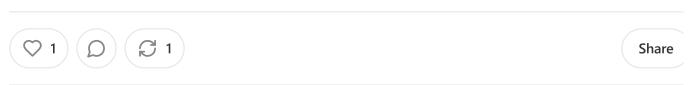
# **Exploring the Potential and Challenges of Historical Video Games**





Historical video games represent a unique convergence of digital entertainment educational media, blending immersive experiences with history education. The games have achieved considerable commercial success and captivated millions globally by offering richly detailed and historically accurate environments. Howe the extent to which they enhance players' understanding of history is a subject of ongoing scholarly debate. This article examines the potential of video games to illuminate and obscure knowledge about the past. It explores the broader potential benefits, and drawbacks, of using video games as tools for history education (Kap Elliott, 2013; Squire, 2002; UK Government, 2023).

Video games offer a range of genres that cater to various interests and play styles Action games, including First-Person Shooters (FPS) and Third-Person Shooters immerse players in intense combat scenarios set in historical contexts. Titles like of Duty: World War II and Medal of Honor provide players with a visceral experi of historical battles, while games like Assassin's Creed Chronicles merge platfor elements with historical narratives (Ubisoft, 2007). Adventure and role-playing gar (RPGs) such as the Kingdom Come: Deliverance (and the Assassin's Creed series) narrative-driven experiences, allowing players to explore vast historical worlds a engage with complex storylines through meticulously recreated periods like the Renaissance or settings inspired by historical events (Chapman, 2016; Kapell & E 2013).

Simulation and strategy games such as Civilization and Age of Empires emphasi resource management, tactical decision-making, and realistic recreations of historia.

scenarios. These games provide a strategic depth that encourages players to thin critically about historical progress and the factors that influence it (Squire & Jenl 2003). The diversity in game genres, from the narrative depth of RPGs to the stra complexities of simulation games, highlights the unique ways historical video ga contribute to understanding and appreciating history (Champion, 2016).

This article seeks to bridge the divide between entertainment and education, crit evaluating how video games contribute to and complicate the public's understan of historical narratives. In doing so, it endeavors to elucidate the nuanced challer and opportunities presented by historical video games in shaping historical consciousness, supported by the growing interest in the potential of historiograp video game design.

# The Role of Historical Authenticity in Gaming

The concept of historical authenticity in video games is often heralded as a signi achievement, yet its actual impact on understanding history is debatable. Develo of games like the Assassin's Creed series emphasize meticulous recreation of his settings and events, claiming it enhances educational value (Ubisoft, 2007). The e to which this fidelity translates into genuine historical understanding is question After all, these games are commercial products designed for entertainment, and primary goal is to engage players rather than educate them comprehensively abo past. While visually stunning and immersive, the representation of history in the games often simplifies complex historical realities, potentially leading to a super understanding of the eras they depict (Chapman, Foka, & Westin, 2017).

While these games include accurate representations of historical figures and eve their narratives are frequently driven by fictional elements designed to enhance gameplay rather than historical accuracy. For instance, the Assassin's Creed sericintegrates significant historical events and figures into its storylines within a framework of fictional conflicts and conspiracies. This blending of fact and fictional the lines between historical reality and entertainment, raising questions about educational value of such games. Players may come away with a skewed understated

of history, influenced more by engaging gameplay demands than rigorous histori scholarship (Chapman, 2016).

The educational potential of historical video games is a topic of growing interest it is crucial to critically assess how these games engage players with historical cc Games like Civilization and Millennia are praised for simulating various aspects historical development, yet the accuracy and depth of these simulations are limit the need to create a balanced and enjoyable game. The strategic decisions player make in these games often involve oversimplified representations of historical processes, which can lead to misunderstandings about the complexities of histor events. While these games encourage players to think critically, they also risk for a surface-level engagement with history that prioritizes gameplay over education rigor (Kapell & Elliott, 2013).

One of the strengths of historical video games is their ability to simulate comple historical processes, yet this strength is also a limitation. In Civilization, players their civilizations through different epochs, but the game's mechanics necessaril simplify and abstract historical realities. The focus on strategic gameplay can overshadow historical change's nuanced and multifaceted nature. Players might develop a sense of historical progression that is linear and deterministic, which c not accurately reflect the contingent and often chaotic nature of real historical er This simplification can undermine the educational value of these games, making more about strategic mastery than historical insight (Kapell & Elliott, 2013).

The interdisciplinary nature of historical game studies is often highlighted as a positive development, connecting game studies with history, education, and cult studies. The actual impact of this interdisciplinary approach on players' understate of history remains uncertain. Games like Assassin's Creed and Ghost of Tsushim analyzed for their cultural and ideological underpinnings. However, these analyses more relevant to academic discourse than the average player's experience. The portrayal of historical events in these games can indeed influence public percept but the extent to which this influence promotes a deeper understanding of historical events.

debatable. The primary appeal of these games lies in their entertainment value, r their educational merit (Lundblade, 2020).

Player communities play a significant role in shaping the historical narratives presented in games. Through modding, online discussions, and community-drive content creation, players engage with history collaboratively, often challenging a expanding the narratives presented by the games themselves. This participatory culture enhances the richness of historical games but also introduces the risk of propagating inaccuracies and biased interpretations. The collaborative nature of communities fosters a sense of ownership and engagement. However, it also meathat historical content is subject to the whims of popular trends and personal bia. This dynamic can lead to a fragmented and sometimes misleading portrayal of h reflecting the interests and perspectives of a particular community rather than a balanced and comprehensive view (Apperley, 2013).

The educational value of historical video games extends beyond gameplay to the process of game creation, yet this potential is not always realized. While creating history-based digital games can be an effective pedagogical tool, it requires careful guidance and critical oversight. Lawler and Smith's curriculum encourages stude design their historical games, which is innovative, but it assumes a level of historical knowledge and critical thinking that students may not possess. Without proper context and instruction, students might reproduce historical inaccuracies and oversimplifications, reinforcing rather than challenging their misconceptions ab history (Lawler & Smith, 2021).

The use of digital games as educational tools aligns with broader trends in digita humanities, but it also raises concerns about the commercialization of education Historical games offer a bridge between traditional historical methods and mode digital tools, yet this bridge can sometimes lead to commodifying historical knowledge. These games' immersive and interactive nature makes history more accessible, but it also risks reducing complex historical realities to marketable entertainment products. This tension between educational value and commercia

interests is a fundamental challenge in the use of historical games as teaching to (Champion, 2016).

The field of historical game studies has provided valuable methodological and theoretical contributions. Early scholarship laid important groundwork, but the is still grappling with fundamental questions about the role of games in historical understanding. The success of games like Sid Meier's Civilization has driven schinterest, yet the impact of these games on historical consciousness is mixed. Schinave developed new methodologies and critical discourses, but the practical application of these insights to enhance players' historical understanding is limit the games' inherent focus on entertainment (Kapell & Elliott, 2013).

#### **Future Directions in Historical Game Studies**

The future of historical game studies promises a dynamic and expanding field the requires continuous engagement with interdisciplinary scholarship. As Lundblach historiographic review (2020) suggests, the field must incorporate insights from various disciplines, including game studies, history, education, and cultural studintegrating these diverse perspectives, scholars can enrich their understanding o video games portray historical events and narratives. This interdisciplinary appreis crucial for developing a comprehensive framework that acknowledges the complexities of historical representation in games.

One critical area for future research is the exploration of race, class, and gender historical games. Historically, video games have often perpetuated narrow and stereotypical representations of these social categories. By focusing on how gam depict race, class, and gender, scholars can challenge these portrayals and advocamore inclusive and nuanced representations. For instance, games like Assassin's Creed: Liberation and Battlefield V have started to include more diverse character and storylines, reflecting a broader range of historical experiences. Analyzing the representations can reveal how games contribute to or challenge prevailing historicatives and societal attitudes.

Developing new analytical tools and theoretical frameworks will be essential in advancing historical game studies. These tools can help scholars dissect the com

ways in which games interact with historical narratives. For example, procedural rhetoric—how game mechanics convey ideas and arguments—provides a lens th which to examine how games like Civilization simulate historical processes. By refining and expanding such methodologies, researchers can better understand t implicit messages conveyed through gameplay and how these shape players' perceptions of history.

As digital games grow in popularity, their potential to shape public understandir history becomes increasingly significant. Historical game studies will play a cruc role in analyzing and guiding this impact. Scholars can investigate how games lil Assassin's Creed and Ghost of Tsushima are used in educational settings and pul history projects. These games often serve as entry points for players to engage w historical periods and events, making it vital to assess their educational value and accuracy. Research in this area can help educators leverage the immersive and interactive nature of games to foster a deeper understanding of history among students.

Historical games also offer unique opportunities to address contemporary social issues. Games can be powerful tools for exploring and critiquing modern societa challenges through historical analogies. For example, games that address colonia such as Anno 1800 or Colonization, can provoke discussions about contemporary issues of imperialism and cultural dominance. By examining how these games from thistorical and modern-day issues, scholars can contribute to a broader dialogue of role of games in social critique and education.

Another important direction for historical game studies is critically assessing ho games influence historical consciousness. This involves investigating how games shape players' perceptions of historical events and figures, and how these perceptranslate into broader cultural narratives about the past. For instance, how does playing a game like Total War affect a player's understanding of military history strategy? Do games like Call of Duty reinforce or challenge conventional narrative about World War II? Understanding these dynamics can help scholars and educations.

design games and curricula that promote a more accurate and critical engagement with history.

Historical game studies must also consider the commercial aspects of game development and how they influence historical representation. The need to creat commercially successful games can sometimes lead to the simplification or distorical narratives. Researchers should explore how market pressures shape development of historical games and the implications for historical accuracy and depth. This analysis can inform discussions about balancing commercial success educational and historiographic integrity.

Another vital area of study is the role of player communities in shaping historica narratives within games. Modding, fan fiction, and online discussions allow play engage actively with historical content, often expanding or challenging the narra presented by the original games. These participatory cultures can democratize historical knowledge and introduce diverse perspectives into historical discourse Studying these communities can provide insights into how collaborative and decentralized forms of historical engagement contribute to public history.

The future of historical game studies lies in its ability to integrate interdiscipling scholarship, address critical social issues, develop new analytical tools, and critic assess the impact of games on historical consciousness. By pursuing these direct scholars can enhance our understanding of how games represent history and influpublic perceptions of the past. This field offers valuable opportunities to bridge academic research with public history, education, and cultural critique, ensuring historical games contribute meaningfully to our collective understanding of history.

# **Successful Franchises**

**Civilization Series (1991)** 

The Civilization series, created by Sid Meier, represents a long-standing franchis within the strategy genre. Players control a civilization from ancient to modern t making strategic decisions on resource management, diplomacy, and military conquest. The series is renowned for its depth, replayability, and educational value.

offering insights into historical development and cultural evolution. Each install of the Civilization series incorporates complex systems that simulate aspects of historical development, including technological advancement, cultural exchange geopolitical dynamics. This simulation encourages players to critically analyze the factors influencing historical progress and the interplay of various societal eleme (Kapell & Elliott, 2013). Early scholarship on Civilization, such as the works of Do (2002), Poblocki (2003), and Lammes (2003), established critical discourses and analytical frameworks within the field of historical game studies. These studies revealed how the game's mechanics and narrative structures reflect broader historiographical debates, such as the portrayal of Western imperialism and deterministic views of history. Understanding the procedural rhetoric of games l Civilization translates historical narratives into interactive experiences, fostering deeper appreciation of the complexities of historical development (Lundblade, 20

#### Millennia (2024)

Paradox Interactive's "Millennia" is a modern iteration of the classic civilization building genre. Similar to Sid Meier's Civilization, Millennia allows players to gu civilization from its inception through various historical periods. The game emphasizes strategic decision-making and historical accuracy, providing players a complex and engaging simulation of historical development. Millennia distingu itself with its focus on the detailed simulation of political and social structures, allowing players to experiment with different governance models and social poli-This deep engagement with historical variables offers a robust educational exper highlighting the complexities and nuances of historical progress (Paradox Intera 2023). The educational potential of historical games is highlighted in the curricul developed by Jeffrey Lawler and Sean Smith (2021), which encourages students to create history-based games. Their approach aligns with observations on the educational value of historical games, emphasizing how game creation can be an effective pedagogical tool. Using tools like Twine, students creatively engage in historical process, constructing narratives that reflect their understanding of his contexts. This approach enhances students' engagement with history and helps t develop critical skills transferable to other disciplines (Squire & Jenkins, 2003).

#### **Nobunaga's Ambition (1983)**

Koei's "Nobunaga's Ambition" is a strategy game series focusing on the Sengoku period of Japanese history. This period, known as the Warring States period, spa from the mid-15th to the early 17th century and was characterized by social uphe political intrigue, and near-constant military conflict among competing feudal lo Players assume the role of a daimyo, striving to unify Japan through diplomacy, economic management, and military conquest. The series is acclaimed for its historical accuracy and detailed simulation of feudal Japan. Each installment offe intricate portrayal of Japanese feudal society, emphasizing the importance of stra alliances, economic stability, and military prowess. Players are required to manage resources, negotiate alliances, and plan military campaigns, providing a comprehensive understanding of the challenges and strategies of the Sengoku pe (Koei, 2023). Scholars have debated the extent to which games can accurately dep historical events and figures, given the constraints of the medium. Some argue th these games offer valuable insights into historical processes, while others content the algorithmic nature of games reduces their historical value (Galloway, 2006). Historical game studies have developed tools to critically assess these representa helping scholars understand how games create meaningful connections between players and historical narratives (Chapman, 2016).

#### Assassin's Creed (2007)

The Assassin's Creed series, developed by Ubisoft, is celebrated for its detailed historical settings and narrative-driven gameplay. The series features a fictional struggle between the Assassins and the Templars, spanning various historical pe such as the Third Crusade, the Italian Renaissance, and the American Revolution games are praised for their historical authenticity, engaging narratives, and inno gameplay mechanics that blend action, stealth, and exploration. The series' commitment to historical accuracy is evident in its meticulous recreation of historical figures. This attention to detail provides players with an immersive historical experience that is both educational and entertaining (Ubisoft, 2007). Tl

interdisciplinary nature of historical game studies connects game studies with research in history, education, heritage studies, and other disciplines. This cross-pollination of ideas has led to the development of new theoretical frameworks ar methodologies that enrich both game studies and historical scholarship. Researc can explore how these games reflect and challenge historical discourses by exam the cultural and ideological underpinnings of games like Assassin's Creed (Chapt 2013). This interdisciplinary approach helps scholars understand the broader cultimpact of historical games and their role in shaping public perceptions of history

### Ghost of Tsushima (2020)

Developed by Sucker Punch Productions, Ghost of Tsushima is set during the fir Mongol invasion of Japan in 1274. Players control Jin Sakai, a samurai who must choose between following the warrior code or using guerrilla tactics to repel the invaders. The game is celebrated for its authentic depiction of samurai culture, stunning visuals, and engaging combat system. It also features a multiplayer mod titled "Ghost of Tsushima: Legends" that incorporates elements of Japanese mythology. The game's detailed portrayal of 13th-century Japan, including its landscapes, cultural practices, and combat techniques, provides players with a rihistorical context and a deeper appreciation for the samurai ethos (Sucker Punch Productions, 2020). The game's portrayal of female samurai challenges traditiona assumptions about gender roles in medieval Japan, opening new pathways for historical inquiry and discussion in the classroom (Clulow, 2023). This example demonstrates how games can serve as starting points for deeper exploration of historical contexts and issues. The study of player communities is another crucia aspect of historical game studies. The interactions and practices of players, such modding, online discussions, and community-driven content creation, significan contribute to the historical discourse surrounding games. These practices allow players to engage with history in a collaborative and participatory manner, often challenging and expanding the narratives presented by the games themselves (Apperley, 2013).

# **Historical Games and Player Communities**

The study of player communities is another crucial aspect of historical game students are communities form around shared interests in specific games and often endeeply with the historical content presented within them. The interactions and practices of players, such as modding, online discussions, and community-driver content creation, significantly contribute to the historical discourse surrounding games. Modding, in particular, allows players to modify and enhance games by an new content, altering existing elements, or even creating entirely new scenarios an arratives. This enriches the gaming experience and transforms players into actiparticipants in historical interpretation. Through these practices, players engage history in a collaborative and participatory manner, often challenging and expanthe narratives presented by the games themselves (Apperley, 2013).

Examining these player communities provides valuable insights into how historic games function as platforms for public history. With their active modding communities, games like Europa Universalis and Total War illustrate how player reinterpret and reimagine historical scenarios, contributing to a dynamic and evalunderstanding of the past. These communities frequently create extensive modifications that add historical accuracy, new campaigns, and alternative historical outcomes. Such efforts showcase the players' commitment to historical detail and desire to explore "what if" scenarios that traditional history might overlook. The modding communities often serve as informal spaces for historical debate and education, where players share knowledge, discuss historical events, and engage collective historical reconstruction. These interactions can lead to a more nuancunderstanding of history as players collaboratively construct and deconstruct historical narratives (Crabtree, 2013).

The role of fan cultures in historical game studies highlights the importance of considering the broader cultural impact of games. Player communities consume produce historical content, creating mods and narratives that reflect diverse perspectives and interpretations. This participatory culture challenges traditional down approaches to historical scholarship and opens up new avenues for collaborand inclusive historical inquiry. By democratizing the creation and interpretation historical narratives, these communities allow for a multiplicity of voices and

viewpoints, which can lead to a richer and more diverse understanding of history bottom-up approach to historical scholarship contrasts with the more traditiona authoritative narratives often found in academic and educational settings, and it underscores the potential for games to foster a more inclusive historical discours (Champion, 2016).

The collaborative nature of these communities fosters a sense of ownership and engagement among players. However, it also means that historical content is sub to the whims of popular trends and personal biases. This dynamic can lead to a fragmented and sometimes misleading portrayal of history, reflecting the interes perspectives of a particular community rather than a balanced and comprehensive. For instance, certain mods might emphasize specific historical events or figure. The properties of the communal creation and discussion of historical content can also encourage critical thinking and debate, as players confront different interpretation and perspectives on historical events. This participatory engagement with histor thus serve as both an educational tool and a means of fostering a deeper connect the past (Webber, 2016).

The influence of player communities extends beyond the games themselves to br cultural and social contexts. The discussions and content created within these communities often spill over into other media, such as forums, social media, and YouTube channels, where players continue to debate, share, and expand upon th game experiences. This cross-platform interaction helps to solidify the role of historical games as influential tools for public history, as players bring their in-g learning and discussions into real-world conversations. The proliferation of fancreated content, such as Let's Play videos, tutorials, and historical analyses, furth amplifies the reach and impact of these communities, demonstrating the potenti games to engage a wide audience in historical discourse (Crabtree, 2013).

The study of player communities reveals the significant role that these groups pl shaping and expanding the historical narratives presented in games. By engaging history through modding, discussions, and content creation, players become acti

participants in historical scholarship, challenging traditional narratives and contributing to a more dynamic and participatory understanding of the past. The collaborative and often critical nature of these communities highlights the poten for historical games to serve as powerful tools for public history, fostering a deep engagement with historical content and encouraging a more inclusive and divers exploration of historical narratives. As such, the intersection of player communit and historical games represents a vital area of study within historical game studi offering valuable insights into the ways in which digital media can influence and enhance our understanding of history (Champion, 2016).

## **Digital Games, Historical Skills, and Learning**

Digital games present a unique opportunity to bridge traditional historical meth with modern digital humanities. Lawler and Smith (2021) argue that digital game serve as primary sources to explore the history of the second half of the 20th cent thus facilitating historical research. Their curriculum, which integrates the creat history-based digital games, enables students to learn historical content, historiography, and research methods through a highly engaging and interactive medium. This approach not only renders history more accessible but also enhance students' understanding of historical causation, agency, and narrative constructive developing their own historical games, students test their interpretations and en in the work of historians, gaining a deeper and more practical understanding of a past (Lawler & Smith, 2021).

The incorporation of digital games into the study of history signifies a significan in pedagogical strategies. Unlike traditional methods that often rely on passive learning through lectures and reading, digital games demand active participation requiring students to make decisions, solve problems, and create narratives. This active engagement fosters a more profound connection to the material, as studen not merely recipients of information but active constructors of historical narratives. Through this process, students gain a better grasp of historical context, the composition of historical events, and the interconnectedness of social, political, and economic factors that shape historical developments (Lawler & Smith, 2021).

#### Enhancing Learning Through Perceived Realism and Sense of Place

The study by Nicholas David Bowman et al. (2024) explores the intricate relations between perceived realism, sense of place, and the effectiveness of historical vide games in enhancing both cognitive and affective learning outcomes. Cognitive learning refers to the acquisition of knowledge and intellectual skills, such as comprehension, application, and analysis, while affective learning involves the development of attitudes, emotions, and values. Historical video games like Assact Creed excel in creating immersive environments that can significantly impact bo dimensions of learning. These games' ability to present historically rich and visu detailed settings allows players to experience history in a manner that traditiona textbooks or lectures may struggle to replicate (Bowman et al., 2024).

One of the key aspects highlighted in the research is the concept of perceived real In Assassin's Creed, the developers invest substantial effort into accurately recreat historical settings, events, and figures, which enhances the game's authenticity.' perceived realism is crucial because it helps players suspend disbelief and fully e with the historical content presented. When players perceive the game world as realistic, they are more likely to immerse themselves in the narrative and explore historical context with genuine interest. This immersion is not merely about visu accuracy but also involves the inclusion of period-appropriate behaviors, dialogu and societal norms, which collectively contribute to a holistic historical experien (Bowman et al., 2024).

The sense of place in historical video games further amplifies their educational potential. Sense of place refers to the emotional and cognitive connections that p develop with the game environment. In *Assassin's Creed*, the meticulously crafted landscapes and cities allow players to virtually step into the past, exploring landr and experiencing the daily life of historical periods firsthand. This sense of place evoke strong emotional responses, such as awe, curiosity, and empathy, which ar essential for affective learning. By fostering a personal connection to the historic setting, players are more likely to develop a lasting interest in the historical periods.

retain the knowledge gained through their gameplay experiences (Bowman et al. 2024).

#### **Emotional Engagement and Experiential Learning**

Emotional engagement plays a pivotal role in the effectiveness of historical vided games as educational tools. Traditional methods of teaching history often rely or passive absorption of information, which can be less engaging for students. Conversely, the interactive nature of video games encourages active participation emotional investment. As players navigate the challenges and narratives within t game, they experience a range of emotions that can deepen their understanding historical events and figures. For instance, witnessing the struggles and triumph historical characters in games such as Assassin's Creed can elicit empathy and a nuanced appreciation of the complexities of history, fostering a deeper emotiona connection to the material.

Recent studies support this perspective. Beavers (2020) elucidates how digital gai offer an informal yet impactful avenue for historical learning, emphasizing that I interactions with historical narratives can deepen historical awareness through a participation and emotional investment. In her dissertation, Beavers presents empirical studies exploring player perceptions of historical games as a medium f informal learning. A significant finding is that players often engage in suppleme activities like seeking information, modding, and participating in forums, which further enhance their historical understanding and emotional engagement.

Similarly, Boom, Ariese, van den Hout, Mol, and Politopoulos (2020) demonstrate video games provide a platform for experiential learning that can rival traditiona educational methods. Their research identifies three main genres of historical ga—strategy, action-adventure, and first-person action—all of which incorporate elements of violence as central mechanics. Despite this, these games facilitate a level of personal and historical learning through their immersive and interactive nature. The authors emphasize the need for critical engagement with the content warning that without mediation, players might accept the historical narratives at value, potentially leading to presentism. Their case studies illustrate how video g

can be used effectively in formal education to teach complex historical concepts encourage critical thinking.

Furthermore, the design of emotional agents in educational games can significar enhance emotional engagement and learning outcomes. Emotional agents, such animated characters, are designed to respond to the cognitive and emotional stat learners, making the learning experience more engaging and personalized. These studies involved students interacting with an educational game called Heroes of Island, which featured an emotional agent designed to enhance engagement. The findings indicated that such agents could make learning more enjoyable and emotionally engaging, thereby improving educational outcomes. The presence of emotional agents can help to maintain student interest, provide immediate feedh and create a more supportive learning environment.

### **Emotionally Sensitive Histories**

Bräuer (2019) adds another dimension by discussing the importance of an emotic sensitive approach to learning history. She argues that emotions and their expres are culturally and temporally specific, meaning it is impossible to fully relive the emotions felt by historical agents. Instead, learning history should involve experiencing and understanding the temporal, cultural, and geographical other. I advocates for an educational process that allows for open emotional and intellect engagement with history, rather than the rigid emotional choreographies often s contemporary historical narratives.

The immersive environments in historical video games facilitate experiential lea wherein players learn through direct experience and reflection. This form of lear is particularly effective in promoting critical thinking and problem-solving skills players engage with historical scenarios, they must make decisions, solve puzzles interact with historical figures, all of which require them to apply their knowleds think critically about the historical context. This experiential learning process he solidify cognitive understanding and encourages players to view history as a dynamic and interconnected series of events rather than isolated facts to be memorized. E

engaging emotionally with the content, players are more likely to develop a lastifinterest in history and a deeper understanding of its complexities and nuances.

Recent empirical studies, such as those by Beavers (2020) and Boom et al. (2020), highlight the potential for video games to serve as powerful educational tools. Tl studies suggest that when designed and used effectively, video games can offer a emotionally engaging, and intellectually stimulating way to learn about history. I approach not only enhances cognitive understanding but also fosters a deeper emotional connection to historical events and figures, making history education impactful and memorable.

Moreover, research on the concepts of flow and immersion in video games provide further insight into the effectiveness of these tools. Michailidis, Balaguer-Ballest and He (2018) in their mini-review discuss the overlapping concepts of flow and immersion, emphasizing that both are integral to the gaming experience. They highlight that immersive experiences are characterized by concentration, loss of perception, a balance between the player's skills and the game's demands, and lo self-awareness, all of which are essential to achieving a deep engagement with historical content. The review underscores that flow and immersion might not substantially differ in current studies, suggesting that these states might actually the same. This conceptual understanding reinforces the idea that the immersive of video games can significantly enhance historical learning through deep emotion and cognitive engagement.

## Tools and Collaboration in Historical Game Development

Tools like Twine, a narrative-based interactive game creation platform, exemplif digital game creation can immerse students in the historical process. Twine's simplicity and flexibility allow students to create detailed historical narratives we requiring extensive coding skills. This process encourages students to evaluate so critically, make informed decisions about historical representation, and understate the complexities of historical events and figures. The engagement and creativity involved in game development make it an effective pedagogical tool for teaching

history, as it combines technical skills with historical inquiry, resulting in a more comprehensive and immersive learning experience (Lawler & Smith, 2021).

The use of platforms like Twine also underscores the importance of narrative construction in historical understanding. Students must consider how to frame historical events, which elements to highlight, and how to portray different perspectives. This task requires deep engagement with primary and secondary so promoting a critical examination of the evidence and its interpretation. By constructing their own narratives, students learn to appreciate the subjectivity involved in historical storytelling and the importance of a well-supported argum (Lawler & Smith, 2021).

Integrating game development into historical education fosters student collabora and critical thinking. Working on a game project often requires teamwork, as stu must divide tasks such as research, writing, design, and programming. This collaborative approach mirrors the interdisciplinary nature of historical research where scholars from different fields must work together to piece together histori narratives. Additionally, the iterative nature of game development—where stude must continuously test and refine their games—parallels the process of historica revision and interpretation. By engaging in this hands-on, iterative process, stud not only learn historical content but also develop essential skills in project management, problem-solving, and peer collaboration. These skills are invaluabl both academic and professional success in the field of history and beyond (Lawle Smith, 2021).

# Long-term Impact and Transferable Skills

The benefits of incorporating digital games into historical education extend beyon the classroom. Students who have developed games as part of their curriculum or report higher levels of engagement and a stronger connection to the subject mater This heightened interest can lead to further independent study and a lifelong into in history. Additionally, the skills acquired through game development—such as critical thinking, creativity, collaboration, and technical proficiency—are transfer

to various fields, making students well-rounded and adaptable learners (Lawler 8 Smith, 2021).

Digital games offer a powerful tool for enhancing historical education. By integr game creation into the curriculum, educators can provide students with a dynam interactive way to engage with history. This approach not only enhances understanding and retention of historical knowledge but also develops critical sk essential for academic and professional success. The use of platforms like Twine exemplifies the potential of digital humanities to transform historical education, making it more engaging, collaborative, and reflective of the complexities of the As digital games continue to evolve, their role in education will likely expand, of new opportunities for innovation in teaching and learning (Lawler & Smith, 2021)

## The Use of Game Engines in Video Game Design

Game engines serve as comprehensive middleware software solutions that significantly streamline the game development process by providing developers an extensive suite of tools and frameworks. These engines allow developers to concentrate on the creative aspects of game design, such as storytelling, characted development, and gameplay mechanics, by automating and handling the more technical and repetitive tasks such as rendering graphics, performing physics calculations, and managing input handling. The advent of game engines has revolutionized the video game industry, making game development accessible to broader range of developers and significantly reducing development time and co

# Primary Advantages of Game Engines

One of the foremost advantages of using game engines is their ability to offer a standardized set of tools and functionalities that can be utilized across various projects. Prominent engines like Unity and Unreal Engine come equipped with extensive libraries of pre-built assets, such as 3D models, animations, sounds, an textures, as well as ready-made functionalities including physics engines, collisic detection, and AI behaviors. This modularity allows developers to quickly protot and iterate on their game ideas, enabling rapid testing and refinement of gamepl mechanics and design concepts. The iterative process facilitated by these engine

supports a dynamic development environment where ideas can be tested, evaluat and improved efficiently.

Furthermore, game engines support a wide range of platforms, including PCs, consoles, mobile devices, and virtual reality headsets. This cross-platform capabi means that games developed in engines like Unity or Unreal can be easily ported one system to another with minimal adjustments, thereby broadening the potent audience and market reach. This feature is particularly advantageous in the curre gaming landscape, where players expect access to their favorite games across mu devices.

Another significant advantage of game engines is their capacity to facilitate collaboration among diverse team members. Modern game engines often come integrated with sophisticated development environments (IDEs) that support ver control, asset management, and real-time collaboration. These features are especibeneficial for large development teams where multiple developers, artists, and designers need to work simultaneously on different aspects of the game. By prov a unified workspace, game engines ensure that all team members are aligned, rece the risk of miscommunication and enhancing the efficiency of the development process. Tools like GitHub integration within these IDEs allow for seamless vers control, ensuring that changes are tracked and merged correctly, which is crucia maintaining project coherence.

## Challenges and Limitations of Game Engines

Despite their numerous advantages, relying heavily on game engines also presen several challenges and limitations. One of the main drawbacks is the potential for performance issues. While game engines are designed to be versatile and handle broad spectrum of tasks, they may not always be optimized for specific types of  $\varepsilon$  or hardware configurations. This can lead to suboptimal performance, particular resource-intensive games that require fine-tuned optimization. Developers may themselves constrained by the limitations of the engine, which can impact the or quality, responsiveness, and visual fidelity of the final product.

Another significant disadvantage is the potential for a lack of originality. Given to many developers use the same popular game engines, there is a risk that games rebegin to feel homogenized, sharing similar aesthetics, mechanics, and even user interfaces. This homogenization can make it challenging for developers to create unique and innovative experiences that stand out in a crowded market. Moreover reliance on pre-built assets and functionalities can sometimes lead to a superficit understanding of the underlying technologies, limiting the developers' ability to the boundaries of what is possible in game design. This reliance can stifle creative and innovation, as developers may default to using available assets and features than creating bespoke elements that could set their games apart.

Game engines also often come with a steep learning curve, particularly for those to game development. Although engines like Unity and Unreal Engine offer exte documentation, tutorials, and community support, mastering their full range of capabilities can require a considerable amount of time and effort. This learning can be a significant barrier for small indie developers or those with limited resou as they may struggle to fully utilize the engine's features without substantial investment in learning and experimentation. Furthermore, the complexity of the engines means that even experienced developers must continuously stay updated the latest features and best practices, which can be time-consuming.

## The Broader Implications of Game Engines

Beyond the immediate technical and creative aspects, the use of game engines in game design has broader implications for the industry. The democratization of g development tools has empowered a new generation of indie developers, allowin them to create and distribute games without the need for extensive resources or teams. This democratization has led to a flourishing of creativity and diversity in gaming landscape, with indie games often exploring unique themes, innovative gameplay mechanics, and diverse narratives that might not be feasible in big-but productions.

However, this accessibility also means that the market is increasingly saturated v vast number of games, making it more challenging for individual titles to gain

visibility and success. The reliance on game engines can contribute to this satural as the ease of development lowers the barriers to entry, resulting in a highly competitive environment. Developers must therefore find ways to differentiate the games not only through technical and aesthetic innovations but also through effecting and community engagement.

Game engines play a pivotal role in the modern video game industry by providing robust tools that streamline the development process and enhance collaboration among team members. While they offer significant advantages in terms of efficiencross-platform support, and accessibility, they also present challenges related to performance optimization, originality, and the learning curve. Understanding the dynamics is crucial for developers aiming to leverage game engines effectively, balancing the benefits of standardized tools with the need for innovation and creativity in game design. As the industry continues to evolve, the role of game engines will undoubtedly expand, shaping the future of how games are created at experienced.

# **A History of Historical Game Studies**

The field of historical game studies has seen significant development over the padecades, with Sid Meier's Civilization playing a central role in its growth. Histor game studies have developed metalanguage, critical discourses, and taxonomic structures facilitating cross-pollination across various scholarly domains. This interdisciplinary field connects game scholars with research in history, education heritage studies, and more, offering valuable methodological and theoretical contributions that provide tools to analyze digital games as historical forms and their historiographic validity.

As the field has matured, the practical implications of these academic advances l become increasingly significant. Scholars like Uricchio (2005) and Galloway (2006) initially laid the groundwork by analyzing games' historiographic potential and limitations, focusing on understanding how games like Civilization could be use simulate historical processes and what this simulation could teach us about historical and understanding. Their foundational work has paved the way for mor

sophisticated analyses, leading to a deeper engagement with how video games function as interactive texts, capable of engaging players in historical narratives ways that traditional media cannot.

As historical game studies continued to evolve, scholars began to develop more formalized theoretical frameworks aimed at moving beyond simple analyses of individual games to a broader understanding of the cultural and educational imp of historical games. For instance, Kapell and Elliott's (2013) edited volume "Playi with the Past" brought together a range of essays that examined different aspects how games simulate history, highlighting the diverse ways in which games can represent historical events, from the procedural rhetoric of game mechanics to the narrative structures that guide player experience.

These methodological advancements have not only enhanced our understanding how games can function as historical texts but also fostered a richer comprehens how they can both reflect and shape historical understanding. For example, the concept of "procedural rhetoric" helps articulate how game mechanics convey historical arguments, while "algorithmic historiography" examines how the rules systems of a game can shape our understanding of historical processes. This deep insight allows scholars to critically examine the cultural and ideological underpinnings of historical games, revealing how games set during periods like War II often reinforce certain nationalistic narratives, presenting a simplified an often glorified version of historical events.

The interdisciplinary nature of historical game studies has been one of its greate strengths, connecting research in game studies with fields like history, education cultural studies. This cross-pollination has led to new theoretical frameworks an methodologies that enrich both game studies and historical scholarship. For inst the use of games in educational settings has been a major area of interest, illustration how games can teach historical thinking skills such as understanding cause and evaluating sources, and considering multiple perspectives. By using games as teatools, educators can engage students in active, experiential learning that complete traditional methods.

In addition to education, historical game studies have also connected with herita studies and public history. Games like Assassin's Creed, with their detailed recre of historical settings, have been used in museum exhibits and public history proj to engage wider audiences with history. These applications highlight the potenti games to serve as bridges between academic history and popular culture, making historical knowledge accessible to a broader public. This also raises questions at the accuracy and authenticity of the historical representations in these games an responsibilities of game developers and historians in creating and presenting the narratives.

Historical game studies must continue to engage with interdisciplinary scholarsl and address contemporary social issues, developing new analytical tools and theoretical frameworks that enable scholars to explore the diverse ways games represent and interact with historical narratives. As digital games continue to gr popularity, historical game studies will play an essential role in shaping how we understand and engage with the past through interactive media. This involves critically assessing the impact of games on historical consciousness, examining I games shape players' perceptions of historical events and figures, and influencin broader cultural narratives about the past. By engaging with these questions, sch can better understand the role of games in shaping historical knowledge and me in the digital age, ensuring that they contribute meaningfully to public and acade historical discourse and serve as powerful tools in shaping historical consciousness.

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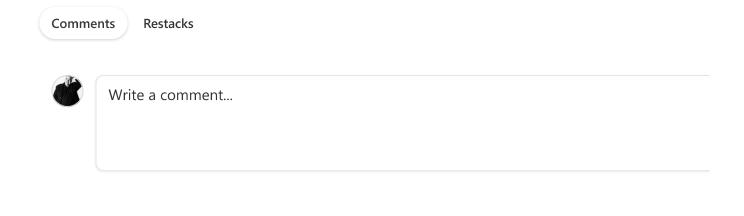
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