

The Effects of Popular Gaming with Historical Themes on Secondary and Tertiary Education of History-Based Subjects



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Master's Degrees by Examination and Dissertation Declaration Form

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Abstract

This dissertation looks at the potential use of history-related games as educational tools and related issues. It will present the hypothesis that there is a correlation between the medium of gaming and development of interest in studying antiquity-related courses. Additionally, the games offer a positive influence upon the learning process. There will be a critical examination of how the dramatic and engaging storyline of games such as *Assassin's Creed Odyssey* make the actual historical events behind these games far more engaging and hopes to show that video games set in antiquity can be positive for educational development, as they allow for intense levels of immersion in a historical game world and thus can encourage learning of the historical context behind the game world by making it immersive and interesting. The aim is, therefore, to show that because of the use of dramatized elements of history, the players' awareness of historic periods and the context behind certain key events in time is heightened, with limited negative impact regarding inaccuracy. It is suggested that intellectually high-functioning individuals with enough significant interest in history to engage in higher and further education courses, are likely to explore information related to the period, external to these games. Thus, games can easily be used as an educational tool to aid in learning of antiquity related subjects as well as potentially being a factor in encouraging enrolment onto antiquity related courses.

This dissertation will use qualitative and quantitative data collection from informants who have predominantly studied history-related subjects at higher and further educational establishments, to allow the opportunity to discuss whether experience of history through the medium of games and associated media encouraged the decision to enroll an antiquity-related course and has been significant in their development of interest in history-related subjects.

Introduction

This dissertation investigates and critically examines the correlation between video games based upon historical situations and students choosing to study courses which focus upon similar periods of history (such as History, Medieval History, and Ancient History) and other related subjects (such as Anthropology, Politics and Religious Studies). The intention of the research is to show how this is exemplary of the fact that games are an excellent educational tool, both for inspiring interest in related subjects and for enhancing learning about such subjects.

In order to gain an appropriate collection of opinions on the subject area, interviews and surveys were undertaken to gather evidence sufficient to indicate qualitative and quantitative norms which gave any correlations between games and interest or learning about history-related subjects.

The research also considers whether any of the informants encountered difficulties in their interpretation of how much historically or mythologically themed games draw upon source material, and the extent to which they adopt, adapt, ameliorate, selectively omit or simply reinvent for their own purposes. This will lead to consideration of how long such acquired knowledge can impact upon a person's understanding of what is a reliable piece of information, and whether the impact of this should be taken more seriously by the producers of such games.

It is hoped that the working hypothesis can demonstrate how historical games are predominantly positive, in that they directly cause interest in the field of history and antiquity. The intention is to show that video games can be incredibly useful in the field of education, as students can become immersed in a historical setting by playing an antiquity-related video game thus learning key themes that will help in their studies.

Thesis

The overarching position taken in this dissertation is that despite the inevitable re-imagining, reinvention and deliberate omissions of the source material, which developers may argue is required as part of the artistic process (occurring for numerous reasons such as commercial need and audience expectation), video games set in antiquity are useful resources for inspiring interest in higher and further education courses which focus upon history-related subjects. The associated research theoretically backs the

thesis to a significant degree, since as a generality, people are often likely to pursue courses in areas they enjoy outside of scholarly research and study; as enjoyment piques interest in study.¹ However the empirical data collected for this study indicates that a significant number of students have experienced a growing in interest in history-related subjects as a result of exposure to popular mediums such as games and movies.

What will also be focused upon within this investigation is whether or not artistic liberties, which often involve a loose adaptive use of the source material may well be damaging, because they may embed misleading information. If there is no subsequent investigation into scholarly interpretations of the source material, a skewed perspective of antiquity may result. However, if these games do inspire further interest and investigation into antiquity, particularly drawing upon more academic and educational work, then they may still have a role to play as a (possibly indirect) pedagogical tool.

Research Process

The research is broken into three parts; the first section is made up of two chapters looking at evidence-based research into the accuracy of the historic content in games and how they may impact upon, or be utilized for, the learning process plus what future interest in history-related subjects may develop as a result of exposure to the subject areas included in such games. The first chapter will look into how games can be used to aid effective learning and considers pedagogical theories² and psychological understanding of how we learn, process and retain information.³ The second chapter focuses upon consideration of how the historical representations in video games, such as *Assassin's Creed Odyssey*⁴, impact upon the audiences' impression of antiquity and the extent to which artistic adaptation might stray quite far from the source material; this will be achieved by comparing events and actions in the games to the writings of ancient sources such as Herodotus,⁵ Thucydides,⁶ Polybius⁷ and Caesar⁸.

The next part of this dissertation focuses upon presentation of the primary data taken from the findings which have been gathered from individuals who are or previously

¹ Dovey, Kennedy, 2006.p.5

² Banks, 1986.p.2

³ King, 2002.p.2

⁴ *Assassins Creed Odyssey*. 2018

⁵ Hdt. *Hist.*

⁶ Thuc. *Hist.*

⁷ Poly. *Hist*

⁸ Caes, *B Civ.*

studied history-related subjects at higher or further education; such as modern, medieval or ancient history, classics, politics and archaeology students. The evidence for this was gathered using online questionnaires,⁹ made up of both closed and open questions, and a focus group¹⁰ made up of six individuals to allow for the gathering of qualitative and quantitative data. The questionnaires were advertised on university student platforms but recipients were encouraged to share them widely so that the anonymous informants may not therefore be made up of just current students or from the usual age-group associated with the general student body. With regards to questionnaire responses, they were entirely blind to ensure that only the things discussed were considered and not the demographic details of the informants.

The final part of the dissertation will compare the ethnographic findings to the theories presented in the previous chapters to discover whether this evidence supports or conflicts with the thesis; that video games set in antiquity are useful resources for inspiring interest in higher and further education courses which focus upon history-related subjects.

Potential and Purpose of the Study

It is hoped that this dissertation can prove useful to the field of academic and educational research by studying the effects that games have on individuals and their helpfulness in a classroom and educational environment, especially in relation to subjects which are history-related. This research should provide use for those analysing the positives and negatives of gaming, as it offers a comprehensive and unbiased investigation into the factual quality of the material covered in history-related video games. There is limited research in this field, especially with regards to qualitative data collection, therefore it is hoped that the findings of this paper will inform and also go some way towards shaping the use of games in education in the future.

Methodology

To discover whether video games have any significant impact upon peoples' decisions to study history-related subjects at university it was necessary for empirical data to be

⁹ Appendix 1 & 2

¹⁰ Appendix 4

collected and the findings correlated into thematic trends, so that some statistical data could inform and evidence the findings of this research. Themes and theories on all related subject areas also needed exploring so that findings from the empirical study could be compared to such theories to ascertain whether they supported or disproved such research.

Primary Data Collection

The primary data collected was ethnographic, which was achieved using qualitative (open questions) and quantitative (closed questions) data collection using online surveys on the *SurveyMonkey* platform.¹¹ There was also a focus group towards the end of the study, carried out via Microsoft Teams.¹²

The online surveys were mainly circulated on student platforms, but the more quantifiable survey¹³ was advertised with encouragement for informants to pass them on to anyone who may be interested in responding, thus this data is representative of a broader age demographic but still primarily relates to individuals who have studied history-related subjects at higher and further education. The second qualitative questionnaire¹⁴ was only promoted on student online sites therefore the qualitative responses tend to be from a younger demographic.

These surveys are anonymous; therefore, consent to use responses and personal confidentiality in storing the data related to individuals was not necessary. It is important to note here that no personal data, such as age, gender or race, were included in the questionnaires therefore any potential related themes in responses will not be shown. The reliability of the answers to the questionnaires is based on who responds, since a problem arises if the only people who take the surveys are those who have played a lot of video games, then one could easily question the reliability of arguments based on the evidence. However, it is necessary to gather data from individuals who have chosen to study history-related subjects at higher or further education to gather data of use to this study, so the findings will be biased to this group, but as this is a consideration of how games can aid in the process of individuals going on to study at higher and further education levels, this should not pose a problem in its bias. In the first survey, whilst

¹¹ Survey Monkey UK; Appendix 1 & 2

¹² Appendix 4

¹³ Appendix 1

¹⁴ Appendix 2

mostly gaining student responses who often have experience of gaming, individuals who do not regularly play video games also responded and their input regarding other media, such as novels, films and television programs added to a broader view of the subject to be considered alongside pedagogic and psychological themes explored in the secondary research.

Of the two surveys used to gather data for this research, the first had predominantly closed questions¹⁵ to gather raw empirical data but also offered a chance for further explanation of responses in a more qualitative manner. This survey did not gain extensive qualitative response; therefore, a second online survey was formulated using only open questions, thus encouraging expansion on personal experiences and opinions on the six questions posed.¹⁶ All qualitative data has been analysed using thematic trends (see Research Findings), and some informants' words have been used, in the form of quotations, to support the relevance of themes which arose.

The primary themes being explored in the surveys are:

- The impact of fictitious or unreliable historic representation
- The difference between authenticity and historical reliability, why games' developers may choose the former, and how this impacts upon the player
- The impact of games on academic inquiry
- The effects of playing video games on the brain's ability to learn
- The value of immersive learning experienced by gaming.

Towards the end of the study there was a focus group session using Microsoft Teams made up of six individuals, five male and one female all aged between twenty and twenty-five with individuals who were, or had recently finished, studying a cross-section of subjects at further education. Interest in being part of the focus group was encouraged from members of the gaming society at UWTSD (using different people to those who had given one-to-one interviews), as well as one other student from Exeter University. The informants were asked to indicate consent by email after having read the statement of intent for the study before beginning.¹⁷ The group discussed the primary themes arising from the qualitative responses to the online questionnaires and consider what

¹⁵ Appendix 1

¹⁶ Appendix 2

¹⁷ Appendix 5

their thoughts were on these topics.¹⁸ All data from the interviews and focus group were stored responsibly and confidentially (as indicated on the consent form¹⁹) and only shared with supervisors when required. No identifiable information was included in this study and any such information gathered was destroyed once this research was completed.

As with all types of qualitative research the validity of a study can be questioned, especially whether evidence suggesting a correlation is just a co-incidence. Since this is very difficult to identify based purely on the empirical evidence, a thorough analysis of the context and background of the found epigraphical evidence was undertaken in order to gain some understanding of whether correlation was indicative of quantifiable thematic significance or merely the response of one or two informants who agreed. Only once a significant number of responses correlated to create a reliable theme was any thesis put forward based upon the empirical data.

Secondary Data Collection

Secondary data collection was required to explore primary sources from antiquity²⁰ to consider whether evidence based representations versus fictitious adaptations were the general expectation in the video games being considered in this study²¹ and to also observe any issues with the reliability of the ancient sources being used by game developers insofar as their usefulness as a source on which to base the games.

Another field requiring secondary sources to be explored was in relation to theories about educational use of video games. This was an area with limited academic publication, to resolve this issue, scholarly sources and articles from a wider variety of topics, such as the phenomenon of authenticity which is well documented was required.²² The lack of evidence-based studies for the use of video games as educational tools, underpins the importance of this study especially if its positives can be shown to outweigh the negatives. It has therefore been important to explore publications upon these positive and negative responses to video games, both regarding how they

¹⁸ Appendix 4

¹⁹ Appendix 5

²⁰ Hdt: Caes; Thuc: Tac

²¹ *Assassin's Creed Origins*, 2017; *Assassin's Creed Odyssey*, 2018; *Ryse: Son of Rome*, 2013; *Total War*, 2002-present; *Civilization*, 1991- present; *Age of Empires*, 1997-2019

²² Halter, 2002.p.110

impact detrimentally upon health and wellbeing²³ as well as how they enhance the learnt experience and stimulate the brain to imbed information more thoroughly; for instance, even former US President, Ronald Reagan, stated that games such as *Space Invaders* use similar skills to that of a pilot.²⁴

This dissertation will also make clear the disparity between historical authenticity in games and evidence-based historical representation, as what most games developers aim for is historical authenticity rather than accuracy. The concept of accuracy is somewhat problematic regarding ancient history, as evidence is limited and from one perspective. Therefore, the notion of accuracy in this instance is defined by how evidence from the most reliable ancient sources available, utilizing the opinion of modern scholars to confirm such reliability is represented. Therefore, this research aims to highlight the fact that they are not one and the same, as authenticity is the process of making the themes within a game seem believable with regard to history, to encourage the player to continue to be immersed in it, but adjusting a selection of evidential elements to create an exciting plot. In comparison, historical accuracy on such themes in the time selected could be quite boring or perhaps have politically incorrect themes with regard to how a modern audience perceives them and so would not be something that games developers would want to engage with as this could affect their profits from their product. Of course, many games are therefore inaccurate, and this means that it is then necessary to discuss whether this is detrimental to the educational usefulness of games or whether the degree of authenticity is enough to inspire further interest and inquiry and that it should not therefore hold games back in an educational sense.

Chapter 1: Games used for Educational Purposes

This chapter focuses upon how games are in some respects already being used in an educational environment. It will firstly compare the positives and negatives associated with games currently used in classrooms and consider how scholars such as King²⁵ and Squire's²⁶ research supports the potential benefits. A discussion of the negatives associated with so called 'Triple A' games (the games which have the highest budgets

²³ King, 2002.p 2

²⁴ Halter, 2002.p.118

²⁵ King, 2002.p.3

²⁶ Squire, 2003.p.2

and the most marketing and that are intended for mainstream success) is also featured such as *Assassin's Creed* for instance.²⁷

The Positives and Negatives of Games in Education

Within education there is a split in how theorists see game use as an educational tool; research has shown evidence which can be interpreted as indicating some negative and other positive attributes. On the one side there are those such as Squire and Wideman²⁸ who propagate the theorem that games are a useful form of repetitive brain exercises that can stimulate the brain and thus cause cognitive brain development.²⁹ Whilst others such as Hauge are far more negative,³⁰ pointing towards the tendency for video games to cause addiction in adolescence as well as causing aggression because of the often competitive and violent aspect of gaming;³¹ however, it is easy to be critical of these studies as they are not cognizant of other factors such as the additional impact of stress and social anxiety,³² rather than the results being entirely based upon gaming.³³

One of the most positive theories about gaming as an educational tool is that it can promote learning through the immersive experience; the player can become entirely focused on the game world and not distracted by outside events.³⁴ This is important because when the player stops playing (after a significant period) then their brain has engaged fully in the themes presented and experienced overlearning by repeated actions, in such a way as to remember information more easily; this is known as the 'Tetris effect'.³⁵ This is enhanced because the player can be directly involved in historical events whilst also triggering the brain's reward center as they go through the game and successfully complete various levels. The benefits of this to learning about history are obvious, in that instead of education being a chore and boring in a classroom, it can become engaging and fun.³⁶

On the theme of immersion when one views a movie or a show, they are not directly involved in the actual events being portrayed on screen. However, with games the player

²⁷ Assassins Creed. 2007-present

²⁸ Wideman, 2007.p.1

²⁹ Squire, 2003.p.1

³⁰ Hauge, 2012.p.3

³¹ Hauge, 2012.p.3

³² Bavelier, 2013.p.1

³³ Bavelier, 2013.p.2

³⁴ Levine, 2014.p.333

³⁵ Exploring Your Mind, 2019

³⁶ Guerrero. 2011.p.1

is directly controlling a character and often making decisions on their behalf, which challenges the player to think in a way that someone would have done in Ancient Egypt for instance. Therefore, the benefit which arises is that players can learn about antiquity-related subjects subconsciously if the game is fun and enjoyable, especially if it promotes rewards for completing certain tasks.³⁷ This is incredibly useful, as gaming in an educational sense can be personalized to suit the individual.³⁸ With regards to both *Assassins' Creed Origins* and *Odyssey* this is certainly true, as both games reward those that complete them with trophies and achievements. The potential for learning about history through interaction with these particular games has been noted by some teachers, with *Assassins' Creed Origins* encouraging the development of the Discovery mode feature³⁹ which allows the player to be a variety of different characters and become guided through various historic events, such as engaging with the political situation surrounding the battle of the River Nile and the archaeology of the pyramids of Giza. These tours focus entirely on giving a window into the period in question, much like a museum, whilst still giving the player some level of agency to explore the world as if they are part of it. Taking this into account, there is definitely a case that can be made that these 'discovery tours' can be used in a classroom environment and game developer Ubisoft state this was their intention for the discovery mode and that they continue to refine the possibilities for these tours.⁴⁰

In order to state that games are reliable teaching tools, an analysis of what reliable historic evidence is included in games must be made. For example, in games such as *Assassin's Creed Origins*, because of recent archaeological findings (Abydos and Letopolis)⁴¹ the developers of the game were able to accurately and realistically portray Cleopatra's Egypt, including entire cities such as Alexandria. When such attention to details present, such video games can easily be used as a teaching resource, as they allow the student to fully visualise the historical interpretations and reconstructions being taught to them. There is also evidence that points towards this already being used, for example Ubisoft themselves have noted that the Discovery tour feature in both *Assassin's Creed Origins* and *Odyssey* was tested at Kennedy High School in California to a positive reception from both the students and teachers. Matthew Duffy,

³⁷ *Assassin's Creed Origins*. 2017

³⁸ Levine, 2014.p.341

³⁹ Fischer, 2018

⁴⁰ Wainwright, 1932.p.159

⁴¹ Wainwright, 1932.p.159

superintendent of the West Contra Costa Unified School District, stated: “I could see Discovery Tour becoming integrated into classrooms. When you're trying to make ancient history really come to life, to allow students to really get into that context and that world, I think this is a really engaging way to do it”, ⁴² clearly showing that gaming in a classroom environment already has significant support from those teachers and students who have experienced using it. It is therefore clear that some games can be educational, and this thesis is further heightened by a study which showed that 'those who played computer games showed improvements in communication, adaptability and resourcefulness scales compared with a control group who did not.'⁴³

However, one of the negatives of what is colloquially known as ‘Triple A’ games (those with the highest budgets and financial support) is that they often have the tendency to incorporate what are essentially gambling mechanics,⁴⁴ in the form of ‘loot boxes’ that offer the player a random chance to get an in-game item which is then purchased via the use of real money. The negatives associated with this are clear, since if a game encourages gambling then its usefulness as an educational tool is greatly diminished. Apart from financial gain, as the game can potentially continue to generate profits throughout its lifespan, the main reasons for game developers doing this is that they know that when one is playing a game and completes a task, or is victorious in a competitive game, the brain’s reward center produces extra quantities of dopamine,⁴⁵ a chemical which stimulates the central nervous system, giving the player increased energy levels.⁴⁶ Because we can logically assume this is understood by developers, they give the player small rewards (micro-transactions) before encouraging them to gamble away real money to get larger rewards. This causes issues with using games as educational tools, in that it could lead players down a negative path, one that is essentially exploitation for financial profit. Even games that possess good qualities for being teaching tools often feature these tactics, such as *Assassin’s Creed Origins*⁴⁷ and *Odyssey*.⁴⁸

⁴² Maguid, 2018.

⁴³ Times Higher Education, 2020

⁴⁴ Diaz, 2018

⁴⁵ King, 2002.p.203

⁴⁶ Bavelier, 2013.p.1

⁴⁷ *Assassin’s Creed Origins*, 2017

⁴⁸ *Assassin’s Creed Odyssey*, 2018

In contrast though, the brain's inherent need for stimulation through the production of dopamine can instead be a positive rather than a negative, as there is the potential for educational based games to cause the production of dopamine to cause brain stimulation for educational effect.⁴⁹ For example, strategy games such as *Age of Empires* and the *Total War* series cause the player's brain to produce dopamine through enjoying the process, therefore creating a desire to repeat it⁵⁰ and because of this repetition, embedded learning through overlearning can occur.⁵¹ One of the theories that is propagated is that when playing a game in a historical setting, if the person is actively enjoying the game then they are extremely likely to pick up little bits of information of the game's subject material. For example, Hatlen discusses the theory that both the *Age of Empires*, *Civilizations* and *Total War* series allow players to learn about historical events, whilst at the same time having fun.⁵²



Image 2: Sid Meier's *Civilization V* offers a fun way to learn (Anderiesz, 2010)

Enjoyment stimulates the brain to remember the key facts about the historical games involved,⁵³ which in the case of *Total War* is battle tactics and military and economic strategy in a classical setting. This is supported by evidence from universities employing gaming as an educational tool, one of which is the University of Bristol, where Professor

⁴⁹ Cochran, Sellers, 2011.p.5

⁵⁰ Cochran, Sellers, 2011.p.5

⁵¹ Dovey, 2006.p.5

⁵² Hatlen, 2013.p.1

⁵³ *ibid.*

Howard-Jones (a lecturer in neuroscience) has shown evidence of how games stimulate the brain to learn facts⁵⁴ that it potentially would not remember in a standard classroom setting.⁵⁵ Therefore, in a controlled environment which removes the potential for addiction to occur games can be good educational tools.⁵⁶

Another positive aspect of using video games in an educational sense is that unlike standardised teaching in a classroom, which is far less stimulating and immersive, video games can actively and uniquely promote repetition of key facts in a far more engaging manner to develop overlearning.⁵⁷ For example, if a person consistently plays a game based on the life of Alexander the Great then chances are over time they will learn a great deal about the exploits of Alexander the Great, provided that the game does not stray too significantly from the source material and is fun enough to maintain the player's attention. This theorem has led many scholars, such as Squire,⁵⁸ to stipulate that games are useful in improving muscle memory as well as upgrading the brain's memory of key information⁵⁹ For example, when playing one singular game over a long period, memories develop in relation to sound clips from the game and the brain then automatically associates these two things, and when the player does something successfully, the brain holds an associated and positive memory of all the sensory stimulate present at that time.⁶⁰ Therefore, music and responses from avatars in a game can be used to endorse actions with positive results and discourage engagement with actions that have negative results.⁶¹ If this was applied to choices related to how to engage with a historic battle, then the player could be encouraged to remember the more reliable information about how that battle unfolded historically.⁶² The usefulness of this fact is clearly similar to what teaching practices already attempt to do, to associate things such as numbers to sounds so pupils in primary school can better remember;⁶³ thus, games can easily be integrated into current teaching practices with ease.

Rome: Total War, promoted many Classicists to complain about the game's historical misrepresentations and lack of authenticity, in terms of the way units collide with each

⁵⁴ Howard-Jones, 2012

⁵⁵ Bacalja, 2018.p.158; Howard-Jones, 2012

⁵⁶ King, 2002.p.47

⁵⁷ Ghita, Andrikopoulos, 2009.p.118

⁵⁸ Squire, 2003.p.3

⁵⁹ Squire, 2003.p.3

⁶⁰ Bavelier. 2012

⁶¹ Bavelier. 2012

⁶² Bavelier. 2012

⁶³ Summerfield, 2016.p.1

other.⁶⁴ Lowe discusses how distorted certain factions are in the game, with Egypt being pharaonic when it should be Ptolemaic in 270 BC and, most egregiously, the Greek poleis and Celtic tribes all fighting as a united faction.⁶⁵ This clearly would have given some players the completely wrong impression of what these factions were like in reality, as evidenced by the survey undertaken by Hatlen in which students felt misled and offput by how inaccurate it was.⁶⁶ However, both Lowe and Hatlen do point out that *Rome: Total War* is a highly modifiable game and thus some Classicists united to create *Rome: Total Realism*, a 'mod' that sought to correct the historical inaccuracies and changed all the units to their historically accurate names, such as the Silver Shields of the Seleucids being re-named to the argyraspides.⁶⁷ In a survey carried out by Hatlen, it was found that a significant portion of the students felt that having played both *Rome: Total War* and *Rome: Total Realism*, the "mod" was more enjoyable as they felt they could rely on its historic accuracy.⁶⁸ Therefore, this highlights that some games can easily be modified for a learning environment.

With the release of Ubisoft's flagship title series *Assassin's Creed Odyssey*, interviews with various news outlets show that Ubisoft hired teams of PHD students and historians to painstakingly craft the world of Classical Greece as authentically as possible.⁶⁹ In an interview at the E3 press conference in 2018, creative director Jonathon Dumont⁷⁰ stated that for *Assassin's Creed Odyssey* the development team were inspired by Plato's *Symposium*⁷¹ and the stories in the *Iliad*,⁷² and with regards to the game world suggested that they spent many hours consulting with historians as to the authenticity and overall believability of Classical Greece. To that end, they ultimately proved very successful in doing so, as the game received high praise from critics and game reviewers such as IGN for its believable world.⁷³ It was so representative of the period that some teachers have already begun using *Assassin's Creed Odyssey* as a template for studying Classical Greek architecture.⁷⁴ For example, the depiction of the agora of

⁶⁴ Ghita, Andrikopoulos, 2009.p.118

⁶⁵ *ibid.*p 117

⁶⁶ Hatlen, 2012.p.181

⁶⁷ *Ibid.*

⁶⁸ *Ibid.*

⁶⁹ Ubisoft, 2018b

⁷⁰ *Ibid.*

⁷¹ Pla. *Sym.*

⁷² Hom. *Iliad.*

⁷³ Tyrrel, 2020

⁷⁴ Kingsland, Munson and Kraft, 2020

Athens matches exactly with the description given by Thucydides.⁷⁵ With regard to the actual game, historical events are represented adequately in the game, for example the horror of the Athenian plague in 429 BC being represented as dramatically as Thucydides describes it.⁷⁶ Some of the quests present in this game are a direct reference to ancient texts such as Homer's.⁷⁷

Assassin's Creed Odyssey also references mythological figures such as Medusa, the Cyclops and the Minotaur. Whilst not entirely historically reliable in its representation, it nevertheless serves to make the game more enjoyable as not only are these boss-battles fun and climatic but they help make the player become aware of the stories behind these mythological beasts with the game explaining how Theseus found his way out of the Labyrinth of Rhodes using rope.⁷⁸ This is useful from the perspective of stimulating the brain by the use of adrenaline released during the player fighting these creatures⁷⁹ and as such, this helps future memory of the facts associated with the battles; therefore, by encouraging the player to fight these mythological beasts, some encouragement for education can occur.

One interesting hypothesis is that a game does not need to be historically set in order for it to have some educational value. For example, Squire states that *Pacman*⁸⁰ and *Tetris*⁸¹ aid muscle memory and learning potential,⁸² and *The Witcher 3: Wild Hunt*⁸³ has references to history present in the game giving tantalizing tidbits to affect further inquiry, as because of peoples background they are more likely to be interested in it (Reception theory).⁸⁴ For example, the Nilfgaardian Empire is clearly based on the Imperial Holy Roman Empire.⁸⁵ *The Witcher 3* also depicts a Polish theme, this is enhanced with the soundtrack being written entirely in Polish and the monsters that the player fights in the game being based on Polish folklore.⁸⁶ Therefore, players can become subconsciously aware of the related historic and cultural material, and whilst not directly related to

⁷⁵ Thuc. 2.3-54

⁷⁶ Thuc. 2.53

⁷⁷ Hom. *Ili.* 1.1.

⁷⁸ Hdt, *Hist.* 7. 61; *Assassin's Creed Odyssey*, 2018

⁷⁹ Greenfield, 2014.p.1

⁸⁰ *Pacman*. 1980

⁸¹ *Tetris*, 1984

⁸² Squire, 2003.p.3

⁸³ *Witcher 3: Wild Hunt*, 2015.

⁸⁴ Terry, 1996.p.1; Hall, 1973.p.3

⁸⁵ *Witcher 3: Wild Hunt*, 2015

⁸⁶ *Witcher 3: Wild Hunt*, 2015

antiquity, it nevertheless shows that games in general can encourage interest into real life historical events.⁸⁷ Furthermore non-fictitious games are already being used in an educational capacity,⁸⁸ with *Minecraft* being used in some classrooms in the form of its education edition.⁸⁹

Chapter 2: Video Games and their Historic Authenticity and Accuracy

This chapter focuses upon how games depict historical authenticity and faithfulness to the source material in relation to its potential use in an educational setting and it will firstly discuss how game developers use historical authenticity as a unique selling point to sell their products. It will then discuss the relevance regarding accuracy when a games developer aims to achieve historical authenticity and then discuss examples such as *Ryse: Son of Rome*. In which inaccuracy can be a factor if it negatively impacts the game as well as how alternate takes on history and mythology can be an interesting perspective on ancient writing⁹⁰ and a good tool for learning the historical context surrounding that alternate take.⁹¹

There is a major problem with the games industry however, this being that they are exactly that, an industry, and one that has financial profit as its top priority.⁹² Whilst some games, like the *Assassin's Creed series*, have disclaimers at the opening sequence of the games stating that this is a work of fiction inspired by historical events,⁹³ a significant portion of games do not have this disclaimer at all and do not really appear to care about historical accuracy in any way.⁹⁴ In some cases, such as *Call of Duty: Modern Warfare*, games designers deliberately misrepresent historical fact to increase sales to a Western audience;⁹⁵ this example was based upon a war crime which was committed in real life by the Americans in which American fighter jets bombed an Iraqi civilian convoy supposedly accidentally, but in *Call of Duty* this was shown to be committed by the

⁸⁷ Hall, 1996.p.14

⁸⁸ Gallagher, 2015.p.1

⁸⁹ Minecraft: Education Edition, 2016; Gallagher, 2015.p. 1

⁹⁰ Lowe, 2009.p.64

⁹¹ *Ibid.*

⁹² Goggin, 2011.p.147

⁹³ *Assassin's Creed series*, 2007-2020

⁹⁴ *Call of Duty Modern Warfare*, 2019

⁹⁵ BBC, 2019

Russians.⁹⁶ This sets a dangerous precedent of misinformation that games developers would be advised to avoid as political bias can essentially mean that games can be classed as propaganda pieces, which is how the Russian government responded to *Call of Duty: Modern Warfare*.⁹⁷ However it is hoped that as a student enters educational courses these misconceptions will quickly be dispelled as facts are learnt.⁹⁸

Other numerous examples include buildings of archaeological significance or 'Wonders' in multiple strategy games, including *Rome: Total War*⁹⁹, *Civilization*¹⁰⁰ and the recently released *Crusader Kings 3*.¹⁰¹ In these games these unique and prominent building offer all-encompassing benefits to the faction that controls them for example the Colossus of Rhodes in *Rome: Total War* gives a 40% upgrade on the prosperity and wealth of naval trade.¹⁰² Therefore this can therefore help a player learn the cultural significance a building had and its importance in ancient society. Rollinger expands on this, stating that these bonuses are geared towards helping the player ultimately fulfil the games objective,¹⁰³ that being a concept known as the 4Xs which are true of nearly all strategy games (explore, expand, exploit, exterminate).¹⁰⁴ This can be interpreted as a negative and a positive in equal measure; negative in that it affirms to the player unrealistic benefits which can so easily mislead the player into asserting via exaggeration that these sites had far more significance than they actually had, but it can be viewed as a positive, in that if someone who has played 4X games can learn so much detail about a particular architectural wonder (such as the Colossus of Rhodes) by associating its in-game benefits with the actual building itself, essentially learning by association which is a technique already incorporated into academic teaching.¹⁰⁵

A significant number of games developers, such as Ubisoft, often like to use their games to resemble history as a unique selling point in order to sell more copies. Although, if you actually look at the terminology used by games companies, it is often referred to as 'historical authenticity' rather than accuracy (or reliability) in order to avert attention from the fact that the games are often knowingly manipulated to include aspects of history

⁹⁶ BBC, 2019

⁹⁷ Kozlov, 2019

⁹⁸ Squire, 2003.p.53

⁹⁹ *Rome: Total War*, 2004

¹⁰⁰ *Civilization*, 1998-2020

¹⁰¹ *Crusader Kings 3*, 2020

¹⁰² *Rome: Total War*, 2004

¹⁰³ Rollinger. 2020.p.33

¹⁰⁴ Rollinger. 2020.p.34

¹⁰⁵ Howard-Jones, 2012

that will sell the games better to a modern audience. It is also important to note, that in the games industry there are a lot of internal politics that go on behind the scenes when making a game. Therefore, sometimes the reasoning behind a decision to incorporate certain features and mechanics are not made by the developers themselves but rather by business executives who are mostly interested in maintaining steady financial profit to appease investors; for instance, in the case of recent issues with senior executives at Ubisoft.¹⁰⁶ There have been noted allegations about their views on gender influencing *Assassins Creed Odyssey* as one of the board allegedly stated that ‘women don’t sell’¹⁰⁷ and therefore it can be seen that games are sadly often dictated to by financial gain which could be problematic insofar as their potential for being used educationally is concerned. Even games which are marketed as historically authentic such as *Assassin’s Creed*, have internal agendas and if senior executives do not care about the historical content of the game, they could force the developers (programmers, designers, etc.) to make whatever they deem more sales-worthy.

However, popular games do increase interest in the field of history, so keeping a product selling well is still useful for historical education, and many in Ubisoft and other publishers are still well intentioned and have historical authenticity as their primary objective, such as those developers responsible for the *Assassins Creed* discovery mod.¹⁰⁸

Another issue to be aware of is the recent criticism of games studios, with an Ubisoft representative recently stating that with their games is that they are not at all political.¹⁰⁹ Despite the fact that one of their upcoming titles, *Watch Dogs: Legion*¹¹⁰ is a direct reference to post-Brexit Britain and is clearly trying to sell to people disillusioned with the government and current events.¹¹¹ This therefore heightens a point of contention with games, that they are mainly a retelling of contemporary attitudes enforced onto an historical setting. The inherent problem with this is that games tend to lose authenticity when a game just tries to make political statements just to appease a certain demographic. The likely reason for this is that they believe it will appeal to those on the left but also not showing history that executives deem unappealing to the target

¹⁰⁶ Maher, 2020

¹⁰⁷ *Ibid.*

¹⁰⁸ Fischer, 2018

¹⁰⁹ Maher, 2020

¹¹⁰ *Watch Dogs Legion*, 2020

¹¹¹ Purslow. 2020.

market.¹¹² Obviously, this leads to the problem of games only ever showing one side to history and not giving the full picture of events. Thus, these omissions can simplify history and ultimately misrepresent it. Therefore, in terms of educational benefit this can clearly hinder games in an educational environment since they only cover aspects of history that will appeal to a modern audience. However, if effort is placed in telling a student that this is the case, then it could hinder games in the educational field of academia to too great a degree, since through learning, people can understand about modern values through how they depict ancient history in games.

One of the key debates around historically based games is how they depict important historical figures and whether this is done in a positive or negative light. The interesting thing about this is that the depictions of characters such as Julius Caesar, Cleopatra and Ptolemy XIV are based on writings by ancient authors. For example, the Athenian general and statesman Cleon is based on the negative portrayal of him in Thucydides' History of Peloponnesian War.¹¹³ Another notable example is the depiction of Julius Caesar in *Assassin's Creed Origins*, as in the game, Caesar is initially aligned with the player character Bayek, however once he marries Cleopatra and helps her ascend he becomes something of a tyrannical dictator with the player assuming the role of Aya, Bayek's wife, to assassinate Caesar during the well-known Ides of March of 44 BC; clearly one can debate this portrayal and whether it is historically correct, although this links in with reception theory as this is a great example of how *Origins* has used fictionalized elements to serve a plot that would be more dramatic to be involved in from the perspective of a video game.¹¹⁴ This has both positive and negative qualities, the negative is that it could give people an inaccurate caricature of a historical figure when the available evidence paints a far more complicated picture than the game portrays. There is of course no way a game can show the actual truth behind who a historical figure was, but care needs to be taken not to mislead players into thinking that their portrayal is correct, when the reality is far more nuanced. However, it is positive that these representations can cause debate in an educational setting as to the historical writing that was drawn upon to create such depictions, and whether they have done it well.

¹¹² Murray, 2017.p.14

¹¹³ Thuc. *Hist.* 3.36

¹¹⁴ Kapell, Elliot, 2013.p.10

Whilst financial profit is most certainly a key goal when a game is being developed, if the game is not interesting or fun it would simply not sell as well. Therefore basing a game in history can be a unique selling point;¹¹⁵ *God of War* references the interest in Nordic mythology,¹¹⁶ and *Assassin's Creed Odyssey* makes reference in its trailers¹¹⁷ to the mythos surrounding the Spartans and that the player's character is directly descended from Leonidas. Clearly this is a move to encourage sales in the United States where a significant portion of the film-going population have seen films such as *300*¹¹⁸ and are thus likely to be interested in the warrior reputation of the Spartans. This shows how games studios are using historic plots and characters to upsell their products and the growing demand for historic authenticity can be seen through success of the *Assassin's Creed* franchise.¹¹⁹

God of War developers appear to have taken their responsibility to portray history as authentically as possible, quite seriously. They take an alternate look at Norse mythology, where heroes and villains are reversed, and the main antagonist is Baldur. One of the most likely reasons for this is to tell a unique story that differs from the prevailing portrayal of Norse mythology to create interest in the game. Also, Cory Barlog (*God of War's* game director) stated that Santa Monica (*God of War's* developers) had multiple research teams working on as many different variations of Norse mythology that they could find, in order to have a solid justification for the antagonistic portrayal of the Norse Gods, as well as to have 'a solid grounding with which to go into stuff that's crazy'.¹²⁰

What can be drawn from this is that Santa Monica have clearly taken a different interpretation to the mythology whilst keeping authenticity in mind. This highlights the fact that games set in and around antiquity will include aspects of history and mythology that they believe will be interesting and will sell well, however this evidence may be weak or tenuous so should be explained as such to avoid misleading a historic understanding. This can be both a positive and a negative. It can be a negative in the sense that they are of course not presenting completely reliable historical information, therefore issues may arise when using them as a teaching aide, depending on how far the plot strays

¹¹⁵ Kapell, Elliot, 2013.p.10

¹¹⁶ *God of War*, 2017.

¹¹⁷ Ubisoft, 2018a

¹¹⁸ *300*, 2006.

¹¹⁹ Phillips, 2018

¹²⁰ Barlog, in Playstation, 2018

from evidenced material. However, such plots as are seen in *God of War*, which differ greatly from the mainstream historical understanding of the available evidence, can actually provide students with a unique perspective on a historical time period, thus encouraging independent inquiry and critical thinking to occur on the subject, looking into the different interpretations and translations of the myths and history. Such depth of research as the developers of *God of War* did, provide a solid basis on which advanced academic theories are based, therefore encouraging engagement with such a process of thinking is to be encouraged educationally.¹²¹

Following on from the success of the Norse theme in *God of War* in 2018, Ubisoft have recently released a trailer for their new game *Assassins' Creed Valhalla*,¹²² which is going to be set during the time period of Viking raids on England. Whilst it is not unusual for games studios to buy into trends, what is unusual is the imagery of the Vikings used in the trailers, is that they are clearly shown to be the 'good guys' and the Saxon King Alfred the Great as the villain. Unlike the prior game *Odyssey* (which showed Athens and Sparta as morally grey), this polarisation of the two camps completely flies in the face of most historical accounts given of the Vikings. For instance, their famous raid on the Church of Lindisfarne served to be the most well-known and infamous act of destruction, with Alcuin, a scholar in the court of Charlemagne during the time period writing, 'the heathens poured out the blood of saints around the altar, and trampled on the bodies of saints in the temple of God, like dung in the streets'¹²³ Clearly these are not the actions that Ubisoft are intending to portray with *Valhalla* and they are instead choosing to ignore all the medieval evidence and portraying a revisionist outlook propagated by modern historians such as Roesdahl,¹²⁴ because as the only contemporary portrayal of the Vikings we have come from their enemies, Ubisoft could easily argue that they are trying to show the other perspective. So, why is Ubisoft ignoring the well-known contemporary writings for *Valhalla*, but sticking to it like glue with Thucydides' portrayal of Cleon in *Odyssey*? Clearly this is directly a result of sales and probably not any concern for the accuracy of their games. However, Roesdahl's question as to the validity of the mainstream ancient sources is fair and logically not all Vikings were likely to be murderous rapists,¹²⁵ so Ubisoft are utilizing the current interest

¹²¹ *God of War*, 2018.

¹²² *Assassin's Creed Valhalla*, 2020

¹²³ Alcuin, in Redgrave 2015

¹²⁴ Roesdahl, 1998.p.13

¹²⁵ Roesdahl, 1998.p.13

in the subject for sales, whilst also creating questions about our knowledge and understanding of historic “fact”, which is a positive outcome educationally.

Ryse: Son of Rome,¹²⁶ was marketed as a historically authentic game,¹²⁷ however it lacked accuracy in terms of its weaponry and armour. Blacksmith Tony Swatton suggests that the armour is in fact based on records of Imperial Roman armour from around 50 AD and 100 AD.¹²⁸ However the developers, Crytek, consulted numerous historians to make the game’s armour and weaponry feel as authentic as possible¹²⁹. Yet despite these attempts to make the game as authentic as possible, the game did poorly in sales probably because it too closely resembled the film *Gladiator*¹³⁰ and because the game’s plot, gameplay and dialogue were so inaccurate; even someone who knows very little about Roman history would know that Queen Boudicca did not successfully invade and defeat the entire Roman empire with an army of elephants. This therefore shows that the audience cares about accuracy if it hinders the games authenticity, therefore it is important for the game producers to adhere to this¹³¹ and for the learning environment inaccuracy can be very distracting to a historically savvy student.¹³²



Image 3: *Ryse: Son of Rome*, inaccuracy ruins authentic experience (Crytek, 2013)

¹²⁶ *Ryse: Son of Rome*, 2013

¹²⁷ *Xbox*, 2013a and b

¹²⁸ *ibid.*

¹²⁹ Crytek, 2013

¹³⁰ *Gladiator*, 2000

¹³¹ Welsh, 2013

¹³² Hatlen, 2012.p.181

One of the issues surrounding video games that is often discussed at length on social media platforms such as *Reddit* and *YouTube* are that of “Gender Equality”. With Classical Greece set *Assassin’s Creed Odyssey* being at the forefront of those discussions. As it gives the player the option of choosing either to play as a male character (Alexios) or a Female character (Kassandra), however aside from a change in voice actor and slight differences to the game’s main story (whoever you don’t play as becomes indoctrinated into a cult and becomes the game’s primary antagonist.) There are no differences in terms of gameplay or how the player character is viewed by Non-Player Characters (NPC’s), this has obviously led to some criticism of the game for being inaccurate and misleading, with an article posted by Ubisoft quoting an interview with Melissa MacCoubrey, the Narrative Director on *Assassin’s Creed Odyssey*, in which she states:

‘When you think of historical fiction, there are a lot of naysayers who say things like, “oh, well this isn’t historically accurate” but I don’t think they realize that it would suck to have people yelling at you because you’re a woman for the entire game...I was adamant that we didn’t call out the gender differences. At the end of the day, we’re making a videogame, not a historical documentary.’¹³³

This statement is somewhat disconcerting, as what it is clear evidence of is that the developers of *Odyssey* simply do not care about historical accuracy regarding its representations of gender, instead shoeorning modern day values onto an ancient Greek setting, when evidence implies that the ancient Greeks viewed women as of lower status. Aristotle exemplifies this, saying ‘as regards the sexes, the male is by nature superior and the female inferior, the male ruler and the female subject’.¹³⁴ This is clear misogyny from Aristotle and judging by the fact that all generals and politicians at the time were men it is a fairly safe assumption to suggest that Classical Greece was a mostly patriarchal society; MacCoubrey clearly implies that she did know this but chose to ignore it. This could be problematic for academics and teachers in an educational setting, as it could very easily make someone believe that this is fact, when there is far more nuance. Although it should be noted that from a contemporary standpoint this would make sense as it could potentially disempower female players but from an

¹³³ MacCoubrey. 2018.

¹³⁴ Aris. *Pol.* 1.12

academic standpoint one must be careful not to make entire sweeping assumptions purely based on the depictions of gender in *Odyssey*.

However, there is a noticeable oxymoron in this debate which is that whilst *Assassin's Creed Odyssey* may be spreading misinformation with regards to its depiction of Gender it can still have a positive influence on the medium of educational learning since it can encourage people into being interested in Classical Greece in the first instance. For example, people that normally would not be interested in ancient history have the potential to actually want to play the game, since *Odyssey* makes an effort to appeal to female players it is logistically far more likely that they would want to play it since female protagonists are outnumbered by male ones, although far less so in today's climate. Therefore by marketing the game in this manner it has the desired effect of selling more to a wider audience, thus hopefully a greater percentage of those players enjoyed the game and because of that gained an interest in the field of antiquity because of *Assassin's Creed Odyssey*. Therefore, the debate arises when the fact that the game can be misleading in terms of its historical accuracies and its depictions of its characters, versus how it gets people interested in the history in the first place.

Reception theory is a notion first propagated by cultural theorist Stuart Hall in the 1970s,¹³⁵ its basic theorem is that when someone reads a book or is watching a movie they are not inherently accepting the cultural values that either the book or movie is propagating, but rather the reader interprets these values based on their own cultural beliefs and values A good example showing this is the *Civilization* series, where the non-playable natives of the game are simply referred to as 'barbarians'¹³⁶ this is problematic as this is showing the game to be purely from a westernized colonial perspective rather than showing events from the indigenous viewpoint thus giving a one sided depiction because that is what will sell to an audience,¹³⁷ *Assassin's Creed Odyssey* does a similar thing with its depiction of gender equality in Ancient Greece where modern values have been incorporated into an ancient setting in order to sell to that particular audience. it this leads to an unfortunate trap when it comes to potentially using *Assassin's Creed Odyssey* and *Civilization* as an educational source, because in reality games can only show games from one perspective, that being the faction the player is playing as and since the games are tailored towards a Western audience it is far less

¹³⁵ Hall, 1973.p.180

¹³⁶ *Civilization V*, 2016

¹³⁷ Soares, 2019

likely that its depictions will be questioned,¹³⁸ which is in itself problematic as it can easily make a player think something is fact when in reality it is just one perspective out of many.

One point of contention that often happens with games set in antiquity is that they often use the unknown elements of history in order to justify their games story, essentially falling back on the premonition that because there are multiple interpretations of the same historical events there is no conclusive factual evidence to suggest that their interpretation is wrong and what often happens with video games set in antiquity and indeed to other games generally is that the developers have a tendency to latch onto key details that they think will sell the game more, as it will make the game much for appealing and fun. For example, *Assassin's Creed Odyssey* in its marketing latches onto the theme of the player's character being a descendant of King Leonidas¹³⁹, in a clear bid to sell the game to those familiar with the movie *300*, and even includes moves from the movie in a clear bid to attract an audience from the *300* films¹⁴⁰. The main point that can be made here is that the games will draw attention to various pieces of history that they deem interesting enough to help the game's sales. This can be both a positive and a negative, since it can firstly draw attention to a fun aspect of the history thus enabling the student to remember it, however it can completely ignore other aspects and thus be misleading. Therefore, when using games as an educational tool, the student must be aware that this is what the games developers are intentionally doing to sell the game and thus this awareness will go some way to preventing the usefulness of games as an educational tool being diminished.

A good example of a game using historical authenticity as a unique selling point would be the very recently released *Ghost of Tsushima*¹⁴¹ from Sucker Punch Studios which takes place during the Mongol invasion of Japan in 1274. With game developer Nate Fox stating that the game was 'grounded in reality'¹⁴² but 'We're inspired by history but not building it back stone by stone'¹⁴³ this is exemplary of what the games industry often tends to do when basing a game in history. Which is to take aspects of history which are interesting and will appeal to a wider audience and one who is very unlikely to be aware

¹³⁸ Soares, 2019

¹³⁹ *Ghost of Tsushima*, 2020

¹⁴⁰ *ibid.*

¹⁴¹ *ibid.*

¹⁴² Fox, in Reeves, 2018

¹⁴³ *ibid.*

of Japanese history, aside with American pop culture which has a penchant for fantasizing over Samurai and Ninjas.¹⁴⁴ However it is likely because of these fantastical depictions of Japanese culture in Western media that inspired the developers of *Ghost of Tsushima* to make the game in the first instance as Nate Fox remarked on the fantasy around the honour bound samurai warriors as being the thing his studio was most interested.¹⁴⁵ This therefore leads on to the notion that because the developers knew that there are those that would be interested in what realistic Japanese history actually was and thus made the game to appeal to that target audience. Many of which likely never even knew that Japan was invaded by the Mongols in 1274. This therefore highlights the fact that even though a game's depiction is not entirely accurate in comparison to ancient scholars it does not mean it is irrelevant in an educational sense, as there were likely many that learnt about key things just by being interested in the game. Even though a game may not be realistic, (Katana's were ineffective against armour etc) it can still educate, as the game immerses the player in its world and thus can make the player subconsciously learn about the world.

The documentary series 'Decisive Battles', which used the game engine of *Rome: Total War* in order to visualise historical battles, simulating them through the game, also featured interviews with historians such as Adrian Goldsworthy, an author on Roman warfare¹⁴⁶ giving some interesting contextual information on the battles. For instance, Thermopylae means 'hot spring' in Greek, named after the springs that formed the tight mountain pass in that area.¹⁴⁷

'Decisive Battles'¹⁴⁸ was also a successful show spanning thirteen episodes, with repeats being shown to this day, highlights just how much of an impact *Rome: Total War* had on the field of educational learning. When it released in 2004 it was an entirely new form of media that was at the time unexplored, and what this shows is that the mainstream media, such as the BBC with 'Time Commanders', were keen to explore video games in the field of education. To this day there is clearly ongoing interest, with 'Time Commanders' being rerun as recently as 2016. This shows that the mainstream media has already been successfully using computer games in an educational sense

¹⁴⁴ Napier, 2007.p.1

¹⁴⁵ Fox, 2020

¹⁴⁶ Goldsworthy, 2000

¹⁴⁷ Mallowe, 2014.p.101

¹⁴⁸ *Decisive Battles*, 2004

and would continue to do so as long as evidence of interest and educational validity could be shown.

However, one issue with *Time Commanders* and indeed most video games set in antiquity, is that when re-creating these ancient battles the only literary sources of evidence comes from ancient scholarship, therefore the only perspective that they have is from Roman and Greek historians such as Tacitus and Herodotus. Therefore, this means that what modern historians truly know comes from a Greek and Roman perspective, for example in *Time Commanders* recreation of the Battle of Watling Street in which they choose to show the Romanticised depiction of Boudicca that Tacitus gives.¹⁴⁹ This can be a problem insofar that it can mislead potential students into thinking that this is actual historical fact when in actual fact it is an amalgamation of what ancient historians say and there is no real way we can prove or disprove what they say, therefore it can show history as far less nuanced than it actually is. Although *Time Commanders* does attempt to show their depictions are based on what historians say and what is logical enough to make sense to show in the recreation.¹⁵⁰ Therefore so long as one is aware of the potential lack of nuance, then battle recreations via computer games can still benefit educational learning.¹⁵¹

Chapter 3: Research findings

There were two questionnaires sent out using the *SurveyMonkey* platform. The first, which contained predominantly quantitative questions, but with the option for informants to also add comments, was responded to by forty-seven individuals. Whilst this was initially posted on student-based platforms, it was encouraged that people share this broadly and it was also given to family and friends, therefore these findings indicate the responses of a cross section of society but with a greater weighting on informants who are university students. The second questionnaire was made up of six open questions. This questionnaire was responded to by seven informants, all of whom were current students as this was only promoted on student platforms.

¹⁴⁹ Tac. Ann. 14. 32

¹⁵⁰ Harrison, 2004.p.2

¹⁵¹ Rollinger. 2020

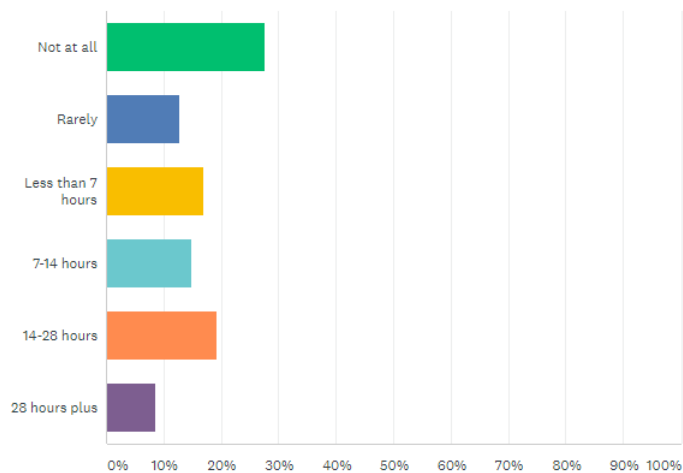
This chapter will show the quantitative data from the online questionnaires in graphs, followed by explanations of what this data indicates, including some associated comments made by informants. A focus group meeting was also undertaken, the transcript of which can be seen in Appendix 4. The themes arising from this are explored in the discussion section alongside the themes arising from the questionnaire responses.

Questionnaire 1

Question 1: How often do you play games per week?

How often do you play video/computer games on average per week?

Answered: 47 Skipped: 0

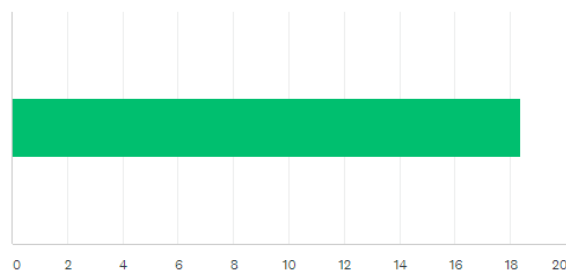


Question 1 indicates that less than 30% of informants play games regularly for a sustained period and that 40% rarely game, if at all. Therefore, the qualitative comments from these contrasting groups of informants can indicate the difference between how games are perceived from a theoretical perspective, versus an experiential one.

Question 2: How many different games that you play are based in a historical setting?

How many different games that you play are based in a historical setting?

Answered: 34 Skipped: 13

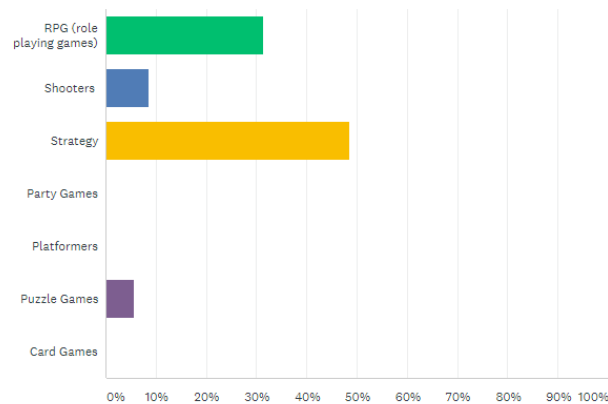


There were a variety of different responses to this question with approximately a quarter of the responses being fifty different games and a further half being at least ten; this suggests that a high proportion of informants play a variety of games. This shows that there are a high number of informants who have been likely to have engaged with an historical setting in a video game.

Question 3: What history-based computer games are most popular?

What sort of history-based video/computer games do you play? (tick all that apply)

Answered: 35 Skipped: 12

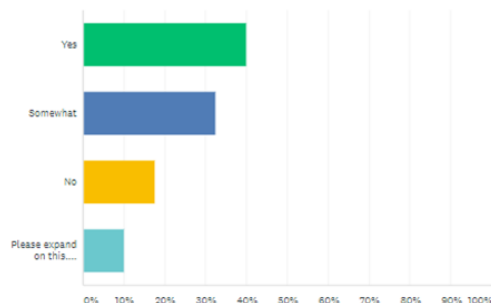


This indicates that RPG and strategy games are most popular amongst the thirty-five respondents to this question, with eighteen to fifty different types of game played. These types of games are more immersive insofar as the setting is concerned and so the player of a historic game would be likely to notice details which could encourage learning about historic information (or being misled in assimilation of historic knowledge by fictitious content).

Q.4. When playing video/computer games would you say that you immerse yourself into the game world and remember key details about the games (for example details of the historic period)?

When playing video/computer games would you say that you immerse yourself into the game world and remember key details about the games (for example details of the historic period)?

Answered: 40 Skipped: 7



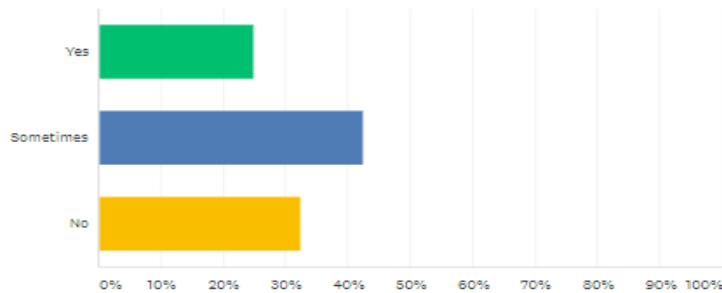
‘The worlds are immersive and give rich lives to the figures of history’ (informant).

The feedback suggests that around 40% of the participants had an immersive experience of gaming, and a further 35% responding with “somewhat”. This indicates that games promote immersion and therefore immersive learning can occur.

Question 5: Do you do further investigation into the historic period in which the game world is set?

Do you do further investigation into the historic period in which the game world is set?

Answered: 40 Skipped: 7

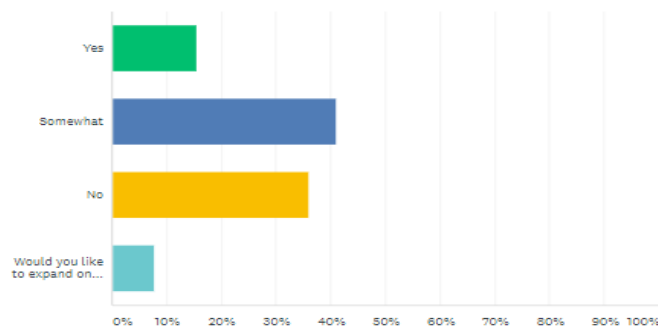


The responses suggest that, depending on the how good the game is at setting up its game world, further research is inspired.

Question 6: Do you feel that games that have a historical setting but are not at all historically accurate are spreading misinformation?

Do you feel that games that have a historical setting but are not at all historically accurate are spreading misinformation?

Answered: 39 Skipped: 8



Notable responses:¹⁵²

- ‘Few games claim to be historically accurate without any accuracy, though often they claim to be influenced’.

¹⁵² Also see Appendix 3

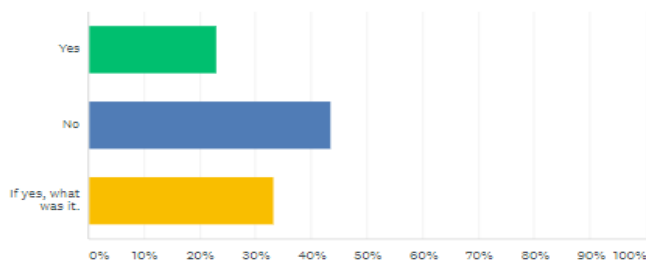
- 'It can confuse you into thinking it's true, especially when lots is correct about the historic information'.
- 'It is often the case with history games that they are "Hollywoodified". However, some games such as the *Total War* games often have relatively good historical accuracy'.

The feedback suggests that many find that games can spread misinformation, but that it is perhaps dependent on the individual games and how they deal with this issue through making the constraints of their reliability clear.

Question 7: Have you learnt anything about history as a result of playing video games?

Have you learnt anything interesting about history as a result playing video games?

Answered: 39 Skipped: 8



Notable responses:¹⁵³

- 'The Roman world and how the senate may have functioned. And in *Crusader Kings 2* how to do kingship and keep vassals happy and loyal.'
- 'Information about elements of history I wouldn't have known about otherwise.'
- 'How much mining trade and development is necessary to support expansion by armies.'
- 'Hardly any women characters and they are often servants or unimportant.'
- 'Sure, *Crusader Kings 2* taught me a lot about different kinds of feudal laws and caused me to do quite a bit of research.'
- 'The way politics has changed.'
- 'Actions of World War 1 and 2.'

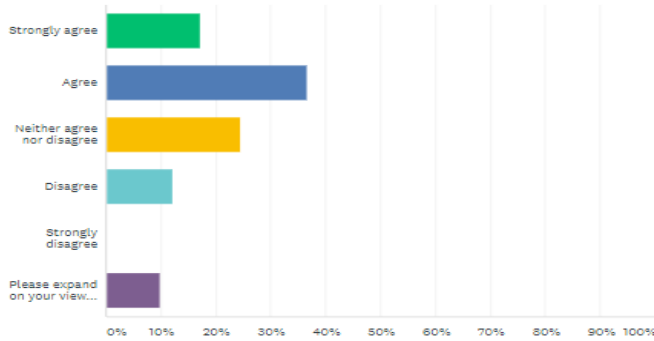
¹⁵³ Also see Appendix 3

Whilst two thirds of respondents feel they gained little or no interesting information about the historic period, one third of respondents did and the qualitative responses indicate that this covered a wide range of history-based subject areas and time-periods.

Question 8: Do you think that some games impose modern-day values onto ancient cultures.?

Do you think that some games impose modern-day values onto ancient cultures?

Answered: 41 Skipped: 6



Notable responses: 154

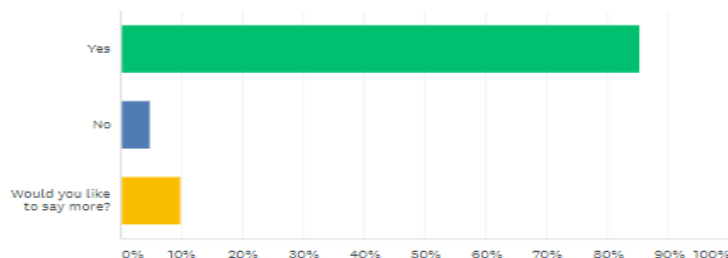
- 'Civilization imparts certain modern ideals of *Civilization* and what that means onto other cultures, and often genericises diverse cultural groups through modern classification'
- 'There is no way a game made today won't impose its values on ancient cultures'

A vast majority agreed that some games do impose modern-day values onto ancient cultures, so this is clearly an issue which must be addressed if such games are to be used as teaching materials.

Question 9: Do you feel there is a capacity for games to be a positive influence in terms of education despite historical inaccuracies?

Do you feel there is a capacity for games to be a positive influence in terms of education despite some historical inaccuracies?

Answered: 41 Skipped: 6



¹⁵⁴ Also see Appendix 3

Notable responses:¹⁵⁵

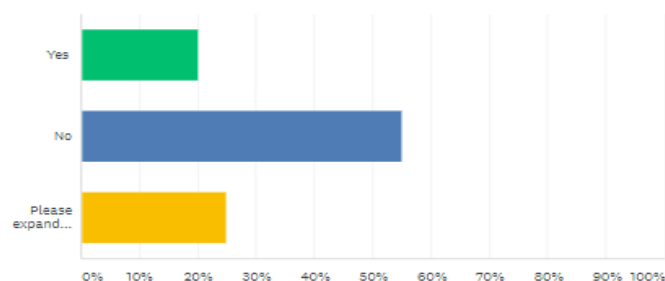
- 'It has as it keeps younger audiences interested on the subject'
- 'A fun way to learn and you can repeat a thing until you understand it'

This shows that a vast majority agree that games are a positive influence despite inaccuracies.

Question 10: Did playing a game in a historical setting make you interested in studying for a qualification in a history-based subject?

Did playing a game in a historical setting make you interested in studying for a qualification in a history based subject

Answered: 40 Skipped: 7



Notable responses:¹⁵⁶

- 'I chose a crusading module on my course following playing *Crusader Kings*.'
- 'I was interested in history first which is why I played the game, but some games have made me interested in different Historic cultures that I hadn't known much about before playing games about them.'
- 'I doubt I would have taken Classical Civ A levels, let alone my degrees without games like *Rome Total War*.'
- 'Didn't start playing historical games until university.'

Of those who replied, about two thirds stated 'no', and one third 'yes', this implies that only one in three people were positively influenced towards studying for a qualification in a history-based subject as a result of playing games. However, the influence of games still can be seen as significant insofar as how students of history-based subjects come to be inspired in the subject as one in three is a significant number regarding the intake for a single subject area at university. In addition, the qualitative responses indicate that some were instead inspired to expand their immersion in history-based subject matter

¹⁵⁵ Also see Appendix 3

¹⁵⁶ Also see Appendix 3

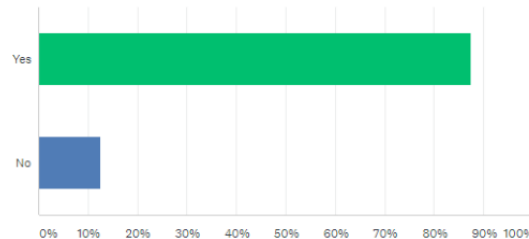
through games whilst already studying related subjects and additionally encountered subject matter and explored academic inquiry as a result of such games.

Questionnaire 2

Question 1: Have you studied any history-related subjects towards any sort of qualification?

Have you studied any history-related subjects towards any sort of qualification?

Answered: 8 Skipped: 0



The results suggest that most of the participants for this questionnaire were studying a history-related course at the time of the survey or had previously done so.

Question 2: Please state what influenced you in your interest in history-related subjects? (for instance: video games, books, films, documentaries, etc.)

Notable responses:

- 'Video games - The *Stronghold* series (PC) got me interested in castle life and fortifications in the medieval ages. *Europa Universalis IV* (PC) got me interested in European history (late middle ages to early modern).'
- 'Books, reenactment.'
- 'Almost entirely videogames.'
- 'Family connection, documentaries and films.'

The responses to this question show that games, whether video or other, are effective in influencing interest in certain themes. Of course, what children are exposed to is often related to peer or family pressure (or norms), so producing games which parents may support their children engaging with for the teaching qualities included can be a tool to encourage learning in children that may help to develop into their future interests.

Question 3: What was the single most influential factor in your interest in history-related study?

Notable responses:

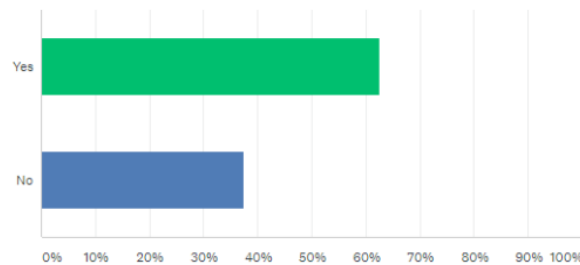
- 'Video Games.'
- 'Curiosity about the past.'
- 'The 'Sid Meier's *Civilization*' videogame series.'

The responses to this question were limited, but again do imply that games are significantly linked to developing interest in history-related studies, alongside an inquiring mind.

Question 4: Have you pursued your interest in history-based subjects through the medium of gaming?

Have you pursued your interest in history-based subjects through the medium of gaming?

Answered: 8 Skipped: 0



The results seem to indicate a 60/40 split between the two answers, which suggests that it greatly varies person to person, however more than half of the gamers have pursued the subject of history through gaming so this shows how important it is for the information in games to be reliable and for the academic field to understand the usefulness of games as a method by which to teach history-related subjects. Comparing this to Q 10 of Questionnaire 1, the higher number of history students in the respondents confirms that the use of gaming for such students is integral to their academic inquiry in the field.

Question 5: What are your thoughts about the historical accuracy of games?

Notable responses:¹⁵⁷

- '...I think games do not necessarily need to be completely historically accurate. Games can transfer feeling or atmosphere which is not possible in other mediums and this is an important part of understanding how life may have been in the past.'

¹⁵⁷ Also see Appendix 3

- 'It's akin to somebody throwing darts while blindfolded, at a target over 40 meters away'
- 'I think that where possible it would be better for games to be historically accurate, but not to the detriment of the overall experience of the game.'

The strong response shown here indicates that accuracy is desired by those players who go on to study history-based subjects and as the previous responses to both questionnaires imply, there is a strong relationship between the two, so games developers need to understand their responsibility for using evidence-based material to construct their themes, as well as advertise clearly the degree of inaccuracy possible, so that players understand that further research is essential before that take an element shown in games as a reliable piece of information.

Question 6: 'What are your thoughts on using history-based games as an educational tool?'

Notable responses:¹⁵⁸

- 'Perfectly viable'
- 'Shouldn't be done'
- 'If they present an accurate portrayal of a particular time-period then they could be useful especially for people with [learning disabilities] (possibly)'
- 'I think it can be an important tool for education if taken with a pinch of salt. It's important to give a bit of a disclaimer that games can't always depict everything correctly ...'
- 'Working as a teaching assistant, the children find being taught straight history as very dry & boring. Finding alternative ways to teach it ... greatly improves their interest. Gaming, as seen with *Minecraft* as an option for creative homework, can be a great tool- the issue is vast majority of games play too lose and fast with it to be useful. Games that are accurate, often are too mature for pupils or require too much of an investment of time to be an effective teaching tool as it currently stands.'

¹⁵⁸ Also see Appendix 3

The responses here, clearly support the synopses of the previous question (as well as the focus group), that games make good educational tools although caution should be taken with regard to the reliability of the information learned from such a medium.

Chapter 4: Discussion

Results from the questionnaires and the focus group¹⁵⁹ main themes are discussed here and compared with the academic debates about the usefulness of video games as an educational tool. The primary themes being considered are the benefits of immersive learning through both engagement with historic themes and the embodiment of historical characters using role-play, how enjoyment enhances the learning outcomes, how gaming helps with the development of critical thinking skills and encourages engagement in further research. The problems with gaming is considered, such as the learning of incorrect information which is merely included to boost enjoyment and sales and may become embedded in memory as reliable information if further research is not engaged with, and issues such as addiction which could be counter-productive in making video games appropriate methods for teaching.

It should also be noted that not everyone plays games, and those who do may not be interested in something with an educational facet. Whilst the first questionnaire gained some responses from people with little experience of video games, the nature of the questions and the platforms where it was advertised meant that the respondents would be likely to have interest in the subject area. Respondents to Questionnaire 2 and the focus group were entirely made up the segment of society where games are regularly played and individuals concerned are academically inclined, with most studying history-based subjects. Whilst this may reduce the validity of the themes arising from the study, it should still show how many university students view the themes discussed, and as it is these students who universities would be interested in encouraging to enroll and keep engaged in their courses, then the outcomes are useful to be considered in an educational context.

¹⁵⁹ Appendices 3 and 4

The Relationship between Games and Academic Interest in Related Subjects

Based on the results of the survey, many respondents referred to strategy games being their inspiration for being enrolled on an antiquity related history course, with one third of Q1 informants saying so. Games such as the *Total War Saga*,¹⁶⁰ the *Civilization*¹⁶¹ series and *Crusader Kings 2*,¹⁶² seem to be the favorites, whilst others informants cited first person shooters set in historical periods such as *Battlefield 1* and *V* as well as the several *Call of Duty* games that are set in World War two.¹⁶³ This supports the idea of strategy games as useful learning tools, as they encourage active thinking about things that someone overseeing an ancient empire would need to understand.¹⁶⁴ In addition, enjoyment and desire to win or complete quests inspire the player to investigate history outside of the game to perhaps gain an advantage in the game. Such reactions seem to apply whether someone became interested in gaming because of their studies or before them, as learning can come from any source of information and games tend to be more engaging than books. Research from Bacalja suggests students found video games far more immersive as they incorporate a greater depth of factors,¹⁶⁵ such as lighting and music to set tone and feeling and that this thus stimulates the brain more than say a book.¹⁶⁶

There seems to be just as many informants who engaged in playing history-related games after already being interested in a subject as there are those who gained interest in the subject through gaming, and some say they do not recall which came first.¹⁶⁷

“I was interested in history first ... but some games have made me interested in different historic cultures that I hadn't known much about before playing games about them”.¹⁶⁸

This shows that students can gauge their own interest in a variety of subjects and many informants were positive towards the notion of video games being used in an educational sense and a significant portion of those who were negative (in Questionnaire

¹⁶⁰ *Total War* series, 2000-2020

¹⁶¹ *Civilization* series, 1996-2016

¹⁶² *Crusader Kings 2*, 2012

¹⁶³ *Call of Duty World at War*, 2008

¹⁶⁴ Rollinger. 2020.p.33

¹⁶⁵ Bacalja, 2018.p.158

¹⁶⁶ Bacalja, 2018.p.159

¹⁶⁷ Appendix 1 and 2

¹⁶⁸ Appendix 4

1 predominantly¹⁶⁹) had hardly played games at all, so may have based their responses upon media perceptions rather than their own experiences. Therefore, just because a participant gained interest in history from elsewhere, it does not mean that games are not useful in encouraging the exploration of history educationally.

Developing Critical Thinking through Immersive Learning

One noticeable recurring theme present in a significant number of the positive responses to the survey was that games can and are a useful educational tool,¹⁷⁰ as they provide an immersive experience which other mediums simply cannot compete with. However, a lot of the informants suggested that it should be implemented in a controlled way:

“I think it can be an important tool for education if taken with a pinch of salt. It's important to give a bit of a disclaimer that games can't always depict everything correctly...”¹⁷¹

However, there were some notable outliers that were against the idea of games in an educational environment, stating that it was ill advised; this is possibly due to the fact that it is still untested and there is still a stigma that surrounds video games.¹⁷²

The focus group noted that games often incorporate ‘what if’ scenarios whereby a game challenges the player to think of all the possible outcomes and choices from the viewpoint of any particular historical figure, essentially putting you into their shoes, allowing understanding of the choices that figure faced and therefore the logic and reasoning behind it in real life:

“but doing it differently means you have learnt to critically analyse the way it could have been done. You are playing the ‘what if’ – whether you win or lose you are assessing and understanding all the criteria in an immersive way”¹⁷³

Informant A also gave the example of how in *Rome Total War 2* the player is told that in the battle of Raphia, the Egyptian elephants are afraid of the much bigger Seleucid elephants which is a reflection of the battle account given by Polybius.¹⁷⁴ Therefore since

¹⁶⁹ Appendix 1

¹⁷⁰ Appendix 1

¹⁷¹ Appendix 3

¹⁷² Kuss, Smith, 2012.p.5

¹⁷³ Appendix 3, informant B

¹⁷⁴ Poly V.65 and V.79-87.

games are an immersive medium they can allow the player to put themselves in the shoes of historic generals and gain a greater context as to the decisions made then; by thinking about the necessitating factors they come to consider why someone did what they did in reality.

Games embody immersive learning as they encourage role play, which “makes you think ‘what would they have thought?’”¹⁷⁵

“Yeah, that goes across all sorts of different topics too, because we had a similar thing with a politics module like that, it was to do with global resources –like oil- and I know that sounds really dry but I took on Russia, representing them and having discussions with other countries’ representatives to make deals. I know a lot about Russia’s natural gas and oil now and I would never have bothered looking into anything like that without the need to get directly involved with it, so anything which makes you have a more direct and tangible experience of a thing could be useful...”¹⁷⁶

Therefore, by role-playing certain events in history, a student has the potential to learn details about whatever subject they are engaging with.¹⁷⁷ This is due to immersing themselves and becoming a historical figure, thus gaining their viewpoint and options from a social, political and economic viewpoint.¹⁷⁸ By making decisions based on historical precedence and knowledge of the time period, one subconsciously learns about it. This is not necessarily as easy to do using other forms of media, as the outcome does not rest upon the participants’ input, so they are less committed or engaged. There was no doubt that the focus group members all agreed that roleplay games were a positive tool in terms of education.

“At school being stuck watching a film is nowhere as good as games for learning as you can be immersed by walking around a period, not just a spectator. Really be engaged in it and interact with it”¹⁷⁹

¹⁷⁵ Appendix 4, Informant A

¹⁷⁶ Appendix 4, Informant B

¹⁷⁷ Van Ments, 1989

¹⁷⁸ Rollinger. 2020.p.34

¹⁷⁹ Appendix 4, Informant D

Is Unreliable Representation Problematic?

In response to Q2:q5 the general consensus was that games are no way historically accurate, possibly even “akin to somebody throwing darts while blindfolded, at a target over 40 meters away”.¹⁸⁰ This therefore would seem to highlight an issue discussed in Chapter 2, where the example of *Ryse: Son of Rome* shows a game being blatantly historically inaccurate, causing it to be egregious and disingenuous to the player. A response to Q1:q6 gives some insight into why this occurs, saying “it is often the case with history games that they are ‘Hollywoodified’.”¹⁸¹ However, the primary issue which arose from all informants was that “it can confuse you into thinking it’s true, especially when lots is correct about the historic information”.¹⁸²

This therefore supports the idea that games often strive for a sense of authenticity rather than accuracy based upon reliable sources; when the two are confused then complications can arise. A good example of this is *Assassin’s Creed Odyssey*’s polarization of characters such as Cleon and Pericles. Because this storyline is based on the ancient writing by Thucydides it would be very easy for someone to just assume that this is reliable information, however, his work is subject to great debate over its reliability.¹⁸³ Such issues are exacerbated by media publicity, such as how as Ubisoft advertise the fact that historians influence the development of the games, therefore the player can easily be misled with regard to the reliability of the information being learned from the game.

Therefore, when using any game in an educational environment it is important to ensure that the students are made aware that games are not intended to be historically accurate and should be used in order to inspire interest and further study a specific area or topic. One respondent to Q2:q5 wrote an entire paragraph that seemed to adequately convey this point:

“It’s very common for games to present themselves as, if not historical events, set in a time and place that represents accurately a time and place in history. Often this is in the best of intentions ... but there are often historiographical failures that arise as a result of trying to boil down complex information into

¹⁸⁰ Appendix 3, Q1:q5

¹⁸¹ Appendix 3, Q1:q6

¹⁸² Appendix 3, Q1:q6

¹⁸³ Luce, 1989.p.12

viable game systems. An instance of this would be the inclusion of a 'Native American' faction choice in *Civilization 4*, which quite obviously translates poorly ... [having] varying peoples conglomerated into homogenized groups in a way that does not correlate in the real world ... In this, it should be understood that videogames as a non-academic media are rarely going to reflect an academic understanding of history and thus 'historical accuracy', but instead will reflect a cultural understanding of history".¹⁸⁴

The theory that games can be used as a cultural understanding is a unique angle to take as it could easily become another way to use games educationally but is clearly problematic in its execution.

On the topic of games' authenticity, respondents suggested that they have a potential to spread misinformation. However, generally it should be noted that most respondents seemed aware of inaccuracies through their own research. This implies that students in education should be made aware of the potential for historical inaccuracy and encouraged to research the evidence from the period in question to gain a wider understanding.

"In all media, but possibly more so in games, there is a tendency to group peoples in a sweeping way and not showing you the details, which therefore makes it pretty incorrect. *Civilizations 5* for instance where the troupes led by Alexander the Great, shows the Greeks unifying cultures and the Celts as a single unified group being led by Boudicca".¹⁸⁵

This observation reflects a primary issue for educational game use, as facts are merely overviewed, not properly explored in any detail. This can result in players being misled, as with Informant A who thought that the Classical Greek poleis were unified until he later researched into this.¹⁸⁶ This therefore indicates that games can have a tendency to make generalisations of history-based on the precedence of making the game more accessible and enjoyable and thus can cause problems with games being used in an educational setting as it has the potential to give people the wrong impression, one that is differing from the ancient scholarship of the subject area.

¹⁸⁴ Appendix 3, Q2:q5

¹⁸⁵ Appendix 4, Informant D

¹⁸⁶ Appendix 4, Informant A

The fact that the reliability of historical representations in some games is questionable, was explored further by the focus group:

“*Assassins Creed*, for instance the city structures, are as factually accurate as possible, but the gap in where the fiction begins is a bit problematic”¹⁸⁷

“[however] where Alexander the Great’s city is perfect, but then to throw in a mad chariot race away from Julius Caesar which is silly and not at all correct”¹⁸⁸

The focus group discussion showed how games can so diverge from reality that they end up being laughable, noting for instance how Julius Caesar was unlikely to be involved in a chariot race fending off Ptolemaic soldiers during the battle of the Nile,¹⁸⁹ much as in *Ryse: Son of Rome*,¹⁹⁰ where it is extremely unlikely and not at all documented about Boudicca invading Rome with an army of elephants. This would therefore show that accuracy is a relevant criticism of a game when it is so diverse as to break the immersive experience or causing imbedding of incorrect information whilst players feels they are immersed in the historic period.

When games are trying to follow reliable evidence, they can still be biased as they

“can often only show one side of the argument. Cleon in *Assassins Creed Odyssey* for instance, is based on Thucydides’ view of him, and Thucydides may not be the most reliable source as they were political rivals at the time so of course he was not going to be too keen on him”.¹⁹¹

However, this could be argued as being

“the same as when you study a subject from history ... One book on the subject may say something happened like this and another may say it happened a different way, so you have to get the full picture before you decide what the truth is, don’t you? It’s a good example of why you shouldn’t ever just take one view on the subject”.¹⁹²

¹⁸⁷ Appendix 4, Informant E

¹⁸⁸ Appendix 4, Informant D

¹⁸⁹ *Assassin’s Creed Origins*, 2017

¹⁹⁰ *Ryse: Son of Rome*, 2013

¹⁹¹ Appendix 4, Informant A

¹⁹² Appendix 4, Informant B

It is fair therefore for games to tend to take one interpretation of a historical figure to give the content continuity, and if the ancient scholar being utilized has a negative view of another historical figure then a game based upon these writings will reflect this.

Therefore, when using a game in an educational manner it must be clear that it is an interpretation of a single source and there is a broader picture to be found through research. The focus group indicated that this lack of authenticity tended not to be a significant issue, as many informants said that they were inspired to do research on the period as a result of playing, thus being exposed to more reliable information causing them to be aware of inaccuracies. However, it can be frustrating when most of the information learnt in games seems historically reliable, so games need to be advertised clearly as to what degree of reliability they contain. Games like *Assassins' Creed Odyssey* and *Origins* both have history tours that try to reduce the chance of unreliable evidence being experienced to encourage learning of reliable information.

How Modern Cultural Norms are Imposed upon Ancient Cultures

Another topic of discussion that was brought up is the issue that games are made with modern cultural trends in mind, for example:

“*Assassins Creed Odyssey* offered a female role, and she is the best one to pick so things are changing or at least some roles are being considered more by some developers. However, when you play as a female you are not treated any differently and this would not have been likely to be true in that period”.¹⁹³

“That has to happen though because it would mean the game changed its point and purpose, and it could open up all sorts of problems in today’s culture regarding equality issues”.¹⁹⁴

This clearly illustrates that there are some gamers who know games are influenced by the cultural values of today. This raises the point that if players can have awareness of certain tropes that games tend to follow in order to sell to a wider audience, then it may go some way to countering the argument that games can mislead and spread misinformation, because if a player becomes aware of such things at any point this then it is no longer misinformation. For instance, the player could also learn about contemporary representations of history through the medium of playing a game set in

¹⁹³ Appendix 4, Informant A

¹⁹⁴ Appendix 4, Informant D

antiquity, thus knowing that this must be critiqued when studying history properly. However, if influence from the Ubisoft executives had not put pressure on the *Assassin's Creed* developers to play down the female characteristics, they could well have fully embraced the idea of a female mercenary in Ancient Greece and all the trials that come alongside that. Therefore, profit and greed can sadly ruin a games representation of history by limiting the creativity of the developers.

Cultural bias of more recent historic periods can be a particularly difficult issue, as it can encourage a colonialist, or single culture's view of historic events regarding other cultures.

"I was most disappointed by *Battlefield 1*, I thought it was going to be a decent portrayal of the war, but it was very much as how the British perspective would be, it just represented Germans as evil".¹⁹⁵

"It's the same with some colonialist-based games, like *Cossacks* and other games like *Age of Empires* based on South American invasion, they only portray the British Empire and the glory of their actions".¹⁹⁶

This promotes the notion that some players, if not all, come into education already having a biased understanding of parts of history. This is because the games developers know this will sell well, and because it reflects embedded cultural perspectives to some degree, thus avoiding too much debate with critics; only in 2018 did the first game set in World War 2 (*Battlefield V*) show the perspective of the Germans. The reasons for this are obvious as first-person shooter games need the player to have no empathy with their opposition, and the Nazis make the perfect candidate for a 'bad guy' because they have a historic representation of being evil due to them being on the opposite side of a world war during living history. However, the reality is far more complex, with Nazi soldiers forced to fight through transcription and to avoid persecution, but these perspectives would not allow full engagement with the purpose of the game, so cannot be expressed. This can also be true of any game set in antiquity as well, with multiple depictions of Persians and Celts being overly negative showing them as mad barbarians without culture. Thus, this dehumanisation of certain cultures is not only showing a biased

¹⁹⁵ Appendix 4, Informant D

¹⁹⁶ Appendix 4, Informant F

overview of one side of history, but also perpetuates negative cultural values of other cultures in modern society, which is extremely problematic in an educational setting.

This issue also arises in strategy games based in the colonial era, as they only show the perspectives of the colonialists. “The problem is that you play the game and read it as a show and that would give a bad representation from an educational perspective”.¹⁹⁷ It is good to see that some players may observe such issues, but on the whole the games perpetuate negative narratives which is problematic in the teaching environment, however, if this was to be used as a theme for discussion, it should be possible to still utilise such games as an educational source.

Educational Qualities even when Information is out of Context

The results of the surveys seem to suggest that through enjoyment, participants can be motivated to retain key facts and knowledge. Furthermore, in response to Q1:q7¹⁹⁸ many said that they learnt historical details from games, for example:

“The Roman world and how the senate may have functioned, and in *Crusader Kings 2* how to do kingship and keep vassals happy and loyal”,

“Information about elements of history I wouldn't have known about otherwise [and] the way politics has changed.”

This correlates with the theory that games can stimulate the brain in a positive way and allow it to learn key information about historical facts and such detailed things as how ancient civilizations managed economics, diplomatic and military issues.

Another area of discussion was that games do not necessarily have to be historical in their content in order to be educational, for instance, *The Witcher 3* is based heavily in Medieval Polish folklore.¹⁹⁹ Informant B was not ingratiated with history-based games but still learned interesting bits of historical information from games.

“I play [games] mostly because I find them enjoyable ... but they still have their influences from actual real mythology and folklore... and then you find out

¹⁹⁷ Appendix 4, Informant F

¹⁹⁸ Appendix 3

¹⁹⁹ *Witcher 3: Wild Hunt*, 2015

connections with cultures which are really interesting, and so I was inspired to know more; even if you are not interested in history you notice things”.²⁰⁰

This suggests that if one is immersing themselves into a game and becoming deeply involved, then they are educating themselves subconsciously despite the fact that the game they are playing is not being directly set in history. *Elder Scrolls V:Skyrim*²⁰¹ was another example the focus group used to support this argument, as even though it is set in an entirely fictitious universe, it still includes elements of information related to the Roman Empire.²⁰² Therefore, even by playing a game that is not entirely based in history, it still has educational potential.

Such games can also inspire broader interests:

“I was already interested in Norse mythology, but seeing representations of it in *God of War* and other games inspired me to do more research into it the culture... and visiting Sweden then added to my interest”.²⁰³

This exemplifies the fact that games can stimulate an inquiring mind, indicating how important an enjoyable experience is in engagement with information, and if this comes woven into a fantasy story this does not have to matter so long as it inspires academic exploration. Nevertheless, not everyone learns in this way from playing games, however, there appears to be clear evidence that some do, and these individuals are likely to be those who would go on to study at higher levels, thus supporting the idea that games promote engagement with higher and further education.

Overview of Academic Research in Relation to Themes Arising from this Study

In general the results from the surveys and the focus group seem to align with the majority of scholars who present arguments for the positive use of video games in an educational sense, such as King, Squire and Lowe²⁰⁴, and Daphne Bavelier,²⁰⁵ who says that games modify the human brain in positive ways, such as being able to quickly identify patterns.

²⁰⁰ Appendix 4, Informant B

²⁰¹ *Elder Scrolls V: Skyrim*, 2015; Appendix 4, Informant A

²⁰² *Elder Scrolls V: Skyrim*, 2015

²⁰³ Appendix 4, Informant B

²⁰⁴ King, 2002; Squire, 2003 and 2008; Lowe, 2009

²⁰⁵ Bavelier, 2012

Looking at the evidence from the surveys, the focus group, and academic theorists, there seems to be a case that in the contemporary era, positive perspectives of gaming being used in an educational manner are already prevalent. Bavelier discusses how action games can cause the brain to become far better at recognising patterns,²⁰⁶ while King highlights how when something is fun,²⁰⁷ then a person is stimulated to learn historical facts far more easily. Van Ments²⁰⁸ and Erickson²⁰⁹ look at the aspect of roleplay and how imagination and immersion work together to create an effective learning experience through embodiment of a character who is constrained by a set of criteria specific to the situation they are in and need to resolve; this can be utilised not only for learning about history, but also other subjects, such as Informant B's experience of learning about politics. Therefore, it is reasonable to perhaps assume that gaming should become a regular tool for mainstream academia, especially as it already uses games like *Minecraft* in schools and *Assassin's Creed Origins*' discovery mode is useful for students of any age or level of study. In addition, strategy games such as *Civilization* and *Total War* are great examples of how, by simply playing and enjoying them, they are subconsciously teaching about history, because it is necessary to know the historical context of whatever faction they are playing in order to achieve victory. Also, games such as *Call of Duty*, despite it not being entirely authentic, immerses the player into that historic setting, for example the Battle of Makin Atoll and the storming the Reichstag in *Call of Duty World at War*.²¹⁰ Essentially, any game which has any sort of historical setting has promise in terms of it potentially being an educational tool, because just by playing the game the player is immersing themselves into that historical scenario. Therefore, whilst negatives do preside, with themes such as addiction being a major factor, if the content of the game has positive attributes then such immersion is being utilized productively. In fact, this research also supports the idea that even when a game is fictitious, there is still the chance of independent inquiry to arise from interest in the non-fictitious elements behind a games' lore.

Reception Theory and the Simplification of Games

Another important subject is that of reception theory and how player agency is a unique part of how games are influenced by modern culture, since a player is directly partaking

²⁰⁶ Bavelier, 2013

²⁰⁷ King, 2002

²⁰⁸ Van Ments, 1989

²⁰⁹ Erickson, 2018, Personal Communication

²¹⁰ *Call of Duty, World at War*, 2008

in the historically-based world that the games makers have created and because of this, events and gameplay are specifically tailored to cater to the target audience's expectations when playing a game:

“There is a problem in that most games only lend themselves to a certain telling of history, for instance *Civilizations* has a Western-centric idea of cultures and things such as how technology progresses from pottery to the space-race.”²¹¹

This therefore can lead to a disparity between what someone could learn when playing a game compared to the actual history which has multiple perspectives to it rather than just a Western one. This correlates with Hall's view of reception theory, how ingesting any piece of media, whether it be films, books or newspapers, individuals are directly contrasting their personal beliefs to what the piece of media states.²¹² Therefore this explains why games often show historical events from a Western perspective, since they know that it meets the expectations of the player who are presumably from the West, therefore they are less likely to question the portrayals depicted in the games. In short games developers will always try to make a game that will appeal to their target audience so that less people oppose the depictions of history in those games.

Games always simplify historical events, but this makes it difficult to learn history from them. This was discussed within the focus group:

“There is a problem in that most games only lend themselves to a certain telling of history, for instance *Civilizations* has a Western-centric idea of cultures and things such as how technology progresses from pottery to the space-race. It's a mechanic of progression which is so heavily caught up in thinking everything has a direct and linear progression from point A to B that it can do a lot of damage to anyone's perspective of history if it is not considered critically.”²¹³

This perfectly sums up the point and correlates with the ideas of Eichner, who states that because video games are an interactive media it is filled with ideologies for reasons described.²¹⁴ This leads to the problem where someone could learn something from history that is wrong, the overt nature of some of the simplification in games can mislead. However, the primary point that can be learnt from this research is that instead

²¹¹ Appendix 4, Informant C

²¹² Terry, 1996.p.1; Hall, 1973.p.3

²¹³ Appendix 4, Informant C

²¹⁴ Eichner, 2014.p.1

of playing games as a source of information, they can easily be used in an academic setting in order to promote discussion and interest:

“We introduced [a friend] to the game *World of Warships: Legends* and he talked about how much he enjoyed it and then was inspired and went off and researched into the Russian warships and bought models”.²¹⁵

Conclusions

In summation, informant responses and academic theories indicate that games, whilst by no means a perfect method in an educational environment, are a unique medium that encourages immersive learning, and above all are fun and enjoyable, which encourages overlearning to occur through repetition of engagement. Games as an educational tool are already being implemented in some key areas, such as with *Minecraft* being used to educate on antiquity-related subjects in schools and reenactment modules at university to encourage critical thinking about the period and its cultural interactions. Therefore, this shows how such tools can impact learning in the field of history-related learning, and informants support the fact that games such as *Assassin's Creed Origins* and *Odyssey* are already catering to this with their discovery mode. Meanwhile, strategy games such as *Civilization* and the *Total War* series' provide useful material such as military strategy, battle tactics and key historic dates to learn from, while encouraging learning through play.

Interactive learning can occur from the merging of fun mechanics to explore within a historic theme in a repetitive manner to win the game or quest, whilst learning about history. However, this repetitive element of games does have notable negatives, mainly based around addiction, so it is necessary for games to be managed by parents and teachers if being used as a learning tool. In addition, the unreliability of the historic representation can be problematic, so again, in a controlled way in an educational setting, games as an educational tool can be useful, but only if supported by instruction on what is and is not reliable. Once this is achieved, there are many useful qualities to be gained, as immersive learning encourages critical thinking which embeds

²¹⁵ Appendix 4, Informant D

understanding in a non-linear way and repetition encourages overlearning which stimulates memory of details.

In addition, an interesting point arose in the focus group responses, that being that even fantasy-based themes can promote academic inquiry if elements of the plot are based on fact (such as herbal usage to heal, or flora and fauna in a specific country), or cultural representations of folklore; for example the *Witcher 3* is inspired by Polish medieval history. This shows that regardless of the accuracy of the plot, if specific elements of a game are based on reliable evidence, inspiration to learn more is promoted, which is supported by reception theory.

The questionnaires and focus group indicated that games could cause an interest in antiquity related university courses, as well as inspire new fields of interest during their studies. Not all informants engaged in games related to their interests in history before their studies, but most were inspired to research subject areas further as a result of such interaction at any point in their education. Those who had experience of modules at university based upon reenactment and games also felt that they were more inspired to engage at a deeper level of research and critical thinking, developed a more rounded view of the subject, and overall retained more detailed understanding of the subject area as a result. They also felt that they had a better base understanding of subjects already encountered in video games when exploring them further during their academic studies.

Overall, what this research demonstrates is that video games offer many positives in their educational use so long as there is clear understanding and explanation on the degree of reliability the historic themes covered in the games have. In addition, games have the ability to inspire individuals to engage in academic qualifications based upon the themes found in the games they have played, therefore games can additionally be used to promote academic inquiry and encourage students to sign up for associated qualifications.

References

Ancient Historians:

- Alcuin. *Fragment of the Anglo Saxon Chronicle*. in Redgrave. A. E. *Alcuin*. (2015) Oxford. The Oxford Companion to British History,
- Aeschylus. *Agamemnon*. J. Connington. (trans) Oxford: Creative Media Partners LTD
- Aristotle. *Politics*. Bolland. W.E. (trans), 1877. London: Longmans, Green, and CO.
- Appian. *The Civil Wars*. Thayer. E.J. (trans), 1913. Harvard: Loeb Classical Library.
- Caesar. *The Civil Wars*. Peskett. A. G. (trans). 1914. London: William Heinemann Ltd.
- Herodotus. *The Histories*. Godley. A. D. (trans). 1919. London: William Heinemann Ltd.
- Polybius, *the histories* Frank W. Walbank, Ian Scott-Kilvert (trans). 1979. *The Rise of the Roman Empire*. Penguin Classics
- Thucydides, C.F. Smith. (trans) *History of the Peloponnesian War*. 1920. London: William Heinemann Ltd.

Modern Historiography:

- Bacalja, A. (2018). *What critical literacy has to offer the study of video games*. Norwood. Australian Journal of Language & Literacy.
- Banks, O. (1976). *The sociology of education*. 3rd ed. London: Batsford.
- Bavelier. D. (2013). *Games to do you good*. New York: University of Rochester
- Buchanan, I. (2010). *Reception Theory*. Oxford: Oxford University Press.
- Bulmer, M. (1977). *Sociological Research Methods: An Introduction*
- Cochran, J.K and Sellers. C.S., Wiesbrook. V., Palacios. W.R. *Repetitive Intimate Partner Victimization: An Exploratory Application of Social Learning Theory*. London: Taylor and Francis Group
- Dovey, J. and Kennedy. H. W. (2006). *Game On: Computer Games as New Media in cultural and media studies*. Glasgow. Bell & Bain LTD
- Eichner. S. (2014). *Agency and media reception: Experiencing video games, film, and television*. New York: Springer.
- Erickson K. (2020). *Personal Communication to Raybould. L.* (Email)

Gallagher.C. 2015. *An Educator's Guide to Using Minecraft® in the Classroom*: New York: Peachpit Press

Ghita. C and Andrikopoulos. G. (2009) *Total War and Total Realism: A Battle for Antiquity in Computer Game history*. In Lowe. D and Shabudin. K *Classics for All, Reworking Antiquity in Mass Culture*. Newcastle upon Tyne: Cambridge Scholars Publishing

Goggin. J. (2011). *Regulating (Virtual) Subjects: Finance, Entertainment and games*. Journal of Cultural economy. London: Routledge

Goldsworthy. A. (2000) *Roman Warfare*. London: Cassell

Graham. (2014). *The Gaming World and Women*. Melbourne. La Troupe University

Greenfield. P.M. (2014). *Mind and Media: The Effects of Television, Video Games, and Computers*. New York. Psychology

Grenfell, M. (2017). *Towards a Realist Sociology of Education: A Polyphonic Review Essay*. Educational Theory Hoboken: Wiley Blackwell

Guerrero, H.A.G. (2011). *Using Video Game-Based Instruction in an EFL Program: Understanding the Power of Video Games in Education*. Bogota: Colombia Applied Linguistics Journal.

Hall. S. (1973). *Encoding and Decoding in the Television Discourse*. Birmingham: University of Birmingham Press

Halter. E. (2006). *From Sun Tzu to Xbox: War and Video Games* New York: Thunder Mouth's Press

Harrison. (2004). *Time Commanders: Great Battles of the Ancient World*. London: Virgin Books

Hatlen. J.H. 2012. *Students of Rome: Total War*. Oslo. The Norwegian University of Science and Technology

Hauge. M.R. (2003): *Video game addiction among adolescents: Associations with academic performance and aggression*. Argosy: National Institute of Media and the Family

Kapell, M.W. and Elliot. A.B.R. (2013) *Playing with the Past: Digital Games and the Simulation of History*. New York: Bloomsbury

Katz. M. (2013). *Ideology and 'the status of Women' in Ancient Greece*. Middleton. Wesleyan University.

- King, L. (2002). *Game on: The history and culture of videogames*. New York: Universe Publishing
- Kuss, D.J and Griffiths.M. D. (2012) *Internet and Gaming Addiction: A Systematic Literature Review of Neuroimaging Studies*. Nottingham. Nottingham Trent University
- Levine. M.H. (2014) *Supporting a new ecology of learning*: in Blumberg. F. *Learning by Playing: Video Gaming in Education* Oxford: Oxford University Press
- Lowe. D. (2009) *Playing with Antiquity: Videogame Receptions of the Classical World*. In Lowe. D and Shabudin. K *Classics for All, Reworking Antiquity in Mass Culture*. Newcastle upon Tyne: Cambridge Scholars Publishing
- Luce. T. J. (1989). *Ancient Views on the Causes of Bias in Historical Writing*. Chicago. University of Chicago Press
- Ma. M. and Oikonomou. A (2017). *Serious Games and Edutainment Applications, Volume 2*. Cham. Springer.
- Magy, S.El-N. (2008) *Assassin's Creed: A Multi-Cultural Read*. Burnaby: Simon Fraser University
- Mallowe. C. 2014. *Beyond the Gates of Fire: New Perspectives on the Battle of Thermopylae*. Barnsley. Pen & Sword LTD
- Martindale, C. (2006). *Classics and the uses of Reception*. Oxford: Blackwell Publishing.
- Murray. S. (2017). *On Video Games: The Visual Politics of Race, Gender and Space* London: Tauris
- Myrseth, H. (2017). Introduction of a new instrument to measure motivation for gaming: The electronic gaming motives questionnaire. Hoboken. Wiley Blackwell
- Napier. S.J. (2007). *From impressionism to anime: Japan as fantasy and fan cult in the mind of the West*. Palgrave. Macmillan
- Porter, D. (1996). *Internet Culture*. London: Routledge.
- Robinson.K. Summerfield. AQ. (1996). *Adult auditory learning and training*. London: Routledge
- Rollinger. C. (2020). *Classical Antiquity in Video Games: Playing with the Ancient World*. London Bloomsbury
- Selwyn, T (2014) *The sociology of education and digital technology: past, present and future*. Oxford: Taylor & Francis.
- Squire, K. D. (2003). *Video Games in Education*: Cambridge: Massachusetts Institute of Technology

Squire, K.D. (2008). *Video Games and Education: Designing Learning Systems for an Interactive Age*. Leiden: Brill

Terry, E. (1996). "Phenomenology, Hermeneutics, and Reception Theory," in *Literary Theory*. Minneapolis: University of Minnesota Press,

Thorsen, S.T. (ed). 2012. *Greek and Roman Games in the Computer Age*. Trondheim: Akademia Publishing.

Van Ments, M. (1989). *The effective use of role play: A handbook for teachers and trainers*. London: Kogan Page

Wainwright. P. A. (1932). *Letopolis*. London. Sage Publishing

Wideman, H.H. et al. (2007). *Unpacking the potential of educational gaming: A new tool for gaming research*. York: York University

Wolfgang, I. 1978. *The Act of Reading: A Theory of Aesthetic Response*. Baltimore: Johns Hopkins UP

Online Articles:

BBC. (2019). *Call of Duty: Modern Warfare faces Russian backlash*. Available at: <https://www.bbc.co.uk/news/technology-50219739>. Accessed: 14/09/2020

Costello. J. (2019) *Ubisoft continue to claim their games don't have political stances, are still wrong*. Available at: <https://www.rockpapershotgun.com/2019/06/08/ubisoft-continue-to-claim-their-games-dont-have-political-stances-are-still-wrong/> Accessed: 25/08/2020

D'Angelo. (2018) W. *Assassin's Creed Odyssey Sells an Estimated 1.4 Million Units First Week at Retail*. Available at: <https://www.vgchartz.com/article/393568/assassins-creed-odyssey-sells-an-estimated-14-million-units-first-week-at-retail/> Accessed: 09/06/2020

Diaz. A. *EA calls its loot boxes 'surprise mechanics,' says they're used ethically* Available at: <https://www.polygon.com/2019/6/21/18691760/ea-vp-loot-boxes-surprise-mechanics-ethical-enjoyable> Accessed: 20/05/2020

Exploring Your Mind, 2019. *The Tetris Effect: What Is It?* Available at: <https://exploringyourmind.com/tetris-effect/> Accessed: 20/05/2020

Fischer. J. 2018. *How 'Assassin's Creed' is Helping Students Learn About History*. Available at: <https://geekandsundry.com/how-assassins-creed-is-helping-students-learn-about-history/> Accessed: 25/09/2019

Kingsland, K., Munson, R. and Kraft, M. (2020). *Analyzing the Assassins Creed Odyssey Discovery Tour Spatial and Temporal Locations of Featured Static Images*. *Archaeogaming*. Available at: <https://archaeogaming.com/2020/02/26/analyzing-the->

[assassins-creed-odyssey-discovery-tour-spatial-and-temporal-locations-of-featured-static-images/](#) Accessed: 14/09/2020

Kozlov.V. (2019) Available at: <https://www.hollywoodreporter.com/news/call-duty-modern-warfare-wont-be-released-russia-1249539> Accessed: 09/06/2020

MacCoubrey, M. (2018). Available at: <https://news.ubisoft.com/en-us/article/5cA54lyJYyKTi5o8rOMkin/women-of-ubisoft-melissa-maccoubrey> Accessed: 19/08/2020

Maguid. Y. (2019) What Happens When Students and Teachers Go Hands-on With Discovery Tour: Ancient Greece. Available at: <https://news.ubisoft.com/en-us/article/2Qdtl7NjlUPC5XO2JkJdLo/what-happens-when-students-and-teachers-go-handson-with-discovery-tour-ancient-greece>

Maher. C. (2020) *Kassandra was supposed to be the lead in Assassin's Creed Odyssey, but Ubisoft said "women don't sell"*. Available at <https://www.vg247.com/2020/07/21/kassandra-assassins-creed-odyssey-lead/> Accessed: 08/09/2020

Phillips, T. (2018) *Sales figures for Battlefield V*. Available at: <https://www.eurogamer.net/articles/2018-11-26-battlefield-5-physical-sales-down-more-than-half-on-battlefield-1>. Accessed: 10/08/2020

Purslow. M. (2020). Watch Dogs Legion's Director on Brexit, Politics, and Ubisoft - E3 2019. Available at: <https://www.ign.com/articles/2019/06/10/watch-dogs-legions-director-on-brexit-politics-and-ubisoft> Accessed: 25/08/2020

Reeves. B. (2018). Why Ghost of Tsushima is a Bold New Direction for the Creators of Infamous. *Game Informer*. Available at: <https://www.gameinformer.com/e3-2018/2018/06/13/why-ghost-of-tsushima-is-a-bold-new-direction-for-the-creators-of-infamous> Accessed: 11/09/2020

Soares. T. (2019). '*Civilization*' and *Strategy Games*' Progress Delusion. Available at: https://www.vice.com/en_us/article/4agqzm/civilization-and-strategy-games-progress-delusion Accessed: 20/09/2020

Times Higher Education. (2020). *Playing video games 'improves students' employability skills'* Available at: <https://www.timeshighereducation.com/news/playing-video-games-improves-students-employability-skills> Accessed: 20/05/2020

Tyrrel, B. (2020). Assassin's Creed Odyssey review: Ubisoft's newest Assassin's Creed is the stuff of legends. *IGN*. Available at: <https://uk.ign.com/articles/2018/10/01/assassins-creed-odyssey-review>. Accessed: 02/05/2020

Welsh. O. (2013): *Ryse: Son of Rome Review* <https://www.eurogamer.net/articles/2013-11-21-ryse-son-of-rome-review> Accessed: 11/05/2020

Movies:

300. (2006). Directed by Zack Snyder (Film) Burbank. Warner Brothers Pictures

Gladiator. (2000). Directed by Ridley Scott. (Film) Universal City. Universal Pictures

Television shows:

Decisive Battles. (2004) History Channel. Television. July 23

Time Commanders. (2003) BBC Two. Television, 4th September

Time Commanders. (2016) BBC Two. Television, 4th September

YouTube videos:

Bavelier. D. (2012) Your Brain on video games. *YouTube* Available at:
<https://www.youtube.com/watch?v=FktsFcoolG8>. Accessed: 02/09/2020

Howard-Jones. P. (2012) Neuroscience, Games & Learning. *YouTube*. Available at:
https://www.youtube.com/watch?time_continue=3&v=aKFjoF-YO20&feature=emb_logo .
Accessed: 18/09/2020

PlayStation. (2018) God of War - Behind the Myths: An Interview with Cory Barlog.
YouTube. Available at: <https://www.youtube.com/watch?v=wxyEcgv34Rk>. Accessed:
11/05/2020

Ubisoft (2018a) Assassin's Creed Odyssey trailer, *YouTube*. Available at:
https://www.youtube.com/watch?v=s_SJZSAtLBA. Accessed: 09/06/2020

Ubisoft. (2018b) Assassin's Creed Odyssey: E3 2018 Conference Presentation.
YouTube. Available at: https://www.youtube.com/watch?v=S_vqG-_0HDs. Accessed:
09/06/2020

Xbox (2013a) Forging the Armor and Weapons in Ryse: Son of Rome. *YouTube*.
Available at: <https://www.youtube.com/watch?v=0kqgLcSTgV8>. Accessed: 24/05/2020

Xbox. (2013b) Ryse: Son of Rome – Inside Look at Combat. *YouTube*. Available at:
<https://www.youtube.com/watch?v=-TRL8lLZe0Q>. Accessed: 19/08/2020

Video Games:

Bethesda Game Studios. 2011. *Elder Scrolls V: Skyrim*. Zenimax LTD

CD Projekt Red. 2015. *The Witcher 3: Wild Hunt*. Video Game. CD Projekt Red. Warsaw

Creative Assembly. 2004. *Rome: Total War*. Computer game. SEGA. PC. Horsham

Creative Assembly. 2013. *Rome: Total War II*. Computer game. SEGA. PC. Horsham

Crytek. 2013. *Ryse: Son of Rome*. Video Game. Xbox One. PC. Microsoft Studios. Frankfurt

Dice. 2016. *Battlefield 1*. Video Game. PS4. Xbox One. PC. EA. Redwood City. California

Ensemble Studios. 1999. *Age of Empires II*. Computer game. Microsoft Game Studios. PC. Dallas.

Ensemble Studios. 2005. *Age of Empires III*. Computer game. Microsoft Game Studios. PC. Dallas.

Infinity Ward. (2019) *Call of Duty: Modern Warfare*. Video Game. Activision PS4/Xbox One/PC

Minecraft.Net (2016) Minecraft: Education Edition <https://education.minecraft.net/how-it-works/in-the-classroom/>

Namco. (1980). 1980. *Pacman*. Arcade Game. Namco. Tokyo

Pajitnov. A. Gerasimov. V. (1984). *Tetris*. Arcade Game. Infogrames. Moscow

Paradox Development Studio. 2012. *Crusader Kings 2*. Computer game. Paradox Interactive. Stockholm

Paradox Development Studio. 2020. *Crusader Kings 3*. Computer game. Paradox interactive. Stockholm

Sony Interactive Entertainment Santa Monica Studio. 2018. *God of War*. Video Game. PS4. Santa Monica

Sony Interactive Entertainment. Sucker Punch Studios. 2020. *Ghost of Tsushima*. Video Game. PS4. Bellevue

Treyarch. *Call of Duty: World at War*. 2008. Video game, PS3/Xbox 360. Activision. Santa Monica

Ubisoft Montreal. 2017. *Assassin's Creed Origins*. Video game. /PS4/Xbox One/PC. Ubisoft. Montreal.

Ubisoft Montreal. 2017. *Assassin's Creed Valhalla*. Video game. /PS4/Xbox One/PC. Ubisoft. Montreal.

Ubisoft Quebec. 2018. *Assassin's Creed Odyssey*. Video game. PS4/Xbox One/PC. Ubisoft. Quebec

Ubisoft Toronto. 2020. *Watch Dogs: Legion*. Video game. PS4/Xbox One/PC. Ubisoft. Toronto

Databases:

Survey Monkey UK: www.surveymonkey.co.uk. Accessed: 05/02/2020

Sales of Video Games: www.vgcharts.com. Accessed 14/11/2018

Image references:

Image 1: Fischer, J. (2018). How 'Assassin's Creed' is Helping Students Learn About History, *Geek and Sundry*. Available at: <https://geekandsundry.com/how-assassins-creed-is-helping-students-learn-about-history/>. Accessed: 20/09/2020

Image 2: Anderiesz, M. (2010). Sid Meier's Civilization V. *The Guardian*. Available at: <https://www.theguardian.com/technology/gamesblog/2010/sep/22/civilization-5-pc-game-review>. Accessed: 20/09/2020

Image 3: PushStartGaming. (2013). *Mini. Ryse: Son of Rome review*. Available at: <https://pushstartgaming.wordpress.com/tag/ryse-son-of-rome/> . Accessed: 20/09/2020

Appendices

Appendix 1: Questionnaire 1

How often do you play video/computer games on average per week?

- Not at all
- Rarely
- Less than 7 hours
- 7-14 hours
- 14-28 hours
- 28 hours plus

How many different games that you play are based in a historical setting?

What sort of video/computer games do you play? (Tick as appropriate)

- RPG (role playing games, for example the *Elder Scrolls* and *Dragon Age*)
- Shooters (both third and first person)
- Strategy (such as *Total War* and *Age of Empires*)
- Party Games (such as *Mario Party*)
- Platformers.
- Action/Adventure.
- Puzzle Games.
- Mobile Games
- Card Games
- Other (please state).....

When playing video/computer games would you say that you immerse yourself into the
game world

Yes/ somewhat /No

- If yes, please expand on this

Do you do further investigation into the historical period in which the game world is set?

Yes/Sometimes/ No

Do you feel that games with a historical setting but are not at all accurate are spreading
misinformation?

Yes/ somewhat /No

Have you learnt anything interesting about history as a result of playing video games?

Yes/ somewhat /No

Do you feel there is a capacity for games to be a positive influence in terms of education
despite some historical inaccuracies?

Yes/ somewhat /No

Did playing a game in a historical setting make you interested in studying for a
qualification in a history-based subject?

Yes/No... please expand

Appendix 2: Questionnaire 2

Have you studied any history-related subjects towards any sort of qualification?

Please state what influenced you in your interest in history-related subjects? (for instance: video games, books, films, documentaries, etc.)

What was the single most influential factor in your interest in history-related study?

Have you pursued your interest in history-based subjects through the medium of gaming?

What are your thoughts about the historical accuracy of games?

What are your thoughts on using history-based games as an educational tool?

Appendix 3: Qualitative Responses to Questionnaires

Questionnaire 1

Question 6: Do you feel that games that have a historical setting but are not at all historically accurate are spreading misinformation?

- 'Few games claim to be historically accurate without any accuracy, though often they claim to be influenced'
- 'It can confuse you into thinking it's true, especially when lots is correct about the historic information'
- 'It is often the case with history games that they are "Hollywoodified". However, some games such as the total war games often have relatively good historical accuracy'

Question 7: Have you learnt anything about history as a result of playing video games?

- 'The Roman world and how the senate may have functioned. And in *Crusader Kings 2* how to do kingship and keep vassals happy and loyal.'
- 'Information about elements of history I wouldn't have known about otherwise.'
- 'How much mining trade and development is necessary to support expansion by armies'
- 'Hardly any women characters and they are often servants or unimportant'
- 'Sure, *Crusader Kings 2* taught me a lot about different kinds of feudal laws and caused me to do quite a bit of research'
- 'The way politics has changed'
- 'Actions of world war 1 and 2'

Question 8: Do you think that some games impose modern-day values onto ancient cultures.

- '*Civilization* imparts certain modern ideals of *Civilization* and what that means onto other cultures, and often genericises diverse cultural groups through modern classification'
- 'There is no way a game made today won't impose its values on ancient cultures'

Question 9: Do you feel there is a capacity for games to be a positive influence in terms of education despite historical inaccuracies?

- 'It has as it keeps younger audiences interested on the subject'
- 'A fun way to learn and you can repeat a thing until you understand it'

Question 10: Did playing a game in a historical setting make you interested in studying for a qualification in a history-based subject?

- 'I chose the crusading module following playing Crusader Kings'
- 'I was interested in history first which is why I played the game, but some games have made me interested in different Historic cultures that I hadn't known much about before playing games about them'
- 'Of course, I have always played *Rome Total War* as a kid and it still to this day is one of my favourite games'
- 'I doubt I would have taken Classical Civ A levels, let alone my degrees without games like *Rome Total War*'
- I was interested in history before playing video games that included an historical setting.
- 'Didn't start playing historical games until university'

Questionnaire 2

Question 2: Please state what influenced you in your interest in history-related subjects? (for instance, video games, books, films, documentaries, etc.)

- 'Video games - The Stronghold series (PC) got me interested in castle life and fortifications in the medieval ages. Europa Universalis IV (PC) got me interested in European history (late middle ages to early modern)'
- 'Books, reenactment'
- 'Almost entirely videogames'
- 'Family connection, documentaries and films'

Question 5: What are your thoughts about the historical accuracy of games?

- 'It depends on the game. I expect games like *Europa Universalis* to be accurate. The stronghold series tries to base its gameplay on historical fact but sometimes uses a bit of artistic license for gameplay purposes. I think games do not necessarily need to be completely historically accurate. Games can transfer

- feeling or atmosphere which is not possible in other mediums and this is an important part of understanding how life may have been in the past.'
- 'It's akin to somebody throwing darts while blindfolded, at a target over 40 meters away'
 - 'I think that where possible it would be better for games to be historically accurate, but not to the detriment of the overall experience of the game.'
 - 'Some are good some not so good'
 - "It's very common for games to present themselves as, if not historical events, to be set in a time and place that represents accurately a time and place in history. Often this is in the best of intentions - Firaxis with *Civilization* and Ubisoft with *Assassin's Creed* for two examples - but there are often historiographical failures that arise as a result of trying to boil down complex information into viable game systems. An instance of this would be the inclusion of a 'Native American' faction choice in *Civilization 4*, which quite obviously translates poorly into the real world. In rectifying this in *Civilization 5*, they added 'Celts' and 'Polynesia' factions - both of which are varying peoples conglomerated into homogenized groups in a way that does not correlate to the real world, but the common understanding of the Celts and Polynesia vs Native American / First Nation peoples meant that this act was not recognised as readily. In this, it should be understood that videogames as a non-academic media are rarely going to reflect an academic understanding of history and thus 'historical accuracy', but instead will reflect a cultural understanding of history".

Question 6: 'What are your thoughts on using history-based games as an educational tool?'

- 'If they present an accurate portrayal of a particular time period then they could be useful especially for people with dyslexia or ADHD (possibly)'
- 'I think it can be an important tool for education if taken with a pinch of salt. It's important to give a bit of a disclaimer that games can't always depict everything correctly when fun gameplay and storytelling has to be an important factor of the experience.'
- 'Perfectly viable'
- 'It *can* be a way to get people interested in history. Working as a teaching assistant, the children find being taught straight history as very dry & boring. Finding alternative ways to teach it such as; through stories, acting, projects &

age appropriate documentaries/films greatly improves their interest. Gaming, as seen with Minecraft as an option for creative homework, can be a great tool- the issue is vast majority of games play too lose and fast with it to be useful. Games that are accurate, often are too mature for pupils or require too much of an investment of time to be an effective teaching tool as it currently stands.'

- 'Shouldn't be done'
- 'I am very much in favour of it, as it is more likely to engage students'
- 'I think it can be an important tool for education if taken with a pinch of salt. It's important to give a bit of a disclaimer that games can't always depict everything correctly when fun gameplay and storytelling has to be an important factor of the experience'.

Appendix 4: Focus Group Transcript

A focus group of six individuals (five males, one female) who have recently been, or still are, studying a history-related subject (archaeology, ancient history, anthropology) at two different universities, met on an online forum on 24th June 2020 to discuss their thoughts on the topics under investigation for this dissertation. The discussion lasted for an hour and covered opinions and experiences related to aspects of the relationship between gaming and education. The themes proposed at the start of the discussion were:

- 1- Do you think that playing history-based games had any influence on your decision to study history-based subjects at higher or further education, or did an original interest in history influence your interest in such games, or are both things true?
- 2- Do you think that games are a good or bad medium for inspiring interest in history and for being used as teaching aids to learn about history, and do you think the unreliable information found in games are a problem or do they inspire more in-depth research into the subject in question?

A couple of hours before the meeting there was a short practice run to check that everyone could use the online forum, and to share the questions above and the research intention and consent form (Appendix 5), with the consent being required back signed prior to the meeting proper.

It is important to understand that all of the focus group informants are keen gamers, especially regarding games set in a historical context, and have gone on to study related subjects. Therefore they are informing on only the experience of people who have an academically inquiring mind, an interest in cultures and their histories, and who enjoy interacting with games, so are unlikely to be a true representation of a cross-section of society, although it is likely to be a good representation of many further education students studying the humanities.

Focus Group Transcript (24th June 2020, 2-3pm)

Informant A: My whole interaction with history came from games, I liked the re-enactment of battles. The music and tone of the game, as with *Total War*, drew me in.

Informant B: Using games for education were the main way I was allowed to interact with gaming from my parents, so I suppose I always see this option in the games I play.

Informant C: when I was young, the PS2 magazine gave away free demo games and that's how I got into games in the first place. Playing *Civilizations* and *Call of Duty* inspired the interest I have in history now.

Informant D: They didn't directly inspire my interest in history but were part of the process.

Informant E: I played *Age of Empires & Civilizations*, then later *God of War*. I am not sure whether my interest in history came before I played these games or after, I think they both happened at the same time.

Informant A: Some people have said that they got into playing games about a subject they were already interested in- you know while they were students.

Informant B: Yes I agree, I was already interested in Norse mythology, but seeing representations of it in *God of War* and other games inspired me to do more research into it the culture any mythology, and visiting Sweden then added to my interest again of course.

Some recent horror games are using elements of mythology too- I find myself thinking – ah yes they are looking at this bit of the culture here or that bit of the culture there when I play the games and it gives me other elements of the culture to look into depending on what the game is focusing on.

Informant D: Games are more interesting if fun comes first over realism – *Battlefield 1* would have been really boring if it didn't for instance -there is a fine line between sticking to what really happened and what the games developers need the game to do to get people interested in what they are offering.

Informant F: That's where fact checking comes in- I always check facts after looking at the games but there will always be a gap between how much they can stick to the available facts and still make it fun. *Assassins Creed* for instance- the city structures are

as factually accurate as possible, but the gap of where the fiction begins is a bit problematic.

Informant D: M3- *Assassins Creed Origins* for instance, where Alexander the Great's city is perfect, but then throw in a mad chariot race away from Julius Caesar which is silly and not at all correct.

Informant A: the games can often only show one side of the argument- Cleon in *Assassins Creed Odyssey* for instance, is based on Thucydides' view of him, and Thucydides may not be the most reliable source as they were political rivals at the time so of course he was not going to be too keen on him.

Informant B: well that is the same as when you study a subject from history isn't it. One book on the subject may say something happened like this and another may say it happened a different way, so you have to get the full picture before you decide what the truth is, don't you? It's a good example of why you shouldn't ever just take one view on the subject.

Informant A: games can really only ever show one side, so you always have to question it don't you.

Informant C: There is a problem in that most games only lend themselves to a certain telling of history, for instance *Civilizations* has a Western-centric idea of cultures and things such as how technology progresses from pottery to the space-race. It's a mechanic of progression which is so heavily caught up in thinking everything has a direct and linear progression from point A to B that it can do a lot of damage to anyone's perspective of history if it is not considered critically.

Informant A: some people play a game and just think that is how it was, but we can hope that if they get really into it, they would want to know more.

Informant D: I was most disappointed by *Battlefield 1*- I thought it was going to be a decent portrayal of the war, but it was very much as how the British perspective would be, it just represented Germans as evil.

Informant F: it's the same with some colonialist-based games, like *Cossacks* and other games like *Age of Empires* based on South American invasion, they only portray the British Empire and the glory of their actions. Even when you play as the other side-as the native Indians it still supports the colonialist perspective and shows the indigenous

people as being barbaric and uneducated lower class as compared to the civilized race. The problem is that you play the game and read it as a show and that would give a bad representation from an educational perspective.

Informant C: If games want to be stand-alone playable video games and not just second-rate entertainment, then they have to engage with the individual playing them, which is difficult to expect of every player, it is hard to passively learn from it.

Informant F: if you are learning with it you have to set the player a goal to play it with a critical eye rather than just run wild. You need the game to set a theme which is integrally linked to the tasks set or you will learn nothing. Some games could be used in teaching, *Total War Britannia* is very reliable as a teaching aid as it is a fact-checked game and has a reliable timeline to follow and you can engage with the battles from the perspectives of the different sides. The one that looks at the battle of 1066 could for example be one used for GCSEs and A levels for instance.

Informant C: Highlights another issue- where facts are truly available and they are represented then you are just using a toy to follow a storyline- does winning the fight in your game really count when it is a different way to how it occurred in history?

Informant A: You are thinking as them though and this is useful for learning.

Informant E: But doing it differently means you have learnt to critically analyse the way it could have been done. You are playing the “what if” – whether you win or lose you are assessing and understanding all the criteria in an immersive way.

Informant A: In *Total War* the game tells you things like the fact that the troupes on African elephants are feared by those on Indian elephants so you learn from that without being told that the African elephants were bigger and stronger- the game tells you things without you even thinking about it.

Informant C: in all media, but possibly more so in games, there is a tendency to group peoples in a sweeping way and not showing you the details, which therefore makes it pretty incorrect. *Civilizations 5* for instance where the troupes led by Alexander the Great show the Greeks unifying cultures and the Celts as a single unified group being led by Boudicca- even when they try to improve this in *Civilizations 6* where they have either Heracles the Athenian or Gorgo the Spartan queen, they still make adjustments for the sake of learning which teaches you things which aren't true, so this can be a problem.

Informant A: *Total War* did make me think that the Greeks were a complete unified culture but then I realised they weren't.

Informant C: but then if the game inspires further investigation into it then that is ok.

Informant E: one of the instances of games teaching things which are bad is that if we learn only from the games mentioned thus far, then all we learn is that history is war. War is central to most games, so you tend to think that the past was full of war all the time.

Informant D: War sells though.

Informant B: and war is an easy mechanic to use isn't it.

Informant E: there is a game which tries to get a balance between war and other things in culture historically like building up prestige for lords of the manner and that is *Stronghold*. Also, every single game mentioned is male heavy.

Informant B: And targeted towards men.

Informant A: *Assassins Creed Odyssey* offered female role and she is the best one to pick so things are changing or at least some roles are being considered more by some developers. However, when you play as a female you are not treated any differently and this would not have been likely to be true in that period.

Informant D: that has to happen though because it would mean the game changed its point and purpose, and it could open up all sorts of problems in today's culture regarding equality issues.

Informant C: and fun trumps realism.

Informant B: I am looking forward to the new Norse one which is coming out because that is my area of interest and the culture and mythology has strong female roles, for instance when the men are away the women are completely in charge, so I hope they will show this.

Informant F: yes, there are also shield maidens aren't there. Most games or even TV programs show Alfred as Great from a British perspective but perhaps that is why they have chosen to produce this from the other side. I hope this one will show it from the opposite perspective or in a more balanced way.

Informant B: Norse mythology is popular currently and you see this in games all the time, they focus on representing the part of history which is most trendy at the time.

Informant A: so, this again shows that modern influences are present in all games, right from their inception.

Informants B & F agreed

Informant F: I would like to see more on the political/cultural view of things rather than on invasion –The new *Assassins Creed* seems to be considering this – although we cannot be sure until we see it when released.

Informants A, B, C, D & E all agreed

Informant B: Video games are more interactive than a lecture or lesson – I learn better when visually doing something or interacting - like walking round the city and seeing people in the period clothing and the architecture- and I get a bit more of an inside view and this pulls me in and makes me want to know more.

Informant C, E & F agree

Informant B: Fun things like Egypt and pirates and Vikings are often missed off the school curriculum at GCSEs and these are more exciting subjects to learn about – the fact that history exams were all based on modern history put me off as I was more interested in the ancient and interesting cultures, not in the 1st and 2nd World Wars, so I didn't take that subject. *Assassins Creed-Black Flag* shows the sympathetic inside view of pirates' lives- they are not necessarily so evil as portrayed normally.

Informant F: this is the most highly rated *Assassins Creed* game for popularity.

Informant A: I really liked the way it portrays Blackbeard as being a show-off, his fierce nature as just an act- humanising him. I'm not sure if this is historically accurate but I like the way they did it. I will look into this now I think.

Informant D: at school being stuck watching a film is nowhere as good as games for learning as you can be immersed by walking around a period, not just a spectator. Really be engaged in it and interact with it.

Informant A: When you are playing a game you are assuming a role. You are trying to think as that person and this actually experiences the time period to some degree, which

is good for learning about the factors they were exposed to – like one of my favourite modules I did last year where I had to learn everything about Pergamon and role-play the Hellenic system and be characters to be able to do your role.

Informant D: Yes, the amount of research we had did to make sure we portrayed Pergamon correctly.

Informants C & E agree

Informant F: that sounds like a good module.

Informant A: learning through a re-enactment in games are really good it makes you think- what would they have thought?

Informant B: yeah, that goes across all sorts of different topics too, because we had a similar thing with a politics module like that, it was to do with global resources –like oil- and I know that sounds really dry but I took on Russia, representing them and having discussions with other countries' representatives to make deals. I know a lot about Russia's natural gas and oil now and I would never have bothered looking into anything like that without the need to get directly involved with it, so anything which makes you have a more direct and tangible experience of a thing could be useful across the field, like science and all sorts of other topics.

It was a mock UN-type thing, but specifically for the big oil nations, so we had the US, the EU, China, Nigeria and a few of the Middle Eastern countries as well and it was how they reacted to places like with the issues in Venezuela and getting access to that oil and someone working off the Gulf of the Middle East. I learnt so much about this as I was playing an active part in the process so really needed to know the details of the situation to play my part well and it was really fun even though it's not a topic I would have thought I would enjoy.

Informant D: in the one we did (aimed at M1) I spent days, not just hours, learning how much water and food an army needed and then calculating how much my troupes would need to travel so far and sustain themselves marching for a battle. It was the first time I did Maths since GCSE!

Informant A: I learnt the whole lineage of their royal family and I'm sure I would never have known that without needing the information to work out the reasons for why people were likely to act in certain ways.

Informant D: I did another module like that too- set in an 1890 British government meeting and I went as a Zulu war veteran– there was a large discussion about the state of things and who was to blame. It was a much easier and enjoyable way to understand and learn about history rather than just watching it or reading books.

Informant E: these are all historically and educationally led- whereas the video games are promoted as entertainment first, so they have a historic veneer based on mass production and a wide market to make money.

Informant B: there should be a distinction between the two as the ones with entertainment first compared to the ones developed for educational purposes are going to be produced in different styles.

Informant A: there are some pen and paper RPGs set in ancient Greece.

Informant B: the things I have researched for D & D sessions are amazing- I have books on poisonous plants and all sorts as I cannot develop or immerse myself in the character properly and portray things accurately if I don't know all these things.

Informant C: this is where there is a bridge between video games and such lectures overlap as they can all inspire you to do your own research.

Informant A: Yes, if it's fun and you like it then you are going to want to know more. I want to know everything about *Skyrim* after years of playing, learning more and more.

Informant B: Oh yes, I am delving into more research for it all the time and getting excited for the sixth game. I bought the first game as a reward in first year for finishing my first essay.

Informant A: On the idea that games can be addictive, especially from the competitive aspect where you are wanting to win, what are you guys' thoughts on that?

Informant E: do any games force you to lose?

Informant F: there is one where you have to do everything and then you die if you complete it- this is realistic but as a game well basically it's all for nothing.

Informants C & D: agree

Informant B: *Undertale* is a game where you can choose to play it passively – in a game based on fighting people and the objective is to fight your way through it where you can choose to play it as a pacifist so you have the option to not play it aggressively.

Informant F: thinking about how you can drive a game with a different personality is like in *Fallout 4*- sometimes you can't win if you make the wrong ethical choices it makes you go the wrong way

Informant B: *The Witcher 3* also does this.

General discussion between Informants A, B & F about how easy it was to make the wrong choices in that game.

Informant E: Knowing your decisions are being judged is good.

Informant A: *Witcher 3* is based on ancient Polish lore

Informant F: and the languages are based on old Gaelic / Celtic and other languages

Informant B: The plants are real things that exist there, you can find out lots about herbalism from playing *the Witcher*

Informant F: and the birds are even native to the specific area and there are accurate descriptions given

Informant E: Everyone in this conversation has a deeper knowledge of history. What you haven't got is people who play the games just to play the game

Informant B: I'm probably closest to that as I haven't actually studied history since thirteen years old. I play them mostly because I find them enjoyable and I know I like fantast and medieval settings but they still have their influences from actual real mythology and folk law which is really good and then you find out connections with cultures which are really interesting and so I was inspired to know more. Even if you are not interested in history you notice things

Informant A: you also learn by seeing things around you which catch your eye, like the architecture

Informant D: Although that would happen regardless of the accuracy - that noticed thing may not be correct or accurate

Informant A: accuracy can be irrelevant to learning, for instance *Ryse Son of Rome* was so inaccurate it was annoying, it still makes you want to know what really happens- I mean Boudicca invades Rome with war elephants for instance- very problematic

Informant C: it was all over the place- with war elephants!! Fun trumps realism- they want the game to be enjoyable but really should try to make it as historically accurate as possible after that

Informant E: *Civilizations* may show each culture's development well historically, being very well researched, but they are not correct at all regarding interactions between the different cultures- they are totally bizarre- you have weird situations with Zulus up against the Chinese and the Americans

Informant C: *Civilizations* is different in that the games don't claim to have any link to history but aesthetically the place is just steeped in history with place names and so on- obviously there wasn't any fight between the Americans and the Greeks in 400 BC but in the game this is possible. Because of the way it is presented it leaves all the learning to the people playing, whereas *Assassins Creed* tries to entirely steep you in the social history itself. The social history is less important to *Civilizations*, so it is a problem as a learning tool, but it does work to inspire interest. *Assassins Creed* feeds you the information on the culture and political situation more.

There is an article which talks about the barbarians as a group who are really just nomads and sees an example of aboriginal perspective – *Civilizations* is too limited to explain this, so it is just represented as a complicated diagram which makes no sense to the Western understanding:

(Informant C: posted link in the Facebook chat: "Unsurprisingly, strategy games tend to only engage with complexity when it can be converted into a military or economic trait, the rest is treated as irrelevant or merely aesthetic." is a very important quote from the article (https://www.vice.com/en_us/article/4aggzm/civilization-and-strategy-games-progress-delusion).

Informant D: talking about another person- we introduced him to the game *World of Warships* and he talked about how much he enjoyed it and then was inspired and went off and researched into the Russian warships and bought models. And I have recently bought tons of books on Italian and American battleships – it's inspired me to not only look into them historically but to explore my own related family history at the same time.

Appendix 5: Statement of Research Intent and Participant's Agreement

Statement of Research Intent

As a student currently studying for a Masters in Ancient History at the University of Wales Trinity Saint David, I am researching into the relationship between history-based games and their influence upon the player regarding future interest in exploring such historic subjects educationally and how games can be used in an educational manner.

All research for this study will be used to develop a dissertation which will look to show the usefulness of history-based games as a teaching aid and for promoting further inquiry and education in these subjects.

The quotations from this meeting and all information gathered through these and qualitative questions during interviews will be kept confidential and stored in a secure place. Only myself and my tutors/supervisor will have access to this information in its raw form and it will be treated with confidentiality. All information directly related to participants will be delivered in an anonymous manner, however, it is understood that there must be transparency regarding how the research will be presented and feedback from participants will be welcomed and treated sensitively.

Participant's Agreement

I understand the purpose of this research and that should I at any time and for any reason, choose to remove permission for use of data, directly relating to myself, I may do so, without explanation.

I am aware that I will be provided with a copy of the finished report, should I request one, and that I am welcome to comment on any aspect which I feel is in need of adjustment and that, within reason, my wishes will be taken into consideration. Any future comments I have on the subject will also be welcome.

I understand that my identity will be anonymous in all gathered data unless I specify otherwise.

At this time, I give permission for any data gathered relating to myself to be used.

Participants signature: date:

Researchers signature: Date:

If at any time you have concerns about your treatment as a participant in this research, please contact the coordinator: Liam Raybould (1500458@uwtsd.ac.uk)