic, meaningful manner (Zielezinski, 2017). The existing familiarity and enthusiasm adolescents possess towards video games can translate to 21st century learning experiences laden with pedagogical benefits that have yet to be conceptualized. To offer some insight into this academic deficiency, the following research questions were proposed:

1. What are students’ perceptions related to social studies content as they engage with video games?

Table 1. Video game selection and learning objectives

Week	Game	Setting	Curricular Content Explored
Pilot	<i>Fallout 4</i> (Bethesda Games, 2015)	Post-apocalyptic Massachusetts, USA	Nuclear proliferation, scarcity of resources, and environmental degradation
One	<i>Assassin's Creed Origins</i> (Ubisoft, 2017)	Ptolemaic Egypt	Architecture, symbolism, and religion
Two	<i>Assassin's Creed Odyssey</i> (Ubisoft, 2018)	Classical Greece	Mythology and diplomacy/rivalries between city-states
Three	<i>Assassin's Creed 3</i> (Ubisoft, 2013)	American War for Independence	Establishing a new world order from the perspective of the other
Four	<i>Assassin's Creed Syndicate</i> (Ubisoft, 2015)	United Kingdom during the Second Industrial Revolution	Labor markets, social class, and wealth inequality
Five	<i>Red Dead Redemption 2</i> (Rockstar Games, 2018)	Late 19 <sup>th</sup> Century American West	Human-environment interaction and the technological conquest of nature
Six	<i>Battlefield 1</i> (Electronic Arts/DICE, 2016)	World War I	The futility of war and the birth of the modern era.
Seven	<i>Battlefield V</i> (Electronic Arts/DICE, 2018)	World War II	Propaganda and the “us versus them” mentality
Eight	<i>Grand Theft Auto V</i> (Rockstar Games, 2013)	Contemporary California, USA	Ecological diversity and humans coexisting with nature

2. In what ways do COTS video games provide a meaningful curricular experience within social studies?
3. How can a combination of face-to-face and digital discussions harmonize with COTS gameplay to reinforce social studies concepts?

## METHOD

### Site and Participant Selection

This study was conducted within a public charter high school setting in the state of Florida, drawing participants from an extracurricular social group known as the Video Game Club, which the author sponsored for five years. The organization of gaming enthusiasts was comprised of an ethnically diverse, coeducational cohort of 25 dedicated members aged 14-18 and fluent in English, who typically attend afterschool meetings every other week. Over the course of nine weeks, the researcher met with 14 of these students after school hours for 90 minutes once a week to play a COTS open world video game repurposed for social studies discussion. The following video game-based lessons unfolded chronologically, and students were made aware of the curricular objectives prior to delving into each week’s content:

Participation in this game-based research and the Video Game Club from which students were drawn were both voluntary activities. Pupils’ grade point averages ranged drastically, and although the group bonded over their intrinsic love of gaming, they were also motivated by a \$5 gift card for each session attended. While some club members were current or former students of the author, he did not incorporate these experimental instructional methods into his classroom teaching. Potential participants were issued a copy of the institutional review board’s informed consent documentation to notify parents/guardians of the intended research.

**Table 2. Summary of data sources and participant revelations**

Data Collection Source	Information Gathered
<i>Student Questionnaires</i>	Individualized baseline knowledge; case-by-case, in-depth understanding of each student's predilections; reflection on participants' unique preferences
<i>Small Group Student Interviews</i>	Precursor information essential for future lesson setup; additional student background data/demographics; reflection on students' insight into gaming
<i>Think-Aloud/Probing Question Discussion Formats</i>	Student retention of content knowledge/thematic social studies concepts; improved interaction between students; enhanced teamwork and technology skills
<i>Slack Backchannel</i>	Informal student dialogue; clarification of murky curricular ideas; upgraded student confidence; digital community-building
<i>Researcher's Field Notes</i>	Author's reflection; insight into data not initially present; emergent themes; progression of ideas; improved quality of future lessons
<i>Audio-Video Recordings</i>	Capture of the live lesson environment; eye-opening interactions, expressions, and reactions when questions posed; building on previous topics discussed; critical researcher reflection

As the format of the study followed a different protocol than our club meetings, the researcher set aside the week prior to the official start date for a pilot study to streamline investigative methods such as a prohibitive sample size and inefficient techniques to capture student responses (Locke et al., 2000). This trial run proved incredibly insightful to prepare mentally, pedagogically, and organizationally for the coming weeks of data collection. All participants were provided with a classroom set of Lenovo N23 Chromebooks with Wi-Fi access, enabling them to maximally participate in the discursive elements of the lessons. While efficient for data collection, these devices do not possess the graphical capability to accommodate COTS gameplay, therefore the author took command of the lone console and the respective controller. By eliminating the potential for student distraction during the gameplay session, student attention was directed at the content and accompanying dialogue.

## DATA COLLECTION

The aim for this phenomenological case study was to attain a holistic understanding of the personal, face-to-face, immediate interactions between the students and this gaming experience. Equal time was allotted to fieldwork and analysis, as the open-ended methodological design required the author to function as a research instrument, with the participants serving as co-researchers who were proportionately responsible for the organic nature of each week's discussion (Janesick, 2004).

The cognitive interviewing strategies included equal parts think-aloud and verbal probing, thereby evoking the imaginative responses of the former with the coordinated dialogue of the latter. These procedures are prototypical, as a think-aloud examination places the emphasis on the respondent, requiring the interviewer to interject minimally, besides "tell me what you are thinking" during extended pauses (Drever, 1995). In contrast, the verbal probing approach necessitates a skilled interrogator who can structure inquiries that compel the participant to paraphrase, recall information, display comprehension, and/or render a confident judgment (Chang & Welsh, 2012).

Since the objective was to capture the participants' perceptions related to social studies content through the verbal and digital dialogue in video games, semi-structured interviews were supplemented with preliminary questionnaires and field notes (Drever, 1995). These observations of specific instances support this study's findings and serve as a bridge between the experiences and the reading audience (Wolcott, 1990). Multiple data sources (see Table 2) permitted the researcher to build his arguments through triangulation (Stake, 1995). By enhancing the internal validity through evaluative criteria, the author maintained the integrity of the detail-oriented qualitative research (Anfara et al., 2002).

By designing a data collection unit plan around content standards integral to graduation requirements (i.e., the U.S. history end-of-course exam in Florida), the author attempted to cater to the interests of stakeholders while capturing curriculum acquisition through the lens of high school students. Although many school districts' views of students are skewed by the business-like principles of driving test scores as an evaluation of knowledge, educational professionals must learn how to navigate these tumultuous waters without destroying their integrity or damaging their sense of purposes (de Freitas, 2018).

Instructors should strive to incorporate a plethora of palpable frameworks to aid students in their academic maturation, highlighting creative means of engagement to ensure the process does not devolve into a regurgitation assembly line (Vogler & Virtue, 2007). While these findings may inform future research, the author acknowledges the limitation of this or any other case study to authoritatively dictate how other pupils will reflect upon, adopt, and utilize video game-based social studies content.

The selection of the games, in addition to the accompanying questions fueling the dialogic discourse, was fashioned according to Rice's (2007) "Video Game Higher-Order Thinking Evaluation Rubric" and "Video Game Cognitive Viability Scale". These metrics calculated critical game components such as the complexity of the storyline, the lifelike nature of the avatar, the presence of dialogue with non-playable characters, etc. Besides receiving a perfect or upper range score on Rice's instruments, all the titles chosen for this study were set in historically and/or geographically accurate open world environments, thereby lending themselves to social studies-themed discussion. To focus the attention of the participants on purely academic pursuits, the researcher controlled the game's avatar and surveyed predetermined map locations that coincided with the primary/secondary sources accompanying each week's lesson. This decision was further bolstered by the mature ratings of these games, whereby students could engage in unethical choices, as well as the limitation of a single console available for this study.

Each 90-minute session interspersed the primary source investigation with COTS content, which built in a certain degree of student autonomy in terms of what we explored within the digital realm. To maintain a tight thematic narrative throughout the lessons, the virtual environment we journeyed to was aligned with a weekly curricular objective, thus limiting our travel options. A strong sense of technological, pedagogical content knowledge (TPACK) was required during the collaborative process, since student interests were always balanced against a ticking clock (Koehler & Mishra, 2009).

The equipment required to undertake this DGBL methodology involves ample preparation. The author provided the Microsoft Xbox One console along with the software titles, and audio-visual proceedings of all sessions were documented with a digital recorder and GoPro HERO5 camera. The first, middle, and last week of the case study contained a thirty to sixty-minute preliminary, midpoint, and exit semi-structured group interview, in which the participants were asked the discussion starters located in Appendix A.

After the initial interview responses were documented, the weekly meetings commenced. Participants collaborated in small groups on a higher order thinking task tailored to a primary/secondary source that exemplified the setting of the video game, as well as the overall theme of the lesson. For example, *Assassin's Creed Syndicate* (see Figure 1) serves as a token example for adoption, as it is an open world and a multi-platform title which is available for classroom integration. Set in Victorian-era London, it explores standards-based U.S. history content designated by Florida's Department of Education as *SS.912.A.3.2*: examine the social, political, and economic causes, course, and consequences of the Second Industrial Revolution. Additionally, the title attained a perfect score on Rice's (2007) video game assessment tools.

Since the late 19<sup>th</sup> century afforded humanity numerous modern media advancements, this lesson featured early photographic and cinematic records. This documentation of reality made it possible to stage a comparison of the print-based, archival imagery with the virtual secondary source. During the student-centered discussion, a participant explained that such digital environments "allow you to experience aspects of society that are not available today, for better or for worse."

Figure 1. Assassin's Creed Syndicate (Screenshot by author)



The open-ended, constructivist theoretical framework undergirding this study created various instances where the author had to assist or derail thought-provoking but off-topic discourse. The immediacy of each participant's comment was interpreted based on its correlation to the lesson's objectives, with each tied to at least two Next Generation Sunshine State Standards for high school social studies (Florida Department of Education, 2014; see Table 3).

Besides the spoken variety, text-based conversation was facilitated through the digital presentation tool *Nearpod* (Renaissance Learning, 2012), directing participants to consider various perspectives brought to life through the digital landscape. To continue with the *Syndicate* example, after the avatar was directed to one of the many factories employing child laborers, *Nearpod* posed a question to the participants pertaining to the ethical treatment of minors and recorded their textual responses: In what ways does *Syndicate's* depiction of 19th century child labor mirror the conditions described in narratives and documented by daguerreotypes/satirical illustrations? *Nearpod* built in ample opportunities during the lesson for participants to compare/contrast social studies themes illustrated through the video game with primary/secondary sources.

To supplement the 90-minute sessions, data was amassed through two platforms that highlight student voice: *Slack* and *Poll Everywhere*. *Slack* (Slack Technologies, 2013) served as an informal chat platform for students to virtually bond, while *Poll Everywhere's* (Poll Everywhere, 2007) unlimited characters permitted detailed responses to survey questions and thorough primary source analysis. To maintain a constructive climate, the researcher and participants organically determined the route traversed within the virtual terrain and the resulting direction of the live/text-based discussion. For example, within the artificial biosphere of *Syndicate*, the gaming cohort decided whether to examine the estates of the affluent or spectate at a bare-knuckle boxing event; regardless of their partiality, the conversation was steered towards inquiry around the cultural fabric that stitched these diverse Victorian settings together: How is wealth inequality explained? Can the private sector be trusted to serve the public interest? What are business leaders' social responsibilities, if any?

Dialogue templates were provided as needed to guide students' responses toward more disciplined, higher order topics. To highlight the overarching objective of analytical discourse, students were offered sentence starters such as "considering the evidence, it can be concluded that..." and "this quote indicates..." to strengthen their contributions. Lessons were also developed in a hierarchical manner that begins at the base of Bloom's (1956) foundational taxonomic pyramid and advanced to the more rigorous demands at the peak. For instance, during week two of the study, discussions evolved from the primary source identification of a single Egyptian hieroglyph to a symbolic evaluation of the virtual Karnak Temple Complex, with *Assassin's Creed Origins* serving as a secondary source interspersed throughout the lesson. During these analytical exercises, participants responded orally and textually via *Nearpod* to the following questions: Why is the layout of a temple complex so important? Could ancient Egyptian architects be creative with their designs? How so? One student

**Table 3. Description of games used in case study in relation to Florida's Next Generation Sunshine State High School social studies standards**

<i>Fallout IV</i>	<ul style="list-style-type: none"> <li>• SS.912.A.6.11 - Examine the controversy surrounding the proliferation of nuclear technology in the United States and the world.</li> <li>• SS.912.A.5.5 - Describe efforts by the United States and other world powers to avoid future wars.</li> <li>• SS.912.W.8.2 - Describe characteristics of the early Cold War.</li> <li>• SS.912.A.6.6 - Analyze the use of atomic weapons during World War II and the aftermath of the bombings.</li> </ul>
<i>Assassin's Creed Origins</i>	<ul style="list-style-type: none"> <li>• SS.912.H.2.3 - Apply various types of critical analysis (contextual, formal, and intuitive criticism) to works in the arts, including the types and use of symbolism within art forms and their philosophical implications.</li> <li>• SS.912.H.2.1 - Identify specific characteristics of works within various art forms (architecture, dance, film, literature, music, theatre, and visual arts).</li> </ul>
<i>Assassin's Creed Odyssey</i>	<ul style="list-style-type: none"> <li>• SS.912.H.3.1 - Analyze the effects of transportation, trade, communication, science, and technology on the preservation and diffusion of culture.</li> <li>• SS.912.E.3.3 - Discuss the effect of barriers to trade and why nations sometimes erect barriers to trade or establish free trade zones.</li> </ul>
<i>Assassin's Creed 3</i>	<ul style="list-style-type: none"> <li>• SS.912.A.5.10 - Analyze support for and resistance to civil rights for women, African Americans, Native Americans, and other minorities.</li> <li>• SS.912.W.5.5 - Analyze the extent to which the Enlightenment impacted the American and French Revolutions.</li> <li>• SS.912.C.1.1 - Evaluate, take, and defend positions on the founding ideals and principles in American Constitutional government.</li> <li>• SS.912.A.1.7 - Describe various socio-cultural aspects of American life including arts, artifacts, literature, education, and publications.</li> </ul>
<i>Assassin's Creed Syndicate</i>	<ul style="list-style-type: none"> <li>• SS.912.W.6.1 - Describe the agricultural and technological innovations that led to industrialization in Great Britain and its subsequent spread to continental Europe, the United States, and Japan.</li> <li>• SS.912.A.3.2 - Examine the social, political, and economic causes, course, and consequences of the second Industrial Revolution that began in the late 19th century.</li> </ul>
<i>Red Dead Redemption 2</i>	<ul style="list-style-type: none"> <li>• SS.912.A.3.6 - Analyze changes that occurred as the United States shifted from agrarian to an industrial society.</li> <li>• SS.912.A.3.4 - Determine how the development of steel, oil, transportation, communication, and business practices affected the United States economy.</li> </ul>
<i>Battlefield 1</i>	<ul style="list-style-type: none"> <li>• SS.912.W.7.2 - Describe the changing nature of warfare during World War I.</li> <li>• SS.912.W.7.3 - Summarize significant effects of World War I.</li> </ul>
<i>Battlefield V</i>	<ul style="list-style-type: none"> <li>• SS.912.W.7.11 - Describe the effects of World War II.</li> <li>• SS.912.A.6.4 - Examine efforts to expand or contract rights for various populations during World War II.</li> </ul>
<i>Grand Theft Auto V</i>	<ul style="list-style-type: none"> <li>• SS.912.G.5.4 - Analyze case studies of how humans impact the diversity and productivity of ecosystems.</li> <li>• SS.912.G.5.2 - Analyze case studies of how changes in the physical environment of a place can increase or diminish its capacity to support human activity.</li> </ul>

Table made by author.

responded that these cultural sites “tell detailed stories of the past through the use of vibrant colors and unique shapes” while another surmised that “there was no room for creativity since the buildings were an extension of their religion.”

*Red Dead Redemption 2*'s attention to detail also functioned as a fantastic example of how a virtual medium can breathe new life into curricular content. The video game's narrative stretches throughout the latter portion of the 19<sup>th</sup> century, documenting how the American West and its inhabitants were altered in the name of progress. Equipped with a massive map and a graphical engine that features a certain degree of randomization, this COTS title provides a superlative staging area to the birth of the modern era. During week six's gameplay session, the author directed the avatar inside a magic lantern exhibition without any confirmation as to what would appear on the screen. The in-game moving



picture show, entitled “One of the Wonders of the Age”, synced up perfectly with our discussion around the plethora of household innovations that emerged because of widespread industrialization. Participants exclaimed that this novelty factor is frequently at the nucleus of the intrinsic replay value built into COTS titles like the *Red Dead* and *Grand Theft Auto* franchises.

All weekly meetings closed with a semi-structured, hybrid (digital and face-to-face) conversation detailing what and how the participants learned, coupled with the revelation of the upcoming game and theme to build excitement. After the nine weeks of classroom conversations concluded and were transcribed, textual trends were inspected via *Dedoose* (SocioCultural Research Associates, 2013), a web-based qualitative coding application designed for discourse analysis.

## RESULTS

With the aid of an assistant, the author transcribed 16 hours of audio captured on a digital recorder and GoPro HERO5 camera, interjecting the video footage as needed to clarify any uncertainties. Once the dialogic session was recorded, the participants’ textual and image-based replies captured via *Poll Everywhere*, *Nearpod*, and *Slack* were chronologically catalogued. The final step of this data preparation stage involved scanning pupils’ paper-based answers, as many lessons were scaffolded with papers serving as graphic organizers or extension activities. The multiple data formats were then uploaded to *Dedoose*, where they were tagged according to source (e.g., *Poll Everywhere* preliminary survey, *Nearpod* text, field notes, etc.) and corresponding video game title.

While pursuing patterns within the social studies-themed discussions, the researcher turned to Saldaña’s (2009) six suggestions for discerning thematic trends: similarity (occurrences happen the same way), difference (they happen in predictably different ways), frequency (they happen often or rarely), sequence (they happen in a particular order), correspondence (they happen in relation to other events), and causation (one appears to cause another). These indicators supplied the foundation in which to ground the investigation, resulting in the collection of qualitative codes and respective definitions present in Table 4. For instance, participants would frequently relate their memories of a video game’s narrative with the content explored in the lesson. As a respondent examined primary source photographs of Indian Residential Schools, he recalled how a Native American character from *Red Dead Redemption 2* struggled to justify peace in exchange for the surrender of his people’s cultural identity. By coupling the close reading of text and imagery with the gameplay, students detected the heart-wrenching emotion present in the First Peoples’ transition from peaceful living to the prescribed care of early settlers.

The resulting codes were compiled according to Creswell’s (2005) classification for dividing data into the following themes: ordinary (elements of the study the researcher anticipated), unexpected (surprises not predicted to surface during the study), hard-to-classify (containing ideas that overlap with several themes), major/minor (representing the significant and secondary themes in a database), and interconnecting (linking the themes according to a sequence of events). Although much of what was predicted to occur in this study did unfold, nuanced qualities of each week emerged organically and unpredictably, often leading to concepts that were challenging to classify.

With 85 uniquely coded documents and transcribed recordings at the author’s disposal, the data easily reached its saturation point according to Ryan and Bernard’s (2004) guidelines: the quantity and complexity of data, investigator experience and exhaustion, and the number of analysts evaluating the data. The findings from these thematic occurrences, which will be outlined in the subsequent section, were in collaboration with a colleague with a background in DGBL, thereby enhancing the interrater reliability (Shapiro et al, 1995). Additionally, participants were counted individually for the occurrence of a specific qualitative code (Hannah & Lautsch, 2010). To illustrate this point, when a student correctly labeled all the elements of a primary source image (see Figure 2), this display was catalogued as “social studies content knowledge” separately from the pupils who only received partial credit.

Figure 2. Exemplar of primary source image analysis (Made by author)

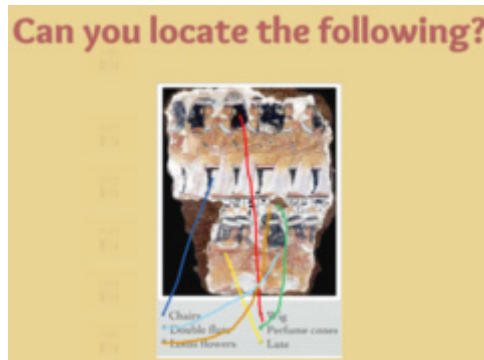
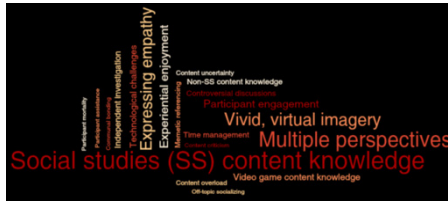


Table 4. Definitions of qualitative codes

Qualitative Codes	Description
<i>Communal Bonding</i>	Participants displayed a social connection by means of the study design
<i>Content Criticism</i>	Participants/investigator critiqued the primary/secondary source selection
<i>Content Overload</i>	The participants found the primary sources too wordy or lengthy and had trouble with the analysis process
<i>Content Uncertainty</i>	Participants expressed a lack of clarity regarding one of the primary sources
<i>Controversial Discussions</i>	The participants did not see eye-to-eye on certain issues and expressed their views in a heated but respectful manner
<i>Experiential Enjoyment</i>	The participants communicated an overall positive experience based on the week's lesson.
<i>Expressing Empathy</i>	The participants placed themselves in the perspective of a historical actor
<i>Independent Investigation</i>	Participants proposed questions or contributed comments that were unique and separate from the objective of the lesson
<i>Memetic Referencing</i>	The participants displayed some connection to meme culture
<i>Multiple Perspectives</i>	Participants responded to a portion of the lesson with an internal struggle while determining their position
<i>Non-Social Studies Content Knowledge</i>	The participants related the social studies (SS) content to background knowledge they had acquired outside of SS classes and not through video games.
<i>Off-Topic Socializing</i>	Students employed various platforms to discuss topics unrelated to the lesson
<i>Participant Assistance</i>	Participants provided aid to one another in the form of dispensing content knowledge
<i>Participant Engagement</i>	An allusion to the participants focusing their attention fully on the task at hand
<i>Participant Mortality</i>	Some mention of a participant(s) not being present for one or multiple data collection sessions
<i>Social Studies Content Knowledge</i>	The participants related the SS content being explored to background knowledge they had acquired.
<i>Technological Challenges</i>	An example of the technological plans not coming to fruition, requiring an on-the-spot fix
<i>Time Management</i>	Aspects of the lesson were either cut short or never mentioned due to time constraints
<i>Video Game Content Knowledge</i>	The participants linked the gameplay to previous video game knowledge they had acquired before the lesson
<i>Vivid, Virtual Imagery</i>	The 3-D environment allowed the participants to make better sense of SS content

Figure 3. Word cloud of qualitative codes (Created in Dedoose by author)



The *Dedoose* software proved pivotal for data analysis procedure, enabling the compilation of a complete list of qualitative code appearances, represented as a word cloud in Figure 3. While visually appealing, the program’s capability to compute the highest code co-occurrences was its most valuable feature. *Dedoose* calculated 23 occasions in which vivid, virtual imagery appeared with experiential enjoyment, indicating a distinct relationship between video game environments and educational stimulation. Equally significant, there were 22 cases of multiple perspectives pairing with expressing empathy and the same number of instances for social studies content knowledge correlating with multiple perspectives. These connections reflect the study’s strength as a tool to impart more inclusive and expressive curricula grounded in primary sources. By exposing pupils to conflicting voices, they are challenged to expose the complexity of the past.

## DISCUSSION

While these findings are not meant to be generalizable, there may be some emergent, universal themes that transcend student demographics. First, the most frequently appearing code excerpt, “social studies content knowledge,” demonstrates that the mature rated video games selected redefine the titles’ association with sensationalized violence and obscene language. Video game franchises like *Assassin’s Creed* or *Grand Theft Auto* brandished their connection to complex, interdisciplinary subject matter and provide promise as interpretative classroom tools (Darvasi, 2022). All titles were tied to Florida’s social studies standards (2014), ethically presented, and evocatively connected to historical events. COTS titles like *Red Dead Redemption 2* present educators with the invaluable opportunity to traverse massive, open world environments that recreate historical and contemporary settings.

Although producing pupils more adept in content mastery was never the objective, these findings validate that the participants responded enthusiastically and adeptly throughout the social studies-themed lessons. To demonstrate this unintended upshot, during the fourth week’s lesson concentrated around *Assassin’s Creed Syndicate*, a participant described the illusion of industrial progress as “frosting” and the glimpse into the factory working conditions as the “inside of the cake.” The student explained that while “it looks good on the outside, once you take a bite you realize it is rather bitter and a product of cruelty.” As the avatar traversed through the polluted climate, interacting with adolescent laborers along the way, it became clear that such impassioned student dialogue was at least partially the product of the digital 19th-century manufacturing plant excursion.

The next three most commonly occurring codes (multiple perspectives; vivid, virtual imagery; expressing empathy) underscore the methodology’s ability to provide a platform to investigate historical actors or contentious topics that are usually absent from secondary classrooms in the United States (Redder & Schott, 2022). During the digital expedition into the past, the game’s avatar was directed to diverse regions of the map that corresponded with the provocative, primary source-driven dialogue. For example, week two’s *Assassin’s Creed Odyssey* showcased the societal differences between the city-states of Athens and Sparta. By complementing Xenophon’s Athenian critique with a virtual landscape depicting the democratic hypocrisy of slavery, the participants were privy to alternative viewpoints (Kroeker, 2009). Florida’s social studies standards (2014) highlight the Classical

Greek period as the cradle of Western civilization, but the game's display of vast numbers of enslaved peoples allowed students to connect more compassionately with the complicated roots of democracy.

The last three notable codes (experiential enjoyment; participant engagement; technological challenges) emphasized the varied discussion formats present within the study: polls, written responses, and face-to-face interactions. Although the instructional format was designed to provide equal time to both digital and traditional dialogue to attract different communication styles, the author was able to extract more consequential data from the verbal discourse. As one of the students communicated: "Given the limits of *Nearpod*, we can only type 250 characters per entry; when speaking you talk 1000 or more characters, unless you are boring." Another participant also recognized the need to preserve traditional classroom dialogue, admitting that while she may be a swift typist, others may struggle with their writing or prefer to speak their opinions. Since the lessons are heavily dependent on technology, the researcher ran into regular roadblocks which required on-the-spot troubleshooting; educators who identify as a video game novice should adapt this methodology to their skillset.

## CONCLUSION

Since the preconceived limitations of existing student-teacher relationships and technological difficulties were addressed in the previous section, the author will now focus on the study's shortcomings annotated during the analysis process. Firstly, student engagement was not always recorded at elevated levels. During the early stages of the study, participants' verbal contributions were limited and more guarded. Discussion was typically driven by their digital, typed responses to the probing questions posed through *Nearpod*. The latter half of the data collection process yielded engrossed conversations, rich in displays of social studies content knowledge and higher-order thinking. After the social anxiety receded and the students developed a rapport outside of the research, their collaboration skills improved along with the overall quality of the discourse. Certain student demographics may respond differently to this methodology grounded in CHAT, as video games are not universally beloved and may not serve as an effective curricular entry point. However, these participants grew increasingly more captivated by the lesson design over the course of the nine-week study.

Next, the complications for instructional implementation of this approach prove daunting to overcome. Educators must juggle an oftentimes overwhelming assortment of responsibilities, often being forced to surrender their weekends to grading and lesson planning or counselling students on major life decisions - a teacher's workday is never finished. It is therefore difficult to imagine instructors willingly investing their remaining free time to embrace new pedagogical techniques. This methodology requires hours devoted to gameplay mastery, content familiarity, primary source preparation, digital lecture construction, and dialogue rehearsal. It is illogical to expect schools to facilitate the time and budget for the training it would take for educators with inadequate video game experience to execute this discussion-based format with much success. Furthermore, the lessons typically lasted more than 90 minutes, making them challenging to insert amidst the backdrop of standardized testing and curricular demands.

Lastly, macro environmental factors will prevent the support of this instructional design. Regardless of how methods for employing video games in educational settings are described, a percentage of parents and administrators will not support COTS titles with mature ratings. While more video game developers may include nonviolent modes like *Assassin's Creed's* "Discovery Tour," some stakeholders are conditioned to associate the digital activity with malicious behavior (Markey & Ferguson, 2017). Additionally, constricted school budgets may not allow for the equipment expenses. If this classroom practice were accepted more broadly, institutions would ultimately incur added expenditures to host professional development seminars. Although potential for discussion-based, teacher-led gameplay abounds, this pedagogical tactic best serves a niche segment of social studies instructors.

## RECOMMENDATIONS

Despite this research offering beneficial insight into bridging the gap between education and entertainment, future examinations need to be conducted. To begin, similar forthcoming qualitative studies should increase the number of participants to simulate the average classroom size; this number is capped at 25 students for Florida core classes such as social studies subjects (Florida Department of Education, 2002). While 14 participants procured from a convenience sample proved thought-provoking for the purposes of foundational research, modifications must be made to assess whether this teaching strategy is viable for wider use. It is worth noting that these respondents represent video game enthusiasts, with some admitting to struggling socially and academically in traditional scholastic formats. As an alternative, this methodology may appeal to unorthodox learners, a percentage of whom are medically diagnosed with attention deficit hyperactivity disorder (ADHD). Video games, like *EndeavorRx* which was recently endorsed by the American Food and Drug Administration, may prove helpful as therapeutic treatment to boost the concentration of adolescents who struggle with ADHD (Canady, 2020).

Furthermore, additional changes must be applied to this methodology's configuration. Participants voiced their displeasure with the oftentimes verbose primary source documents assigned throughout the nine-week study. For example, it was not necessary to have students preview the entirety of Pericles' funeral oration for fallen Athenian soldiers of the Peloponnesian War to grasp the ethos of classical Greek democracy. To maximize discursive engagement and safeguard the success of the flipped classroom model, future studies should decrease the textual burden and demonstrate desired conversational practices before the data collection process begins (Cabi, 2018). The earlier lessons were stymied by infrequent participation, as pupils were initially uncomfortable having their viewpoints pertaining to social studies standards recorded. Fortunately, the teacher-led gameplay enhanced the collaboration, as students willingly exhibited their video game content knowledge in an academic setting.

The author would also advise supplementary semi-structured interviews and feedback forms be administered throughout the length of the study. Even though he was able to extract provocative trends from the preliminary questionnaire and three small group meetings, an even richer data set could have been compiled by issuing an exit survey to each participant and hosting biweekly DGBL gatherings. Additionally, the *Slack* backchannel needs to be reconsidered, as participants displayed only negligible interest in utilizing the platform to converse informally. *Discord* could function as an alternative since the gaming community considers the application its de facto chat method (Anderson, 2019). Further investigation should also be conducted into a live assessment tool with *Poll Everywhere's* unlimited characters and *Nearpod's* collaborative magnetism, thereby eliminating the need for both.

To conclude, future educational researchers should unite with video game advisors to alleviate potential technological hurdles. With the instructor working in tandem with a gameplay consultant attuned to the pedagogical objectives of each lesson, data collection sessions would run more smoothly, and fresh, open world COTS titles could be repurposed to explore social studies content. Moreover, if this virtual learning technique gains traction, it could improve collaboration between COTS developers and educational entities. To impart a more functional instructional toolbox, colleges may elect to model examples of this methodology for current and prospective teachers.

In a forthcoming study unobstructed by budgetary constraints, small groups of participants would be supplied with their own console and COTS games, modeling the virtual objectives first then allowing the students to explore the environments on their own. While teacher-led gameplay ensures a certain level of classroom management, the social constructivism undergirding this research highlights the detriment of this curricular control on the learning experience (Moore, 2015). Although the dynamic nature of video games affords more educational flexibility than a static film or song, passive participation may not be sufficient for students to tap into the full potential of this powerful medium.

## **CONFLICTS OF INTEREST**

We wish to confirm that there are no known conflicts of interest associated with this publication and there has been no significant financial support for this work that could have influenced its outcome.

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## APPENDIX A

### Preliminary Semi-Structured Interview Questions

- How old are you, how many years have you been gaming, and how many hours do you spend gaming each week?
- How do you socialize while gaming? What are some examples?
- Would you participate more in class discussions if you could respond through text? Why or why not?
- Why are video games important to you?
- What have you learned through playing video games? What are some examples?
- What is it about social studies that interests you? What are some of your favourite topics that you have investigated?
- How have you seen social studies present in video games? What are some examples?

### Midpoint and Exit Semi-Structured Interview Questions

- What aspects of the experience have you enjoyed? What could have been improved? Any specific examples?
- Did the video games specifically help you learn social studies concepts? How so?
- Was the instructor knowledgeable of the social studies content and gameplay? Why or why not?
- How have you bonded with the other participants during this experience? Any specific examples?
- Were you able to express yourselves better during discussions through texting responses? Why or why not?
- Which game or moment from a game was most memorable for you? Why?
- Do you see this approach to discussing social studies concepts as beneficial? Why or why not? Could this method be utilized in a traditional classroom setting?
- What facets of this approach to learning social studies content would you change? Why?

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