Learning to Kill?
Taking aim with the First-Person Shooter

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Abstract

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Academic debates about the 'effects' of playing video games have been ongoing for several decades. By investigating the learning potential of first-person shooter games from the *Call of Duty* franchise this study gives fresh stimulus to the area of video games as tools for facilitating learning.

Some games attract the label 'serious', replicating pre-existing notions of high culture and popular culture: this thesis rejects this tendency towards canonisation and focuses on how a popular gaming franchise can become the site for a wide range of learning opportunities. This project has undertaken research with three different research cohorts and the ensuing research data enables a claim that the *Call of Duty* games franchise is a powerful force for learning.

Focus groups and interviews have been conducted with a range of participants to discuss their views of how the games may facilitate learning; how gaming metaculture may assist in this process and queries the potential for ideological transference from games to player. A questionnaire was also completed by different participants to cross-check data validity.

The research findings all flow in the same direction: playing *Call of Duty* games is an aid to players learning strategic and tactical thinking skills. This happens through the scaffolding offered in-game, the quantity and range of different feedback points and through engagement with different aspects of gaming metaculture. These in-game and extratextual features combine to shape a formidable learning tool which takes players on a journey towards becoming model learners.

Demonstrating that video games are learning tools is a good thing in itself. However, with the substantial shift to online delivery of education at all levels around the world in the shadow of the Covid-19 pandemic, this project provides a very timely insight into the capacity of video games to provide thorough learning opportunities.

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We always stand on the shoulders of giants and two of my giants have sadly left us in recent years, so this thesis is dedicated to the memories of Maura Boyce and Bryan Arnold.

Mission Briefing: Introduction

The title 'Learning to Kill?' centres the study on the grounds for seeing 'violent' video games as vehicles for learning. Academic curiosity is aroused by what can be learned from gaming - and not just from the game itself – it is the social world around playing such games which is the focus for analysis in this project. Similar to other media products, video games are cultural artefacts and are nested within wider frames of discourse. This study analyses how video games, specifically games of the *Call of Duty* franchise, can be viewed as tools which facilitate learning. The more recent iterations of the franchise (*Call of Duty: World War II (2017) to Call of Duty: Modern Warfare (2019)* are the focal points for investigation and discussion, but participants were free to discuss any aspect of the games of the franchise). This study respects the differences in immersion and popularity of the offline and online modes and does not attempt to conflate the two modes together. Much of what is discussed later in the thesis pertains to the online modes owing to the directions which participants took their answers in. What marks this study out is the belief in the value of seeing the 'problem' of playing so-called violent video games from the perspectives of the people who play such games. A vital component in this endeavour is the interlinking between games and the surrounding metaculture and focus on this forms a significant aspect of discussion.

The *Call of Duty* game franchise has become one of the biggest in the burgeoning video game sector. In the past twenty five years, games from the franchise have been the bestseller in eight of those twenty five years, achieving a dominance that outreaches the *Grand Theft Auto* franchise (Fortune, n.d.). For example, *Call of Duty: Modern Warfare 2* sold more than 20 million copies worldwide whilst the biggest selling *Call of Duty* game to date is *Call of Duty: Black Ops* which has sold 30.72m copies worldwide, marginally more than *Call of Duty: Modern Warfare 3* which has sold 30.71m copies worldwide (Stuart, 2011; McCarthy, 2019). Regardless of moral taste or personal choice, this fact alone means that the franchise is culturally and economically significant and the findings of this project have relevance to those with an interest in education, video games and popular culture. Therefore, whilst this study

only investigates the experiences of *Call of Duty* players and how they account for this in discourse, the impact of *Call of Duty* on both cognitive processing and strategic learning and its ideological effects on players, addressed in my first two research questions (see page 21), will be significant, both culturally and educationally, given the scale of engagement with these texts.

Statements and questions

The title has two antecedents, understanding both of these is crucial to understanding the rationale for the existence of the study and for the nature of it's execution. The first inspiration was the title of and a succinct description of Willis' research findings of the sociological study 'Learning to Labour' (1978). Willis conducted a qualitative study with British school-aged teenagers to better understand their attitudes to the coming world of work and how their experiences at school conditioned them for future subservient roles in industrial occupations. For Willis, pessimistically, 'learning to labour' was a statement, not a question.

Aligned with Marxist views on the function of education in capitalist societies, Willis drew the conclusion that school was a training ground for work - learning the rules of the game of social status and the 'place' of people from different social classes in this game. In the terminology of Gee's (2013) educational principles, school can be seen as a fish tank - a version of situations and tests to come to equip the learners with enough knowledge and experience to survive the experience. I am pointedly making references here to games to begin the process of drawing parallels between the interior world of games and the similarities to the exterior social world.

There is a significant body of academic work which is sceptical about the benefits of playing video games and also viewing 'violent' video games as tools for feeding anti-social effects. In the polemical book *Stop Teaching Our Kids to Kill* (Grossman & DeGaetano, 1999), Grossman used his status as a former military officer (his military rank has his title displayed on the book cover) to label first-person shooter or action video games as training programmes which teach children to kill. Grossman & DeGaetano recognised the learning power of video games in this regard - seeing

games as tools for instruction. Inadvertently perhaps, they undermine their own argument with the title of the book in it's explicit recognition of the teaching and learning relationship between game and player - this is more fully excavated later in the literature review, particularly the section sub-headed ‘Teachers? Where we’re going we don’t need teachers’. Similar to Willis, Grossman & DeGaetano, saw one agent of socialisation as a training ground, or learning programme for how to handle future experiences. In the way that for Willis it was ‘Learning to Labour’ as a statement, Grossman & DeGaetano’s book expands the ethos that playing video games leads to players learning to kill. So deliberately mimicking the title of Willis’ work and taking the stance taken by Grossman & DeGaetano and adding a question mark, the thesis title ‘Learning to Kill?’ came into being. The question mark in the title sets this thesis apart from the above works in terms of recognising the agency of the players. Jenkins’ (2006) powerful critique of Grossman & DeGaetano, owing to the behaviourist approach to education and recognition of player agency is informed by the work of Foucault (see p.12) and has steered the approach to methodological choices and thus contributes greatly to the final outcomes and findings of the project.

Education: 20/20 vision

“All changed, changed utterly:
A terrible beauty is born.”
(Yeats,1921)

In a political-economic context, the UK education sector is now dealing with the after-shocks of seismic ‘reform’ of curricula and of qualifications enacted by the UK Government between 2010 and 2015. The sector has experienced radical change from Early Years provision through to the university level, as changes to student funding reverberate through the university sector, re-distributing students and financial resources in different ways. Amongst these changes has been the emergence of MOOCs (Massively Open Online Courses). Many universities including Oxford and Cambridge have significant online learning programmes and in the process are bringing online learning into the mainstream.

The public health threat posed by the Covid-19 global pandemic led to 'lockdowns' in many countries worldwide, including the UK. The unprecedented nature of these lockdowns has been the total closure of face-to-face education in the UK, and in many other countries. Education from Early Years to doctoral students has suddenly and sharply moved online: distance learning is now a common mode of learning for all learners. That sudden shift in the delivery of learning is likely to cause pedagogical waves to roll for a considerable period of time. What began simply as a small scale study into whether and how people can learn a range of thinking skills from playing video games now has the potential to begin to signpost a rationale for how and why educators can re-structure learning environments and consider what cultural changes could be made to drive forward the efficacy of online learning. In a world where all educators are suddenly seeking to deploy their courses online with the best pedagogical practice possible, the moment has arrived for video games as teachers, and gaming metaculture as a wider network for scaffolding learning, can finally be taken seriously. However, while the present moment is important, the rationale for this project was generated well before this moment - the discourse of fear and harm over video games and the long running debates in British education all pre-date the pandemic. Additionally, with the increase in online course delivery in recent years before the Covid pandemic, as demonstrated by Zaidi, Beadle & Hannah (2018), a study such as this has the potential to offer ways in which to adapt pedagogy to better cope with online learning. While the project would have had view value without the impact of the pandemic, the sudden switch to homeschooling and home working do add to the relevance for such a study as this in and can add to the academy's knowledge base.

British education has long been a site of political and academic struggle to assert different ideologies of what education is for, to simplify here: a tension between education as a personal and social good in itself through developing an aware and empowered citizenry or as a site to learn the knowledge and skills for a range of jobs. This top-level tension reaches down through curricula and assessment methods - some subjects are privileged over others. This has been very much a facet of recent 'reforms' with the invention of the English Baccalaureate (commonly referred to as the Ebacc) at GCSE level and the demarcation of 'facilitating subjects' at A-level.

Successive governments over the decades have wrestled with the desire to equalise the status of ‘academic’ and ‘vocational’ education. This is now manifested with the launch of T-Levels (Department for Education, 2018). Various initiatives have been tried, however, the problem has deep roots. While the transition from the grammar school / secondary modern schools began in the early 1970s, cultural mindsets are harder to rename and re-purpose than school buildings. These tensions are expressed in what subjects can be offered and what subjects can teach (a process now subject to more explicit government control, through the issuing of subject criteria) (Department for Education, 2014).

While the study of Shakespeare is and continues to be a feature of the educational experience of all students in the UK – as a symbol of the valued, formalised status of the author - the same cannot be said for video games. While students in Britain are all required to study Shakespeare and grapple with the language and use of iambic pentameter; the same is not true for video games. Video games are only studied as part of an optional subject (GCSE Media Studies in England & Wales) and these studies explicitly do not require any hands-on game playing, to avoid onerous costs for schools and colleges having to buy the hardware and software that would otherwise be necessary. However, this cost consciousness comes at a price - that students do not experience the text as it was intended: as a game. The biggest selling games such as those of the *Call of Duty* games are off limits to such studies because of the PEGI 18 ratings of the game. Awarding bodies are sensitive to accusations that the subject is ‘too soft’ and thus, arguably, the study of video games gets dressed up into something it isn’t to satisfy criticisms which haven’t yet been aired. The lesser social-cultural status that video games enjoy compared to other forms of culture enables the learning potential of video games to be too often overlooked – especially by politicians and aspects of the popular media. In terms of discussions in the public sphere to which politicians and the media contribute, it is easier to find negative portrayals of video games and its subculture than positive ones (Shaw, 2010; McKernan 2013). The reporting in the media of video games very often

stems from the publication of academic works. The dominance of the Active Media[1] perspective in academic publications has a direct consequence on the nature of media reporting on video games (see the section on Discourse Analysis). It is partly the purpose of my research to attempt to move away from the dominant paradigm of viewing video games as objects for individual harm and social disruption which has been largely steered by writers associated with the Active Media perspective. This dominant paradigm has set the wider cultural agenda for the perception of video games and gaming culture for too long. This has proved to be a fertile breeding ground for analysis of games and gamers which seek to formulate cause and effect relationships between the two parties, where games are on the whole negatively affecting the gamers who play them – whether those negative effects are formulated as health effects or social effects.

This project takes the reader inside gaming subculture, and rejects the positivist approach by refusing to treat games and gamers as specimens for the conduction of experiments from which neutral observers can draw a dispassionate set of conclusions from the results of their experiments. This rejection of positivism is motivated by the work of Lyotard (1997) in refuting the credibility of theoretical grand narratives and the work of Foucault (1980) in his re-focusing of power relations and and promoting the agency of individuals and groups who are overlooked by ideologies such as Marxism and functionalism and is further motivated by epistemological concerns on the application of the positivist paradigm. In rejecting positivism in regards to researching aspects of social reality, believing that this style of ontological and epistemological approach to the study of such a social phenomenon needs to be done from the inside. The interpretative, qualitative approach, working from the inside in the attempt to develop some wider theoretical knowledge spurs the beliefs and designs behind my research proposal. This seeks to present, as much as is possible, an insider's view of the learning potential available from gaming, with a specific focus on how online gaming can teach skills of strategic and tactical thinking. Thus, borne from a theoretical disposition, this study was designed to be a small-scale, tightly

[1]Active Media perspective - a term used to describe academic work which priortises the content of media products over user response in developing an understanding of the drivers of meaning creation in interaction between reader and text

focused study to enable gamers whose voices are seldom heard in academic discourse to be heard (which becomes clear in the ensuing literature review).

Teaching, learning, assessment and feedback

Given that there is a growing body of literature exploring the potential for video games to act as vehicles for teaching and to facilitate learning which are providing an effective counter-narrative to the Active Media perspective in educational publications, and given the research questions informing this project and how the research questions have been formed partly out of my professional work as a teacher and an assessor there is value in detailing what some of the current thinking is with regard to effective teaching, learning, assessment and feedback.

Ofsted, the government regulator of schools and colleges in England and Wales, recently published a document which underpins the current framework for school and college inspection. The document describes what Ofsted defines as effective teaching, learning, feedback, assessment, behaviour and school leadership. The elements taken from the report for consideration below are those which have a distinct overlap with how video games can be understood to work with their players. Regarding teaching and learning, Ofsted state:

> Effective pedagogy consists of both teaching and the provision of instructive and stimulating learning environments and routines, and the latter need to be well planned and developed with clear goals on what learning is intended.
> (Education inspection framework: overview of research, n.d., p. 15)

It is one of the core positions of this thesis that video games (at least for those who choose to play them) provide “stimulating learning environments and routines”, and this chimes with the thoughts of Burn (2016). For example, in the most recent *Call Of Duty* game, *Call Of Duty: Modern Warfare* (2019), in offline campaign mode - for those with an interest in the first-person shooter (FPS) genre - a stimulating environment is provided pitching the player into a game which takes them on a James Bond-esque tour of the continents and visiting imaginary trouble spots and presenting a range of playable and non-playable characters which help to immerse the player within the

game world. Accordingly, for the online only player, a wide range of different maps and different games are available to enable the player to choose with a relative degree of freedom what kind of game they wish to play at any point in time (choices include Free For All, Team Deathmatch, Drop Zone, Domination and Hardpoint (gfinityesports.com, n.d.). In terms of routines, there are rules which govern the start and end point of online games - maximum game times and maximum points having been achieved. For the offline player, routines are inculcated by the chunking of the game into different missions which are designed to increase in difficulty as the player progresses through the game. These missions are bookended with cutscenes designed to give context at the start of a mission and to give a sense of closure and achievement at the end of a mission. Offline game modes also fit with the conventional rules of storytelling as found in films and novels particularly, but also television. Such rules are anchored theoretically by structuralist concepts such as Propp's character theory (Propp, 1968), Todorov's theory of narrative structure, Levi-Strauss' concept of binary oppositions (Turner, 2000) and models of narrative progression as theorised by Campbell (2017).

The Ofsted framework document goes on to explore definitions of learning. They state:

> Learning is at least in part defined as a change in long-term memory. As Sweller et al (2011) have pointed out, 'if nothing in the long-term memory has been altered, nothing has been learned…
> (Education inspection framework: overview of research, n.d., p.29)

Changes in the long term memory are what enables *Call of Duty* players to remember which loadout is best for a particular type of map, or remember where the best vantage points are on each map. There can be little doubt by any interested party that playing video games, especially on a regular basis, can change long term memory. Another dimension of this effect on long term memory is concern about the ideological effect of playing games such as the *Call of Duty* titles. For writers such as Grossman & DeGaetano (1999) the problem is that the games are teaching behavioural scripts or schemas which will condition players to become more aggressive and violent in other

areas of their lives[2]. Therefore, the area of dispute is of what kind of changes to long term memory playing video games can have - positive or negative; and what the repercussions of those changes in individuals' long term memory are for the individual and for society. To put this into a rhetorical question: are the effects on long term memory negative, in that they desensitise people to violence and condition them to accept ideological / political views or are the changes positive, and that players are learners who are developing their metacognition skills and thus enabling them to become better learners and thus better able to take on the challenges of living and working in the 21st century? With regard to assessment and feedback, the report explores the definitions and roles of both formative and summative assessment, but the following comment is useful when spotting the overlaps between pedagogy and game design and game play: "There is a range of evidence that suggests that formative assessment and feedback can improve pupils' learning and attainment." (Education inspection framework: overview of research, n.d., p.29)

Whether playing online or offline, players are offered a wealth of assessment and feedback points as they play. If playing offline, players are assessed in terms of how many enemy soldiers they can kill and at what points to enable progress to the next part of the mission or to complete the mission. In *Call Of Duty: World War II (2017)* some of that assessment was set to timed conditions, where the player had to complete a mission within a designated time period or otherwise further progress was impossible (the player 'died' and had to replay the mission until they could complete the mission within the time allowed). In doing so, the game taps into flow theory (Csikszentmihalyi, 2008) as this section requires a high degree of immersion and concentration. If playing online, the player is assessed extremely regularly - when coming under attack from opposing players and online games are always under pressurised timed conditions. Feedback comes thick and fast - you live or you die, you successfully complete tasks which generate XP and this is communicated instantly to the player, as is evident in the video clip from my own game play at https://twitter.com/Catastrophist73/status/1248647099706720259.

[2] The academic study of video games pre-dates Grossman &DeGaetano (1999) - with academic going back to the early 1980s. Grossman &DeGaetano's work is referenced here as this wasa key driver of my initial academic enquiry into the topic.

In offering stimulating learning environments rich with opportunities for assessment and timely, effective feedback, video games also offer the possibility to develop the skill or trait of resilience. The Ofsted report details a number of approaches to defining the word resilience. The report notes:

> Resilience, alongside its related concept, 'grit', has become a popular concept in education over recent years. In general, resilience is about adjusting to adversity when it happens and bouncing back afterwards."(Education inspection framework: overview of research, n.d., p.29)

Therefore, if resilience is something which can be learned, then theoretically it is something that video games can teach. Commercial video games exist to make a profit for company shareholders. In order to make a profit, games have to be rewarding and welcoming environments for their players - games need to get their players to want to immerse themselves within the gameworlds and cultivate the desire to and complete any offline version of a game and to keep returning to play online and presumably to keep wanting to buy DLC (for games that produce and sell such content). Given these commercial imperatives, games need resilient players, therefore games need to be able to take steps to foster that resilience. There are frequent opportunities for feedback in the online game modes (see the images on ppd 73-78 and the video clip from my own game play at https://twitter.com/Catastrophist73/status/1248647099706720259), and when playing offline Campaign mode the steps the game takes to help the player when unable to progress (for example, you can check for an update on current objectives, the game constantly gives you onscreen markers about where to head - see the image below and will also resort to giving you voice signals from non-playable characters to give additional guidance where needed). While there are some complaints from gamers (Gault, 2017) about the amount of control - in Vygotskyian terms, scaffolding - the game has put in place, if looking at the games as learning tools, then it is difficult to criticise the game developers for taking a number of steps to ensure learners or players remain within their ZPD (Nordlof, 2014). From an educational perspective, it is better to have too much scaffolding in place to ensure a successful outcome, rather than too little scaffolding and risk academic failure and learner frustration. In over-supplying feedback and scaffolding, especially in the early parts of a game such as is being depicted from the first level in the image below, the game is giving the player a

fish tank (Gee, 2013) where the player can orientate themselves and learn the game. In designing the game this way, the intention is to enable players to become immersed in the game and to bind some emotional attachment (as Csikszentmihalyi (2008) argues in flow theory) and that will help to generate the necessary grit or resilience that will be needed for the next set of challenges.

Image 1 : Screenshot of gameplay from *Call of Duty: World War II*

The toolkit for HE lecturers provides some useful points for considering how games give feedback and the usefulness of that feedback. The HEA feedback toolkit (www.advance-he.ac.uk, 2013) states that:

> Feedback can perform several functions. For example it can be used primarily to: correct errors; develop understanding through explanations; generate more learning by suggesting further specific study tasks; promote the development of generic skills by focusing on the evidence of the use of skills rather than on the content; promote meta-cognition by encouraging students' reflection and awareness of learning processes involved in the assignment; encourage students to continue studying. (Gibbs and Simpson, 2011, p.19-20)

Arguably, video games are very good (when designed suitably) at giving feedback that can help to correct errors, and this generates more learning and promotes meta-cognition. In terms of helping to correct errors, when playing *Call of Duty* online the

player can get replays of the most recent game and can use that to self-assess where errors will have occurred and the fact that you have made errors will be communicated to you through the XP that you will (or will not) have accrued while playing. In terms of generating more learning and promoting meta-cognition, the game itself is only a part of the answer here - the rest of the answer to this lies in the wider tools of gaming culture. The HEA toolkit also notes:

> Common agreement concludes that effective feedback can: promote an individual's learning journey and encourage greater achievement; enable students to reflect and develop on their strengths and weaknesses; foster greater levels of self-esteem and motivation which, in turn, can result in greater progress...develop core skills around self-assessment and peer-to-peer evaluation. (NUS, 2008, Feedback Campaign Briefing, p.2)
>
> (ibid, p.9)

While games cannot amend content and delivery methods, video games have excellent capacity to fulfill all of the other points of effective feedback detailed in this statement, as the later research discussion will demonstrate. To complete this contextualisation, some points on what makes effective learners from Institute of Education training materials will be used in relation to video gamers in general. In the document 'Curriculum and Standards Unit 1: Structuring learning Senior leaders, subject leaders and teachers in secondary schools Designing lessons Pedagogy and Practice: Teaching and Learning in Secondary Schools' (2004) effective learners are declared to be:

> Pupils who are effective learners have the skills to learn on their own. They can be relied on to work independently, even for long periods. They can:
> • organise and sequence their work;
> • solve complex problems;
> • appreciate when they need to seek help or ask questions;
> • read and gather information and take notes;
> • share ideas or work in a group;
> • appreciate the purpose of what they are doing and make connections with other work;
> • evaluate their work and plan what to do next.

Whether a *Call Of Duty* gamer plays offline or online, in a physical sense, they are likely to be alone at the times they are playing. While the game sequences the work

(particularly in the linear narrative campaign mode), whether playing offline or online gamers have to solve complex problems in order to make progress. They are likely to learn from self-reflection and from in-game feedback when they need to seek help from others and share ideas with others. Many, if not all, of these tasks will be done virtually and online, but they will be done. If these are the skills that as a matter of public policy we are seeking to cultivate in children and young people, we should cherish and embrace the potential for video games and the surrounding gaming culture to work as highly effective pedagogical tools. The value of play as a space outside of the real to query and learn about sense of identity and to engage in the processes of socialisation is also recognised by Burn (2014), and these are recurring features in this project as a whole.

Research questions

The views about learning and feedback outlined above set the parameters for RQ1 and RQ3. RQ1 as formulated, gives a focussed space for a discussion of learning and for the role of video games in the processes of learning. The focus on metaculture in RQ3 then creates the space for a discussion of the types of feedback offered in the *Call of Duty* games. The formulation of RQ2 enables a meaningful connection between learning and how and what we learn and to the fears expressed by some commentators that video games can have adverse effects on some of the people who play them. Given the overarching focus on learning and the desire to investigate in detail how games and gaming technology may have a positive role to play, each research question has a learning dimension. Breaking this down into three areas for each research question gives a focus for the project and the conduct of its primary research. This project addresses three research questions:

1. In what ways might the *Call of Duty* games facilitate the development of strategic and tactical thinking skills?
2. To what extent does playing the *Call of Duty* games have demonstrable ideological effects?
3. How might involvement in gaming metaculture help to develop model learners?

RQ1 was formulated as a meaningful way to get above and beyond the media effects debate. This was necessary as if the research had simply been a qualitative study on gaming effects this was likely to only return with a counter answer to the debate and not break new ground in knowledge formation. Also, in being framed this way, this RQ is explicitly focussed on dimensions of learning. The purpose of this was to give the project a clear direction to enable a new and meaningful contribution to knowledge.

RQ2 has to be asked given the title of the research. A research project which sets itself against the notion that games are training programmes for turning young people into nascent soldiers needs to take account of the ideological dimension. However, this question also has an explicit learning dimension. The learning focus in RQ2 is on if / how ideology can be learned from aspects of game content. This research question is not simply the effects debate in khaki as this research question takes no approach on the measurement of aggression - which is the locus of concern for video game effects studies. The narrowness of the focus of effects oriented studies - too often measuring small quantities of game play (matters of minutes in laboratory conditions, which is very different to how games are played ordinarily) and focussed on identifying the capacity of games to arouse short term aggression. This research question is focussed on ideology, not aggression, and seeks to query the abilities of the games to transmit ideological messages - and if so, what messages are communicated and how such messages may be received.

RQ3 recognises the value of gaming metaculture and also looks to situate the project in a more overtly educational theoretical setting. Given the cognisance of the need to strike new ground, this RQ offers the space to add something to the field of game studies by focussing on the extratextual metaculture and not just on the game itself. This RQ also helps to push the project on from being a retort to the effects debate and the position of the Active Media theorists and in doing so provides another avenue in which this project will contribute directly to the development of new knowledge.

Chapter outline

Each of the chapters is named in convergence for the structure of action games such as the *Call of Duty* games - the intention here is to signal the overlaps between game design and academic conventions to further underline the educational potential to be found in video games.

Chapter 1: Heads Up Display reviews literature on the media effects debate as applicable to video games and the growing debate about the learning potential of video games. This will take the reader from the traditional media effects debate through to the most recent publications about games and their learning potential. This chapter also gives an overview of the scoring system and how this links with the multiple ways in which the player is given feedback on their performance whilst playing and after the completion of a game.

The second chapter, Loadout: tools of the trade will justify in theoretical and methodological terms a rejection of the positivist paradigm and detail the research design and justifies the choices made about research methods employed. This chapter also discusses epistemology and ontology and reflects on the ethics of working with human research subjects.

Chapter 3: Recon mission covers the work undertaken for the pilot study phase: discussion of findings from British newspaper coverage of video games. This will make clear the negative media discourses on video games and also highlight the connections between academic work and news reporting. In doing so, this chapter will also justify why a fresh approach to the academic study of video games is required. This chapter will also present the findings from the first wave of interviews conducted with *Call of Duty* gamers.

The fourth and fifth chapters, Mission 1 and Mission 2 respectively, present the findings from the two focus groups and a one-to-one interview held with an esports player who had also participated in the two focus groups (esports is the term used to describe mass spectator events who gather to watch elite players of games contest each other). Mission 1 compiles the outcomes of the first focus group, and this leads

on from the work of the pilot study and builds considerably from there to offer a range of evidence to answer all three research questions. Mission 2 covers the follow up focus group, a one-to-one interview held with an esports player who had also participated in the two focus groups (which further develops the response to RQ3 particularly) and there is discussion of the findings from a questionnaire undertaken with a different group of participants which also tests responses across all three research questions.

The final concluding chapter, Mission debrief, presents the overall and overarching conclusions to this study, reflects on the limitations of the study and offers some possibilities for future research. This chapter highlights the findings to each of the three questions. Overall, the study finds that the games have a range of ways to foster strategic and tactical thinking; there is a participant-led rejection of the notion of ideological transference and recognition of gaming metaculture in building the culture of gaming and helping to mould players into highly effective and reflective learners.

Chapter 1: Heads-Up Display - literature and literacy

Introduction

Within relevant academic literature, there is a strong anti-video game discourse. This anti-video game discourse postulates that playing video games is bad for you: bad for your ideas about violence, bad for your social skills and bad for your physical and mental health. This discourse is to be found in many strands of academic discussion (Dill & Dill, 1998; Bushman & Anderson, 2001; Funk, 2005) and popular media commentary (Hunt, 2016; Appelbaum et al, 2015, Manger, 2015). The debate about violence in video games continues to roll on – both in media discourse and academic discourse. Theorists who can be ascribed to the Active Media perspective (as defined by Egenfeldt-Nielson, Smith & Tosca, 2008) claim the negative effects are proven and longstanding (Anderson, Shibuya, Ihori, Swing, Bushman, Sakamoto, Rothstein, & Saleem, 2010), while theorists who reject this approach and can be ascribed to the Active Users approach (Egenfeldt-Nielson et al, 2008) claim there is no proof of such a negative causal effect (Ferguson, 2015). The polarised aspect of debate is decades old. Over the last two decades there has been a gradually emerging consensus that games do have the capacity to teach people content and skills, but then an antagonism about the value of what is being learnt arises. In this field of debate, the existence of 'serious games' has emerged - a process in which 'other' games which do not receive the accolade of being nominated as a serious game are implicitly viewed as less valuable as learning tools. Gee (2003, 2008, 2013) is perhaps the best known exponent of this idea of serious games and has forged connections between game design and learning principles. In seeking to examine how the *Call of Duty* games can be alternatively viewed as learning tools and how extratextual metaculture can help to scaffold learning, this thesis sets aside judgements about whether a game is serious or otherwise as this too easily a path towards canonisation. The privileging of some games and gaming genres over others risks ignoring games and genres which are popular and, like any cultural artefact, have the potential to afford insight into cultural

practices and meanings which may be otherwise obscured because of value judgements over cultural worthiness.

Objectives - what and why?

The strands this literature review needs to consider are:

- Strand 1: the effects debate as it applies to video games - this pertains to being able to develop a response to RQ1 and RQ2
- Strand 2: video games as malign forces in teaching and learning (relevant to RQ2 and RQ3) and video games as a positive force in teaching and learning (in pursuance of RQ1 and RQ3)
- Strand 3: a consideration of the necessity for a teacher to be the conduit for learning (RQ3)

Strand 1 necessitated the analysis of various material pertaining to effects debate in video games. To ensure the required rigour, the material examined here ranges from the turn of the millenium to 2015. This gives a firm foundation for developing an understanding of the theories, concepts and debates at play in the study of video games. This period of time stretches across the sixth and seventh video game console generations which saw considerable development of how gaming was undertaken - specifically the development of online gaming. The hardware tools for online gaming for built-in to seventh generation consoles (McDougall & O'Brien, 2008) such as the PlayStation 3 and X-Box 360 in ways which were not as fully developed in the previous generation. Over this period of time, use of the internet is fast increasing - up from 35% of adults using the internet every day in the UK in 2006 to 81% by 2016 (ONS, 2016) and by 2010, 71% of UK households had access to broadband internet (UK Government, 2010). The considerable technological and social developments have the effect of making aspects of the literature from this period to become quickly outdated, as will be clear as the review progresses.

Materials analysed for the Strand 2 and Strand 3 were found primarily from a search on the term "video digital games learning" which was limited to 2015 to 2020. The contemporary framing of the search was deliberate for two reasons: firstly, to ensure

that the literature being reviewed was as recent as possible to the lifetime of the project and secondly, owing to the fast moving nature of technological advance and the pace of change in online gaming (a phenomenon which barely existed a decade ago), which requires materials able to speak to the current moment. A total of 23 research papers were retrieved in this search. Of these 23 papers, the analysis of 17 papers is in the thesis. The six papers omitted were omitted on the grounds of lack of relevance to the study (using the research questions) or duplication of other materials covered. Allied to this, questions of what research questions guided each study, what methodological approach was taken, how clear and logical were the connections between methods and findings and what theoretical concepts did the work speak to explicitly or implicitly were used to structure the literature review. The discourse analysis of video game coverage in UK newspapers will later make clear the key aspects of media discourse, which have the potential to shape public discourse on the issue. The reliance on journalists for academic reports and sources to steer their coverage is made clear in this review. Currently there does seem to be publication bias towards coverage of more negative aspects of video gaming. The research for these strands had to be mindful of this, and how this media discourse is bound up in older notions of media effects theory and seek to work towards developing an understanding that would be relevant for the parameters of this project.

This review is divided into two parts. The first part has the objective of sifting through a wide range of different types of materials to provide a multi-layered mapping of the relevant academic debates. The second part will take a turn into a more tightly focussed discussion of key concepts which were operationalised in the conduct of the research. The final part will analyse Gee's learning principles and extrapolate to the *Call of Duty* games.

The effects debate: remastered - video games and effects

This first section of the literature review will identify the overarching academic approaches to theorising the interactions between players and video games. The purpose of this is to set the overall context into which other academic debates will

nest. In its literature review, the Byron Report (2008) described the two competing perspectives in the media effects debate - what has been labelled as the Active Media and Active Users perspectives (Egenfeldt-Nielson et al, 2008). This is deemed significant here as the work in the discourse analysis of media coverage of video games demonstrates how heavily popular media draws upon the work of academics from the Active Media perspective in framing reporting about issues concerned with video games and gaming culture (discussed from p.100). Here, in a landmark government report, which has set the public policy framework for video games and the internet in the subsequent time since its publication, there is time and space given to addressing the fact that there are different perspectives on theorising and researching video games.

As the report acknowledges, the Active Media perspective is tied to various works of Anderson and the various writers he has published with (Bushman & Anderson, 2001; Anderson & Dill, 2000; Anderson, Gentile & Buckley, 2007). This perspective works out of the influences of social learning theory and the General Aggression Model (GAM), both of which have antecedents in older perspectives on media effects such as the direct effects or hypodermic needle model. By contrast, the Active Users perspective draws upon more recently derived approaches to theorising and researching the impact of the media. This perspective draws on the user-centred theoretical models of uses and gratifications (Blumler & Katz, 1974) and reception theory (Hall, 2001).

These two competing academic perspectives have been in debate with each other for several decades (at least from the 1960s with the emergence of uses and gratifications theory) and thus forms the battleground upon which the academic and media debate about the role of the media and its impacts users and / or how users make use of media products. The academic debate about media effects is far from settled and there are sharp ruptures on epistemological and ontological stances from the competing theoretical approaches. Given the conceptual focus on the GAM in Active Media research and the theorising on aggressive thoughts, feelings and behaviour, and the positivist approach to undertaking research, the commentary in this section is designed to provide a theoretical underpinning for the later analysis of primary

research in seeking to answer RQ2 and partly to make clear the need for a cognitive element in the research questions, hence RQ1.

'Violent' video games: setting the stage

Within an academic field contoured by two opposing theoretical approaches as discussed above, there exists a long-standing debate on whether / how video games can be accurately labelled as violent and how such games can be said to have a range of effects on some of those who play such games. There has been considerable academic work carried out on video games and effects on players. The meta-analyses carried out by Harris (2001), Anderson and Dill (2000), Bushman & Anderson, (2001), Dill & Dill (1998), Griffiths (1999) and Funk (2005) all broadly arrive at the same conclusion: video games can have negative effects in the form of arousing higher levels of aggressive thoughts, feelings and behaviours. This school of thought additionally rejects the premise of Feshbach's catharsis theory (Feshbach, 1984) which argues that the consumers of cultural artefacts which contain violent material can be purged of aggressive tendencies through the process of interacting with the text. However, there are two common problems with these meta-analyses: the acceptance of the models of passive direct effects and an over-focus on laboratory based experiments and quantitative studies which all steer research findings in one direction. While this methodological approach is in sharp contrast to the interpretative approach of this study, these studies have value as pointers about what mainstream theory is with regards to players of video games. Cognisance of their views is important in assessing previous research and my primary research in relation to RQ1 and RQ2. These are issues addressed by Arnseth (2006) and Ferguson (2007) in their rebuttals of such perspectives, and this is discussed below.

Arnseth (2006) identifies the interactivity and multimodality of games generally being crucial in terms of how they can facilitate learning. The levels of interactivity of games are then linked to the quantity and quality of the engagement, or immersion, which video games can elicit from their players (this dovetails with Burn's points about representation and engagement (2010: p.7-8). Arnseth (2006) identifies what he considers to be key problems with the existing literature at the time - the focus on

‘effects on cognition, emotion and behaviour.’ (Arnseth, 2006: paragraph 6). For Arnseth (2006) this is problematic as he finds the model of communication overly simplistic - when someone plays a game, some information is transferred from this into their mind which can then be activated in other times and places - Arnseth name checks the aggressive and behavioural concerns of many of the more psychologically oriented researchers within this field. Anyone approaching this mode of thought from a communications or media background is likely to find this a rudimentary approach to modelling communication because there is a lack of recognition for distortion or aberrant decoding (Hall, 2001) and resistant readings (Fetterley, 1977 in Wallotwitz, 2004) to occur in the reception and processing of the message. Forgetting or ignoring reader / player agency in the process of meaning construction is to overlook a vital cog. However, as Arnseth (2006) notes: “Such a model is often taken for granted in much educational research on computer games.”

Arnseth proceeds to point out some of the learning value embedded within video games and gaming culture, noting the increased focus on collaboration between players on how to strategise their approach to progression within games and how this increases the redundancy of the old stereotype of the lone gamer (ibid). Beyond the Active Media / Active User theoretical divide, Arnseth (2006) identifies another theoretical faultline in terms of a split between learning to play and playing to learn. The playing to learn perspective focuses on identifying the knowledge or skills which can be treated as the outcomes of the encounter - and this accumulation of knowledge and skills can be positive as well as negative. In the learning to play approach, learning is seen as an intrinsic part of the gaming experience and occurs not just as the outcome of the process, but through the wider experience of playing the game, learning takes place with the development of mental pathways (ibid).

The social and cultural contexts of learning are of considerable importance to developing a fuller understanding of the interactions between games and players and how games and gaming culture can facilitate learning and help to develop more effective learners. Having identified a theoretical difference in learning to play versus playing to learn, Arnseth (2006) digs deeper to link theoretical dispositions to methodological approaches. He states that researchers more concerned with a cognitive / media effects approach are more likely to employ quantitative methods

whereas researchers from a social and cultural standpoint are more likely to utilise qualitative methods. From this, different types of findings continue to emanate. While these divisions are made clear, Arnseth (2006) also points out that while there is this division in academia, there is a belief held by many parents and teachers that views video games as being good for "... development of valuable skills such as strategic thinking, communication, application of numbers and group-decision making." However, Arnseth (2006) demonstrates caution in inferring what the actual lessons learned from these teaching sources might be - noting how playing *SimCity* might enable you to learn more about town planning but might also enable you to learn more about how to manipulate people. Thus, with a wide range of meanings which an individual player might make from interacting with a game. He observes:

> These problems, among others, have led some researchers to explore gameplay as an activity in its own right, an activity whose meaning is constituted by the contexts in which it is used. According to Squire (2003) what is missing from research on computer gaming are more naturalistic studies of how players experience gameplay, how gaming is related to other activities in young people's lives and the diverse practices players engage in when gaming. (ibid)

It is into this research gap identified by Squire and Ribbens & Malliet (2014:1625) where this project seeks to implant itself, by attempting to find out what real gamers think and give their voices some academic expression - which is still a problematically unfilled space. The quotation above speaks to RQ3 directly but is also relevant to addressing RQ1 and RQ2 also. This demonstrates why the qualitative methods approach taken here in this project, to enable detailed exploration of what people think about an issue.

The work of Active Media and Active Users researchers critiqued in this section details some of the broader theoretical schisms and builds on the previous section. Beyond the work of the Byron Report (2008), this gives a first hand insight into the theoretical debates that underscore RQ1 and RQ2. Understanding of these points is crucial to understanding how answers to RQ1 and RQ2 need to be framed and to recognise the agency of players. The theoretical points raised and reinforced and also set the rationale for understanding the motivation for the types of research papers considered for subsequent analysis in the following sections.

Games / effects / learning : the big picture

This project takes on part of the mission set by Squire (2003) seeking to study to establish from gamers' perspective an insight into their thinking. However, writers such as Anderson et al (2010) take a very different approach to Squire regarding the function or use of video games in society. A study concerning itself with the potential for learning from video games requires some attention to the negative aspects of learning which some commentators claim to have established. To best enunciate this, the following quotation from this paper is reproduced below:

> People of all ages in most modern countries get a heavy dose of violent media, especially in TV programs, films, and video games (e.g., Comstock & Scharrer, 2007; Gentile, 2003; Gentile, Saleem, & Anderson, 2007; Kirsh, 2006; Singer & Singer, 2001). Potential harmful effects of media violence have been scrutinized for over six decades, and considerable consensus has been reached on several of the most important issues. As stated by a recent panel of experts assembled by the U.S. Surgeon General, "Research on violent television and films, video games, and music reveals unequivocal evidence that media violence increases the likelihood of aggressive and violent behavior in both immediate and long-term contexts" (Anderson et al., 2003, p. 81)
>
> (Anderson et al, 2010: p. 151)

There is some very loaded language here - some of which will be excavated to reveal some of the ideological work being channelled here. In the first sentence we are presented with a sweeping generalisation about the media that people are 'presented' with. The joining together of the words 'violent' and 'media' implies that the media products under discussion are inherently violent. While there are many media products that contain examples of violent behaviour - the authors name check television, film and video games, all of which have a long history of being scapegoated for society's ills (Trend, 2007), it is a rush to judgement to instantly and completely label such representations of violence 'harmful' as is the case in the above quotation. This sweeping statement completely disregards the narrative and generic contexts in which violent acts can be bound up in media products, and of course, disregards the disposition of the reader / spectator towards their interaction and reading of the text. The use of the word 'presents' with regards to audience behaviour disregards any kind of theorising about how people do and do not respond to the media products they

consume. In doing so, the authors have immediately junked approximately 60 years worth of audience centred studies in media effects.

Furthermore, the US Surgeon General's report from 2001 cited by Anderson et al (2010) is judged to be 'recent'. This paper, having been published in 2010 whilst making such a claim to recency is somewhat lacking in credibility and points to a lack of understanding of the technological and consumption changes that the video games industry and game players experienced in the period of time between 2001 and 2010 and referred to previously. This timeframe saw the birth of online gaming as a mass market phenomenon and there was a shift in console generations, ushering in a new era of even higher resolution graphics and sound, offering greater ability to immerse players within game worlds. This timeframe correlates directly with the arrival of the *Modern Warfare sub-franchise,* with release of *Call of Duty: Modern Warfare* in 2008 and the cross-over points between the sixth and seventh console generations.. This signifies too great a distance between the authors and the subject matter they comment on. With regard to long term effects the authors state that these are "relatively permanent changes in beliefs, expectancies, scripts, attitudes, and other related person factors that are brought about by repeated exposure to video game violence." (ibid, p. 155).

The logic employed rests upon an insecure base which is really revealed when the authors say "repeated exposure to violent media is *expected* to lead to measurable changes in the chronic accessibility of aggression-related knowledge structures" (ibid, p155). At this point, the argument has shifted to what the authors believe might be the case within a blend of social and environmental factors. This is a hypothesis about what might occur, dependent on a wide range of variables. Therefore, there is nothing concrete here.

In the closing lines of the paper, the authors do explicitly recognise that there is a process of interaction between product and consumer, and not a process of presentation as was illustrated at the start of the paper by stating: "It is true that as a player you are "not just moving your hand on a joystick" but are indeed interacting "with the game psychologically and emotionally." "(ibid, p. 171). While they then step back into traditional Active Media cause and effect territory, there is a recognition that

there is an academic frontier in game studies which has been under explored - the prosocial educational benefits of playing games and engaging with wider gaming meta culture effects. This is the space that this project exists in.

For Griffiths, Kuss & King (2012), the academic concern around the potential for video games to be addictive harks back to the 1980s when the industry was still in its infancy (p. 308: 2012). In their literature review, Griffiths et al (2012) posit that, as the video game industry has developed and its popularity increased over the intervening decades, there has been an accompanying rise in the number of studies on video games and addiction. Simultaneously, the authors re-introduce the now outdated stereotype of the lone adolescent male gamer with the recognition that this demographic group (teenage males) are more likely than other to play video games and that they are at greater risk from such exposure, whilst conceding that "the course and severity of these [video gaming] problems is not well known" (ibid, p.309).

In the debate about video games and aggression, it is evident in other papers analysed (Ferguson, 2007 and Anderson et al., 2010) that there is a schism in the research literature and an identifiable lack of clarity about what sense people are really making from video games, a point noted by the Australian Government's literature review (Australian Government, 2010). The lack of precision in the 'effects' of games noted above demonstrates the need for audience / user focussed research on video games.

Ferguson's work in the field of video games and effects has taken a very different stance than those assumed by proponents of the Active Media perspective. His publications, along with those of Anderson and his various writing colleagues have formed an interesting public dialogue between diametrically opposed points of view of the roles and risks of video games in society.

The first key point Ferguson notes is that while there are numerous studies about the effects of video games there is no fixed academic position on whether video games do have a negative causal relationship on the levels of aggression and violence displayed by players. He further suggests that Anderson & Dill (2000) have misinterpreted or misunderstood their own research findings - whereas they posit that their research evidence indicates a causal relationship between video game play and

levels of aggression, Ferguson says that there is not clear enough data to support that conclusion. This is symptomatic of the public academic discourse that exists between both camps.

Ferguson (2007) conducted a meta-analysis which analyses the findings of 17 different studies carried out between 1995-2007. He noted that the academic debate on the effects of video games has been too narrow (subsequent to publication of this article, the literature on positive and negative effects has grown in a range of directions). This is a salient point to a project such as this one, as this project is focused on what video games can help people with rather than seeing such games as a hindrance. (Ferguson, 2007: p.310). The final key point to be extracted from this meta-analysis is that "violent video game exposure is associated with some positive effects, but does not appear to be associated with negative effects in relation to aggressive behavior." (Ferguson, 2007: p.314).

Vogel, Vogel, Cannon-Bowers, Bowers, Muse, Wright (2006) compiled a meta-analysis which drew from 32 other studies which focused on how technology can be an effective tool for learning. This was focused on formal education - on how games and simulations can help to develop learning in classroom environments. In keeping with the other papers discussed in this section, this paper is looking at the effects of games - but this one is entirely focussed on pro-social gains from video games, rather than the anti-social effects of aggression and harm that other authors discussed in other elements of this section.

While the public / media discourse around video games and effects is dominated by the fear of video games in the wrong hands, other academic debates about the pro-social uses of video games have generated some attention in recent years. The necessity to take this debate seriously, especially within the parameters of this project, is illuminated in the following statement: "There is also some evidence to suggest that using these computer games or simulations may actually "teach" people more effectively than traditional methods (Cassidy, 2003; Jenkins, 2002)." (ibid, 2006: p.230).

Like the paper of Vogel et al (2006), the meta-analysis published by Young, Slota, Cutter, Jalette, Mullin, Lai, Simeone, Tran & Yukhymenko (2012)[3] focuses on the educational power of video games as applied to formal educational settings. Young et al (2012) hypothesised that they would find clear positive correlations between game play and educational achievement. They concluded that the evidence did not support such a hypothesis and that different methodological approaches must be employed to truly understand the individual nature of game play. However, as they progress to discuss the philosophical issue of what makes a game and discuss the role of games and play in child development, the authors make a critical point on how play helps shape imaginative thinking and also rehearse activities they may do at other times and stages in life. In citing the claims of Vygotsky (1978) in this context, the authors then make the following claim:

> Children use games that imitate war or play "house" to mimic the adult activities for which they must ultimately prepare; ergo, Civilization IV or World of Warcraft (WoW; equal to war games) and The Sims Online and TirNua (the virtual equivalent of playing "house") can be said to have obvious sociocultural and educational affordances for the simulation of, enculturation to, and learning about adult activities.
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> (Young et al 2012: p.63)

The wider point here, with relevance to the nature of my project, is the role of 'play' in helping humans to learn social and cultural norms (fitting into the rule based systems that games are, according to Juul (2011) and how by playing games we enable ourselves to practice, which in turn helps us to develop our knowledge and skills and offers us the opportunity to develop in a particular field, and this links back to Willis (1978), one of the theoretical antecedents to this project.

Similar to Young et al (2012), the meta-analysis carried out by Wouters, van Nimwegen, van Oostendorp and van der Spek (2013) is focused on evaluating whether so-called serious games are more effective in facilitating learning than traditional classroom methods. This meta-analysis drew from 39 different studies selected after the search criteria had been exhausted. Wouters et al (2013) focus most of their attention in this paper on how playing 'serious' games can be a motivating

[3] search process is described in the paper, but the number of studies drawn upon for their meta-analysis is left unclear

factor in the desire to learn. Given that the term 'serious games' is a phrase which regularly re-occurs in this strand of literature, it is worth bearing in mind how these writers define the term, which is as follows:

> In speaking of a serious (computer) game, we mean that the objective of the computer game is not to entertain the player, which would be an added value, but to use the entertaining quality for training, education, health, public policy, and strategic communication objectives (Zyda, 2005).
>
> (Wouters, et al, 2013: p.250)

This definition reinforces there is a distinct strand in how some academic writers define games as serious, and by implication, others as non-serious and therefore not useful in furthering the public goods stated above. Having noted this thinking in other papers critiqued above, this does suggest an element of canon building which puts an unnecessary obstacle in the way of any researcher seeking to really get to grips with how and why games can facilitate learning. It is a false dichotomy to seek to infer the purpose of games and does a disservice to those who play all sorts of video games because individual gamers in one stroke here are being denied their agency, their voice about what they might choose to play certain video games. It has to be for gamers themselves to make their decisions about what the meaning or significance over what games they choose to play and how they choose to play them. Returning to focus on the issue of how games can foster motivation, Wouters et al. (2013), citing Malone (1981), state that the motivational factors for playing video games are "challenge, curiosity, and fantasy.". They also recognise the value of "autonomy and competence." (ibid, p.250). These overarching elements create a deep and wide research pool for researchers to dive into, further accentuating the point made above that there is no need to divide games into the serious and otherwise.

Working towards the end of the paper, the authors claim:

> Our results corroborate other findings indicating that serious games are a more effective than other instruction methods (cf. Sitzmann, 2011; Vogel et al., 2006). *The next step is more value-added research on specific game features that determine this effectiveness*. (my italics)
>
> (ibid p.262)

The next step called for above is exactly where this project goes. In the aftermath of another mass school shooting in the US (the Sandy Hook school shooting in 2012), the moral panic about video games and effects flared again. Subsequently, Ferguson (2015) undertook another meta-analysis to comb through the research data on aggression, mental health, prosocial behaviour and academic performance - the key areas of academic concern with regard to video games. In gathering together the outcomes of 101 separate studies Ferguson comments: “Despite more than 100 studies, the scholarly community remains divided over whether evidence for causal links with player aggression has been established…” (Ferguson, 2015: p.647).

This is a timely reminder of the uncertainties about what the research evidence actually shows that populates so much of the available literature - whether that literature is focused on the purported negative, anti-social consequences of playing video games or is focused on positive, prosocial effects (such as facilitating learning), there is a lack of clarity and this is acknowledged by commentators. Ferguson (2015) proceeds to rehearse a familiar argument from previous work - that some researchers conflate findings which purportedly show video games triggering a rise in aggression with video games triggering a rise in violent acts and he notes how other academics have again made this causal correlation with regard to the Sandy Hook incident, citing the work of Huesmann and Dubow (2012). In keeping with his previous work, Ferguson (2015) is once again critical of studies which claim that they can establish negative causal relationships between games and players. (ibid, p.648). There is not much at all about the existing effects research work which is based on solid methodological grounds and therefore a degree of academic scepticism is required when handling the findings arising from any such study. Taking the critique further, Ferguson goes on to say “...it is clear that effect sizes are substantially reduced when control variables including gender, trait aggression, and family environment are included in analyses.” (ibid, p.648). Therefore, in assessing what the available evidence offers with regard to answering the research questions, there can be no denial that the picture emerging is fragmented and incoherent in places. While those who work from a positivist paradigm may claim rigour in their methods and processes, the research findings from such studies do not easily lend themselves to drawing easy conclusions.

This section has had two purposes: a focus on research mostly from the recent decade to ensure that the research analysed is sufficiently contemporaneous to ensure that the work of this thesis as a whole is fresh and draws on the most relevant contemporary research. Besides this, the papers surveyed here are all meta-analyses with a clear focus on games and learning. This section of research builds on the theoretical foundations of the previous section and makes clear how the older theoretical concerns continue to make themselves felt in recent work and highlight some of the points of enquiry into the forms of learning that video games can or cannot facilitate, such as the debate about what constitutes a 'serious' game, which is necessary when grappling with the work of Gee (as happens later in this chapter). From the work of Anderson et al (2010) which is sceptical that there are personal and social benefits to what video games can teach to the more positive approach to the educational role of video games as displayed by Young et al (2012), there is a diversity of opinions and this means the answers to the research questions are not foregone conclusions. Vogel et al comment on how similar types of meta-analyses have determined that there is a positive correlation between games / simulations and cognitive gains - or put simply, learning gains (Vogel et al, 2006: p.237). The salient point is the recognition of the ability of games to work as learning environments. Whilst Vogel et al (2006) are concerned with measuring this way of learning against more conventional classroom based learning methods, what has been academically established here is that games are a tool to enable learning.

Video games can teach, but they teach the wrong things

Having established that video games are tools which can facilitate learning, the next step here is to consider how video games have been claimed to have facilitated learning. Gentile & Gentile (2008) sought to bridge the academic gap between educationally oriented research into video games and more traditional media effects oriented research into video games. One of the authors of this paper is associated with the Active Media school through the output of his work in conjunction with writers such as Anderson (e.g., Anderson & Bushman, 2001; Anderson et al 2007) and this paper begins with a statement of Active Media orthodoxy - playing 'violent' video games correlates to an increase in aggressive thoughts, feelings and behaviours. In

seeking to advance the core argument of the Active Media school, Gentile & Gentile (2008) look to identify the various ways that video games act upon core educational principles to deliver attention-grabbing learning opportunities. Their aim in undertaking this task is to end the ability to claim that video games have no effects. In taking a positivist driven approach, with ensuing preference for experimental quantitative methods the authors demonstrate their top down direct effects approach to theorising media effects and thus overlook many decades of studies theorising and analysing how individuals and groups use, interact with and respond to the media products they choose to read or consume. Therefore, arguably, this paper starts from something of a flawed premise, but it does proceed to make a number of connections between learning design and game design.

The study was a large-scale quantitative research project which consists of three data sets and had 2478 participants from two schools and a college. The sample was mostly evenly split between gender and was representative for the ethnic composition of the local population. The research instruments were three confidential surveys gathered over two points of time. Thus at all times, there was a very clear gap between participants and researchers. From a positivist, scientific approach this is good, but on the reverse this distance is a significant barrier to the participants knowing at first hand what the lives and experiences of the participants are. This gulf means researchers end up in a position where they seek to claim generalisable theory entirely based on third hand experience of the phenomena being investigated, which is problematic when seeking to extend academic knowledge. The quantitative data gathered for the purpose of this paper informed the writers that their hypotheses were justified - reinforcing the strain of research from which this paper sprang, namely that playing video games correlates to higher levels of aggressive thoughts, feelings and behaviours. However, Gentile & Gentile (2008) were careful to note that while there was a correlation, this did not mean there was a causal connection, which reinforces criticism by Ferguson (2007, 2015) of the Active Media research.

What this paper does mark is an acceptance of the proposition that video games make excellent tools for facilitating learning. It is not a question of *if* video games can help people learn, but a question of *how* this learning can happen and *what* kinds of learning can be fostered. The authors' main statements of learning design principles cross

over into game design. They note that games have clear (learning) objectives, which are achievable at different difficulty settings (differentiation by task). Secondly, video games require learning and learners to be active in the process - undertaking practice tasks, receiving and acting upon timely feedback and further practice until mastery of a task is achieved. Thirdly, knowledge and skills are practiced so much that they become overlearned and engineer automatic responses on the part of the learner / player. Next, mastery is rewarded extrinsically with a range of metrics (point scores, kills, deaths) and intrinsically through level progression to higher levels of difficulty, recognising the player / learner's achievements and thus boosting their self-esteem. Fifth, the difficulty of tasks or missions is well sequenced in order of difficulty - requiring mastery from previous levels thus keeping learner / players within their ZPD (Vygotsky). By revisiting previously acquired knowledge and skills and re-application in new scenarios, Gentile & Gentile (2008) note how this is an excellent example of Bruner's concept of spiral learning at work. The authors further note how spiral learning is not achieved in video games by shortening the content and making tasks easier (as they argue happens in schools) but the reverse - where games are long and hard and thus require a great deal of player / learner time and effort. The sixth point is because video games are adaptable in difficulty by the player; they encourage the accumulation of massed and distributed practice. In playing regularly the player accumulates massed practice which can then be activated with more sporadic play (distributed practice) with the relevant mastery of knowledge and skills. The final educational principle identified lies in how the practice of knowledge and skills in a range of in-game contexts is a better enabler of knowledge transfer to situations outside of the game as the player has already become sophisticated in adapting the reservoir of knowledge and skills to different tasks within the game.

Beyond these principles, Gentile & Gentile (2008, 130) also detail the use of "...time-honored ''tricks'' that have been well-known by the media and advertisers.". They proceed to offer an overly deterministic way of accounting for how people react to use of media language in media products and decry "provocative scenes of sex and violence [that] not only capture one's attention, but also supply vivid visual images, which are known to create better memory than the same information provided verbally (e.g., Paivio and Begg 1981)." (Gentile & Gentile, 2008: 130). This use of language

reveals a ‘direct effects’ model of thinking about how the media influences people – which will be challenged by this study’s findings especially with regard to RQ2.

Lapierre & Farra (2016) position their work in alignment with the Active Media school of thought, by detailing how they are looking to employ the General Learning Model (GLM) (Buckley & Anderson, 2006) which is an outgrowth of the General Aggression Model (GAM) (Bushman & Anderson, 2002) to test hypotheses which center around how to access realistic gun controllers for video games such as *Delta Six* and *Call of Duty* amongst other FPS games. This study was carried out by means of a survey and had 779 participants from two American universities and these were drawn from communications courses. They are also interested in the issue of desensitisation from the perspective that repeated exposure to violent content will mean a diminishing shock value for the content to the reader / player. In explaining the GAM and the GLM and the differences between the two models, the authors state that the key difference is that while the GAM offers a model for measuring aggression, the GLM seeks to measure learning outcomes from playing video games while contending that behaviour is “driven by twin variables - personal and situational.” (Lapierre & Farra, 2016: p. 217).

What this statement again makes clear is that there is no longer a debate about *whether* video games are a tool for learning, it is a series of debates about *what* types of learning can be facilitated by video game play. Active Media school theorists are concerned with what may be termed socially aberrant effects of video game play - increased levels of arousal fuelling increased levels of aggressions, which cements over time into behavioural scripts which will ‘naturalise’ someone towards a more hostile, aggressive, violent means of problem resolution than might have otherwise been the case without the video game stimuli over time. However, the same levels of academic concern don’t appear to exist towards board games such as *Cluedo* or *Monopoly*, where respectively, you *might* aberrantly learn that you can kill someone with a candlestick or how to be a ‘vulture capitalist’. This is one indicator of how differentials in cultural values for different types of games filter how academic readings of activities such as video gaming which does not enjoy a high status across society and culture. Returning to the two variables identified in the GLM which affect behaviour, Lapierre & Farra (2016) note:

> According to Buckley and Anderson (2006), personal variables are what we bring to an experience (e.g., attitudes, behavioral tendencies, and emotions), whereas situational variables are those belonging to the environment (e.g., media, settings, other people). The personal variables which determine whether we learn from video games are the same variables that determine general learning (e.g., age, ability level) combined with variables associated with our experiences with video games (e.g., history of exposure, video game skill). The situational variables that influence our availability to learn from games include elements of the games. These elements include game content, game controller…
>
> (Ibid, p. 218)

Lapierre & Farra (2016) hypothesise that playing 'violent' video games will lead to a decrease in support for gun control and increased support for gun use to ensure public safety. The authors claim that those who spend the most time playing FPS games are less likely to be in favour of gun control policies (Ibid, p. 225). However, after making this claim the authors also note that there are limitations in their findings - that they have only established an increase in experience with gun controllers, and while they had a substantial research sample (779 participants), this sample is made up entirely of communications students who cannot considered to be representative of the wider player base for such FPS games. This is a critical issue because when operationalizing concepts such as the GAM and GLM, the very use of the word 'general' in those two models implies that such theorising is or should be widely generalisable - if not then they are not general models.

Blanco-Herrera, Gentile and Rokkum (2019) note that the majority of video games research has been on aggression or visual-spatial cognition. They also note that while there is a substantial body of academic research on video games, there are some very dominant strains in the directions of that research. Partly looking to broaden the focus of the field, the authors conducted a study into the hugely popular game *Minecraft* to explore the potential for players to develop their creative skills through playing the game. Blanco-Herrera et al (2019) note that "seemingly straightforward first-person shooter games can engender creative practice as players rethink strategies" (Blanco-Herrera et al, 2019: p.119).

This statement is significant in that it shows recognition that video games are multi-layered products from which a range of meanings can be extracted. Given the acknowledgment in the paper of the dominant strains of published research and this recognition that playing games like *Call of Duty* is not just a route to displaying higher levels of aggression (ibid, p.119); there is clear evidence of a shift in the directions of research around video games which is looking to explore their potential for good outcomes - how video games can help people learn. This further underpins the validity of the methodological approach for this topic.

Blanc-Herrera et al's study had 252 participants and consisted of laboratory experiments with participants being divided between playing *Minecraft* (undirected play), *Minecraft* (directed play), *NASCAR* and watching television. While it is not entirely explicitly clear, it would seem that participants played the games or watched TV for a 40 minute period (the paper (p.123) states that the *NASCAR* game and the TV viewing were of 40 minutes durations). Given the nature of modern games (especially in terms of the length to complete them) this is not a long period of time and that calls into question the validity of Blanco-Herrera et al's (2019) findings (and experiments involving relatively short bursts of video game play are all exposed to the same structural weakness in research design which of course affects research outcomes).

In referencing the General Learning Model (Gentile et al., 2009; Gentile, Groves, & Gentile, 2014), Blanco-Herrera et al (2019) recognise that the learning potential of video games develops from the principles of game design, specifically the desire to "achieve flow and immersion and the timely provision of meaningful feedback." (ibid, p.121). This point is then taken into a specific discussion about *Minecraft* and the range and frequency of feedback which that game offers, but the point about the range and frequency of feedback is wider than just *Minecraft*. Commercial video games need to work with their players and make them feel good about their game play (generate a sense of achievement) while challenging the player and enabling them to progress (keeping the player constantly in Vygotsky's ZPD). Ultimately, this study found that Minecraft does offer meaningful potential for players (learners) to develop their creative skills owing to the nature of the game play and the feedback mechanisms provided. In summing up the arguments presented in the study, Blanco-Herrera et al

recognise that not all games are the same and cannot be treated uniformly as a good or bad phenomenon, and that playing video games can have cathartic and educational outcomes.

While there is a certain logic in seeing a correlation with the number of hours spent gaming (particularly if this results in less sleep than is ideal) great care needs to be exercised in noting two 'facts' (academic underperformance is relative and an ideological construct formed from positions on what constitutes academic progress and what quantity of progress is to be expected from different micro-cohorts; self-report of hours spent gaming need to be treated with some questioning rather than simply accepted at face value), the intention of this critique is to focus on the longitudinal study on educational outcomes conducted by Gnambs, Stasielowicz, Wolter and Appel (2020). The anecdotal observations above are given some credence by Gnambs et al (2020, p.70), as they observe that time spent playing games is to the detriment of school performance.

With the employment of theoretical constructs such as the GLM, the research presented in this section supports the view expressed earlier that it is no longer a question of *if* video games can teach but a question of *what* they teach. This then puts all three research questions into play - with an acceptance of the teaching potential of video games then serious scrutiny of what they can teach and how they teach is required to further extend academic understanding of this field. Thus, the validity of this study is further extended. All of the work surveyed in this section is united on the point that video games are detrimental learning tools and this extends the old media effects tradition into an educational framework. However, this then means the same criticisms can be levelled at this work as at the media effects work: too often such researchers look for cause and effect correlations where there aren't any and this then leads back to the criticisms leveled by Ferguson (2007, 2015) that the Active Media researchers do not fully understand what their own data is telling them.

Video games can teach and they can teach good things

The older traditional strain of video game effects research is focussed on the traditional fear of harm which has permeated the development of different media forms. This

school of thought implicitly recognises that video games are tools for learning, but expresses concern over what is being learned (and this picks up from a similar idea expressed by Jenkins, 2006: p.215). This section of the literature review will analyse work which is focussed on positive learning gains from playing video games to counterbalance this. Stiff & Kedra (2018) note the emergence of research in recent years which explores different areas of enquiry and does not report the concerns about negative effects. They recognise that playing 'violent' video games can have pro-social benefits if there is a cooperative dimension to play (Stiff & Kedra, 2018: p.105). Cooperation and collaboration between players is a major feature of the research findings from my study discussed later.

Stiff & Kedra (2018) set out to investigate whether collaborative video game play is or is not an effective tool for reducing prejudice by getting people from different social groups to work with each other. The value of the skill of being to work collaboratively with others has long been recognised in curriculum development, featuring in successive rounds of curriculum reform in the UK (IOE, 2008). Additionally, this skill is also one recognised as one of the fundamental skills in the P21 agenda (Fadel, 2008). Citing other studies, Stiff & Kedra (2018) claim the process of getting people from different groups to work together can lead to reductions in prejudice. The authors furthermore claim that this contact between people can be virtual - offering space for online video games to play a socially beneficial role. They also note that very popular games such as *World of Warcraft* and *Call of Duty* "afford opportunities for players to work together." (Ibid, p106-7). When playing any iteration of *Call of Duty*, it becomes quickly apparent that obstacles or problems are generally only resolvable through the deployment of physical force, including significant violent acts. The violence is a tool towards problem solving and not the objective, therefore, if learners / players can learn to work collaboratively in playing such games, then what they will be learning together is the process of how to learn and progress together.

Stiff & Kedra's study (2018) was a quantitative one, consisting of two experimental groups with a total of 80 participants, of which 60 were female. In one group a participant played against an outgroup member and in the other group participants played against a computer controlled player. In order to measure participants' views on the research topic of whether game play could enable people to become more

tolerant of others, the participants were asked to complete a survey using Likert scale type responses.

Given the six hypotheses the writers state, and with special regards to Hypothesis 1 and Hypothesis 6 (display of more positive attitudes and the effect of social identity on social behaviour), it is surprising that the research design did not find scope to include some qualitative element to help measure these. When part of the object of a study is to determine whether or not the experiment conducted led to more positive attitudes about other social groups, it is a big missed opportunity not to have found a way to actually ask the participants their views on such a topic. Here, then this is a study which is high on reliability, but has issues with it's validity because of this shortcoming.

Stiff & Kedra (2018) concluded that their hypothesis - that playing online games with people from different backgrounds - could be supported from their data. This is in line with previous research regarding partnering players up from different backgrounds with the same purpose in mind. The study is a good example of how playing (online) video games can be good for the individual and for society - this study is evidence of people learning to be more tolerant and respectful towards others and this type of learning can only produce a net social benefit.

Checa-Romero (2016) recognises the value of digital media as tools which can facilitate learning and sets aside old dichotomies about some cultural forms being literature while others are not. She also recognises the ability of video games to put players in the driving seat of their learning because without the player, the game cannot progress, citing the work of Egenfeldt Nielsen, Smith & Tosca, (2008) and Mitchell & Savill-Smith, (2004). Her research was centred on a class of 13 Spanish schooldren. Data was captured by means of audio, video and screen capture recordings of the children working on tasks relating to the film and game *Harry Potter and The Goblet Of Fire* (both released in 2005). In conjunction with other material reviewed in this chapter, this reinforces the point that video games and learning are not mutually opposite terms but instead complement each other. Checa-Romero (2016) further notes how this learning can enable the development of strategic thinking, creativity, innovation and collaboration (Ibid, p. 465) - which fits very well with

the P21 skills agenda[4] (Fadel, 2008).

In the citations above, there is evidence that this type of approach to theorising about video games is not especially new, although it is something of a minority perspective in the overall volume of published research about video games. While Checa-Romero (2016) is positive about the power of video games to enable learning, she does express the view that this power is better amplified through the site of traditional formal learning - the classroom. In the classroom with a traditional teacher-student situation, she argues that the learning power of video games can be more fully realised with the presence of the teacher to guide the learners. What is of greater concern in my study is the learning power of commercial video games in informal learning settings with none of the trappings of formal, traditional learning and exploring what learning power can be harnessed by the removals of these agents.

This perspective then directs the nature of Checa-Romero's research itself which was classroom based and looking to explore how film and video games could enable children to develop their literacy competencies and how this could be measured through the products which they generated - drawings of key scenes in the Harry Potter film and video game studied. Ultimately, the study found that "...video games are tools designed for entertainment which, if introduced into the classroom and properly mediated by the teacher, can become instruments which facilitate learning and digital literacy (e.g., Fromme & Unger, 2012; Hutchison, 2007)" (Checa-Romero, 206: p.484).

The notion of teacher mediation is salient here. A recurring feature in various 'games for learning' papers centres the role of the teacher as being integral to the successful functioning of games as learning tools. Arguably, this is the imprint of professional ideology. Checa-Romero's study consisted of a data collection phase and a data analysis phase. The first phase of data collection was with a primary school class and consisted of eight workshop sessions. The second stage was an ethnographic study of the artefacts created by the participants.

[4] P21 skills agenda - a partnership between American educational institutions and wide range of employers to clarify the skills required for work in the 21st century

The nature of this study gives rise to the same discussion of validity versus reliability as that above. The value of such a study, with its richness in ecological validity partly arises from the artefacts created in the process of the research by the child participants. This generates evidence of how the participants have internalised and processed what they have seen and played in the Harry Potter film and game named above. In getting the children to express themselves visually, they are then being invited to transfer what they have seen and what they gave deemed important onto their own canvas - thus the process of getting them to recall events and vitally make a judgement on what they considered important moments from the game and film is a vital part of the process in forging critical readers - because that is exactly they have done with their responses to the task. So in assessing how video games can help children (or indeed anyone) learn this project offers some useful pointers.

Diverging from the orthodox position within the video games as learning tools literature, Palaiogiannis (2014) advocates in favour of viewing video games as learning tools which can operate effectively without the traditional teaching infrastructure of the classroom and the teacher. This position is entirely in keeping with the views expressed on the learning potential of video games in this thesis. Palaiogiannis (2014) justifies his position by deploying ideas from constructivist theorists, notably Dewey, Vygotsky, Bruner and Gee. For Palaiogiannis (2014), video games - and with a focus in his paper on commercial off the shelf games (COTS) in the field offer the kind of situated learning space which has been advocated by Gee, which can can enable the fostering of learner autonomy and independence - one of the skills treasured in educational systems globally (Fadel, 2008) and certainly in the UK (QCA, n.d).

This was a mixed methods study involving twenty high school students in Greece. Given that the class teacher was the researcher, an opportunity sample was utilised because of ease of access to the participants. The qualitative element of the student was formed through student diaries; with the quantitative element arising from the use of a questionnaire administered at the end of the research. Rather than seek generalisability from his findings, Palaiogiannis (2014) concentrates instead on seeking transferability.

In addition to the issues highlighted with regards to the reliability and validity of the studies discussed above, given the nature of the opportunity sample (a class being taught by the teacher-researcher), there are again issues with social desirability in terms of research outcomes. While much of the research was done outside of the classroom - happening via game play and feeding into a bespoke Facebook discussion group, the public nature of Facebook groups could act as a brake on respondents being entirely forthcoming with honest answers. Perhaps the degree to which the answers are the full and frank views of the participants rests upon the trust and confidence group members had in one another. Again, as with other studies, an unknown element, but one that must be borne in mind when evaluating the efficacy of this project.

Palaiogiannis (2014) brings together Dewey's approach of 'learning by doing', Vygotsky's belief in situating learning in 'social and cultural settings" (Kiili, 2005, p. 57)' and Bruner's concept of 'discovery learning' in his research into the use of a COTS game by student at one Greek secondary school. In addition he draws on the connectivism theory and flow theory. The idea of 'know-where' in connectivism theory (Palaiogiannis, 2014: p.261) is crucial because this learning habit of players / learners knowing where to find sources of knowledge and being ready to invest time in improving their own performance is one of the key findings from my study which emerges later. As with connectivism theory, the findings from this research project discussed later will offer substantial evidence that flow theory is at work in the responses of the participants in their interactions with the *Call of Duty* games.

Palaiogiannis (2014) reports that video gaming promotes vocabulary learning in ways that formal education cannot (Palaiogiannis, 2014: p.269). He is persuaded that his findings demonstrate that learning can be facilitated and that the situated learning within the diegesis of the game is capable of being transferred outside of the 'magic circle' of the game (Salen & Zimmerman, 2004 cited in Dovey & Kennedy, 2006). Knowledge transfer is one of the key points of education in any setting - learning something in one context is done in the expectation that this can be transferred to a similar situation arising in a different context. Palaiogiannis (2014) goes on to also state that his research findings demonstrate that video gaming made players / learners

feel more independent and that working collaboratively in writing projects boosted confidence (Palaiogiannis, 2014: p.271).

Dale, Joessel, Bavelier and Green (2020) remind us that academic research on video games and cognition is effectively as old as the field itself, emerging in published research from the mid 1980s onwards, mirroring the rise to mass market prominence of computer / video games at the time. Dale et al (2020) are critical of the dominant methodological approach: the positivist, experimental approach to carrying out research in this field for the purposes of trying to forge correlational relationships. In discussing specific games, such as the *Call of Duty* games, it quickly becomes apparent when attempting to find direct correlation between game and effect in an experimental setting is too narrow and restrictive. Dale et al (2020) identify the following range of factors at play in such games: the fast pace leading to pressurised gaming environments; need to distribute players' attention across a wide visual field; need for players to select which area of the screen to focus most on; the need to switch attention between different tasks and areas of the screen and sufficient variety to prevent predictability (Dale et al 2020: p2).

Owing to the variety of the cognitive demands being placed on players Dale et al (2020) argue that action video game players (AVGPs) outperform non players (NVGPs) on tasks where the participant needs to demonstrate fine understandings of visual and audio stimuli. The authors also claim that sustained playing action video games is beneficial to the development of visuospatial memory, mental rotation skills and attention capacities.' (ibid, p3). This firmly counters the time-displacement argument proffered by Gnambs, Stasielowicz, Wolter & Appel (2020).

The authors acknowledge that there are sharp disagreements in the field and state that this work is not claiming to be a definitive statement, but this paper does show clear understanding of the prevalence of video games within mainstream culture generally and of the shifting patterns of game consumption - both in genres and how people play - up to the current time. This suggests that this paper is tonally more in tune with gamers' real life experiences than some other papers surveyed elsewhere in this literature review. Greater understanding of the thoughts of gamers affords these findings of Dale et al (2020) with a degree of credibility which is absent from studies

focussed on quantitative data collection and analysis of statistics alone, which is a weakness identified in the work of Gnambs et al (2020) earlier.

Frye (2012) points out one of the most obvious but overlooked points by those who have exported academic debates from other media to video games. He identifies the agency of the reader in writing the text (the act of playing the game) which does not exist in the same capacity in the reading of the texts of other media forms. Owing to the greater degree of reader agency involved in playing video games Frye (2012) contends that the active versus passive reader is a false construction - and this is very much a contested notion in literature pertaining to the analysis of audience behaviour for other media forms. In place of this active versus passive dualism, Frye (2012) argues for a more games-centric approach, specifically the application of the concept of the 'magic circle' where players understand the division between real and play and this chimes with the concept of the membrane put forward by Castranova (2005) (Frye, 2012: p. 870). The distinction between what is play and what is real also ties to work of Kolb & Kolb (2010) on experiential learning theory.

In the longer term debate on 'media effects', Bandura's work on social learning theory has held high status and is arguably the underpinning theory to public policy with regard to media regulation, owing to the discourses of fear and harm that permeate approaches to media regulation. This concept of the 'magic circle' is something of a rejection of social learning theory as it argues that game players can place a hard border between the real and the simulation. The fear from academics who adhere to social learning theory is that games are tools for learning the wrong things - learning to be aggressive; learning that violence is the best means to resolve problems. In noting the developments in games research over recent years prior to publication of his paper in 2012, Frye makes clear that there is greater consideration of the interactions between players and games and the concept of the magic circle coincides with the ideas of Kolb & Kolb (2010) where play exists in a sphere of its own (Frye, 2012: p. 870).

Evans, Jones & Akalin (2017) conducted a study designed to explore how educational principles could be successfully transported in a game design topic which would have recognisable learning gains for the learner-participants. The study required

participants to design a new level for the previously mentioned game *Spore*. This was a qualitative study undertaken over the duration of an academic year which interviewed participants at various stages to measure their sense of learning gains over the study period. While this is a small scale study with three participants, it offers support for this thesis' underpinning idea that playing video games is not something that is done to people, but an active use of time which gives players a sense of achievement and success.

To complement this, the authors also note how the participants reported a sense of being challenged (ibid, p.23). The recognition by the participants that they were being challenged, but that the level of challenge was appropriate, was a factor in enabling them to complete their work and thus get the emotional satisfaction of success. In educational theory terms, the participants were placed and kept within their zone of proximal distance and this led them to a successful conclusion. This is another theoretical idea which underpins substantial aspects of my primary research findings, as discussed later.

The first phase of Evans et al's research consisted of three meetings between the students and teacher-researcher. The next phase was to play *Spore* enabling the participants to learn the game design mechanics and gave students a hands-on opportunity to develop their skills with the game. In the final phase, students designed, built and tested their own games. Data collection was via participant observation by the teacher supplemented by regular semi-structured interviews.

In research design this is a very different type of study to those discussed above. While much of the criticism levelled at quantitative studies is directed at questioning the validity of the research outcomes, in this study there was no lack of face to face contact between researcher (the teacher) and the participants. This however, presents another set of discussion points - with regard to the workshops, was the teacher-researcher's use of scaffolding and modelling 'too good' in the sense that it directed the student-participants into what the socially desirable responses would be. Therefore, there is scope to query the reliability of Evans et al's study.

The studies appraised in this section detail some of the many dimensions of the pedagogical power of video games. The research discussed above incorporates quantitative, qualitative and mixed methods studies and yields a variety of possibilities about what video games can teach. Regardless of methodological approach, there is a sizeable evidence base of research which indicates a range of ways in which video games can facilitate learning. Compared with the papers critiqued in the previous section, this section highlights that where researchers focus on an element of learning (whether content or skills-based) and investigate the role of playing video games in this process, very different conclusions are arrived at with regards to the learning potential of video games compared to the previous section. This provides a solid foundation for the method of enquiry to answer the research questions.

Teachers? Where we're going we don't need teachers

In the two preceding sections, the focus has been on analysing the ways in which academic writers have discussed the learning potential of video games. In the section immediately above, the research focuses on educational research with teachers at the centre of the action. Here, there is a decisive shift away from such work. Monjelat, Méndez & Lacasa (2017) noted the teacher-centric research focus of academic work into games and learning. They moved away from this area of research and focussed on how students within the classroom can undertake the tutor role of scaffolding learning for other peers - in helping them to navigate a game (*The Sims*) to help them develop their competence to become independent players / learners. Like many other works within this literature review, the ideas of Vygotsky (ZPD and the social-cultural contexts of learning) have been an influence on these writers in what they have chosen to research and how they have chosen to research it. These theoretical influences are the means to justify the focus on video games as the tool for exploring peer-to-peer scaffolding.

This was a qualitative study with ten participants. Unstructured interviews were conducted with the group's classroom teacher. The advantages of designing and carrying out the research in this way is that it enables a forensic 'deep dive' into the social reality of that class at that point in time and the dynamics at play between students and between teacher and students. In a wider context of exploring a range

of different studies, the opportunity for consideration of transferability - through comparison to the findings from other school based studies on videogames emerges.

Before reaching their conclusions, the authors offer substantial evidence from the transcripts from their in-class research. Their evidence points to conclusions that video game play in the classroom is an effective tool for facilitating peer-to-peer scaffolding. The peer supports were given instructions on what kinds of support that they needed to offer to peers. However, this scaffolding extended beyond the instructions given by the teacher, as some of the learners were experiencing difficulty in playing the game. So the peer to peer support also extended to helping other students with the gameplay (as they were not restricted from this by the teacher). For the purpose of this project, this is the most vital finding from this paper - as the authors state:

> In this respect, this study shows that students can effectively guide each other and it could be useful to point that out to them, so they can reflect upon their actions. This could improve their experience in the classroom, making them more responsible for their learning process, resulting in more active participation. (Monjelat et al: 2017, p.279)

Dale, Joessel, Bavelier & Green, (2020) note the substantial change in the size and nature of the video game market over the decades since the 1980s, and within the development and evolution of gaming genres such as the first-person shooter (FPS) and role playing game (RPG). It is these two genres which form the locus for their research into cognitive effects of video game play. Dale et al (2020) cite Griffith, Voloschin, Gibb, & Bailey (1983) to mark the historical reach of the perspective that video games had the potential to develop cognitive skills. With regard to successful gameplay of action video games (incorporating the FPS and RPG genres) the authors note that participants need visuospatial attention working memory capacity, object tracking skills - because of the high number of visual stimuli and the time constraints which induce pressure to perform.

The purpose of this study was to test the hypothesis that action game video play would be beneficial to the development of the skills named above. After excluding cohorts on age grounds, the study consisted of 2169 participants who were given game based

tasks to undertake and a pre-test survey to establish game play habits. Participants were required to undertake two key tasks - Useful Field of Vision (UFOV) task and a Multiple Object Tracking (MOT) task. Their findings were variable - the results from the UFOV task confirmed the hypothesis, but the MOT task produced less clear results. The longer lasting point of interest for this project comes from one of the final elements of the conclusion to the paper. Dale et al (2020) state:

> ...any game regardless of whether it is a minigame, shooter game, strategy game, and so forth may benefit attention so long as it requires the player to rapidly attend to multiple pieces of information at one time, select targets from within an array of distractors over a wide visual field, and make decisions under time constraints. (ibid, p.9)

This gives a theoretical reason to believe that the *Call of Duty* games offer considerable capacity to develop a range of cognitive skills, owing to the ways in which they require the player to be able to absorb a high quantity of visuospatial information from a variety of sources all the time while playing (offline as well as online play).

The work of Steenbergen, Sellaro, Stock, Besten, Lorenza & Colzato (2015) has an acknowledged influence from previous work by Green & Bavelier (2003) in terms of the focus on cognitive control and development and video games as a tool to help in these regards. Steenburgen et al (2015) note the great importance of cognitive control across all areas of life, and express interest in how cognitive control measures can help to alleviate the negative impact of a range of medical conditions (such as ADHD and OCD) and cognitive decline. As has been remarked upon in discussion of other papers, action games such as *Call of Duty* amongst others are highlighted as tools that can help considering the quantity and quality of visuospatial attention the player has to apply to the act of playing.

This was a quantitative, experimental study which began with a sample of 90 participants who were recruited by means of a ‘covert recruitment strategy’ and from which a final sample of 36 adults was derived. The covert strategy meant the use of a questionnaire which asked a range of questions about different issues. However, given that the participants were contacted because they had participated in previous behavioural studies by the authors, this may not have been as covert as the researchers claim. The use of covert means lacks some integrity. Also, given that the

participants had taken part in prior studies from some of the team of researchers, there could be an element of social desirability creeping into responses. While a high number (18) of the participants had reported that they played action video games (such as *Call of Duty*), there was no game play involved in the conduct of the research, instead they were subject to a series of tests, which they performed individually - some cognitive distance from the collective nature of online game play. The distance between the research instrument and research subject opens up questions about the reliability and validity of the findings of Steenbergen et al (2015).

Steenburgen et al (2015) state that other studies have complemented the argument paraphrased above, declaring that players of action games compared to those without this particular form of cultural capital have greater flexibility in switching between tasks (Steenburgen et al, 2015: p.2). Steenburgen et al (2015) chose to focus on FPS games for their study owing to the first person perspective allowing for greater cognitive control improvements than third person perspective games. The choice is partly justified by recognition of the range of multi-tasking such games require from the player (Steenburgen et al, 2015: p.2-3).

This paper shows a clear understanding of the cognitive load which playing FPS games such as *Call of Duty* games imposes upon the players and an understanding of how real life tasks and situations can impose similar types of demands on people. Steenbergen et al (2015) state that this invites the possibility that extensive playing of such games can make the player better at cascading and multitasking. Playing FPS games, whether offline or online. requires the player to be constantly making decisions - plans on what to do, reviewing implementation and making adaptations. Steenbergen et al (2015) found that playing FPS games was likely to help people in selecting different strategies to deal with different situations and that this skill is transferable outside of game settings (Steenburgen et al, 2015: p.9). Notwithstanding the limitations discussed in their paper, this study does add to the body of evidence for taking seriously the argument that video games can be effective tools for learning skills and knowledge.

Wu & Spence (2013) recognise the cognitive processing demands of FPS game play, understanding that players have to be able to multi-task and process data from a

variety of sources very quickly. They situate their understanding of the visual search requirements of FPS game play in examples from relevant literature (Cain, Landau, & Shimamura, 2012; Colzato et al., 2010; Strobach et al., 2012, Chiappe et al., 2013; Green & Bavelier, 2006a). To test differences in visual search performance, Wu & Spence (2013) carried out two sets of experiments on FPS game players and puzzle game players and between FPS game players and non-gamers, to attempt to identify is there something intrinsic to FPS games which can facilitate higher visual search performance or something more generally in video games. Ultimately, Wu & Spence (2013) found that their hypothesis - that playing action video games improves visual search in situations where participants had to be able to identify objects on screen at different parts - was proved (Wu & Spence, 2013: p. 682).

This study consisted of three stages of experiments (1A, 1B and 2) and involved two sets of participants. Experiment 1A and 1B utilized the same 36 male participants in both experiments, these participants were demarcated by their experience with FPS games. For Experiment 2, a new wave of participants were recruited - 30 males and 30 females. Participants were unaware that others might be playing a different game (but may have had some idea owing to them being separated into different groups and being university level students, quite possibly at least some of their number might have an understanding of research methods). The separation of different groups and the separation of different sets of participants is good for generating data which is more likely to be seen as both reliable and valid if the conclusions (as evidenced by the data) all point in the same direction.

While the overall findings are in keeping with the methodological perspective from which the study worked, claiming that such effects can be detected after only ten hours of play is quite a bold statement. These are games which are designed to take many hours to achieve total mastery of offline story mode play and then there are the online dimensions to take into account. The principle that playing action video games can have a positive impact on visual search capabilities is one that should be held on to and this does corroborate elements of what the participants of my study say (as discussed in later chapters).

While all three groups tested in the experiment (action gamers, puzzle gamers, non-gamers) improved their visual search functions, Wu & Spence (2013) found that the greatest improvements were in the FPS and driving game players (5% improvement) compared to the non-gamers who improved by only 1%. Wu & Spence (2013) attribute this differential improvement level to regular game play which has given participants more experience with the nature of the search tasks being tested - this is a practical demonstration of the concept of overlearning (Gee, 2013). Arguably overlearning is a factor in enabling the action games to make quicker progress because of this prior learning. This then points to another clear example of how video games can be effective tools for learning.

In the reviews of other papers in this chapter there have been repeated mentions of gaming culture and how gamers enter and how they learn the norms and values of this subculture. This is also a significant strand which comes through in the later discussion of my research findings. Thus, it is necessary to explore some of the relevant available literature on gaming culture. Myers (2019), with a focus on the replication of power structures in gaming culture and specifically a concern about the deployment of what he labels as 'fag discourse' as a means to discipline and punish (with a due nod to Foucault) those who transgress behavioural or performance standards. This study explicitly seeks to hear the voice of gamers, thus the research was carried out for a qualitatively oriented survey which was made available in online gaming forums.

Myers' research was carried out through a survey distributed over social media and forums frequented by gamers. The author judged that researching via the internet was the best way of trying to achieve the truest sense of the views of the participants on the subject of teabagging, but he also recognises that this reporting of their views on the subject is subject to manipulation. The author reports that 393 participants completed the survey, but given this was described as a qualitative survey, it is somewhat surprising to discover that there were 15 closed ended questions and 9 open ended questions - on face value, this would seem to tilt the balance of this survey being more quantitative than qualitative. Taking the same approach as other qualitative studies, the results were analysed to decipher the emergent themes with a

focus on cultural assumptions, therefore a degree of researcher interpretation (and subjectivity) is necessary.

The value of reviewing this paper is of the light it casts on understanding aspects of gaming culture and specifically the use of ‘teabagging’ (continuously crouching on a dead body) to discipline and punish other players. In defining and explaining the role of teabagging, Myers (2019) also explains how the game design for future incarnations has reacted and adapted to player practice by enabling players to perform the movement easier (Myers, 2019: p. 766). This demonstrates how gamers can modify the text to suit their own meaning making process but also how producers will respond to fan behaviour - even when that behaviour is anti-social through seeking to reinforce a sense of hetero-normnativity adn a lesser status for homosexuality, echoing some of the evidence and claims made by Healey (2016). In turn, this shows an element of the agency of gamers as a collective to set the boundaries for gaming culture and police it and vitally, how for-profit organisations will acquiesce in such practices if there is an opportunity to make customers happy. This recognition of gamer agency points to the other occurrences in this thesis where gamer agency is referred to and discussed.

Myers (2019) found that while only half of participants reported that they had been teabagged or had been a perpetrator of teabagging, the feeling of the meaning of the action was more clear - that it is a means to discipline, punish and humiliate other players and to express dominance over them. This set of perceptions correlates with the sualised nature of the act and the public performance of it. This is an example of the ‘fark play’ that Meades (2015) notes and what Payne (2009) labels ‘grief’ play. Myers (2019) also uncovered a dividing line between serious / mature gamers and gamers who were regarded as immature. Thus, a social hierarchy - dividing the serious from the not serious - comes into view, and this is a finding which is replicated in the primary research carried out for this project. Following the work of Bourdieu (1984), Consalvo (2007) argues that there is such a commodity as gaming capital. For Myers (2019), gaming capital partly accrues from skill development, and for the serious gamer, it is not part of their cultural repertoire to engage in teabagging - because they are serious, well motivated players who are guided mostly by the goal of self-improvement. While Myers (2019) is focussed on cultural practice surrounding

the game *Halo*, he also observes that this type of behaviour is not unique to the game and that players learn the behavioural norms of gaming communities from games and cultural practices across the wider gaming metaculture spectrum (Myers, 2019: p. 771). This familiarity with gaming metaculture and the very considerable popularity of the *Call of Duty* franchise is another reason why studying the learning potential of *Call of Duty* games is a fruitful area for academic endeavour. It is worth noting in 2020 alone, it is reported that Activision, the franchise's publishers had a turnover of $3bn. While the global pandemic has posed considerable problems for production and distribution of over cultural products (notably film, television and live music concerts), the reverse has been the case for the video game industry, which has increased its earning power, and thus only made it even more important as an object for study. The popularity of the games on an international scale means that there are millions of people across the world who have the knowledge of how to play the game – both in the sense of knowing what icon button on the game controller to press to execute certain actions but also familiarity with the genre conventions of the first-person shooter and this will give any player a broad understanding of the objectives of the game and how challenges or obstacles can and cannot be overcome. This teaching and learning of cultural norms and values is just as important an arena for learning as the content and 'messages' of the games themselves and it is highly desirable that researchers interested in gaming undertake further work into this under-theorised topic.

The paper and study by Engerman, Carr-Chellman & MacAllan (2019) in both its focus and starting points has some marked similarities to this project - this is a qualitative study which seeks to hear the voices of gamers and give expression to them, about the meaning and value of the video games they play. As the focal point of the study is to understand learning experiences of boys, the participants consisted of 12 adolescent male athletes between the ages of 10 and 17. All of the participants were partly selected for their knowledge and experience in playing video games. As with the core rationale for this project, the desire to give expression to the voice of gamers by looking at the 'problem' with video games from the bottom up, is brought through in this paper. Engerman et al (2019) state:

> Leading games researcher Kurt Squire (2006) argues, "Too often, past analyses have focused on representations in the games or on the games' surface features, without examining gaming practices or experiences, or the games' meanings for their players." The analysis in this study searched for meaning within the players' experiences and linked these experiences to learning outcomes and skills across the 21 games discussed during these interviews.
>
> (Engerman et al, 2019: p. 3114-3115)

The ethos embedded into the study by Engerman et al (2019) is firmly aligned with the ethos in this project. The recency of the publication of this paper also demonstrates that the time has come for a fuller engagement by academic researchers with how players are using games as learning tools and also as tools as scaffolds for socialisation. These are areas which will be very explicit in the discussion of the primary research carried out for this project. Engerman et al (2019) state that motivational objects (i.e. video games) are the cause of activity to happen and that leads to both intended and unintended consequences - this is all through the prism of educational achievement and their recognition of the gender gap in attainment in the US (which one of the key problems identified in UK educational achievement). The authors note:

> For example the game, *Madden* was a critical and highly influential video game for these football athletes which allowed social peer support networks to expand their interests beyond the field. The gameplay of *Madden* satisfied a motivational object of enjoying targeted activities with peer groups. These findings confirm prior findings and theories that peer supported video game spaces are highly motivating to boys...
>
> (Engerman et al, 2019: p.3115)

This description of some of what the authors found in their study will be echoed in the discussion of the research findings for this project later in this thesis. Beyond the educational value of gaming, the authors also note the social value of online gaming and playing with and against others and the connected engagement with gaming meta culture to help drive performance levels (Engerman et al, 2019: p. 3116). Within the 'games for learning' literature, the emphasis is on research which helps to further illuminate the potential role for games as adjuncts to teachers. What this paper makes clear - and this will be echoed in the research discussion later - is that the learning of social norms and values is a very significant aspect of games and the surrounding

gaming culture. Any tool can be used good or ill purposes, and it must be recognised that the norms and values that may be learned by players may not be personally or socially beneficial, as is evident from Myers (2019) work. The use of 'teabagging' to discipline and punish other players imposes strict and clear lines about 'acceptable' lines of sexual orientation, with homosexuality being othered and to be on ther eciving end of this sexualised and aggressive act is a clear method of chastisement. Such a pratice corresponds with aspects of the 'hardened masculinuty' and physical banter which Roberts, Anderson & Magrath (2017) linked to what they claim as a sense of working class masculinity which values 'fighting, fucking and football' (Roberts et al, 2016: p. 338) in their study of footballers in Permier League academies. Just as there is considerable room for positive learning to emerge from playing video games individually and in a team environment; like any social space, there is also the risk of individual and social harm through encountering ideas and values which were hitherto unknown or not seen as socially acceptable by the player. This hitherto neglected aspect of gaming research is one which is deserving of much greater attention and theorising, and is noted as an area for future work which can emanate from this study.. The authors note how such socialisation learning is good for development of the skills which 21st century citizens are said to require ('Social and Cross-Cultural Skills', Fadel, 2008).

Reaching further into the P21 skills agenda, the authors further note how the boys' use of critical thinking skills and making calculated risks has been evident in the data gathering process. A phenomenological approach to analysing the data in seeking to get a full picture of the interior of this social reality. The use of semi-structured interviews with open-ended questions was designed to enable the participant to give full expression to their views on the subject matter being discussed. The research team gave in-depth analysis to the interview transcripts through iterative reviews and hand-coded to yield emerging themes.

Now emerging is a firm sense that games have a range of positive applications for facilitating learning. Vogel et al (2006) and Palaiogiannis (2014) identify that games have the ability help their player make learning gains (relevant to RQ1); Young et al (2012) identify the potential for games to offer a window into historical times and events - and this emerges as discussion point in the primary research with regard to RQ2.

Stiff & Kedra (2020) claim playing (online) video games can be good for the individual and for society - this study is evidence of people learning to be more tolerant and respectful towards others and this type of learning can only produce a net social benefit and thus offering an intriguing approach to handling RQ2. Compared to earlier phases of research, the majority of the research surveyed here is demonstrating the capacity of video games to offer a range of ways in which video game play can help people learn new skills. Even with the work of Myers (2019) which is problematic in this context does show how video games and gaming metaculture can be tools for learning - but it cannot be denied that what is being learned is regressive.

This thesis takes a different stance to teacher-centric work (e.g. Checa-Romero, 2016; Palaiogiannis, 2014) - here the teacher is decentred and the focus is on the text and extratextual metaculture to carry the teaching load, and that load is also distributed across different learning nodes - face to face peer support, online peer support, wikis, YouTube channels, gaming fora, and this emerges from the work of Monjelat et al (2017) and this aims straight at RQ3.

What this collection of contemporary studies suggests is that video games and gaming culture are very capable teachers and supporters of learning, thus adding another dimension to the research discussed in the previous section. Going back to RQ1, with the establishment that video games are effective teachers, then the focus on strategic and tactical thinking in RQ1 is one that can be meaningfully interrogated. When examining the effects debate from a learning perspective, it has never really been in doubt that video games can teach, and this cuts right across decades worth of work in that field. While the two theoretical forces in the effects debate are pulling in different directions, neither perspective argues that cultural artefacts, such as video games, are not repositories for meaning making. Approached from an educational perspective, this debate is about the quantity and quality of agency that the players and the games can exert at the moments of meaning making. Video games can lead the learning process from the front and they can support learning as learners grapple with new content and/or skill acquisition and this goes to the centre of locus of concern for RQ1. If video games can teach, then like real life teachers and educational institutions, they can channel and communicate ideological points of view. This is the work of RQ2 and is thoroughly tested in the primary research, however this then raises questions of

player/reader agency, which are also addressed later in the discussions of the primary research. Finally the focus of RQ3 on gaming metaculture is supported with findings emerging from Monjealet et al (2017) and Myers (2019). This work is then especially useful in providing an evidence base to explore the research that addresses RQ3.

'Learn from the loss, adapt or die' - Games and learning

This second part of the literature review has a different mission to the previous part. The objective in the first part was to provide a multi-layered mapping of the field. The objective in this next part is to draw points from specific literature which offers a firm theoretical foundation for my study. To that end, this part will focus on the work of Kolb & Kolb (2010) and Gee (2013). Their ideas and concepts will be analysed with the purpose of establishing how such ideas and concepts could be operationalised by analysing the learning potential of the *Call of Duty* games.

Playing or learning / Playing and learning

At the end of a game of online *Call of Duty* players are given a short sound bite which sums up game performance. The phrase in the title above sometimes occurs after a defeat - but this foregrounds that the game expects its players to learn and improve performance: playing has a purpose beyond in the moment gratification of doing something you enjoy, and this brings into play concepts such Kolb's (1984) learning cycle. The role of play as a way to learn is one that is theorised by Kolb & Kolb (2010) and informs public policy towards Early Years education (Foundation Stage, Early Years: Learning Through Play, 2009; Statutory framework for the early years foundation stage, 2017). However, while the value of play as a framework for developing children across the range of 'areas of learning', as the UK government terms it, as Kolb & Kolb (2010) state, play as a framework for learning is too quickly sent to the margins in educational systems. For Kolb & Kolb (2010), building from the concepts expressed by Kolb (1984), play is an essential dimension of the experiential learning theory, play exists in the space between concrete experience and abstract

conceptualisation and the situations faced by learners or players in play situations helps them to work through abstract concepts and transform this into concrete experience - and that act of transformation is learning for Kolb & Kolb (2010). The old learning cycle concept (Kolb, 1984) is now re-conceptualised as a learning spiral - where each act of play can help construct new knowledge. Citing Piaget (1962), Kolb & Kolb (2010) now recast play as "a rich context in which children interact with the environment and create their own knowledge about the world" (Kolb & Kolb, 2010, p.29). Drawing from Vygotsky (1978), Kolb & Kolb (2010) note how play creates a context for cognitive development from which children can then create their own ZPD, and in doing so exert some agency on their learning.

Playing video games mostly fits Huizinga's (1950) description of play - it is always about stepping outside of real life and into fictional worlds; and all of the primary research in this thesis demonstrates the seriousness with which play is treated by all of the participants. All of the participants in my study have been adults, and while the concept of play is seen as one of those 'childish things' that do not belong in the adult world, Kolb & Kolb (2010) present the findings from their research on a softball team composed of adults. Fitting with Huizinga's conceptualisation of play, Kolb & Kolb (2010) state:

> Sunday morning from 10:00 am to 12:00 pm was a special time when players would leave their "real life" behind and enter the world of the softball game. Regardless of the role you played in real life, a therapist, a forest ranger, a nurse, unemployed, or a college professor, this was a time to play ball.
>
> (Kolb & Kolb, 2010: p.32)

In the play time and space, 'real world' status is left at the door giving the players / learners space to reinvent themselves and take on a new identity, if they wish to do so. The parallels to playing video games in online settings are clear - in such spaces, players have to invent a new identity by giving themselves username for gaming platforms such as PlayStation or X-Box Live, and now have an additional Activision identity to play *Call of Duty* online. In creating these new identities the player is free to be 'themselves' or be something which is very different to their physical selves', behaving as they would in real life or choosing a different identity altogether. Castranova (2005) is positive at the prospects this offers for self-exploration, however

there have been other studies which subsequently are not as utopian in outlook, as noted by Jenson, Taylor, De Castell & Dilouya (2015). The growth of the use of the internet in the early 2000s was noted previously - as use of this new medium has grown, the migration of more people from a wider range of social and cultural beliefs has made online conflict almost inevitable and from this trolling, flaming and shaming have sadly emerged as all too familiar styles of online behaviour. The positive dimensions of people being able to step outside of parameters of identity when in cyberspace is also flagged by Cowe & Watts (2012). Outside of virtual worlds, Kolb & Kolb's (2010) study was conducted with adult players / learners, demonstrating that while traditionally play is socialised as a childish activity, play is actually something which can benefit anyone, regardless of age or developmental stage, and playing with identity is another potential are for learning and personal development which can arise from video game play.

In Kolb & Kolb's (2010) study, in addition to learning the rules of softball and various strategies to win, the participants also reported a range of different forms of learning and that this learning was not channelled through someone in the role as teacher - it was the game and the surrounding culture that did the teaching (Ibid, p.45). The absence of a recognised teacher, but with recognition of the value of the assistance of fellow players speaks to the concept of peer to peer support and scaffolding. This is another vital dimension as to how to conceptualise video games as tools for learning - the text itself is the teacher and the learning is scaffolded by the game but also through the learner / player's interactions with other players and accessing extratextual metaculture. Also, the deeper forms of learning spoken of here, as well as learning the rules of the game and strategies to win and tactics to recover position, are all accessible by playing any of the *Call of Duty* games, and in various guises each of these deeper forms of learning are recalled by the participants in the focus groups, discussed later. It is these theoretical conceptualisations of what play is and what play is for which are detectable throughout this thesis and this is the reason why the terms 'learner' and 'player' are deliberately used interchangeably. Playing is learning, learning is playing.

Gee's principles of learning and the relationship to video games

Researching into video games and learning, whatever the start point, will bring the researcher into contact with the work of Gee (2003, 2008, 2013). His core ideas about the learning potential for video games and his conceptualisation of good video games are recycled through a number of publications. His 2003 publication has 14555 citations[5] and this is a demonstration of the ubiquity of his ideas in the field, especially when the citing publications cluster onto the same or similar territory. The value of Gee's ideas for this project is that they offer a conceptual framework to interrogate the learning potential of the *Call of Duty*. The advantage of this approach is that Gee's ideas of a high degree of academic currency but he has not sought to apply them to the *Call of Duty* games - choosing other games for his discussion of serious games and the learning principles embedded within their design. Motivated by an approach to studying cultural artefacts that values the popular and is similarly wary of canon building, taking Gee's concepts and seeking to apply them to the *Call of Duty* games for this project seemed a logical move.

For Gee (2013), there is a range of connections between the way the human brain works and the ways 'good' video games work. Gee (2013) argues that humans do not think in abstract words and thoughts but work through situations in terms of experiences and that humans build and run through their own simulations in determining how they should or could act in any given situation. Using this comparison between the workings of the human brain and the design of video games, it can be argued that video games can simulate all facets of human life (and much more) across the gamut of games, historically and generically speaking. Video games offer space for expression and experimentation which do not have real world consequences. In taking this view, the view that play is a form of rehearsal for other activities which may occur at other points in the lives of players later is also being expressed. This conception of play echoes Willis' (1978) conceptualisation of the role of school - a training ground for other activities and roles. In the sphere of video games, Bogost's (2007) concept of procedural rhetoric is of value here in working

5 https://scholar.google.co.uk/scholar?hl=en&as_sdt=0%2C5&q=james+paul+gee+video+games&oq=james+paul+gee, accessed on August 25th, 2020

towards an understanding that the learning value of *Call of Duty* games goes beyond the use of the tool of violence previously discussed. The interaction between player and game in terms of the procedures of the game are what enables the player to learn better tactics and develop a more effective game strategy. Such play, or rehearsal, can be immediately followed by the performance - or it can come much later. In the way that girls may be given (or indeed ask for) toy ironing boards and toy cookers and thus the acts of play with these can become rehearsal for the acquisition and reinforcement of traditional gender roles; play acts as the space between the real world now and the real world to come. Therefore whatever acts and social and cultural practices that might be dismissed as play are actually quite serious, loaded with meaning activities.

Gee (2013) certainly takes video game play seriously, seeing in 'good' video games the potential for deep learning to occur across a range of topics. The use of the adjective 'good' is problematic, as it implies a moral distinction between what is good or bad. For Gee, good games are the ones which most closely cleave to a range of learning principles, which will be discussed below. He adroitly notes that games which are 'bad' - as in they do not demand enough of the player to require a deep level of concentration on the tasks of the game and a full learning of the rules of the game world - simply will not sell well, and in a commercial environment such games are toxic. However, some caution should be exercised in adopting uncritically this view. The games which Gee dwells on are PC and console games. Give the time period when his key writings were published (early 2000s), this should not be too surprising as this was largely before the development of the mobile gaming market. Games designed for the mobile market, mindful of the different levels of time and application players may be willing to give mobile games, may arguably feature more simplistic game play than PC and console games, but that does not mean the games are simple in terms of their design. Going back to the dawn of the video games age with games such as *Pong* and *Space Invaders*, while more simple in design than contemporary games still had the ability to motivate players and immerse them in the flow - particularly with games such as *Space Invaders* which allowed level progression and offered the player more difficult challenges, thus rewarding their progress and stretching them further simultaneously.

Gee observes that games are ‘smart tools’ that can distribute knowledge and skills around variety of playable and / or non-playable characters - he cites the example of *Full Spectrum Warrior* of the way skills can be distributed across the team that the player must operate and determine when and how to access the skills of particular characters (when playing in offline, campaign mode). In doing this, the player is able to make quick progress into the game and is able to distribute the cognitive load around the team, and because of this, this is what Gee champions as performance over competence, which he sees as hugely motivating for players and learners. He also addresses how this distribution of skills can work in an online game setting with examples about team composition in *World of Warcraft* - specifically how teams composed of a range of players with a range of skills, but how each player needs knowledge of all group roles. This is an amalgamation of what Gee (2013) calls intensive knowledge and extensive knowledge - and there is evidence of this in the primary research discussions. This integration of team and the distribution of knowledge and skills across team members is what Gee (2013) labels cross-function affiliation which he argues is essential for work teams in the 21st century. With the sudden switch to mass homeworking by people as one of the many systemic shocks delivered by the global lockdowns in response to Covid-19, the necessity for individuals to be able to perform their tasks in physical isolation but still understand how they fit vis-a-vis other team members, this social change buttresses the view that taking serious notice of the way games engage their players is a notion whose time has come.

Gee (2013) outlines thirteen learning principles which are to be found in ‘good’ games. Below, Gee’s ideas are decoupled from his game examples and then extrapolated these learning principles to the *Call of Duty* games. The first principle is *Co-design* where learners are active agents, and as Gee (2013) points out games need players - players make things happen. The interactive nature of games marks them as being a radically different cultural form than television or film where the audience or spectator only has long-term and indirect ability to shape the narrative arc of a product: television series either get recommissioned or they do not dependent on their ability to capture the right audience necessary for the producers to decide that continued investment is warranted or not. The longevity of *Game of Thrones* is

due to its popularity (Time.com, n.d, accessed August 25th 2020) whereas the curtailment of *Deadwood* was due to the programme's inability to connect to the desired size and shape of audience (Sims, 2018). In video games, the player acts and the game reacts immediately and that cycle continues. For Gee (2013), in educational terms, co-design leads to engaged participants who will consequently be well motivated to learn and improve. Whether playing *Call of Duty* offline or online, for every action the player takes, the game will offer a response - this will assure the player they have done the right thing through the receipt of positive feedback from the game or give them hints on how to adjust their game play in order for them to be more successful. The extent to which these features of game design are lines of enquiry for the primary research.

Gee's (2013) second principle is *customise*. This principle arises from recognition that different learners have different preferred learning styles. In playing *Call of Duty* offline you can adjust your difficulty level up or down at a range of points in playing through games, allowing the player to self-regulate the level of challenge presented by the game and thus enabling the players to stay within what Vygotsky labels the zone of proximal distance (Nordlof, 2014). In an online game mode, players can choose what type of game to play - individual or team based games, again allowing the player to self-regulate the level of challenge and cognitive load being taken on. This is another avenue for investigation in the primary research to consider to what extent this idea is put into practice by players. Gee calls for classrooms and teachers being more willing to adopt such a practice to make classrooms more accessible and welcoming spaces to all learners.

Gee's (2013) third principle is *identity*. He argues that deep learning requires deep commitment and that such levels of commitment are able demonstrated through the taking on of another identity. Gee argues that games can do this in two ways. Firstly, games that offer characters have sufficient depth that there is a lot of the player to inhabit and become, thus driving player immersion into the game. Secondly, on first glance, perversely, the game offers the character a very flat character - but this character is then activated by the player and the character becomes the interface between game and player. As discussed previously, the work of Jenson et al (2015) and Crowe & Watts (2012) is instructive in considering the performance of identity in

virtual spaces. In online game modes, the *Call of Duty* games allow for some of the playing with gender identity and sex-swapping discussed in such research. Additionally, identity is performed through choice of weapon loadout - are you a sniper or a machine gunner? Such choices afford the player to be themselves or decidedly not themselves with a range of choices available. Beyond these levels of personal identity, arguably the games offer another form of identity formation. One identity that can be cultivated is that of the 'serious gamer', of whom the reader shall discover more of later. This identity is learnt from the process of playing the game, how enjoyable and meaningful those acts of play and how such players interact with other players. Linking back to the 'working class lads' identified by Willis (1978) and considering the taking on of different identities which some players do as they transition between the real world and the game world, it would be interesting to investigate how easily the contemporary versions of Willis' 'working class lads' may also be 'serious gamers'. This is an issue meriting considerable investigation with potentially a great deal to teach us about the delivery of education and the politics of education.

For Gee, the ability to cultivate a new layer of identity is a great way of furthering learning intentions, for him this enables the player to think, feel and behave as that character would do in the scenario. In doing so, the learner is able to access deep learning which can be transformative on how and what they think and this gets far past the 'content fetish' which Gee shows his disdain for and has become an undeniable feature of subjects at GCSE and A-level in England, Wales and Northern Ireland owing to the institution of a supposedly knowledge rich curriculum over the past decade. The *Call of Duty* games arguably offer both of these two types of characters - in the offline campaign mode of the most recent instalment, *Call of Duty: Modern Warfare (2019)*, the character inhabits playable characters such as Alex or Iskra (*Call Of Duty* Wiki, n.d) - characters from whom you will learn a lot of biographical information about who they are and why they are involved in conflicts. In online play, the player can style aspects of their appearance but they are only represented in the online game by their avatar - the rest of the immersion comes from the nature of the online game mode being played and the degree to which the player wants to progress through the ranking system.

Gee's fourth principle is *Manipulation and Distributed Knowledge*. He argues that people feel empowered when they are able to control powerful tools which enables them to be more effective. This effectiveness yields greater progress and greater rewards from the game, in turn boosting self-esteem and self-confidence (and this also partly loops back to the first principle regarding active agents in learning). On an educational note, Gee points out that if learners had access to relevant smart tools in the classroom then such learners would have a more authentic learning experience and enjoy their learning more. Whilst the smart tools in a *Call of Duty* game are not to everyone's taste, the games offer access to a wide variety of smart tools to enable the player to be more effective: rifles, grenades, radar, weapon detection systems, protection systems - the list is quite exhaustive. Both in online and offline modes, the player is given a variety of choices about weapon loadout -it is then for the player to decide what is the most effective combination of such smart tools to use. The ability for players to recognise this agency and how it impacts their approach to playing the games is another issue to be discussed in my primary research findings.

The fifth principle is that of *Well-Ordered Problems*. In short, this argues that the simplest problems should be sequenced at the front end of the learning encounter with the more difficult challenges sequence for the final missions. In doing so this cleaves to the Vygotskyian idea of the zone of proximal distance (Nordlof, 2014)and also to Bloom's taxonomy (Armstrong, 2010). Every offline campaign mode of a *Call of Duty* game always forces the new player to work through tutorials sections where they are required to use a variety of weapons in a variety of situations. This is done to enable the player to get a sense of what they will need to do and how they will be expected to do it. Whilst online play does not require the player to have played the accompanying offline campaign mode, it is always advised by the game that the player do so. The online modes offer different types and degrees of challenge, theoretically enabling the player to keep within their ZPD - another area for consideration in the primary research. Also, the tutorials the games require the player to work through before embarking on a full campaign mode equate Gee's ninth principle - that of *fish tanks* - where elements of the game are removed and thus the task is simplified: precisely what the tutorial sections do.

In gently increasing the demand of the challenge as a campaign mode progresses, any *Call of Duty* game is then also arguably employing Gee's sixth principle - that of being *pleasantly frustrating*. Following in the steps of Vygotsky, this principle recognises that learning is most effective when challenges are frustrating but push learners to the edge of their ZPD, or regime of competence, as Gee terms it. This is also to be addressed in the primary research.

Whether playing online or offline, by progressing through the offline campaign mode or by routinely playing online game modes in order to progress through the ranking system, the game then nudges the player towards Gee's seventh principle - *Cycles of Expertise*. Expertise is developed by repeated cycles of practising skills until mastery is achieved, and then being represented with a new problem which forces reconsideration of how to solve the problems and thus consolidating old and new knowledge together. This routinisation of skill development is very well exemplified later in the research discussion with participants discussing how they spent a long time passing a ball in a game to practice the skills of throwing and catching to be ready to deploy that skill in the pressure of a timed contest. This is an example of the ninth (*Fish Tanks*) and eleventh principles (*Skills as Strategies*) in practice.

Gee's eighth principle is *Information 'On Demand' and 'Just In Time'*. Gee observes that humans are poor at using verbal information out of context and that such information is much better accessed by learners when broken into chunks and disseminated 'just in time' and when needed - 'on demand'. With the increase in digital versus physical game sales, the game instruction manual is becoming a curio of times gone by as the player no longer has a physical product to refer back to (Yin-Poole, 2019). Owing to this, games have to be able to deliver the necessary verbal information to players on demand and just in time. When playing a *Call of Duty* game in campaign mode, the player will get a mission briefing at the start of every mission - giving instructions as to mission objectives and giving the necessary contextualisation (the environment for the mission, who the villain is); plus those objectives can be accessed by the player at any point by pressing the right control button, the games arguably adhere to this principle. In online play, the Heads Up Display (HUD) contains a variety of information sources - one of which is the minimap

which arguably provides the player with information on nearby friends, enemies and obstacles.

The tenth principle of *Sandboxes* in some ways crosses paths with the ninth principle of fish tanks discussed previously. Like the fish tank principle, the sandbox principle is focussed on creating a safe and simplified learning environment. Again, to briefly repeat the point made in regard to the fish tank principle, the game's active tutorials implement this sandbox principle in the offline mode. Also, in the online modes, the player has the choice about whether to compete in private online matches with people they know or to compete in public matches with people they do not know. In having the opportunity to play in private matches, the player potentially has the facility of the private match as a sandbox opportunity. Additionally, when playing online, the player has the increased agency versus off line play, which is more tightly scripted and leads the player from situation to situation and quickly makes it clear when the player has veered off the right path. In online maps, the players are left to determine how much or how little they should move and in what direction, however, they will be prompted into action when opposing players make their presence felt. In the primary research discussed later, participants discuss how initially they like to explore a map before determining the best playing approach to it. The range of choices available make online modes of *Call of Duty* games much closer to the sandbox style of play which is frequently associated with other highly popular game franchises - *Grand Theft Auto and Red Dead Redemption*.

In the establishment of the twelfth principle of *System Thinking*, Gee points to how playing games can be beneficial for being an informed and engaged global citizen. He argues that people learn skills, strategies and ideas best when these are contextualised, and this chimes with the thrust of the earlier principles. If learners can see the bigger picture, and understand the rules of the game then this excellent preparation for being able to determine the systems and rules and processes that affect us (this faintly echoes the thinking of Willis (1978) on how schools prepare working class children for the roles and rules of industrial labour). Given the high sales numbers of the *Call of Duty* games, and on an international basis, this could indicate an ability to appeal to gamers of different social class backgrounds – there is a lack of available published research on gaming demographics and social class,

with more research available on gender and ethnicity in this regard. If it is true that such video games have a cross-class appeal, then this makes understanding how the *Call of Duty* games and surrounding metaculture can form the kinds of highly effective learners / players as featured in this project even more vital from an educational perspective in order to develop ways to rid British education of the undue influence of social class as a determinant of educational outcomes. In terms of understanding interdependency and how intricate and complex globalised systems have become, the Covid-19 era has shone a powerful light on such globalised systems - both in terms of infection transmission and control but also in the tools to combat it's spread. In such a moment, Gee's statement “Citizens with such limited understanding are going to be dangers to themselves and others in the future.” has never rang truer than right now (Gee, 2013: p. 35). In the offline campaign modes particularly, the *Call of Duty* games have excellent potential for providing a total view of a world in chaos and identifying the role and purpose of one individual - the player and the characters she or he will inhabit throughout the duration of the game. Educators need to harness ways of being able to present total pictures but also spell out the individual’s capacity for agency and change is within that grander system - games do this routinely.

The final principle - *Meaning as Action Image* - brings the wheel full circle. Gee’s work starts off establishing how people need simulations to think through in order to map how they might or should navigate a particular incident or event. Gee rejects the notion that you can do this just through knowledge alone - this is shown in his disdain for what he calls the ‘content fetishism’ exhibited by some educational systems (the UK and the US amongst them). Beyond knowledge, people require understanding and understanding arises from working through problems in simulations. In playing games, the player will accumulate a variety of experiences from which they can use as simulations. Whether playing *Call of Duty* online or offline, the game is offering simulations of conflicts all the time and through these simulations the player can learn how to navigate these scenarios. The ability of the player to transfer this knowledge to other situations outside of the game is questionable and is an area of academic debate in its own right, but it is fair to state that such knowledge transfer is possible. Stiff & Kedra (2018) argue that such knowledge transfer from the

game world to the real world is possible. In terms of closing this consideration of how games can be learning tools, the following is useful:

> When we think of games we think of fun. When we think of learning we think of work. Games show us this is wrong. They trigger deep learning that is itself part and parcel of the fun. (Ibid, p.36)

Having now demonstrated that the *Call of Duty* games contain the full range of educational principles, a brief probe into the nature of assessment is useful - because besides effective teaching, timely and effective means of assessment and feedback are fundamental for effective learning to take place. Owing to the structure of 'good games' and the educational principles hardwired into their design, games also utilize a range of effective feedback tools (aspects of this are outlined in Chapter 1). Gee (2013) argues that the case for schools assessing student work in the same manner how games assess player performance (continual assessment with very regular episodes of formative feedback) is unanswerable. This is because games present complex problems to be solved, they introduce concepts when needed and scaffold effectively to steer the learner down the path to mastery, and owing to the complexity of well designed or 'good' games, there is a need for frequent assessment and feedback points. Gee draws upon Csikszentmihályi's (2008) flow theory in supporting this - the flow is generated because the player becomes so immersed from the nature of the problems presented and from the tools available to them to solve these problems. In doing so, schools would shift from what Gee considers outmoded forms of assessment (knowledge retrieval) which has become too great a hallmark of the UK's qualifications framework in the recent 'reforms' instituted by the present government. From this Gee foresees a future where learners are assessed against a range of skills or competencies which assess much more than just knowledge - and this is what games do: you do not progress in games simply by knowing what to do, you have to be able to demonstrate your competence. If education systems can undertake this radical shift, Gee argues they will develop learners that will be better prepared for the challenges which the 21st century poses, which will require skills of systems thinking and collaboration in order to see the big picture and understand how to react appropriately. Given the present Covid-19 global emergency and the longer term climate emergency, it is easy to see why Gee thinks as he does.

With the interweaving of Gee's principles to aspects of the *Call of Duty* games, and given that these principles are the benchmarks of being judged as a 'good game', it should now be beyond question that the *Call of Duty* games do satisfy all of these criteria. With this theoretical potential for the *Call of Duty* games to facilitate a wide range of learning opportunities, and with the other literature reviewed in the preceding section of this chapter, it has been established games are good vehicles for facilitating learning and that games have the capacity to take on the traditional role of teacher.

Tutorial - playing *Call of Duty*

Game information

To ensure the reader is fully acquainted with scoring and progression in the games, what follows is an illustration of the games' scoring systems and feedback mechanisms. Each *Call of Duty* game (with the exception of *Call of Duty: Black Ops 4*) features a Campaign mode which offers the player a narrative based game to play - taking the player through various missions which have to be accomplished. The games always recommend that the player plays Campaign first to familiarise themselves with the game before playing online modes - here giving evidence of Gee's (2013) learning principles of the fish tank and the sandbox in action.

To play online, the most commonly used method is via public gaming lobbies. Once the player chooses an online game mode, they are then placed into a public lobby while the game servers allocate the player to a game and, if relevant, to a team. The image below depicts part of that process in action.

Image 1: Player entering into a public lobby

Players and teams can also organise to play in private matches which are not open to the general public. This is the province of the serious gamer and is the mode used by a number of the participants in the main phase of the research for this project.

Scoring and feedback

In the research discussion chapters, there is much discussion of the scoring mechanisms and feedback points the games offer. While there are slight variances between different iterations of the games, the way that the player makes progress is very similar from one game to another. Using screenshots from my own game play, I will illustrate some aspects of the scoring and feedback points.

Image 2: In game feedback 1

In Image 2 above, it will be quickly clear that there is a substantial amount of multi-modal information. With regard to player and team performance there are six points of feedback on the screen at this point. In the bottom left, there is a bar chart showing the points of the two teams competing to give a quick real-time view of the score - this should act to inform the player of how they need to be playing for the duration of the game - more offensively or more defensively. In the middle third of the screen, in the gunsight section, there are two points of individual feedback and scoring. Firstly there is the caption 'Bloodthirsty' which informs the player that they are progressing well in the sense that they are killing a lot of the opposing players in a short period of time. Just below that there is another caption - '210 XP Offense Double Kill'. XP stands for Experience Points and is the main metric facilitating progression from one level or rank to the next - the quicker the player accumulates XP, the quicker they progress through the ranks of the game. The amount of XP scored per kill varies on the difficulty or reaction time in taking the kill - the player is rewarded for quick reaction and skillful use of weapons. The player here is also receiving specific feedback on what they have scored for - in this case, attacking play and killing two opponents in quick succession. In reference to educational theory, this is excellent instructional practice - there is immediate and specific feedback on player performance allowing the player

to understand what is working and what might need to be done differently in real time, while the ‘assessment’ is happening (www.advance-he.ac.uk, 2013).

At the top right of the screen is a dialogue box which informs the player that they are on a ‘5 kill streak’ - reinforcing the positive feedback in the middle of the screen. Additionally, this feedback (unlike that in the middle of the screen) is broadcast to all players in the game, thus the individual’s positive progress is celebrated publicly. Finally, in the bottom right corner , there are a number of lit up graphic symbols - these are lit because of the player’s progress and informing them that they are able to access one of their ‘rewards’ (illuminated in blue) and will soon be able to access others (illuminated in red).

Image 3: In game feedback 2

The key element of feedback to draw attention with regard to Image 3 is in the top right, where the player and all players in the game are informed that a game objective (Point B in a Domination game) has been secured. This is publicly saluting the progress of the individual and rewarding a dynamic, active playing style.

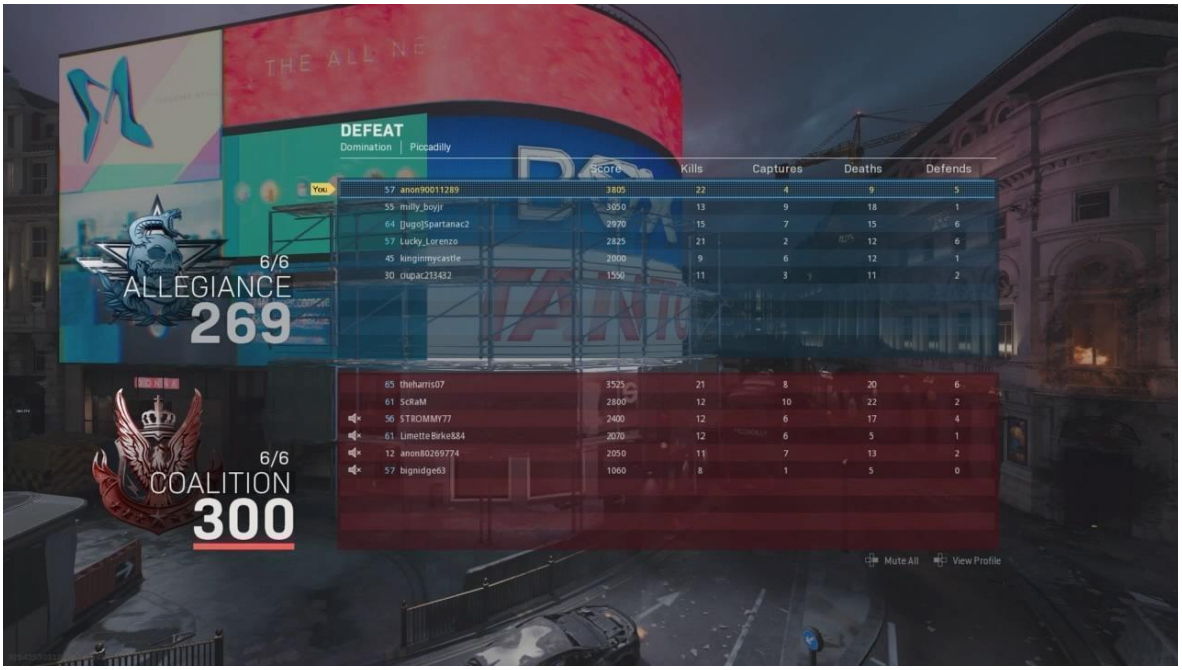


Image 4: End of game leaderboard

At the end of an online game, everyone who has participated sees the same leaderboard, although it is marked out where you have an individual rank amongst your team. This leaderboard reports the key metrics from the game type being played, enabling the player to self-assess summatively whether that was a good, bad or average game. All of the online games have different types of objectives and there are variances between players about how seriously or not they take these objectives, so in self-assessing their own performance the player has the licence to interpret their statistics as they see best. To echo a point made earlier, this feedback is very timely - being given to all players immediately on conclusion of the game so there will be no confusion for the player about what game is being scored and how - again, fully aligned with excellent practice in giving feedback (www.advance-he.ac.uk, 2013: p8). The leaderboard offers a range of assessment scores - this gives the player a global report on their achievements and can highlight to the player aspects of their game they may wish to improve upon, so empowering players to take control of their development. This one of many elements of how games such as this can develop the skills of highly effective learners / players.

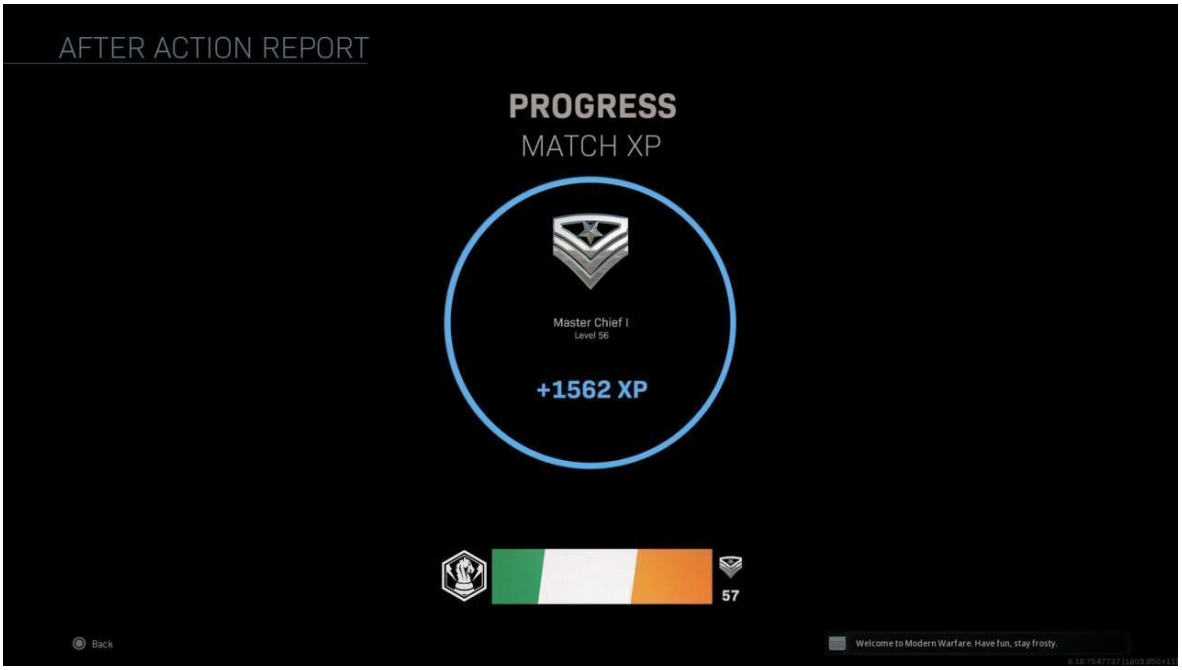


Image 5: Individual After Action progress report

After the publication of the overall leaderboard, each player receives their individual summative feedback. This informs the player the total of XP scored and the blue circle represents how close or otherwise the player is to progressing to the next rank. This screenshot is taken just before the player is informed he will 'rank up' and progress to the next rank. A player who is motivated to progress will be rewarded quickly and will continuously receive positive reinforcement of their progress in game and after each game. These scoring and feedback tools are of great importance in driving this player's motivation and to players wanting to progress more because they always have very timely feedback. This creates a virtuous circle which binds the player to the game. These are elements of good game design and the overlaps to educational theory in terms of the benefits of quality feedback delivered in quick proximity to the learning episode and ties directly to the approaches to educational theory of Vygotsky and Gee.

'Ranking up' is the process of moving through military ranks from a private upwards. The speed of progression through the ranks is dependent on the accumulation of XP from winning games, playing style and types of weapons and loadouts used. Additionally, part completion of the daily and weekly challenges is also rewarded with XP. These are key levers from the game in motivating players to progress.

Chapter 2: Loadout - tools of the trade: methodology

Introduction

The global video games industry has steadily grown over the decades since the emergence of the first home games consoles and the public games arcades of the 1970s and early 1980s. Video gaming is a multi-generational activity, sweeping through a wide range of ages (Entertainment Software Association, 2019). Video gaming now outstrips the former powerhouses of the culture industries - film and music (Gaming worth more than video and music combined, 2019). The three biggest selling games consoles of the current generation have sold 215.6 million units) combined global units sales of PlayStation 4, Nintendo Switch and X-Box One (VGChartz: Video Game Charts, Game Sales, Top Sellers, Game Data, n.d). According to the UK's video games industry body the UKIE, the UK's gaming market value in 2019 was £5.35bn (2019 UK Consumer Games Market Valuation - Ukie, 2020) - made up of software sales, hardware sales and gaming culture (covering merchandise and esports events amongst other things).

The two best selling games globally in 2019 were *Red Dead Redemption II* (13,940,203 PS4 sales) and *Call of Duty: Black Ops IIII* (9,317,241 PS4 sales) (VGChartz.com, n.d). What some commentators dub as 'violent' video games are very popular media products (e.g. Gentile & Gentile, 2008). There can be no ignoring the fact that video games generally, and games such as those of the Call of Duty franchise, do have value for the millions of people who play these games. Academics should go where the cultural action is and respect has to be shown for what is popular, regardless of whether such products have been canonised in academic curricula. Academics must work with popular texts of 'low' cultural status because it is with studying the popular and thus what gives meaning to many people that academics in this field will be best positioned to continue to contribute new knowledge. The same logic applies to the choice of focus in this research project. As someone with an

academic interest in how people engage with the media, and as someone who has played video games since the 1980s and enjoys playing games such as the *Call of Duty* games and the *Red Dead Redemption* games and thus understands how playing such games can elicit pleasure in the player there is a personal fascination in linking academic interest to real world cultural practice. This is why this project has been designed to give gamers' perspectives on the potential for games to facilitate learning. As demonstrated in the literature review, there are relatively few studies that genuinely give an insight into what gamers think and feel about the games they play, but these are the studies which have the capacity to give the greatest insight into the meanings and value that gamers apply to their gaming. It is into this underdeveloped area of academic enquiry which this study situates itself, because the aim of this study is to give voice to what gamers think, and in doing so signaling the power of video games as tools to facilitate learning. From this, a different sense of the overall cultural value of video games and gaming can start to emerge.

Conceptual framework – epistemology and ontology

The nature of my research questions has shaped the approach taken to the research design of this project, and also the choice of the overall project theme, the choice of research questions and research design reflects aspects of my own epistemological and ontological perspectives. My study fits into the interpretivist paradigm (with an ensuing rejection of the positivist paradigm). In taking this position, the chosen methodological course is with qualitative methodology. To be able to meaningfully map out the research design and instruments used in this project, exploration of epistemology and ontology is first essential to establish the theoretical assumptions and positions being brought into play in the construction and execution of the project. The remaining sections of this chapter will describe and justify the methods chosen to fit the different aspects of the project.

From theory towards method

In setting aside the positivist paradigm and the claims and aspiration to a scientific approach to discovery of knowledge, a discussion of how knowledge is to be discovered is required. The interpretive paradigm with its recognition of the agency of

social actors and the willingness to adopt research methods which seek to allow this agency to speak itself has therefore been seen as the more suitable approach for my study.

In making decisions about what to research and how to research, any researcher is making decisions which will spring from their world view. Littlejohn argues that there are two world views. The first of the epistemological positions is what Littlejohn calls 'World View 1' (Littlejohn, 1983 cited in Gunter, 2000). This view treats social reality which is something that can be separated from the researcher and the researcher, through the application of empirical tools, can uncover something hitherto unknown about our world and our social reality. This perspective aligns very closely to the positivist paradigm. The second of Littlejohn's world views as paraphrased by Gunter (2000) is derived from the constructivist approach to knowledge – where knowledge is gained as part of an ever-evolving process and this knowledge is gained and refined by how an individual interprets various elements of the world around them. Here, knowledge does not emerge cleanly through experiments. In this approach, knowledge can be gained, and with recourse to the tripartite theory of knowledge, the gaining of a new element of knowledge may lead to previous beliefs being challenged or reinforced. If a prior belief is reinforced, then the new elements of knowledge will attach to the other complementary elements. However, if the new element of knowledge challenges previously held views, then the subject is cast into a process of having to review and internally re-negotiate what they believe to be true, and thus question again what they actually know. The emergence of knowledge in this way, where something either reinforces or challenges existing beliefs means that knowledge is quite possibly likely to emerge and be built up slowly.

From these two competing epistemological positions arise two competing ontological approaches – non-actional theory and actional theory (Gunter, 2000). To paraphrase Gunter, the non-actional theory seeks to reduce potential research phenomena to empirically observable events – this ontological approach paves the way for the positivistic approach of experimental methods and the use of quantitative research tools. In opposition to this, actional theory starts from an assumption that people create their own meanings about their interactions in the world, and these meanings

will coalesce with their intentions and choices and these will loop back to inform individuals who understand or interpret the situation they are then facing (ibid).

It is crucial when researching with human subjects to respect their individuality and their agency; and this respect must begin with the decision to align with one research perspective over another. It is out of this sense of respect that the position adopted for this study is rooted in the interpretive paradigm. The purpose of this was to look from the ground up into an area of research enquiry which has been subject to top-down, positivistic studies previously.

Research design

This study as a whole consisted of the following elements:

1. Discourse analysis – investigating media representations of 'violent video games' ('VVG's). Specifically, this centres on UK newspapers' coverage of some 'VVG's' published in the current decade. Arguably the dominant view of video games in general is that they are a negative influence upon those who play them. The intention with this phase was to build an evidence base for understanding the public/media discourse around 'VVGs' and to use this to inform the setting of questions in research activities and frame the approach to analysing the data gathered from the primary research activities. Articles for consideration for the discourse analysis were found by internet searches. The first search term used was 'violent video games British newspapers'. This enabled some of the articles which have been drawn upon to be sourced. However, this search term did not generate much in terms of responses from the *Guardian* and *The Independent* newspapers – both of whom frequently run stories about video game culture. Given that media content will reflect the producer's ideas about what their audience likes and dislikes, there is very considerable room for publication bias to enter the frame here. Therefore the original search terms were amended to 'violent video games British

newspapers the guardian', 'violent video games British newspapers the independent', and to ensure coverage across the spectrum 'violent video games British newspapers Daily Mail' and 'violent video games British newspapers daily telegraph'. This series of searches returned 29 articles on the topic. For reasons of feasibility of data handling and recency it was decided to focus upon articles dating from January 2015 onwards at this point. With each article, a system of coding was employed to identify the key parts of each article. It is recognised that this process is a subjective, interpretive one and, again, the rationale for this will be detailed below. With a coding system identified and a process to follow, the remainder of the process of doing the research was to read each of the selected articles and code accordingly.

2. Interviews – five university students (18+) who have acknowledged experience with the *Call of Duty* games. The rationale for this element of the pilot study was to solicit the views of others who have cultural competency in the video games medium. This added to the findings uncovered from the discourse analysis. To build a study which was capable of truly exploring the perspectives of gamers, it was vital to engage with individual game players at this point in the study to ascertain their views with regards to research questions and to help build the capacity of the researcher with such a tool to ensure fitness for purpose for the use again of the same method in the full study. The research participants were recruited following contact with a university in the West Midlands. The students who were interviewed were computing students who had academically studied game design and were experienced *Call of Duty* gamers (this was initially established by self report, and consolidated by checking at the interview stage). This was an opportunity sample, access was contingent through academic citizenship extended by members of staff from the university. The interviews were carried out in February 2018. The participants were all given copies of the Participant Information Sheet prior to meeting with me, and prior to the commencement of any of the interviews, the Participant Agreement Forms were given for checking and signing. To avoid possibility for mis-interpretation I also verbally confirmed key aspects of the details governing their consent. At the start of the interview, I explained to each participant that I would be audio recording the interview - in line with my ethical approval - and

that I would be anonymising them as Participant A etc. The interviews were audio recorded and then transcribed after the event.

3. Focus group 1 – research participants were brought together to discuss issues pertaining to the broader theme of how players can learn in playing *Call of Duty* games. Following from the pilot study, key discussion points were on how the games have the potential to facilitate growth of strategic and tactical thinking skills. The research participants were recruited by postings into a wide variety of Facebook gaming groups and through personal social networks. A total of nine participants took part in this focus group through this recruitment process. This opportunity sample was all-male with ages ranging from 24-49. While not in the original orbit of the study, owing to recruiting participants via an opportunity sample with some snowballing or participants recruiting other potential participants, the focus group cohort was all-male. This then required some examination of how gender identity and gender performance impact on what the participants reported in the focus groups but also some careful analysis of how this could steer the overall findings in different directions. Thus, where relevant in aspects of the discussions of research findings particularly, there is a querying of gender identity and performance in an attempt to peel this layer away from the gaming side of the discussions and findings. This focus group was held virtually - with a bespoke WhatsApp group set up. This setting for a focus group was decided upon in line with Prensky's (2001) concept of 'digital natives' which posits that those of the millennial generation are so used to digital tools and online culture that this is as natural a setting for a conversation as a traditional face to face focus group. A set of questions was written and sequenced before the commencement of the focus group, these questions were asked at intervals during a two week period from February 28th 2020 until March 13th 2020. Unscripted follow up questions were also asked to clarify responses. The pre-written questions were posed to the group in a systematic way: the first set of questions were icebreaker questions to share information around the group (most of whom did not know each other outside of the focus group, although there were three people who are friends outside of the group) about which *Call of Duty* games the participants were most experienced in playing and whether their preference was for online or offline

(campaign mode) play. The second wave of questions was focussed on the theme of learning, designed to see if participants could easily or not envisage the *Call of Duty* games as tools for learning. The third wave of questions was on the theme of strategic and tactical thinking (thus bringing forward some of the themes from the pilot stage study), the objective here was to gather participants' views on the extent to which the *Call of Duty* games offer players opportunities to develop these thinking skills. The final wave of questions was on the theme of ideology - designed to get the participants to reflect on their views about real conflicts (contemporary and historical) and whether or not they feel that playing the games has had an ideological effect on them. When the focus group had been completed, the data was then exported out of WhatsApp and imported into MaxQDA for analysis. All coding was bespoke and developed specifically to analyse the data for this project.

4. Focus group 2 - a sub-sample of the participants from the first focus group were invited to take part in a second focus group. These participants were selected into the sub-sample because they regularly played together as a team in online modes of *Call of Duty*, and the outcomes of the first focus group had raised further questions about teamwork and communication and player culture which I thought would be beneficial to explore further with these participants. This group consisted of four male participants, with ages ranging from 24-28. Following analysis of the transcript to the first focus group, this second focus group discussion was convened in April 2020. At this point, due to the global Covid-19 pandemic and ensuing shutdown of social spaces, there was no choice other than to carry out this research remotely. However, in order to get access to first responses to questions, rather than how ideas can be filtered by means of writing into a WhatsApp group, I thought it was important to get unfiltered responses to check against previous statements and thus to reinforce the robustness of the research. This was done by means of a video call, and the audio of the conversation was recorded and later transcribed by the researcher.

5. Interview – follow up interview with one of the research participants to probe individual’s thoughts on aspects of the focus group discussions and personal

reflections. This participant is a semi-professional esports player, with significant experience of competing in esports championships and was very willing to share his knowledge of such events and surrounding gaming metaculture. This was an unstructured interview, where I sought to get the participant to describe as fully as possible his experience in esports and his thoughts on wider changes in the gaming industry. This interview took place on the same evening as the second focus group. This was conducted by telephone and the audio was recorded and then later transcribed.

6. Questionnaires - ten respondents returned completed questionnaires which comprised thirty questions. These questions were designed to establish views towards strategic and tactical thinking and possible ideological transmission from games to players, in keeping with the research questions. The intention with this dimension was to have an element of methodological triangulation and also to generate an alternative dataset with which to compare and contrast patterns in responses to the research data from the focus groups and interviews. The questionnaire consisted of 31 questions. The questionnaire was distributed via email to university lecturers and university gaming societies - mostly in the UK, but some distribution into Ireland and the USA also.

As a general note, informed written consent was obtained from all participants prior to the start of the research. Additionally, they all gave consent to recordings being made of the video and audio calls.

Methodological rationale

Interviews

The purpose of conducting interviews at the pilot study stage was to test out research questions and to gain experience in primary research prior to undertaking the main phase research where the key method was the focus group. Upon arrival at this stage in the research journey, I was very well aware that there were a large number of ‘unknown unknowns’. The theoretical purpose in carrying out the first phase interviews was to convert some of these unknown unknowns into known knowns and known

unknowns[6] - which would be the focus of the remaining stages of this project. On this journey of enquiry, the first phase of interviews were seen as an opportunity to develop new knowledge for myself. This purpose fits very well to what Kvale (2007) labels as a postmodern approach where the research interview is a 'construction site of knowledge' (Kvale, 2007: p.11). The interviews for the first phase and the interview conducted with P2 on gaming metaculture were both designed to get a sense of the life world of these participants as gamers, in line with how Kvale (2007) identifies the purpose of the qualitative research interview. The intention was to ask not to tell and to be very open to what the participants could tell me about the interior of the gaming subculture. This approach was extremely beneficial in the first phase, because the key outcome of exhibiting the type of intellectual openness which Kvale (2007) calls for enabled me to learn the value of of aspects of gaming metaculture in enabling players to become more skilled - this became a central part of the discussion points in the later focus groups that were held.

Kvale (2007) identifies two types of metaphorical interviewers - the miners and the travellers. The miner is one who works from a positivist perspective, seeing research as something valuable to be found when excavating the findings from an interview. The traveller is one who understands that they are on a journey and are seeking to construct a story of their travels for their return home. This metaphor is most relevant to the qualitative, interpretative approach taken in this project - I was on a research journey, keen to explore and learn and seeking to bring 'home' a rich and detailed narrative - but one that was also faithful and true to what participants were saying. Kvale (2007) details a range of approaches to analysing interviews. For the interview on gaming metaculture with P2, a narrative analysis approach was taken where the raw materials of the forty minute interview were distilled into a coherent story about P2's experiences as a semi-professional player. With regard to the first phase of interviews, an ad hoc approach was taken, where the responses were coded upon analysis of the transcripts and then subject to further interpretation to forge a narrative of the overall views of each participant.

[6] phraseology adopted from speech by former US Defense Secretary Donald Rumsfeld (Graham, 2014)

Focus group

Focus groups as a tool for research emerged in the 1940s, but in the 1980s with the development of the interpretivist and critical paradigms, this method rose to a greater prominence (Gunter, 2000). Focus groups consist of a group being called together by a moderator to discuss an issue of concern to the researcher. It is the moderator's task to ensure that the discussion stays on track and enables the views of all participants to be heard. Focus groups are a means to extract 'rich' data from research subjects – a chance to get into aspects of what real people think about real issues. However, the environment, the number and type of participants will affect the quantity and quality of data to be extracted from the encounter. As such, a focus group needs to be carefully managed in order to be sure of obtaining knowledge in 'the right way'. The ability of the moderator to manage the group will be vital to the success of the operation of the method, as Gunter (2000) notes. This method potentially offers a crucial path to obtaining data to use to construct answers to my research questions, as long as careful consideration is given to the size and makeup of the focus group, in terms of the levels of familiarity between participants, in order to safeguard as much as possible from a *group think* mentality taking hold.

Additionally, in using this method, one has to be mindful that while social conversations between groups of self-selecting participants are a natural part of human interaction, focus groups are not the same thing. Focus groups are called for a specific purpose with a researcher who has questions to attempt to find answers to. As a result of this element of artificiality, participants are likely to be somewhat guarded in what they verbally communicate, because as Goffman (as cited by Smithson, 2000) argues focus groups are a type of performance. Recognition of this performance element to this scenario helps because then it can be managed rather than being blind to the performance element, which again risks contaminating the research findings. Focus group performance can be managed by choice of moderator and the moderator's self-presentation at the encounter. If the moderator shares attributes in common with the group – whether that be gender, ethnicity, interests in video games or a whole range of other factors, this can hopefully help to reduce any anxiety about social desirability and reduce participants' possible desire to perform in the 'required' way. This was

handled at the start of the focus group, where I shared my gaming 'biography' with the participants. The purpose was two-fold: firstly, to break down some barriers that can exist when communicating with strangers and secondly to model the type of biographical information I wanted them to share in order to create an emotionally safe environment for the participants.

Discourse analysis

The study has undertaken a discourse analysis of British newspaper coverage of video games to map out the contours of media discourse. Through the prism of analysing news coverage, Gunter (2000: p. 88) makes clear that representations of the world are not value-free and how linguistic devices encode and frame meanings that can be usefully abstracted to any area type of media product. With application to video games, which as a form, has its own collection of syntax, grammar and punctuation – a collective set of rules about how the language of video games is constructed and reconstructed from text to text exists. This language exists and develops with the active permission of its users, so seeking to develop an understanding about what these linguistic devices are and their potential for encoding and framing meaning was vital in mapping media discourse.

Questionnaires

The questionnaire was designed to capture data from research participants outside of the focus groups and interviews held to cross check the validity of the findings arising from those research processes. Methodologically, the intention was to capture some quantitative data to enable methodological triangulation. Therefore all of the 31 questions yielded quantitative data. In terms of testing responses on matters of strategic and tactical thinking and ideological transmission, the majority of the questions used Likert scales to structure the responses of the participants. This was done in the conventional way, utilising five point scales and identifying what each end of the scale meant. The questionnaire was distributed to a range of sources via email, Facebook groups and LinkedIn postings seeking respondents who were *Call of Duty* players - therefore this was designed as a cohort study (Gunter, 2000).

Analysing the data - Grounded theory

In working under the general umbrella of the interpretivist paradigm and flowing from that paradigmatic choice, the decision to draw from a range of qualitative methods was a natural but considered consequence. In the process of refining how the data was to be collected, beyond identifying suitable methods, I have had to give careful thought to the approach to data analysis. Given that there had been two periods of data capture (February 2018 and March-April 2020) with different participants - partly to avoid contamination, partly to determine how widely held the views of the participants in the first phase were – and reflecting that the data captured was composed of both interviews and focus groups, one consistent approach to analysing the data was required. Having done the research via WhatsApp, tools such as conversation analysis and discourse analysis were rejected out of concerns that either aspects of these approaches lacked relevance to the way this research has been carried out and / or would place false constructs and barriers to analysing the data. Grounded theory, owing to the shape of the data collection process and the iterative loops built into the approach to data analysis, while being able to hand craft my own indexing or coding system and use that to analyse the research data, offered a workable solution in a bid to arrive at a point where the research outcomes were high in validity. Additionally, the grounded theory method of constant comparative analysis offers a way to thoroughly analyse and re-analyse data, looking to see the overlaps between codes and in turn helping to generate new codes. In applying this method, the ensuing analysis of the data is rich and helps to constantly illuminate the path ahead for the next research task: the analysis of the first phase interviews paves the way for the writing of the questions of the first focus group, the analysis of that data sets the agenda for the follow up focus group and for the accompanying interview with P2. This connects with the theoretical approach to grounded theory as stipulated by Pidgeon (1996).

With the data driving the hand crafted coding system, this approach was in keeping with the original grounded theory writers, Glaser and Strauss (1967). At all points the research outcomes have been completely grounded in what the participants in various research tasks have said. In the style of the presentation and discussion of the

research findings I have sought to keep true to the grounded theory approach of paying care and attention to the views of the participants on the social world being investigated - this was all about putting into practice the previously stated desire to craft a project that built from the bottom up and that offered a voice to gamers who are too often ignored and disenfranchised from debates about gaming. As Pidgeon (1996) acknowledges, in grounded theory being enthusiastic about being in tune with the voices of research participants, this fits in well with the broad spectrum of interpretivist social theory and connects to the symbolic interactionism perspective advocated by the Chicago School.

Other appealing features of grounded theory is the focus on generating knowledge and theory rather than discovering it. In the preceding discussion about the approach taken to research interviews (the miner versus traveller metaphors); and having declared that the traveller metaphor was the most suitable one for a project which is a voyage far deeper into gaming subculture than I have been since my teenage years; the belief that theory and knowledge is generated rather than discovered or excavated fits perfectly - so the the choice of research method fits exactly with the choice of approach to research analysis. Also, with such volatile research findings - where the codings are in the lap of the researcher and the ultimate meaning-making from the research encounter is led by the researcher - there will be the openness to question about the reliability and validity of these findings. However, grounded theorists call for applying the notion of 'respondent validation', whereby the validity of the interpretations can be judged by the participants. If participants feel the account being offered by the researcher is a truthful one, then this should be reassuring to any potential critic.

Ultimately, any researcher engaged in social research has to be cognisant of the fact that whatever the project, and regardless of the methodological choices, there will always be questions over the truthfulness of the data capture and data analysis stages. Grounded theorists recognise that data capture, data analysis, and the generation of new theories are sticky and interlinked processes and in taking this position, this chimed very well with my own sense of how knowledge is generated.

Utilising this approach to analysis in a consistent and systematic manner has been essential to rigorously interpreting the research data. In doing so, by combing and re-combing through the focus group conversation this has given greater insight into the variety of themes which come through in the discussion, and this is reflected in the multiple coding layers for many parts of the focus group discussion.

Ethical considerations

In any research project utilising human subjects, there are always going to be ethical questions to consider and form answers for before, during and after the carrying out of the primary research processes. Stevens (2013) raises the question of whether such ethical considerations are of greater importance when carrying out qualitative research over purely quantitative research. The reason for raising this concern is that qualitative research methods – which are always subject centred, and then by extension "more intrusive – into the everyday world of the participant" (ibid). Where and when this is the case – that the research throws into the public spotlight the interior lives of people whose lives and social and cultural practices would otherwise not be subject to such scrutiny – very careful thought needs to be given to protecting the identities of participants and ensuring that their views are fully and honestly represented in any published outcomes from the research.

Additionally, given the nature of the study as described in the preceding sections, there will be a relationship at a variety of points between researcher and participants. In any type of relationship, as Foucault informs us, there is power (Rose, 2007). This is true of the researcher-participant relationship – because it is the researcher setting the agenda and collating research data in order to form answers to research questions. Arguably, the power dynamic is heavily weighted in favour of the researcher. Therefore, the researcher needs to ensure that participants are fully confident in the approach taken by the researcher and the carrying out of the research itself and what will happen with personal data afterwards – where identities are required to be protected they will be, and indeed, it is beneficial to offer this public protection to individuals. If participants are not referred to by real name in the outcomes of the research, and know that from the outset, there is a greater chance of them operating in a candid manner at all points. By fully complying with the university's ethics

guidelines and going through the processes of achieving ethical clearance for the research activities of this project, the identities and data of the participants have been well protected throughout the course of gathering, processing and analysing the data.

Safeguarding participants can also follow if the researcher commits themselves from the outset of the project to transparency – as Stevens (2013: slide 18) puts it: "Researchers should endeavour to ensure that methodology and findings are open for discussion and peer review". Such transparency and intellectual honesty are perhaps the best safeguards to ensure the emotional safety of participants, because the researcher will be constantly aware that every element of the conduct of the research will be open to scrutiny and discussion after the research is completed. Perhaps the dominant currency in the academic world is that of quality research – no academic or aspiring academic can afford to run risk of academic ridicule in the execution of a research project, so this commitment to transparency should act very effectively, and as such, I am fully willing to submit the work of this project to such scrutiny. Alongside being willing to be transparent in the research project, it is also good practice to adhere to guidelines for the conduct of such research as promoted by the Respect Project (RESPECT for research ethics: guidelines). In parallel to this commitment, this project is committed to abide by the Nuremberg Code unreservedly (The Nuremberg Code, n.d)

Regarding decisions by individuals to participate in the research, Stevens (2013) advises:

> Researchers should endeavour to ensure that participation in research should be voluntary. Researchers should endeavour to ensure that decisions about participation in research are made from an informed position. Researchers should endeavour to ensure that all data are treated with appropriate confidentiality and anonymity. Researchers should endeavour to ensure that research participants are protected from undue intrusion, distress, indignity, physical discomfort, personal embarrassment, or psychological or other harm.
>
> (Stevens, 2013: slide 21)

These protocols are all ones which have been employed in the conduct of my own project to enhance the robustness of the project in terms of generating valid research outcomes but also in ensuring that the emotional safety and security of the participants

was at the forefront of the design and conduct of the research. Further to this, consent by any participants was always a precondition for taking part in any research activity. The reassurance that there is an exit from the process without rancour that is always available should ensure that participants are comfortable with the process and data handling.

The only exception to guarantees of confidentiality and identity protection would have been if any report of harm was made during the research process – and that such harm does, or is believed to be, in contravention of the laws in jurisdiction in which the research occurs. For this project, the jurisdiction of England and Wales is where all of the primary research occurred, and it would have been to the appropriate authorities in this jurisdiction where the researcher would have needed to make the issues known. No such problems have arisen during the course of the project.

Limitations

As with any research project, there have been a number of constraints on the process. For this project those constraints flow from the limited resources which could be deployed. The limitations of the first focus group were previously mentioned - the ability to filter thoughts when writing into an online discussion group where there is no social requirement to answer in real time; plus the relatively limited introduction time available before fearing a lack of interest and commitment to the research might take hold undoubtedly limited the quantity of discussion which might have been achievable in other circumstances. The second video based focus group had its limitations - the key one being overtalking between participants making it difficult to pick out what was being said at all points. The limitations put in place by the government in response to Covid-19 meant that there was no other way to run a focus group at that point in time.

In future research of this nature, it would be useful to organise a series of focus groups with different groups of participants to determine how similar the pattern of the answers to the same questions as those put to the main focus group might be. This

would increase the ability of such a study to be able to offer ideas which are more widely generalisable.

Concluding remarks

This chapter has sought to demonstrate that there was a clear plan for the conduct of the research study, and that this plan was underpinned by considered epistemological and ontological positions, and that these positions ally to the chosen methodological approach. Additionally, testimony has been provided that due consideration has been given to relevant ethical considerations and the researcher is fully committed to transparency in the conduct of the project and has fully adhered to aspects of the Nuremberg code in all aspects of the study.

Chapter 3: Recon mission - pilot study research

A short history of fear - from Cromwell to COD

Concern about the consumption of media products is long-standing. From one media industry to another, there is a history whereby powerful individuals and groups use their platform to advance their agenda (e.g. individuals such as Tipper Gore (wife of Al Gore, then a US Senator and future US Vice-President) and Susan Baker (wife of James Baker, Secretary of State under President Reagan) formed the Parents Music Resource Center (PMRC) to campaign for censorship in the music industry). Sometimes, religious leaders will involve themselves in such campaigns (e.g. the campaign against films such as *Life Of Brian* and *The Last Temptation of Christ)* and this can feed onto politicians (Morris, 2013). Media products that become the site of contention by those who desire greater restrictions of media content will find that the forces ranged against them may shift in number and the direction (whether from top-down political pressure or bottom-up from crowdsourced petitions) with these *ad hoc* groupings form coalitions of the concerned.

In these first decades of the 21st century this has been true with the internet in general, with specific concerns about access to pornography. In very recent years there has been the exposure of the hacking of services such as Facebook by organisations such as Cambridge Analytica (Cadwalladr, 2020; Graham-Harrison & Cadwalladr, 2018). There has also been the reporting of the mass harvesting of data by government agencies on both sides of the Atlantic, which was largely led by the reporting of the revelations from the American whistleblower, Edward Snowden (Greenwald, MacAskill & Poitras, 2018). Alongside this there have been outbreaks of 'concern' about the release and effects of specific video games, such as *Grand Theft Auto V* (Molloy, 2016). Moves by those in positions of power in society have regularly sought to restrict access to information is not new. For example, in the turmoil of the Puritan revolution leading to the civil wars of the 1640s in Britain and Ireland, punctuated by the execution of King Charles I and the institution of a Puritan republican government headed by Oliver Cromwell, restrictions on press freedom became commonplace, with printing being under military control and limited to only a few major cities with licensed

printers (Ingelhart, 1987: p.53). Control over access to the means of production and distribution was very quickly seen as key to restricting access to content. Regardless of the locus of concern, the discursive elements would constantly recur (corruption of young minds (Vassalo, 2011). The history of violence as a feature of entertainment reaches back through the centuries and across different cultures and civilisations. Ferguson (2016) traces a line from tales the mythic Gilgamesh, through Beowulf, Dante's Inferno to the plays of Shakespeare as a demonstration of this claim.

When looking through an historical lens in considering the discourses of fear and harm around video games, it becomes apparent that this is another re-working of the same debate which has dogged every media form. Arguably, for all of the theoretical refinements in recent decades - the development and refinement of social learning theory, General Aggression Model and the priming effects model - the dominant concept informing these is of media effects model, as Cohen (2011: XX) summarises: "The crude model of 'media effects' has hardly been modified: exposure to violence on this or that medium causes, stimulates or triggers off violent behaviour". He goes on to state:

> Societies appear to be subject, every now and then, to periods of moral panic. A condition, episode, person or group of persons emerges to become defined as a threat to societal values and interests; its nature is presented in a stylized and stereotypical fashion by the mass media; the moral barricades are manned by editors, bishops, politicians and *other right-thinking people; socially accredited experts pronounce their diagnoses and solutions…* (my italics)
>
> (ibid, p.XX)

Whatever the causes of these intermittent waves of moral panics as time passes, it can be demonstrated that there has been a moral panic as each different type of media form has been introduced to, and adopted by, the wider public (Springhall, 1998; Trend, 2007). Video games, their 'effects' and the people who play them have been problematised by a variety of academics (such as those who can be ascribed to the Active Media school) - thus corresponding to the italicised element of the above quotation - academics are amongst the 'right-thinking people' who can diagnose the problem and suggest remedies (usually centring around restriction of access). While contemporary video gaming is a social and cultural practice engaged in by people

spanning all age groups (Entertainment Software Association, 2019), in media and academic discourses the most visible groups are children and young people. This sharp focus on younger gamers makes the whole discourse of fear and concern a classic example of a moral panic as defined by Cohen (2011: XX). The discourse of fear and harm can be found at work in the newspaper articles retrieved and analysed. An example of sensationalist reporting about video games is evident in headlines and subheadings in *The Sun* newspaper such as:

> Playing games as addictive as heroin - 5,000 calls to one clinic for help- Call Of Duty link to three suicides.
>
> (Price, 2014)

While such headlines are eye-catching clickbait, and perhaps alarming for some readers, this is part of the continuum of fear. Rofling (2018) states that the historical picture about media harm has always been obscure. More widespread access to television from the 1950s onwards, fostered the fear discourse among academics (which is where Gerbner's cultivation theory enters the academic fray (Gerbner, 1998). In a context of growing concern about the power of television, the U.S. Surgeon General labelled television a public health problem and called for evidence (Rofling, 2018). However, the research findings which emanated from this call didn't substantiate the hypothesis. Rofling (2018) points out that there is no clear pattern of influence of television on children. It is in this historical context that the following discourse analysis needs to be considered.

Discourse analysis

Purpose

Flowing from Cohen's concept of moral panic and his discussion of media reporting of the events which fuelled this, fused with aspects of the literature reviewed (see p.24), my hypothesis regarding the discourse analysis was that the news media give a generally hostile coverage to the playing of video games – especially so-called violent video games. Given the contextual indicators coming into the process, the purpose of the discourse analysis was to work up an evidence base for use in other parts of the research process. It is an open question about how much the news media influences

the thoughts and behaviours of the general population, but I wanted a way of getting a handle on what the popular discourse around video games is. It was important to have a clear sense of the range of ideas and messages being communicated in media discourse to have a sure base for drawing up questions for the primary research and as atool for comparison to primary research participants responses. Newspapers, as commercial products, arguably reflect the sensibilities of their audiences (to an extent). Therefore, while perhaps not the perfect methodological tool for seeking to uncover something about general societal attitudes towards video game culture, the discourse analysis phase has some ability to offer some meaningful data which will be useful during the life cycle of the research process.

Rationale and decisions

The focus for the analysis was on articles published from January 2015 onwards for contemporaneity. This yielded an initial list of fourteen articles which was filtered down to nine to prevent double-counting stories of news stories emanating from the same source in different publications. Additionally, I also took into consideration the range of newspapers that were now featuring in this revised list of news articles. Mindful of the different political views and socio-cultural sensibilities of different newspapers and their publishers, I wanted to ensure a range of opinions in this sense carried through into the final list of articles to be examined. From here, each newspaper article was worked through applying a coding framework. This framework consisted of three processes – highlighting text green if it was interpreted as positive about violent video games, highlighted red if the material was negative about violent video games and blue if the tone was neutral or asking, rather than answering, a question.

The coding process attempted to follow the journalistic practice of trying to answer the who / what / where / when / how of newspaper articles. The process of interpreting the newspaper articles was then trained on trying to find where the newspaper articles addressed these questions and coded the terms in accordance with the framework enunciated above.

Findings

Before proceeding to presenting and discussing the findings, a note of caution needs to be flagged. The content of newspapers does not automatically translate into a clear statement of what the public at large thinks about an issue – to draw such a causal connection is to be over-deterministic about the power of the media, and under recognises the agency of consumers of media. In a study which is seeking to explore individuals' agency, this would be folly indeed.

The overall results prove this hypothesis correct: British newspapers are mostly negative about video game culture. Of the nine articles which were analysed, only two of those articles were entirely positive about video game culture. With regards to the other 7 articles from the sub-sample, these were on a spectrum from being entirely negative or hostile about video games to being able to mitigate that negativity with some reach towards neutrality or objectivity by presenting opposing views (briefly) and / or reaching towards 'experts' for quotes to support the general tone of the headline and article.

With journalistic practice being to write articles in the form of an inverted triangle – where the most important points are made first in the headline working towards the least important information at the end of an article, the headlines for all articles were coded as positive, negative or neutral and from there, a deductive process was used to apply further coding labels where key journalistic questions – who / what / when / where / how – were being addressed.

At the most sceptical end of the spectrum of the articles analysed, the direct media effects model is accepted uncritically which also leans into Gerbner's notion of 'mean world syndrome' (Stossel, 1997).

> There's very, very clear evidence that accessing violent media is a risk factor for aggressive attitudes and behaviours, and for becoming desensitised to violence," Handsley said. Rather than enacting the virtual violence in real life, Handsley said people who played violent video games more often developed a "mean and scary view of the world", and assumed the worst of others' intentions.
>
> (Hunt, 2016)

This quotation is from the article surveyed that was the most negative about video games – as evidenced by the number of the red codings applied to aspects of the written text (see Appendix 1, article 10). The negative view is evidenced by the repetition of 'very' to accentuate the purported risk of video games for levels of aggression. This stance towards video games is further compounded with Griffiths (2015) article for *The Independent* which alludes towards a causal correlation between video game play and desensitisation towards crime and violence whilst also positively namechecking Craig Anderson, and taking care to address him as Dr. Craig Anderson to elevate his status to the reader (Appendix 1, Article 1). Giving ballast to news articles with the inclusion of high status sources is part of normal journalistic practice and it is no surprise that the same practice is detectable in Bolton's (2015) article also for *The Independent,* with its namechecking of Zimbardo and airing his claim of a new crisis in the form of young men being addicted to pornography and video games (Appendix 1, Article 4).

The deference to academics is further to be found in an article from *The Telegraph* (2015) which repeats the American Psychological Association (APA) claim of "... a consistent relation between violent video game use and increases in aggressive behaviour, aggressive cognitions and aggressive affect…" (*The Telegraph*, 2015). While the language used in the articles from broadsheet newspapers is more measured than that found in tabloid newspapers on the subject, the overall content is very similar. Manger (2015) writes of 'screenagers' who are 'glued to games' - but with the same reliance on the status of academic research to support the report.

However, while the wariness towards video games is dominant in this collection of news articles, it is not uniform. The *Guardian*, the same newspaper which published the article by Hunt (2016) cited above also carried an article by Etchells (2016) in which he states about such 'scaremongering stories' that 'when you start to dig into the evidence behind the claims, the story becomes murky - an acknowledgement that the academic research picture is more mixed than what may be apparent from the other newspapers articles cited above. Bingham (2015) also recognised an element of moral panic in elements of news coverage about video games and echoes the research findings of Ferguson (2007, 2015) discussed in Chapter 1. Bingham stated:

> [Research] concluded that fears that a generation of young people are growing up with their development impaired by exposure to violent video games are no more likely to be borne out than previous “moral panics” over television and other media.
>
> (Bingham, 2015)

For all the fears expressed in academic work and media publications about video games, here is a recognition that this fear is not new, but the latest in a line of moral panics over popular media content and what young people do with it. As Przybylski argues in Solon’s (2015) report there are no grounds to state that there is a causal relationship between game play and behaviour. This point is echoed by Stanton (2016) who concludes his article with: “Do videogames make your kids violent? No one knows and, by now, we really should have a better answer than that.” This reinforces the point made by Ferguson (2015) that the research evidence to demonstrate video games as a cause of aggression were not conclusive. Overall, the discourse analysis paints a clear picture of a media discourse that is, in the main, hostile or fearful about young people playing video games. The type of concerns aired echo those in academic works and, arguably, the dominance of this discourse within media publications reflects the shape of the academic research field.

Interviews

Interpreting the data

In recognition of the need for a systematic approach to analysing the data, some coding patterns were set which were driven by the research questions and aspects of the available literature. Therefore the following *a priori* codes were set:

- Strategy - S
- Tactical - T
- Vision - V
- Reaction - R
- Effects - FX
- Emotions - Emo
- Community - Co

These *a priori* codes were then used as tools to highlight the richer aspects of each of the interviews. The application of these codes eliminated where the more detailed answers were in each participant's transcript and identified the frequency of certain codes - S,T, Co - and the relative infrequency of others - V, Emo. While this coding process identified key aspects of different participants' answers, in some way this was an overwhelming process, as I was applying these *a priori* codes quite liberally across the transcripts. On the one hand, this demonstrates that very little of the interviews was redundant communication, with the majority of the interviews each yielding very rich data for analysis. However, at this point I realised that I needed some further subsequent codes to sharpen the ability to analyse the findings. Therefore, a small number of Gee's learning principles were selected to apply here. These principles are: Active Critical Learning Principle (coded as ACL on my transcripts); Committed Learning Principle (coded as CLP); Self-Knowledge Principle (coded as SKP) and the Ongoing Learning Principle (coded as OLP). The subsequent application of these codes showed the high frequency which participants' answers touched upon the Active Critical Learning Principle - appearing in much higher frequency in my interpretation than the other Gee learning principle codes. What now follows is a more considered discussion of the research findings.

Findings

During the course of the interviews, the value of the information being gathered as the participants were talking to me. This became even clearer when reading through and annotating the transcripts - there is barely a part of any respondents answers which are not addressing aspects of learning in some fashion, and the details which participants provided in terms of their strategies for improving the level of their game play should quickly disabuse any notions that games such as the *Call of Duty* games are mindless entertainment. The games provide the participants with much entertainment - but also much more than that as the interviews quickly made clear.

Participant A

This participant gave very full answers to each of the key questions[7] and it is quickly clear that this participant had very clear views on the subject and was able to explain these views. In terms of the *a priori* codes and the subsequent Gee codes, this participant's answers coded strongly on strategy (S) tactical (Ta) and thinking (Th) and community (Co), generating responses and evidence to answer RQ1 and RQ3. With regard to the Gee codes, all of the selected Gee learning principles were heavily featured in this person's answers. From this, it is reasonable to deduce that for this person, the Call of Duty games are loaded with opportunities for learning in the game and in the social practices which surround game playing - such as the watching of YouTube gameplay videos to help identify areas for improvement.

Having expressed their love for the games, I pressed Participant A to expand a little further on why they felt this way. Their response was:

> It's the sense of community between everyone, there were always these set groups of people, you had the campers who would snipe from far away constantly, the noobs who would just use the grenade launchers from far away. Everyone was split into groups and they all had their reputations, everyone got along and didn't get along at the same time and it just felt really special to be honest.

[7] See Appendix 1

Whether the collection of people who play *Call of Duty* can be safely identified as a community[8], or is an online crowd[9] is a field of academic debate, Participant A was clear that there was a sense of community and that for this participant at least, there was a sense of something special. This response also brings up the split between serious gamers and 'campers' and 'noobs'[10], as a foreshadowing of debates which would come out more fully in the research stages which followed this exercise. A feeling of community by participants is important to recognise, because the later research work which has explored a sense of community, gaming metaculture and *Call of Duty* gaming as a microculture with its norms and rules has been organically built out of the research findings from this stage. The participant then went on to establish what they particularly enjoyed about playing online:

> One of the biggest things that for me in order to get a better skill was playing against people who were better than me because you could see that after playing with them for long enough you could see the paths that they took around maps, the sight lines they used and things like that, the weapons they used, the choices of the perks which were pretty interesting. Playing with friends also, giving you the competitive edge of trying to be better than your best mate, you had that kind of banter between you so you'd want to make sure you had a better KD than them which is always interesting. The clan battles as well, trying to be better as a group, not just individually compared to another group which was pretty good.

The desire to learn and improve is established here, and this was a feature of responses which was set to recur through the remainder of the research. Informal peer to peer scaffolding is identifiable here, from how the participant describes how they have used what they have seen in the game play of others. Additionally the fun to be had from playing with friends and a sense of competition is introduced here. These pleasures have also occurred through different participants' responses across the research stages. Also vitally, the sense of kinship, the use of 'banter' and group competition (clan play) also helps to crystallise analysing how people play *Call of Duty* as a form of subcultural analysis is academically sound. In explicitly addressing areas

[8] community being used here in the same sense that Anderson (2016) uses the term - as a group of people who identify that have interests in common with each other

[9] cowd is used here to describe a group of people may not feel a sense of co-belonging - so while they may inhabit the same space (e.g. *Call of Duty* game lobbies) there is no feeling of belonging.

[10] Campers - players who inhabit, or camp, in the same spot throughout a game. Noob - a new player, derived from 'newbie'.

of tactical thinking being deployed in game play in conjunction with watching videos from YouTube (accessing gaming metaculture), the participant makes clear the processes of self assessment. They state:

> One of the biggest tactics that I learnt throughout the game was that I used to patrol a lot, I used to select a small area and I used to mainly with either two entrances/exits and just patrol back and forth just guarding this one area to myself and once I died I'd set up in a new place and just keep doing that over and over again, I think that worked really well for me. I learnt that through watching videos of people dying to people doing that you see a lot of groups in the clan battles they used to do that a lot...

This was the first interview conducted and as such this was the first aspect of primary research data gathered. However, as this interview session progressed, and as was to be witnessed from the main phase of the research which occurred later, the points about the use of strategic and tactical thinking, the enjoyment of playing and the enjoyment of playing with friends and enjoyment of competition were all to be salient features of all responses.

Participant B

Similar to the first participant, this person was able to offer some very full, lengthy answers to the questions and it quickly became apparent in the interview that this person had a very high degree of technical knowledge. Additionally, this participant revealed early in the interview that they had some experience as a professional gamer, having taken part in some esports events. From this, it was assumed - and confirmed during the interview - that this participant was very serious about their gaming and very concerned with how to improve. With his own high drive to improve it was no surprise that the application of the *a priori* codes revealed a high frequency on the strategy, tactical and thinking codes (evidence towards RQ1). Similarly with the application of the Gee codes, there was a high frequency of application of all of the selected codes. From one question about how players can learn to improve their gameplay performance, Participant B made the following points during a lengthy response:

> The first thing you have to do is learn pretty much all the basic stuff that the game gives you because certain guns fire certain ways essentially i.e. some are single fire but they will do high damage, some are fully automatic with low damage. Things have a drop off range where the bullets stop being effective after a certain distance so you have to have to take that into consideration and there's stuff that isn't directly given to you but you figure it out by playing it. Once you've got that down, you have to learn the maps because there are lots of little hidey holes and stuff.

This statement connects to several of Gee's learning principles (2013) - the game is pleasantly frustrating (Gee principle 6) through having to learn the firing distance of certain weapons and learning where the 'hidey holes' are; through this design the game guides cycles of expertise (principle 7). and the phrase "once you've got that down" is telling in this regard.

> After that you want to progress to watching YouTube videos and things like that because people will do play by play analytic breakdowns of everything. Professional players are always good to watch because you are watching the top people in the world. You will see where they shoot from and which guns they use because there's pretty much always common themes."
>
> You've got to figure out everything first then watch other people to figure out where you can improve further.

These two comments signal the importance of the use of gaming meta-culture and identify that the game itself is only one part of the equation. The identification of the value of watching professionals - who can model the skills needed for success is important in relation to literature which seeks to establish the value of peer to peer modelling and scaffolding (Monjelat et al, 2017; Evans et al, 2017).

Participant C

Like the previous participants, this person was able to offer good depth to the range of their answers and as with the previous participants, the application of the *a priori* codes revealed the same core pattern to answers - frequency of coding for strategy and tactical was high. Additionally this person gave answers which consistently lent themselves to being coded as thinking - there are a range of remarks in their answers where it is clear that this person is reflecting on a whole series of thought processes

in playing the games and the social practices surrounding gaming to better to inform their approach and advance their proficiency within the games (aligning to RQ1). Of note are the occurrences of the FX code - for effects, in this case this refers to the debate of the effects of games on players. While this was not put directly to participants in the questions, with their prior access to the PAF, it would be clear to them my perspective. This participant made a number of remarks about the cathartic pleasures to be taken from gaming - and given the low academic standing of the catharsis theory, this was of note. The application of the Gee codes revealed the same dense pattern - with a particular major focus on the Active Critical Learning Principle - which is at the very heart of my study.

On being asked about in-game tactical adjustments, Participant C commented:

> I tend to peek corners basically so I'll think ok, this is an open area, rather than run straight out I'll stand up the corner and size it up a bit to see if there is anyone there to see if there are any snipers around the corner and then if there is I'll attempt to basically be aware of if there is cover there and not just stand out in the open and stay there and look around for team mates that can help me out.

Besides the tactical judgements being made about how and where to move, this quote identifies the collaborative nature of mauch of online game play. Participant C went on to state that they preferred team games compared to the individual Free-For-All mode because they like the support network this style of play affords. With Participant C expressing this preference In playing team game modes, this demonstrates how some players / learners prefer to work with others and given the need for effective team working in working life, games which offer people the potential to develop their skills with regards to collaborative working should be championed. Players have plenty of opportunities to develop the skills of collaboration and communication, and this connects with the P21 skills agenda (Fadel, 2008), which is discussed in further detail in the discussion of the main stage research findings. The participant went on to talk about how they like to experiment with different weapons and adapting weapon choice to map and game modes. They stated:

> I'd find out how they worked first reading the stats and then do a few test matches with them so basically I'd go into a game and just try it out, if I felt I didn't like it I would change it to one that I am comfortable

> with and over time I got used to how the guns worked and had my preferences.

Referring back to Participant B, this statement pulls together Gee's learning principles with the use of gaming metaculture. Participant C makes clear that they undertake research on the statistics for each weapon, and that they would then try these out in games. This speaks to two of Gee's principles - Principle 2 Customise and Principle 11 Skills as Strategies. In conjunction with the testimony offered from the previous participants, it is becoming clearer how directly Gee's learning principles can be seen at work in *Call of Duty* games: these are engines which can facilitate a range of learning opportunities. With regard to use of gaming metaculture to scaffold skill development, Participant C also stated:

> I would mainly check what the game provides but occasionally look on forums and Google the easiest weapon to use to start off with so that I can get used to them …

Using extratextual sources to help solve problems presented by the game is another dimension of how playing games and engaging with the surrounding metaculture helps to develop aspects of the P21 skills (Fadel, 2008) - here there is evidence of self direction and innovation.

Participant D

While all the participants were self-selecting, this participant appeared nervous at the commencement of the interview process, and this nervousness is reflected in the length and depth of his answers. On the whole, this participant did not say as much as the three previous participants had done and subsequently, the same degree of application of *a priori* codes was not appropriate when coding this transcript. However, there remains a high frequency of the use of the strategy code, with regular bursts of the thinking code (RQ1). While this person wasn't as able to verbally express himself as fluently as others, it was nevertheless clear that the same patterns were coming through. This deduction is reinforced by perusal of the application of the Gee codes - while not having the same range as other respondents, there is nevertheless a high

frequency of the Active Critical Learning Principle. Given that this person was not as verbally dexterous as others, it is an indication of the strength and depth of the learning potential in games that this could be seen in this interview.

> Experimenting with the other weapons the player can learn a lot, exploring different attachments, maybe using things that other players might not use, you may find something that works for you mainly. Trialling the different types of perks that work for you and see what other players use you can practice with other things that maybe you can find tactics in those perks that other people may not have found which means you can get better because they wouldn't know about the secret to be used with it and weapons.

Analysing this quotation from a learning context, the first word in the quote jumps off the page. The desire and the perceived ability to experiment in the game signifies the presence of Gee's first learning principle (Co-design) as the player / learner clearly feels like an active agent in their learning (in this context getting better at the game); it hits the second principle (Customise) - as discussed earlier; it also reaches towards Principle 3 (Identity) because through this immersion of testing different weapons and sets of attachments, the player is involved in deep thinking about what this the best tool for the way that they want to play the game and finally Principle 12 (Systems thinking) - the player is getting a feel for what can and cannot be done with different weapons and setups for that weapon.

In response to questions about the kind of strategic thinking and planning going on before a game starts, Participant D stated:

> I would look at the map and I would think about where the massive choke points are, where I can defend, where I can attack and then I always have a load out for offensive and defensive and pick a load out based on that idea. That's my whole thought process. But if it's something I'm not familiar with I will go straight into creative class and make a quick class so as I know that I have something ready for the situation.

> The defensive [load outs] would be based more on damage so can hold down in the area, with defensive it would be more silencers so I wont be seen on the map, I won't be heard, I can basically go round areas completely unnoticed and gives me a tactical advantage over the other players because they wouldn't know I was sneaking up on

> them with the silencer. With offensive, I don't mind them knowing where I am because they are going to come to me so I have to make them fight on my terms.

These statements reinforce the points made about player agency but also emphasise the type and range of decision making that is afforded to the player at the commencement of games. This underlines the point that *Call of Duty* games are not simplistic games, but worthy of being defined as 'good games' (as Gee terms it), for the range of learning principle embedded in the games and the many opportunities that playing the games and engaging with extratextual metaculture can offer.

Participant E

This interview was the hardest to conduct, as the interviewee was willing but had evident gaps in his knowledge of the *Call of Duty* games which impacted upon his ability to reflect on his experiences in the same way as other participants had done. Correspondingly, many of the answers were relatively short, and this interview required supplementary questions to further probe some of the interviewee's thoughts. There are a few applications of the codes to thinking and tactical (RQ1), but the answers also make clear that this participant does not take the same all-encompassing approach to playing and improving at the games as some of the others. However, Participant E did talk about the Zombies mode which is an online feature in many of the *Call of Duty* games, which has proved popular with players and has attracted a considerable range of professional actors into delivering voice performances (see Chapter 4). From this discussion of Zombies mode, the participant made the following comments:

> [Playing Zombies] It's fun, like trying to get to a higher round, it's like with multiplayer, it's competitive but you get that aspect with zombies as well. It's another competitive feeling, when you die on a certain round you just try and beat that round and you start focussing more, progressing more, figuring out the certain patterns that will help you survive a lot longer.

While the interview was limited in its detail, this does re-confirm that even with respondents who were not able to provide much detail, that they could still articulate

a sense of learning value of playing the game and it is important to note that they chose to focus on *Zombies,* which is one of the online multiplayer modes which pits players against each other, and with each other, on two teams. This preference for online multiplayer modes foreshadowed a great deal of sentiment towards online versus offline play to be displayed by the participants in the subsequent research. The more scripted, 'on rails' nature of the offline campaign modes does not offer the level of challenge to either this participant or the ones to follow. The room for player agency and the higher level of skills demanded by the online modes are clearly objects of value to these participants. This mixture of a sense of fun and a competitive gaming environment (thereby generating evidence aligning to RQ1).

Participant F

This final interview saw a return to the same type of responses that had been witnessed earlier on. Thus, there were a range of opportunities to apply the strategy, tactical and thinking codes from my *a priori* list and the subsequent application of the Gee codes put a sharp focus on the Active Critical Learning Principle. This respondent has got some strong ideas on what learning is and was able to make some articulate comparisons between the tasks that the *Call of Duty* games will require of the player in order to master skills as what they had seen in other spheres of life. Thus, for this respondent the idea that video games were tools for facilitating learning was absolutely self-evident. The participant showed an understanding of the layers of strategic and tactical thinking that are practiced in their approach to playing the game. As most of the other participants have detailed, Participant F stated that they would choose what they considered to be the most suitable loadout (combination of weapons and other equipment such as flash grenades and radar equipment). Going back to comments made by other participants, decisions on loadouts are driven by consideration of what map and what game type is being played as these will inform how the player chooses to play with an offensive or defensive mindset. Additionally, the game also offers daily and weekly challenges, such as killing a certain number of enemies with the weapons of other players (when a player is 'killed', they drop their weapon, enabling other players to pick up and use). This can also have an impact on how the approach the player chooses to take to the game - if you take up the challenges, this will influence

playing style. Therefore when observing such gameplay, the assumptions should be that the player has actively chosen the loadout and the approach to playing the game. In doing so, Gee's first principle about player agency is being invoked. As Participant F stated:

> First thing would be to look at the most effective layout I could have, what gun is going to kill the quickest and then once I'd done that it would be practising with one weapon so if you do that you can remove the external variables like you're not having to waste time learning other weapons.

Additionally to the above point about loadout and their strategic and tactical approach to playing the game, this is also calls to another Gee's principles Principle 8: Information on demand and just in time (Gee, 2013) and this is expressed here in the form of being a learner demand through recognising that time is a scarce resource and that it must be used effectively and also implies the use of P21 skills such as critical thinking / problem solving and self-direction (Fadel, 2008). The surfacing of these skills and learning principles is then extended in the next comment:

> Then it would be a case of, you can only be as good as your peers, so you then have to work out where they are. To get better you need to find better people to practice with… That's where most of your learning can come from because you are constantly facing more difficult opponents.

As has been noted in the interviews with other participants, this process of reviewing and use of extratextual metacultural forms is important in the review process. Here, the accent is on collaboration with other (again, leaning in to the P21 skill set) with clear learning value attributed to being able to play and practice with others, and this connects to the findings of Paliogiannis (2014), Engerman et al (2019) and Monjelat et al (2017) with regard to collaborating with others and peer to peer scaffolding.

Discussion points

Much of the talk in the interviews revolved notions of how games can promote strategic and tactical thinking, which was a logical outcome given the information given to

participants on the PAF and from the questions posed in the interview. One of the unexpected dimensions of responses was how respondents referred to their use of YouTube and PCs in studying how best to play the games. This really heightened my awareness of widespread use of different forms of metaculture and was a spur to further secondary research and ensured that this had to be a key area of investigation in the subsequent research tasks. With the processes of preparation and after-action reviews (through the 'kill cams' that some respondents referred to in their answers), it was very clear that progress in game leaderboards and clans is taken very seriously, and to improve, this required reflection and planning ahead - and of course these are some of the skills which educators are always trying to cultivate in students. This was the biggest unknown of the project to date - therefore this required further investigation in the subsequent research phases.

Another of the mostly unexpected points emerging from the interviews were the comments relating to 'effects theory'. Noted earlier was the point made by Participant C about how they played games as a means of relaxing and de-stressing - in other words catharsis theory in action. Additionally, Participant A talked freely about how he disputed classical effects theory with his expressed disbelief in the central tenets of effects theory. Intriguingly, these interviews occurred a few days after the latest mass shooting in the USA, where once again, so-called 'violent' video games were apportioned some of the blame for the tragedy (Pearce, 2018). However, Participant A still felt confident in refuting much of the anti-games rhetoric which has been highlighted in the literature review and the discourse analysis.

Participants C and D as part of their answers to other questions independently ventured the suggestion that their reaction times have become sharper as a direct result of playing games such as the *Call of Dut*y games. These responses veer towards an exploration of other positive outcomes of playing video games - in addition to the focus on learning that this study is focussed upon. This is another point for bearing in mind for extending the research into different directions in the future.

Conclusions

The detailing by all of the participants of the processes of reviewing play / performance and benchmarking against peers and 'professionals' (which firmly ties into connectivism theory as distributed social learning); the use of gaming metaculture (starting to answer RQ3) and the discussion of experimenting with loadouts and playing styles all set the course for the research that was to come (partially answering RQ1). They also identified how embedded Gee's learning principles and the ideas about ludic play space expressed by Kolb & Kolb (2010) are in actual gaming practice. From this point forward, the line of enquiry could not be about *whether* games are effective tools for learning but *how* they were and to what degree those who played games were aware of this.

The key point emerging from this research phase is that the underpinning hypothesis to the project is one that has now been substantiated by a group of research participants. This validation of the initial starting point gave encouragement that the steps mapped out to complete the full study had the capacity to deliver research outcomes that had ecological validity. Earlier, it was stated that some of Gee's learning principles were chosen as the codes to analyse the research. Whilst this worked well for working with the data collected from these interviews, there was also an element of rigidity about this, which had the capacity to blind-side the analysis to other elements within the research data. Thus, for the next phase with the focus groups, the decision was made to use the key themes emerging from this phase which cleave most closely to the research questions as the opening framework for data analysis. So the topics of strategic and tactical thinking (RQ1), gaming metaculture (RQ3) and ideological transmission (RQ2) became the foundation for analysis. In doing so, the analysis of the next research tasks would be directly in relation to the research questions.

Chapter 4: Mission 1 - Main focus group

Content analysis

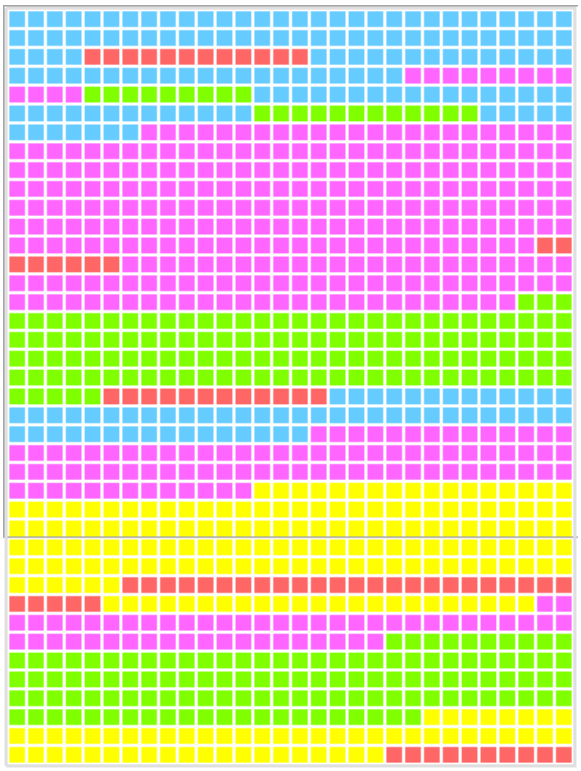
In the first iteration of analysis, the conversation was marked up into areas reflecting the key areas of pre-written questions for the focus group. This led to the marking up of the conversation text with coding labels such as ‘Online’, ‘Campaign’ ‘Strategic’ Tactical’ ‘Unanswered’. The purpose of this was to visually mark the areas of discussion so it was clear where more conversation and less conversation had occurred.

Thematic coding

After this initial mapping of the areas of the discussion was concluded, the conversation was analysed looking for different items of interest which had become apparent during the process of holding the focus group and from the first iteration of mapping the conversation. This led to the parts of the conversation being coded as ‘serious’ ‘gaming culture’ ‘ideological’ ‘enjoyment’ ‘communication’. This also made clear the areas of overlap between the different codes. In the analysis document, this gives the effect of layering up the codes - which is a way of showing immediately the different layers of discourse at play in the ebb and flow of the focus group.

Overview of the hotspots and coldspots of the focus group

Figure 1: Code map of key areas of focus group communication



X = Online play

X= Unanswered

X= Campaign mode

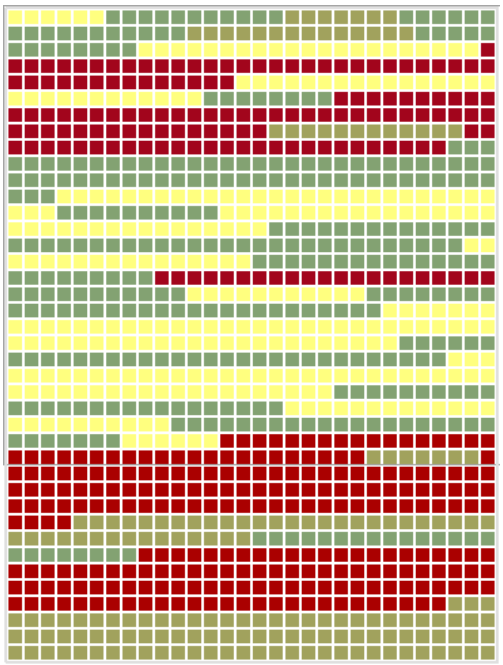
X = gaming culture

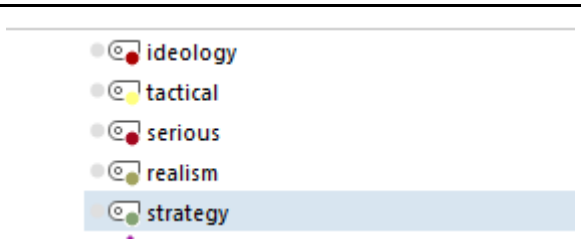
X= communication

Given that there were three main areas for questions, the code map in Figure 1 above illustrates quickly how much the actual data captured diversifies and spills out very quickly from these constructs. This is simultaneously a help and a hindrance in seeking to answer the research questions. The reasons for this are the same on both sides of that equation - the focus group data shows that the playing of games such as *Call of Duty* is a multi-layered socio-cultural practice. It is not something which is a mindless pastime and it is not something that is done to gamers unwittingly and passively. At the very least, the data captured here illustrates that gaming is an active practice which gamers bring a variety of thoughts and prior experiences to - from their formal education in history at school to their informal education in social norms and values.

Most of the group stated that they were more online than offline (campaign mode) focussed on how they use the game, in comparison to some of the other areas, online play was not one of the leading areas of discussion in terms of explicit reference to online play. Campaign mode (offline play) was not an area of gameplay that many of the focus group participants showed much interest in - only one participant showed more interest and enthusiasm for this mode of play compared to online play. The biggest quantity of discussion has been coded as discussion about communication, which also wraps around parcels of talk about gaming culture - there is a lot of interplay between these two codes, as will become evident in the discussion to follow. There were three questions which either got lost in translation or were drowned out by talk on other points, these have been picked up for subsequent discussion with the participants.

Figure 2: Discourse codes (whole conversation)





The codes refer directly to the themes of the pre-written questions - ad hoc follow up questions and their responses are also captured in this code map under the same coding. The quantity of coded segments above for the codes 'ideology' 'tactical' and 'strategy' is to be expected given that these were areas for close focus from the pre-

written questions and in line with the research questions. However, given that questions around realism and the seriousness of gamers were not in the pre-focus group question plan highlights that these issues are ones of concern to these gamers and this in turn highlights the value system and social hierarchy involved in online gaming - where people are assessed by self and peers as serious or not due to one's playing style and proficiency with certain gaming metrics (for example, the kill/death ratio or KDR for short was one metric discussed somewhat in the group).

Furthermore, discussion comments which have been coded as 'realism' have taken up a sizable amount of space this shows how the participants themselves interpreted the questions and how seriously they took the issue of realism in terms of how the games portray events. The seriousness of the discussion on these points demonstrates the value that playing the *Call of Duty* games has for the participants, while it is a space in which to escape and have fun (in classic uses and gratifications terms), it is also a space where fun is taken seriously and it *matters* to these participants that fellow gamers behave in ways which are in accordance with gaming cultural norms and that the games' producers make games which offer gaming situations and environments which are credibly realistic to the period - whether that's in present day set games (the *Modern Warfare* games) or the historically set World War II era games.

Online play code analysis

What did the questions ask for this code?

The questions were seeking to establish which of the participants played *Call of Duty* online, and out of those what the frequency of play. The intention behind these questions was to determine how enthusiastic the participants were about the game.

What are the overall answers?

The overarching message coming back was that online play versus offline play was the much preferred mode of play for the majority of the cohort. The competitive

dimension where players are pitched against other real players, albeit via the virtual world of the 'map' (the playable area for each online game) and the sense of enjoyment that comes from this sense of playing with and against other real players - giving them a very different response to individuals playing offline, where the player essentially plays against the 'computer' - a computer / video gaming trait since the inception of the form.

How do you know?

To evidence the claims made above, it is appropriate to hear the views of some of the participants. In the words of Participant 1 (subsequently referred to as P1):

> Also only play online, prefer the *instant feeling of reward when you finish every game whether it be unlocking a new camo, attachment, rank, prestige*[11] etc etc. Got very into competitive COD throughout Infinite Warfare but that fizzled out through WW2 which I hated.[12] (my italics[13])

The issue of feedback is also raised in this quotation - the type of feedback and the timeliness in response to the causal event are both raised here,and the range of forms of positive feedback listed in the statement from P1 show the value to which such feedback is given. The type and timeliness of the feedback are important in the context of Vygotsky's theory of the zone of proximal development and in Csikszentmihályi's flow theory, which cites the importance of the timeliness of feedback and the type of feedback as being important to enable the learner to maximise the progress available from the assessment and feedback encounter (Nordlof, 2014, Csikszentmihályi, 2008). The enjoyment of the competitive dimension to online play is reinforced by one of the comments from P3:

> My favourite period of playing was the competitive side on Infinite Warfare. *Taking it really seriously and trying to learn from every game* with the rest of team was really interesting, and seeing the progression

[11] Prestige - up until *Call of Duty: Modern Warfare (2019*), Prestige was the highest level attainable from online play

[12] P1: Main focus group, Pos. 40

[13] also italicized elements in quotations henceforth are those of the author

> on our gameplay then helped fulfil the need for a reward after a game too[14]

In addition to the point about the competitive dimension being a key driver of enjoyment of the game, what this statement also makes clear is that for these gamers this is not mindless entertainment - while it is fun for them, they are also driven by the desire to improve - as P1 makes clear with the point about feedback and how P3 makes a similar point with the words "Taking it really seriously" - these participants are very highly motivated to be good and get better at the game - which creates an excellent platform for learning. This phrasing also calls back to the contextualisation section at the beginning of this chapter and specifically the commentary around the HEA's feedback toolkit where one of the outcomes of feedback is that the learner should want to continue to learn and to enjoy learning - this is evident in this comment above. This also fits into the vision of connectivism as connected social learning. A final element of evidence from the voices of the participants to demonstrate the motivation the desire to improve can be found in this quotation from P5:

> Since black ops 1, *I always aim for master prestige*, the first couple of prestige I basically don't care about KDR as I familiarise myself to the maps. Sometimes barely getting to a positive one but once I have them locked down, say from prestige 2, *my aim is to get as high a KDR ratio as possible*.[15]

The italicised elements in the above quotation again highlight how the participants are well motivated and driven by the desire to improve and succeed and also emphasise other points of effective feedback (from the HEA toolkit) where feedback should help to "foster greater levels of self-esteem and motivation which, in turn, can result in greater progress" (www.advance-he.ac.uk, 2013: p.9).

What did this section reveal?

The key points arising from this analysis is the high level of motivation shown by the participants towards their stated goals - being good and improving at the game and enjoying the range of positive feedback which the game's mechanics afford the

[14] P3: Main focus group, Pos. 41
[15] P5:Main focus group, Pos. 139-142

successful player. This corroborates the findings regarding motivation from the work of Engerman et al (2019) and begins to answer RQ1 because evidence now emerges about how elements of game design of the *Call of Duty* games affects the motivation of the players: to play more, to want to improve and thus sowing the seeds of becoming model player / learners. The corroboration of the findings of Engerman et al (2019) has two advantages: firstly, that this study is able to capture similar results to studies conducted with greater resources; secondly and more importantly, that with similar findings, but applied to a different game franchise, it is now possible to conceptualise a more generalisable point about the power of games as learning tools.

With the variety of feedback which the online game modes provide, there are a range of different metrics for players to measure their progress and determine their sense of achievement. The participants in this focus group generally were not overly fixed on KDR; which they regarded as the key progress metric for less serious gamers than themselves. This touches once more upon the issue of hierarchies within subcultures, which also appears as a factor in other sections of the focus group. This is clear evidence that such games offer a very high potential to be highly effective tools for learning - it is a question of identifying what kinds of learning can be done from playing such games, issues that other answers in other parts of the focus group will be able to cast more light on.

Tactical code analysis

What did the questions ask for this code?

The focus of questions here was to determine the extent of tactical thinking which the participants were aware of in terms of how they adjusted their game play in real time to the challenges posed by opposition players and how they differentiate their overall playing style as they revolve around different maps. The ability to be able to adapt tactics and be flexible in approach to playing the game is essential if the player desires to be successful - in terms of winning games and improving your own personal metrics

(KDR, weapon unlocks, camo upgrades) - as detailed in the previous analytical section. The ability to be flexible and make good judgements in terms of adjusting tactics is a hallmark of good leadership across any area of life, such as sports leadership. With self-acknowledged serious gamers as participants, one of whom is a semi-professional esports player, turning to the values of sports leadership is apt. Examples of good sports leadership can be found in aspects of the career of rugby player Jonathan Sexton, who demonstrated transformational leadership in motivating his team, Leinster Rugby, to stage a comeback to win the European Cup final in 2011 (Sexton speech sparks Leinster win, 2011) and provided situational leadership in navigating weather conditions and pressure to seal a victory for Ireland over France in 2018 which set Ireland on course to win the Six Nations Championship of that year (Aylwin, 2018). Knowing when and how to adjust tactics - and just as crucially having the communication skill set to communicate the right information at the right time (leaning in to Gee's educational principles) can mean the difference between sporting events being won and lost. The need for flexibility and being able to make the right adaptations at the right time chimes with Gee's (2013) view on ensuring learners are ready for the challenges of the current century and this also resonates with the P21 skills agenda (Fadel, 2008). The skills called for in such gaming situations also closely mirror the skillset which is viewed as central to successful military leadership. The 'LOCKED' model espoused by Murphy (2014 reinforces the need for excellent communication across the team and from the leader to the team. This model also stresses the need for a high degree of situational awareness - and this comes through from the participants stating how they share information to enable to build up a complete picture of the threat face. Murphy (2014) also notes that effective leaders delegate tasks and this also fits with the evidence from the research, with the sharing and swapping of different tasks across different maps and swapping for reasons of differential performance. In establishing the need for all team members to display a high degree of situational awareness this is also developing team members to become team leaders over time. This further adds to the many ways in which learning can be facilitated by playing the *Call of Duty* games.

What are the overall answers?

The retrieved segments for this code give a clear and consistent message - that the participants recognised quickly that indeed they do make a range of tactical decisions in real time in terms of how to adjust to the playing conditions presented. This adds further ballast to the claims made in the previous section with regard to how the *Call of Duty* games can be highly effective tools for facilitating learning. The evidence in this code segment details repeatedly, and for different participants, how they recognise their own agency in determining how to approach the 'problem' of how best to play the map they have chosen or been presented with by the game. This directly addresses and answers RQ1.

How do you know?

The message regarding player agency and the flexibility of approach came out from all participants who commented in a variety of ways. As P4 states:

> *I think I preferred the 3 lane map design* as it complimented a run and gun style of play. I mostly use sub machine guns or assault rifles, and occasionally shotguns *depending on map* (Nuke town).[16]

The italicised elements of the above quotation bring out clear examples of player agency, tactical thinking and active engagement with the game. P4 enunciates a clear preference for a particular type of map and justifies that choice in terms of his personal preferred playing style. He further states how certain types of weapons are preferable for certain kinds of maps - this reinforces the claims made above with regards to flexibility and tactical adjustments in real time.

On the same point about players adjusting how they play to the game in front of them, one of P2's comments is useful here:

> *People change the gameplay style a lot of the time depending on opponents that they're against*. I mean the most common ways the game play will be changed will be to shut down the player which would be running the game. So this might be a case of the opponent is using an AR and out slaying our current AR player so *they might change it up and run more SMG / close quarter guns and rush him not allowing him to hold lanes / spawns*. But then it may change to the opposite when someone could be running around with an SMG having the game of their

[16] P4: Main focus group, Pos. 129-131

> life and *the only way to stop them would be slow down your own game style* and wait for the mistake from the opponent, this is what I have found while playing competitive[17]

P2 presents clear evidence for how and why players will adapt their tactics on a game by game basis. The first italicised element signals how players react to the playing style of those they are playing against - calling back to the liking for the competitive dimensions of online *Call of Duty* play, this is clearly something that the players / participants relish doing - they like pitting their wits against other players and they like the challenge of being able to react quickly and accurately to the nature of the challenge. In this sense, the game is acting as a problem presenting tool, which because of the nature of the gameplay and the reward system, highly motivates players - certainly these participants to engage in the game and crucially, solve the problems. Positioning these participants as learners rather than gamers, then the evidence here points towards the label 'effective learner' (QCA, n.d) being most appropriate for them. Another way of responding to this would be to say that the games are very good at making learners curious, offering them a range of stimulus to pique their interests and then offering sufficient scaffolding to make the learning quick and pleasurable and invisible to the point where people may not consciously associate what they are doing and reacting as learning. The second and third italicised elements demonstrate clear evidence of how the participant when playing has a very clear sense of how the opposition players are acting in the game and how these tactics need to be countered through their own tactical response. Beyond evidence of tactical thinking in relation to one player seeking to outwit another, there is evidence from the focus group of tactical thinking through how they prepare for rounds of the games. P5 commented:

> In the games that have score streaks instead of kill streaks, I found taking out UAV's could be that extra score that gave me something. For me, I would get the care package and have whatever perk that enables me to "re-roll" if it was trash. That way I have 2 chances to get a high scoring streak. This of course, changed from game to game, but in some versions, if you got a high tier score streak, it could build up to another care package without to much effort, and create a loop.[18]

[17] P2 Main focus group, Pos. 193

[18] P5: Main focus group, Pos. 137-139

Coming back to an earlier point made about the nature of feedback, this statement provides further clear evidence of how important in-game feedback is to the process of helping players make tactical adjustments - or to put in more educational language - the participant's comment demonstrates the importance of useful feedback in helping the learner to learn. While staying with the point on in game feedback, but also recognising how the offline campaign mode also offers effective feedback enabling tactical adjustments then one of the comments from P6 is useful.

> P6: *I remember there were calls for help from medics. And sort of worked it from there in a zig zag manner.* Guess it was a compassionate point of view. I hadn't picked that up at that point.[19]

This segment of conversation arose from questioning about how the game gave feedback about how / when to adjust the approach to game play. One of the biggest frustrations gamers experience comes from games which provide insufficient feedback to enable the player to make progress through the game because the scale of the next challenge is too great and this then demotivates players. The part of the game being referred to in the above quotation is from the first mission or level in *Call of Duty: World War II* - at such an early point in the game, it is essential that the game can sufficiently scaffold players to make progress to prevent demotivation to take hold with the player. This helping hand from the game's mechanics enables the player to make the right tactical decision. From personal experience of playing this game in particular (but also with others from this franchise and beyond), once the player recognises how the game is offering them a steer on how to attempt something differently, it is quite likely that the player will remember this and then be able to access this learning later in the game and make the right tactical decision quicker or without assistance from the game. Here then we have further clear evidence of how the game provides feedback which enables the player to learn and make progress. The participants are able to apply the feedback to the immediate context of the game, but potentially, the wider learning outcomes from such learning events can facilitate skills development which could be applied in other contexts. The range of feedback provided gives the player a range of sources to choose from in order to improve performance. In-game feedback offers the player the rapid opportunity to make tactical adjustments

[19] Moderator and P6:Main focus group, Pos. 125-126

in their approach to the mission or map. End of game leaderboard feedback, with data on kill/death ratio (K/DR), and in some game modes, such as Team Deatmatch, the leaderboard offers metrics on how many times you have captured or defended team rally points. The participants have made clear their variable use of K/DR as the success or otherwise of this metric is dependent on how familiar the player is with the map and team they are playing with. For a player new to a map, they may well use early playing experiences as an orientation phase, as P8 made clear in the focus group. Therefore, the use and value of this end of game feedback is dependent on the strategic objectives the player had at the beginning of the game: were they looking for a positive K/DR? Were they looking to boost their number of defences of rally points? Game mechanics, such as the daily and weekly missions that reward different types of actions and uses of certain types of weapons can all play a role in determining what and how the player may decide to approach playing a certain map or their approach over a gaming session. The games offer a wide range of types of feedback and this enables the player to have the agency to determine what aspects or aspects of the feedback they wish to focus on in order to improve certain aspects of their game. This gives a clear response to RQ1 and also goes beyond it with the discussion of the value of feedback.

What did this section reveal?

The key points emerging from this discussion are that players do make a range of considered tactical decisions in their playing of the games, and that when playing online these decision will have to be made fast and with the added challenge of not being able to pause the game to reflect before acting - all actions are in real time and there is not much time which participants feel can afford to be wasted. The other key point emerging strongly here is on the value of timely feedback and rewards which come in a variety of guises to help motivate the player to continue and to give a clear sense of achievement. As stated above, the examples here from this code give very strong evidence to answer RQ1: players are well aware that they are making a series of tactical decisions during game play, and that these decisions are taken on the back of thought and reflection on previous experiences with the games. This corroborates the findings from the pilot study interviews and demonstrates that the process of gaming is one full of learning opportunities.

Strategy code analysis

What did the questions ask for this code?

Where the questions about tactical thinking were mostly seeking to explore how and why players make adaptations to their approach to the game in the act of playing, the strategic questions were looking to explore how the participants worked outside of real time game play to plan how they would improve as players. A theme which strongly emerged during the pilot study research phase was how the participants in the pilot study made planned, careful use of out of game materials to help themselves to improve as players - the watching of other peoples' gameplay videos on YouTube emerged as one of the dominant ways in which those participants did research to help themselves improve. The intention with the questions with the focus group participants was to determine whether a different group of participants (the second wave of participants who comprised the focus groups) also engaged in the same cultural practices. The answers here provided further evidence to RQ1 and offer some evidence to answer RQ3.

What are the overall answers?

Similar to the findings from the pilot study, these participants also made use of YouTube as a source of watching gameplay videos posted by other players in order to ascertain other approaches to the same playing 'problems', again, connectivism theory in action. Further to the comments made by interviewees in the pilot study, the comments here further add to the evidence base for RQ3, detailing that considerable use is made of a range of aspects of gaming metaculture. In turn, this reflects back to the other two research questions, underscoring the importance of metaculture and the virtual collaborative working that goes in such processes. Additionally, and rather crucially, what these participants also revealed in their answers was the amount and type of communication between players on the same teams engaged in, to construct and implement the chosen plan, or strategy for how to play that particular game. This information is extremely useful as this begins to point to an under-theorised area of

the academic debates on games as tools for facilitating learning. The quantity of communication - verbally between team members when playing the game via headsets and written communications via messaging services and the quality of communications requires a high level of understanding of terminology. This level and type of communication that certainly exists between some of the participants and the people they play in teams with suggests that there is a very high degree of socialisation taking place in which players learn the hierarchies involved in team systems and learn how to be an effective team player. Throughout the focus group, a number of participants made continued reference to their offline socialising - involving reviewing their gaming performance in social circumstances. Additionally, P2 observed how he had spent a lot of time on skill development and drill training with other players, which resulted in enhanced communication between the players as well as higher skill levels in manipulating objects. This combination of unofficial debrief / performance review and skill training contains echoes the findings of Roberts et al (2017) in their research on construction of masculinity amongst footballers and also to the work of Murphy (2014) on military leadership skills which highly values communication skills as part of the previously mentioned 'LOCKED' model. Baek & Touati (2019) in their research into cooperative and collaborative gaming, find that males prefer to work in teams with specific roles. My research further demonstrates the veracity of this claim - throughout the focus group, the overwhelming majority majority of participants made very clear their enjoyment of playing in teams online. Additionally the way that the participants who play together take responsibility for different areas of the map signals the preference for specific responsibility, and when they combine in-game and share information with each other in real time, this demonstrates high degree of situational awareness which was critical for Murphy (2014) as a marker of effective leadership and team performance. The process of role allocation - where some people find their way to being a team leader or 'Captain' as some of the participants referred to this plus roles such as the 'hype man' (borrowing a term from rap music) who is responsible for motivating players while playing live. What became clear from this segment of the discussion was that the actual playing of the game is only a portion of the activities involved in online play.

The type of in-game interactions which participants reported that they had - such as cheering each other on and celebrating key 'wins' within the progress of the game as well as giving each other guidance on what to do or a warning of an oncoming enemy player can be seen as the equivalent of the celebration of key moments as reported by Roberts, Anderson and Magrath (2017) in their paper examining the performance of masculinity in elite football in English Premier League clubs. This paper employs Connell's (1995) concept of 'hegemonic masculinity'. Roberts et al (2017) note how physical interactions (hugging, kissing when a goal is scored, for example) and the use of 'banter' helps to form and reinforce group identity. The bonds developed by the footballers of Roberts et al (2017) study are in some ways replicated here, as the participants seek to motivate each other while playing and regularly meet up to review game play sessions and learn new tactical adjustments. In this echoing of the performance of different types of masculinity as revealed by the participants, this study casts further light on the many ways in which gender identity is constructed, performed, reinforced and / or deconstructed.

How do you know?

With regard to the use of YouTube as a tool for research and reflection and planning for improvement on an individual level and as team, the following comments from P3 summarise the position well:

> Used to watch a lot on YouTube, and followed our favourite teams throughout the competitive year, *learned new skills and spoken with the rest of the team on how to use it in our own game play*. And *the reward of seeing new tactics go to plan in certain situations would keep us motivated to learn more and more*[20] (my italics)

The parts in italics demonstrate not just that YouTube is a key research tool for improving player performance but the explicit identification of the processes involved here as learning processes and the explicit connections made to rewards and motivations - this statement from P3 strongly suggests that the *Call of Duty* games have a very high capacity to be effective tools to facilitate learning.

[20] P3:Main focus group, Pos. 66

A comment about the campaign mode of the WW2 game from P6 also illustrates how players will reflect on their gameplay and make a series of adjustments until the right strategy is learned and deployed. In response to my question asking about examples where the participants had reflected and adjusted their game play, P6 said:

> Yeah there was a bit (unsure what level) that had tanks either side of a right entrance to a house with enemy coming from the right . Had to assault go around tank on left over garden wall then around to door on right of house. Took me a number of attempts[21]

Another dimension in how the participants reflect and re-strategise their approach to the game comes evident from the following comment from P5:

> And as for learning the maps, I would watch a replay of the game and look at it from the leaderboards high scorers POV. *It let me see sight lines I wouldn't have thought of myself for me to incorporate later*.[22]

This confirms the claim made earlier regarding differential use of feedback - the use of the replay function is explicitly being used here as the best kind of feedback - that feeds forward and enables the learner to precisely learn how they can improve performance. Coming through here is the strategy of using end of game replays as tools for learning and improvement of performance. Linked to this, the following comment from P3 points strongly towards an active strategic plan to his entire approach in how to play the game - in his words:

> Of course I dont want to end with a terribly negative KD, but *you just have to look at the bigger picture*, competitive used to be Hardpoint, Search and Destroy, and another game mode like uplink or CTF. *So you have to focus on controlling spawn areas or cutting lanes of the map off and making sure every player on your team is in exactly the right place to keep the map covered*, and if someone gets killed then you are close enough to be able to trade the kill out[23] (author's italics)

Further to the point made above, P3 also went on to state:

[21] P6: Main focus group, Pos. 122
[22] P5: Main focus group, Pos. 139
[23] P3: Main focus group, Pos. 163

> Yeah, dunno how everyone else did it, but when we used to play competitive search and destroy you would have allocated areas of the map depending on which bomb site you were attacking, and a *bomb site caller at the start of a round to tell everyone which bomb to go to so there was no confusion about tactics*[24]

These points also call back to the general points made earlier about the importance of communication between players on a team. P3's comments make clear connections between the necessity for effective communication between team members and high performance in the game. From this point it can be reasonably inferred that the game as an artefact is but one part of the equation in working out what players do with games and what games do with players. Arguably, it is becoming clearer at this point that the relationship between game and player is much richer than a cause and effect, direct effects one and that online play in particular requires understanding of the game (or the willingness to learn the game) and the ability to effectively communicate with team members and linked to this is the intuitive ability to learn the sub-cultural norms and values of what is acceptable behaviour in the game and what is and is not acceptable ways of communicating with fellow players.

The full excerpt from the focus group transcript supports this assertion:

> Moderator: So by the sounds of this, this is quite a degree of thinking / planning that goes into working out team members tasks and then being able to adjust in game to the situation. Is that right?
> Would this be how most teams organise themselves or is this a skill which has been developed by veteran players?
>
> P2: Yeah that's correct. Most the time in competitive it's over a course of 5 maps. So in the first is normally to gauge what type of players your up against and with the people that have played the game more and understand the game more will find it easier to adjust their own gameplay to benefit them. This is where the real skill comes into play, cos sometimes no matter what one person may try just won't work against a team, and this is when you know you have been out classed.[25]

What did this section reveal?

[24] P3: Main focus group, Pos. 168
[25] Moderator and P2: Main focus group, Pos. 194-196

This segment makes clear that considerable strategic planning is being undertaken by the participants before they play and when they play and that this strategic planning comes in a variety of guises. Furthermore, this section makes clear the necessity of effective communication between team members in order that game strategies can be successfully deployed. Also, the actual game itself is one piece of a bigger puzzle that needs to be analysed when interrogating questions about the relationship between games and players. An issue with a number of academic studies (Gentile & Gentile, 2008; Lapierre & Farra, 2016; Blanco-Herrera, Gentile & Rokkum, 2019) is the focus on game and player that neglects aspects of gaming metaculture (use of headsets; sharing game play videos on YouTube or Twitch; interacting with other gamers on Discord). This study makes clear the centrality of gaming metaculture to the process of play and progress in games. In doing so, this study makes clear that studies looking for causal relationships between games and players which privilege the agency of the game over that of the player are increasingly outdated in a gaming culture where players can easily turn to a wide range of easily available sources to help improve their gameplay. The importance of gaming metaculture in structuring how gamers experience games and other gamers is an area requiring future study. This dimension of the research findings gives a direct answer to RQ3, detailing the value of gaming metaculture and how gamers make use of it to drive their own progress but more vitally still, it signals where academics can and should proceed to investigate further.

Campaign code analysis

What did the questions ask for this code?

The questions for this code were seeking to elicit how much attention was given to playing the offline campaign modes of the *Call of Duty* games. Findings from the pilot study strongly suggested that players are much more motivated to play the online modes rather than then the offline campaign modes of the various games in the franchise. Concerns about the ideological effects on gamers (on their views of current

real life conflict and on the nature of the conflict in various operational theatres of World War II) are likely to have their root in the ideological work undertaken by the cut scenes which introduce characters and mission scenarios and the missions themselves. So, to attempt to understand how potentially powerful the impact of any such ideological effects on the participants is, it is necessary to understand how much exposure the participants have to these game modes, these questions need to be asked. Additionally, and linked to this potential ideological transmission by the games, the opportunity to reflect on one of the biggest controversies of the franchise was taken by asking about the (in)famous 'No Russian' mission from *Call of Duty: Modern Warfare 2*[26].

What are the overall answers?

In line with findings from the pilot study, the focus group participants as a whole showed no particular regard for the campaign modes - most of the participants declared that they did not play the campaign modes at all, two participants said they played it in order to familiarise themselves with the world of the game and used the campaign modes as a training package to prepare for the online game modes and one participant was more motivated by the campaign mode as compared to the online game modes. With regard to questions about the 'No Russian' mission the group displayed some alarm at the events contained within the cut scene from the mission and some showed some remorse at how little their younger selves were disturbed by the content of the mission.

How do you know?

One of the participants who does play the campaign modes commented this about why he likes the campaign mode to one of the *Call Of Duty* games:

[26] 'No Russian' mission *Call of Duty: Modern Warfare 2* - this mission requires the player to make their escape from a Russian airport packed with travellers. This required the player to work out how best to quickly move the travellers - either the player could shoot over the heads of the travellers in order to effect crowd dispersal or the player could shoot into the crowds of travellers and kill them. IN doing so, the game was offering a moral based choice for the player.

> Out of all the games I enjoyed the campaign of WaW (world at war) the most, just got really invested in the characters and the historical time period."[27]

Going back to some of the points made in the previous code analyses, this comment again reinforces how critical the design of the game is to its ability to immerse the player in the game world and motivate them to want to play and progress. Evidence to support the claim that offline campaign mode is used as a training programme to develop knowledge and understanding for online play comes from the following statement by P4:

> I like to do the campaign modes first then switch to online, so I really missed not having one on the last black ops.[28]

Further evidence to support the point about immersion in relation to P8 comes from the following comment by P6:

> I've played WW2 and another but can't remember what it was. Really enjoyed WW2 and thought it was really close to the reality of what happened as the research was true to campaign. I have worked with a few WW2 Vets whose references were similar to the game.[29]

For P6 immersion into the game is linked to a perception of the degree of realism about what the game was depicting - the theme of realism is one that is picked up in a subsequent analysis. This sense of enjoyment, as stated before, is an example of Csikszentmihályi's flow theory in action. The point about realism also comes across in a comment from P4:

> Yeah I did both I always enjoyed the story's that had the realism. Yes you can become emotionally attached, was sad when ghost was murdered, and soap died[30]

[27] P8: Main focus group, Pos. 67
[28] P4: Main focus group, Pos. 132
[29] P6:Main focus group, Pos. 119
[30] P4: Main focus group, Pos. 268

For those participants that play the campaign modes the themes of realism and engaging characters are key to getting players to want to play and keep coming back - but the point about realism does not equal that the games are purely vehicles for ideological transmission - if they are, then these participants showed no cognisance of this. On the reverse of this, for the participants who displayed no interest in campaign modes, the comments by P3 summarise this position well:

> To be honest I never really played the campaign as I never got too emotionally attached to the game or the characters, the idea for me playing was to master the skill of actually playing rather than the story if that makes sense, so more of a skill based exercise rather than being emotionally invested in it
> Never needed to follow the story to see the outcome, just wanted to play against real people and try and be as good as I could in that sense[31]

Moving on to discuss reactions to the 'No Russian'[32] mission mentioned previously, this collection of responses shows the nature of these reactions:

> P4: First reaction was Wow, that's a bit much. Civilian murder bit harsh. I was shocked that they would put that content in
> Moderator: What did you do - shoot the civilians or shoot over their heads? It's ok to say you shot the civilians, that's what I did when I played it
> P2: Thanks ☺ ☺
> P4: Oh I shot them, even though it was a shocker it's still a game. So can differentiate between that and reality. I don't dispute that it is based in reality though.
> P2: Responding to that video , my first thoughts now was shocking. Making me wonder who would put that in a game , but when I was younger I just played the game and it didn't phase me. Not sure if this is down to it just being a game and not real life or just being that young just not understanding the impact something like this has with what actually happens in the real world.[33]

It is clear from the words of the participants themselves that they fully recognise that what they were witnessing was not real and that they can distinguish between fiction and reality clearly and easily. This is of salience in terms of entering into a debate

[31] P3: Main focus group, Pos. 268-270
[32] the responses are in response to the video clip available at https://youtu.be/V7TRsPk-mW0
[33] P2, P4 & Moderator: Main focus group, Pos. 232-238

about ideological transmission. This offers some evidence towards addressing RQ2 and offers further evidential support for the work of Kolb & Kolb (2010) with regard to players making clear that play exists outside of the real and upholds Costranova's (2005) view of there being a membrane between the real world and the game world which players can recognise and either indulge themselves in this hyperreal opportunity to engage in mass slaughter, in the full knowledge that such morally questionable in-game actions can be carried out without fear of real world consequences, offering players such as P4 the opportunity to partake in a Philip K. Dick-style hyperreal out of body and mind experience.

What did this section reveal?

The key points emerging from this analysis is that Campaign mode does not motivate the participants as a whole as much as online modes do. The key differences between offline and online game modes are the nature of the challenges posed by timed play against real people versus untimed play against computer controlled characters and you can have as many attempts as the player wishes. Therefore, if the player has the resilience to persevere, then they cannot fail to complete the game. While the games can provoke frustration at points where the route to take to make further progress may not be obvious, ultimately they are very gentle, safe learning environments with a guaranteed positive outcome. The online game modes have no such safety scaffolding. Failure (to win) is a real possible outcome from every game and from that the pressure to perform and compete is generated. Such games offer the player a real test of their knowledge and skills with genuine risk: you will win or lose, and this will affect the progress you make through the ranking system and can impact on social status with other gamers. This risk factor seems to stimulate greater engagement from players and with this greater engagement comes greater potential for developing knowledge and skills - such as the strategic and tactical knowledge needed to perform well in the game. So the social dimension of gaming, which is the territory of RQ3, also works with the cognitive development aspects of this project - RQ1. This friction can be the catalyst to facilitate the desire for self-improvement and in turn this can facilitate the desire to learn from others (delving into RQ3 and RQ1) - immediately, in game and more distantly from partaking in aspects of gaming metaculture and

watching and commenting on the video feeds of other players (RQ3). The lack of guaranteed success, fuelling pressure and being exposed to regular reports on progress from game leaderboards ensures that the player / learner is given a range of data on their progress with a subtle time limit to achieve mastery (which will come about organically as the community or crowd of players migrates to the next game) in some ways mirrors the stakes and processes involved for learners progressing through qualifications. Whether a qualification is a GCSE or a doctorate there are a range of commonalities. Time to achieve mastery is finite, the learners get regular updates through assessment feedback and learners may well feel a sense of competition with other learners. At first glance this might seem perverse, but it is the most pressured gaming modes - online - which engineer the greatest emotional attachment for players and the reduced quantity of conversation on campaign modes further indicates a relative lack of interest and / or knowledge of the campaign modes that would enable the participants to discuss further.

Focus group data analysis wave 2

In line with the iterative processes embedded into grounded theory, following the first wave of data analysis which was seeking to map the focus group data to the themes of the pre-written questions, a second wave of data analysis was then undertaken with the purpose of starting to analyse what was said above and beyond the answers to the questions asked. This is one of the advantages of qualitative research - the open-endedness which gives voice to participants and will expose areas of academic interest above and beyond what the researcher had conceived at the outset of the research process.

Enjoyment code analysis

Why did responses get ascribed to this code?

The code of ‘enjoyment’ was formulated from the processes of reading and re-reading the focus group transcript and noting that there was much discussion throughout the

focus group discussion of what the participants liked or enjoyed (or not) about a wide variety of aspects of the games. Given that this was over and above the question themes yet was a recurring theme in the discussion, it was important to respect the views of the participants in this regard and thus a number of elements from this focus group conversation was subsequently coded as 'enjoyment'.

What are the significant features of responses with this code?

Responses with the 'enjoyment' code tend to feature words such as 'enjoy', 'prefer' and 'favourite' (or derivations of these words) in the responses. What these responses did highlight was the aspects of the games which players like - or enjoyed! - and some of the reasons why these gave pleasure to these participants. Linked to a sense of enjoyment are elements of learning and progress which have already surfaced in the first round of discussion. At this second round of coding, all of the focus group conversation has been coded according to one of the question area themes in the first round, so here there is now a process of layering up and what this reveals is this complexity and density of the various modes of thought in responding to the questions and to the participant's own reflections on their own game play practices.

What is the evidence for this?

To substantiate the claim of that the participants enjoy a range of aspects of the games, the following excerpts from the focus groups transcript are added below:

> Played all but a couple of the COD series since, and like the others have said *I prefer the faster paced style of AW and BLOPs 4 etc.* Have tried other games like battlefield etc but they're far too slow for me and I just get bored.'[34]
> '*Favourite mode on PVP MW2 was free for all*. I had a legitimate 188 game win streak which was placing top 3. *I was hoping to get to 200 but my son stopped me on game 189 with the last kill knocking me in to 4th place*. Worst thing was I was the final kill cam by my son with a throwing knife 😒[35]

[34] P1: Main focus group, Pos. 40
[35] P4: Main focus group, Pos. 45

Emerging from these quotations is a strong sense of how pace and a strong competitive edge to the games give rise to a feeling of pleasure from the games. Whereas it might be tempting to dismiss the game play in online modes as 'headless chickens' all running around without a plan for the untrained observer witnessing online play, there is a great deal of organisation going on and crucially (from a learning perspective) there is a great deal of fun being had - that priceless commodity which many educators seek to be able to connect to their teaching. This connection between enjoyment and learning becomes more explicit in the comment below:

> I really like the wall running/jumping as the pace feels quicker but I'm happy to play boots on the ground as long as I get enemy position intel. Learning the maps and working out "secret" ways to climb in to buildings, flanking campers, was always most satisfying.
> And finally, I love Zombies, but only Kino der Totten. I just love that map.[36]

Reinforcing some of the claims made in the first round analysis, this statement again makes a clear explicit connection to the participants acknowledging that learning is happening as they play - and this directly addresses RQ1. Also, this learning is very much connected to a sense of fun and in the statement above this fun is derived from exploring the maps and finding new ways of navigating the map to enable better game performance through the processes of meta-cognition at work. While 'killing' opposing players is always the key objective, the outcomes from playing are much broader than these games being simply and only online training manuals in how to kill and fight wars (which is a fundamental part of the argument advanced by Grossman & DeGaetano (1999)). Given that in the previous discussion about realism, where the participants made clear that they fully understood that there was a very clear difference between game and reality, the evidence from these participants became steadily stronger in rejecting notions of ideological smuggling or priming behavioural scripts which are likely to be re-enacted in real world situations - which then starts to build a negative answer to RQ2: gamers do not perceive ideological effects arising from playing *Call of Duty games*.

[36] P5: Main focus group, Pos. 134-136

> For me I do the same in any game I play. It's striving for improvement. Get the most enjoyment out of the game. *That enjoyment includes frustration and losing temper*. I have been playing games since childhood so prob 40 years. I don't consider myself an "expert gamer" since COD I have gone on to play Destiny and I have over 3000 hrs on that and still get my ass whipped from time to time.[37]

In addition to points already established about learning and fun, the above comment also provides another entry point to criticise aspects of the extant research (notably the researchers who focus on video games and aggression). The italicized element draws attention to the sense of frustration that gamers can experience and how that can cause loss of emotional control - this is precisely what the researchers looking for evidence of negative effects of video games in terms of increased arousal and aggression levels would most likely see as an example of the 'problem'. However here, that arousal and aggression is tempered and contextualised into overall feelings about the game and one's own sense of progress within it. Whilst not clear and obvious from the focus group transcript, there are three possible ways in which this frustration can be dissolved. Firstly, the player can review their own performance and seek to devise new ways of attempting to solve the currently intractable problem, potentially a means of boosting self-esteem if successful. Secondly, the player can turn to other sources by use of gaming metaculture in order to help them resolve the problem, a problem solving approach which many participants in this study have reported utilising. Finally, the player can review their performance with others - exactly as some of the participants do - and solve problems collaboratively. Part of the enjoyment from playing arises from failure and ultimately overcoming that failure. Where gamers have faced gaming challenges or problems which have been difficult to solve, when these obstacles have been overcome then a considerable sense of pleasure and achievement arises from these moments. It is this broader context which is sorely lacking from research which only 'exposes' their research participants to very limited amounts of gaming times in artificial (laboratory experiment) conditions.

What did this coding reveal?

[37] P4: Main focus group, Pos. 214

This coding reveals that there is a considerable difference from how these participants perceive and conceptualise their playing of the games and how aspects of 'orthodox' theory sees this. What this analysis makes abundantly clear is that playing the *Call of Duty* is constantly a learning experience for the participants and that that learning is not merely linked to small chunks of learning arising from playing online game of ten minutes duration but stretches across time and whole experiences of playing different games in the franchise over the years that it has existed and that these participants have been playing for. This then gives a very powerful answer to RQ1 and also highlights the very social nature of gaming culture. Returning to points made previously, this also confirms the key role of gaming metaculture in helping players to learn and develop. Gamers may play in physical isolation from other gamers, but physical isolation does not equate to social isolation, and that they are learning the social norms of very precise elements of gaming culture - such as the social etiquette around playing styles which surfaced in this focus group on a number of occasions.

Serious code analysis

Why did responses get ascribed to this code?

From the same processes of reading and re-reading the focus group transcript which led to the labelling of the 'enjoyment' code previously discussed, and in line with many of the points made in the previous first wave analysis it was very clear that the participants were very serious about the game and this quickly emerged as a theme for exploration when the focus group was being convened. Given that this was a decision taken during the operation of the focus group it was then a natural follow up issue that this theme was coded and the data explored with the purpose of what could purposefully be ascribed this code. In terms of the research questions, responses here are considered to be part of the evidence base for RQ3.

What are the significant features of responses with this code?

This discussion primarily fell around discussion of what constitutes a serious gamer. The key points raised were that a serious gamer is one who approaches playing video games in general as problems to be solved and such problems will require operationalising Kolb's (1984) learning cycle in order to make progress. Such players are certainly serious in their approach to the *Call of Duty* games. This came through in terms of a player's approach to playing the game and also in aspects of technology used to play the games and to interact with others.

What is the evidence for this?

The clearest and most detailed statement defining what many in the group defined as a serious gamer comes from the following comment by P8:

> Serious games to me - Someone who plays the games with a professional competitive outlook rather than a casual competitive mindset. Although I imagine a lot of players invested a lot of hours into their accounts I was shocked to see how much time PC gamers would invest (can't remember exact numbers). As for the skill, I'd see some impressive skill shots and plays on console, but I'd see these kinds of plays more often on PC. I made the switch from Console to PC pretty easy. The basis is simple, as long as you can use a mouse you will be able to essentially point and click for a kill. I would argue it requires more practice to use a controller than a keyboard and mouse.[38]

In this definition P8 brings out the claims made above about a how a serious gamer is one who has a certain attitude in how they want to treat their game play experiences and flowing from this attitude are some of the technological adaptations which many of the participants in this group have delved into in order to better support their game play - here P8 documents how he made a move to playing the games on a PC to further their immersion into the game. A good proportion of this discussion also focussed on in game etiquette - what the participants referred to as a 'Gentlemen's Agreement' regarding socially acceptable and unacceptable styles of play. What was widely seen as unacceptable is what is called 'camping'. Camping is where a player finds a spot on the map to hide and then attempt to pick off other players who are likely

[38] P8: Main focus group, Pos. 87-88

to be completely unaware of their presence. Perhaps similar to how there is a long standing cultural convention that it is cowardly to shoot someone in the back, camping is thus frowned upon. I asked the participants how they came to learn this 'Gentleman's Agreement' - what follows below is some of the comments in response.

> P8: I learnt the Gentlemen's Agreement very quickly. If I was seen 'camping' my team mates would teabag me, pretend to knife me, you'd also get shouted out over the mic (lobby or in game) and if you camp killed someone on the opposite team enough they would send you a private message or voice message calling you a camper as if it was a diractory [derogatory] word. On par with swearing.
> P3: Yeah you just learnt pretty quickly that it wasn't something you do, and wasnt appreciated ever 😂.![39]

These comments make clear how subcultural norms and values are communicated and reinforced in order to make sure that new members to the subculture - or more accurately, the *Call of Duty* microculture[40] - quickly learn what kinds of gaming approaches are acceptable and not acceptable. Firstly, the uncritical use of the term 'Gentleman's Agreement' brings into view the unspoken notion that playing *Call of Duty* is perceived as being a decidedly masculine sphere. This calls back to the research of Roberts et al (2017) and the 'three F's' - 'fighting, fucking and football'. The primacy of fighting in these F's may be coincidental - but it may very well not be - and thus foregrounds how fighting is viewed as a foundation stone for constructing a sense of masculinity argued to be central to working-class notions of masculinity. The other elements of what are described in P8's comment are examples of what Meades (2015) describes as 'dark play', and a breach of what Meades labels the three principles underpinning western play value, specifically, the principle of 'non-observance of rules and expectations that form a game' (Meades, 205: p. 245). Rules to govern the acceptability or otherwise of certain actions are not new - rules are a fundamental part of any gaming scenario. For example, in the board game *Snakes and Ladders,* it would not be acceptable for a player to unilaterally determine how they will progress from from the first square to the last. It is expected (a social / cultural convention) that the player learns the rules prior to playing the game. When all players

[39] P3 and P8: Main focus group, Pos. 93-96
[40] If gaming is a subculture, then it needs to be recognised that different game genres / franchises have their own microcultures, which will have some bespoke norms and values

do not need to adhere to the same rules then the membrane, as Castranova (2005) labels it, which separates the game world from the real world is torn. When this fabric is torn, the experience is sullied for those who play by rules such as the 'gentleman's agreement' and thus this devalues the playing experience and moment for serious gamers who clearly spend a lot of time on learning and improving their performance. Rules to govern the acceptability or otherwise of conduct also percolate out into many other areas of life. With direct relevance to the games studied here, the rules governing duelling - a means of 'gentlemen' settling grievances are very long-standing, providing a framework for duels could be held in a civilised manner (Brammer, 2019) and well dramatised in films such as *Barry Lyndon* (Kubrick, 1975). So the point here about camping and the gentlemen's agreement is not one simply of ludogical concern, but one of identifying an area where a sense of masculinity is being performed - it is not just that camping is against the rules but is seen as 'ungentlemanly conduct' thus breaking a code which is fundamental to a sense of gender identity. Beyond a sense of rupturing the 'gentleman's agreement' with such transgressive play, 'camping' is arguably against the laws of war, where "the right of belligerents to adopt means of injuring the enemy is not unlimited.", and thus breaches the Hague Convention of 1907 (Rowe, 2000). So, camping, and other such acts of arguably transgressive play do not just problematise gender identity, they also transgress the wider cultural conventions of 'the rules of the game ' of war, and arguably, this double transgression (in the eyes of these male serious gamers) is what stirs such annoyance and discomfort.

This form of socialisation is an important learning dynamic, not just because it exposes the norms and values of the microculture but because it also highlights yet another type of learning which is now evident in online gaming and specifically within *Call of Duty* gamers. There is a strictly enforced code of gaming behaviour - so as a microculture there is behaviour here which is on par with how other subcultures and microcultures behave at group level and at the wider macro level, this also reflects how society acts: the rules are set and then various agencies in society are tasked with their enforcement and the punishment of transgressors. At the micro level there is evidence above of all of these social actions.

In a world where institutions and systems are judged on their data outcomes, such as how English schools are judged on a range of metrics - percentages of learners achieving five or more 'strong' GCSE passes, Progress 8 data, and a similar process of regulation via data is in place for universities through the TEF and REF exercises and data has become the new gold as evidenced by the profits of 'new media' organisations such as Facebook and Google (Wong, 2019a; Wong, 2019b) an interesting reverse of metrification comes from how the participants assessed game performance by more than just the headline metric of the kill / death ratio. While that is seen as an indicator of gaming performance, for these participants with particular views on what defines a serious gamer and a serious approach to playing the *Call Of Duty* games, then, as P3 phrases it:

> I Guess it depends how seriously you take the game, to casual gamers who on play public matches it's a good stat to compare to others, but the more serious you take it the more you realise there is a lot more you have to look at as well as KD[41]

The notion of being a 'serious gamer' is integral to considering player agency and how this agency is exercised, and began to be unpacked on p.145. The qualifications to be a serious gamer, as deduced from the views of the participants in this study, centre on skill and motivation. Additionally, a serious gamer is distinguished by having the 'right' type of 'gaming set up' - this will include choice of controllers and headsets, as is discussed later (p.155), plus sound system and display device. Across various gaming groups on Facebook, a common thread of discussion is very often on ideal gaming setups, and such discussions are evident on gaming discussion boards[42]. Myers (2019) discusses gaming capital - having the knowledge and skills to be able to successfully navigate different games - of the same and different franchises and of the and different genres. This gaming capital is accrued through practice, which takes time and motivation. The motivation to successfully overcome the hurdles which any video game will present to you requires the desire to succeed and the implicit understanding that you will fail at the game before succeeding - in other words players will not necessarily expt to successfully complete a game on first play. These qualities

[41] P3: Main focus group, Pos. 158

[42] https://www.gamespot.com/forums/games-discussion-1000000/what-do-you-consider-a-serious-gamer-25945842/, accessed on February 11th, 2021

and attributes are not only fundamental to being a successful gamer and thus on the road to being a serious gamer but also a successful - or serious - learner too. In opposition to Gee's concept of the 'good game' - which privileges the text in the text-reader relationship through the thinking that it is the characteristics of the game design which will be the key determinant in the learning power of that game; this notion of the serious gamer re-balances the text-reader back into the hands of the reader. It is the way a gamer approaches playing the game which will determine the learning value of the game. This is a concept which has the capacity to be extrapolated to all kinds of other games. Examining the habits of serious gamers potentially has a lot to offer to better understand how players can learn from video games.

What did this coding reveal?

With the 'gentleman's agreement' and the definitions of serious gamers this segment has made clear that there is a highly defined set of acceptable subcultural behaviours which, if not followed, will result in censure from other members of the subculture. If someone wants to be accepted and remain within the subculture then they need to learn these norms and values and adapt their behaviour accordingly. There is a strong socialising dynamic at work within the *Call of Duty* microculture and from the communication and enforcement of subcultural norms and values another value sphere of learning emerges into view. This adds to the developing answer to RQ3: that gaming metaculture[43] is a vital component in giving players the tools they need to improve their playing performance, and that the social side of gaming (which is very important to this group of participants) helps them to improve as players, and this then reinforces the points made regarding RQ1 - that playing the games, and reflecting on performance in conjunction with using aspects of gaming metaculture is a critical element of in becoming better players (leaning into RQ3) and developing strategic and tactical decision making capacity.

Gaming culture code analysis

[43] Gaming metaculture - incorporates the use of specific equipment (e.g. headsets, controllers) and the processes of communication through which gamers share information on how to progress in games and what kinds of equipment are the most suitable

Why did responses get ascribed to this code?

This is the second of the codes which were developed following the initial wave of data analysis. Emerging throughout the whole of the focus group discussion clearly established the participant's views of social and cultural etiquette in how to play the games. Part of the evidence base for this code has also been discussed in the previous section on the 'serious' code - namely the discussion on the merits and demerits of 'camping' as an acceptable playing style, but this warrants further discussion in its own right.

What are the significant features of responses with this code?

As noted above, much of the discussion which fits into this code is on the acceptability or otherwise of camping. The other key facet of discussion was on the supporting equipment used (types of headset and controllers) - the brand names which were flagged up also point back to the discussion previously about subcultural norms and values. It became rapidly clear in the discussion that certain brands and types of equipment are valued by the participants - by implication, other types are not. Cultural transmission from peer to peer contact (the micro episodes of socialisation of norms and values) are arguably evident here with the preferences for certain types of equipment being expressed so uniformly by those who responded to these questions. This is also part of the evidence base for RQ3.

What is the evidence for this?

The use of headsets had emerged in the focus group through the discussion of how players are policed in terms of their playing etiquette. Anecdotally from my own playing of these games I know that the use of headsets as a means of communication between players and this anecdotal finding was consolidated in the pilot study interviews. In order to ascertain the popularity of the use of headsets amongst the participants, I directly asked them about their usage - what follows below is an extract from the transcript which details the collective answers.

P1: Yes i play with astro a40s
P8: Turtle beach x11 😂 I remember those headsets were all the rage when I was playing
Moderator: 👍
P2: I have Astro A40s as they was the best around when I purchased mine and was easiest for setup at LAN events 👌
P4: Yeah
P3: O
P3: Turtle beach xo4 for me
P8: The real question here is how many controllers did I get through while playing COD 😂

P3: Ahere too, became almost a necessity for competitive games on IW with jetpacks
P9: Yeah as soon as jet packs were introduced was an absolute game changer[44]

In considering the seriousness or otherwise to which these participants have applied themselves to this subculture, the current prices of the items named above are somewhat revealing. At the time of writing (April 2020), an Astro A40 Gaming Headset is £199.99 (amazon.co.uk, n.d) a Scuf gaming controller is £149.99[45] and a used Turtle Beach XO4 headset is £97.00 (amazon.co.uk, n.d). Given that at current prices a PS4 is retailing at £249.99 (amazon.co.uk, n.d) and an X-Box One is currently priced at £228.49 (amazon.co.uk, n.d), this is evidence of significant personal investment in this subculture and reinforces the sense of seriousness which these participants have all exhibited about their game playing throughout the whole of the focus group discussion. Also, given the mention of playing seriously and LAN connections, this is almost veering towards identifying the tools a 'professional' gamer needs (it should be noted that P2 did disclose at the end of the focus group discussion period that he is a semi-professional gamer and has played in tournaments for financial prizes). This is another sign that such games are not treated as mindless entertainment by these participants. This another dimension into how gaming metaculture helps to mould players / learners - having the right kit is seen as intrinsic to facilitating better game performance, and that is played very clearly in the final comment regarding jetpacks and the perceived need for a Scuf game controller - a "game changer". Whether true

[44] P1, P2, P3, P4, P8 and P9: Main focus group, Pos. 100-118

[45] https://scufgaming.com/uk/scuf-impact-black-gb?source=shoppingads&gclid=CjwKCAjw7LX0BRBiEiw

or false, there is the belief that having the right kit helps to make players better at the game. Subtly, this means that players are more likely to take on the attributes of model learners, thus reinforcing further the points made thus far with regards RQ3 - engagement with and use of gaming metaculture does help to nurture model players / learners.

Ideology code analysis

Why did responses get ascribed to this code?

Following my posting into the group a video clip of the 'No Russian' mission which sparked a phase of discussion, which has been written about earlier, in seeking to get the participants to expand upon their responses, I asked them to consider the purposes of the game's developers and publishers incorporating missions such as 'No Russian'. Responses to this issue have been ascribed the ideology code plus the outcomes of some questions asked later to gauge participants understanding of real conflicts in the past and present to see if there were any connections between the ideological viewpoints which the participants might express versus the ideological viewpoints which it is possible to read as being the intended or dominant reading from the games (following Hall, 1980).

What are the significant features of responses with this code?

At the immediate point of reading the responses as they were sent to the group I was surprised at the geo-political reading of global events and how that did or did not relate to game scenarios. The responses in this phase of the discussion showed a high degree of awareness of key geo-political conflicts (hot and cold) and questioning about what 'they' (the US government? / the UK government? / big business? / 'deep' state actors?) they were seeking to achieve with the promulgation of fear. Part of the history of the Cold War is punctuated by American interventions against governments that were not perceived to be aligned to American interests, as depicted in the documentary series *Oliver Stone's Untold History of the United States (2011)* and

further documented by Kinzer (2006). America's clandestine intervention in Cuba (Bay of Pigs invasion) and the war in Vietnam formed part of the story for the campaign mode of *Call of Duty: Black Ops (2010).* Experience of having played games such as this, in addition to those of the *Modern Warfare* sub-franchise which features attempts by American agencies to infiltrate terrorist groups (as featured in the 'No Russian' mission discussed previously) and having American and British military working with insurgent forces in fictional Asian / former Soviet republics as featured in *Call of Duty: Modern Warfare (2019)* are possible entry routes into how some of the participants may be so questioning of 'western' foreign policy on the ground. The data presented below makes clear the level of scepticism from the participants towards elite groups. The responses considered form the substantive element of the evidence base for RQ2.

When questions directly asking about how well informed participants feel about real conflicts past and present (such as World War II, Iraq and Afghanistan) were asked it took some nudging to get the participants to respond - only one (P8) was quickly forthcoming with his responses. There are could be a range of explanations for this - these questions were asked at the end of a two week online focus group so fatigue could be a factor, but it could also be that the participants didn't have readily available answers to these searching questions (which could indicate that these were issues which they had they had hitherto not given too much thought to) or they were unsure of what the socially desirable answers were. Nevertheless, the answers that some participants did volunteer reinforce the view that anyone claiming a correlational cause and effect relationship between game content and player response needs to pause for thought.

What is the evidence for this?

Initial responses to questioning about the purpose of incorporating missions such as the 'No Russian' mission in *Call Of Duty: Modern Warfare 2* offered the following reasons for this action:

> P4: Could they be looking to keep terrorism in our minds, 9/11 the 7/7. Keep it fresh, justify that the west is good and the east is bad, simplified I know but u get the jist
> P2: I mean I think that cod have put a good point out there with what they have done cos I would imagine that if some terrorist could manage to get into that kinda spot with the armoury they had. But I think with the people that we have in the world in our police force and ain't terrorist force they don't allow such a bad thing to happen. So maybe are they looking at what could actually happen if we wasn't to have them? Be grateful of that maybe?[46]

P4 seems to be offering a perspective which shows a distrust of institutions - and the unnamed 'they' first appears here - mixed with the old Cold War trope (from the western side of the 'Iron Curtain' at least) about the moral standing of the west and the east. It should be noted that P4's Cold War-esque ideological expression does reflect some of the messaging available from all of the *Call Of Duty* games when taken at their totality as an overall franchise. In some contrast, P2 seems more deferential to the unnamed 'they' and seems considerably more trusting of the UK security forces (implied by the use of the word 'our' in his response).

Following the discussion further, the participants were asked about the purpose of governments trying to make their populations more fearful. Given the fears expressed by academics who observe a negative relationship between playing video games and aggression, the initial response of P3 is interesting and highlights why it makes little sense to study people's interactions with video games in short term experimental settings. He states:

> Or it's now got to the point in society where people are now so inundated with terrible things on pretty much a daily basis, things have to be as extreme as this to even get some kind of reaction[47]

Here P3 is saying that society has recently witnessed so many horrors - this is in the context of several acts of terrorism in a range of cities in the UK, most notably London and Manchester - that the games have to be more extreme than real life in order to gain attention and be larger than life. Additionally, the games are in competition with others from the franchise and others of the same genre, and in a crowded marketplace,

[46] P2 & P4:Main focus group, Pos. 247-248
[47] P3: Main focus group, Pos. 250

the franchise will always need tools to attract the audience's attention. The use of familiar, real world locations is one way of achieving this and instilling a sense of verisimilitude in players which can only help to immerse them within the world of the games further. As examples, there was the 'No Russian' mission already documented from *Call of Duty: Modern Warfare 2* and a partially destroyed Paris was used as a map for online play in *Call of Duty: Modern Warfare 3.* Arguably, this indirectly contradicts the possibility of a game-person direct effects correlational model. When asked to clarify his views on why developers and publishers would incorporate controversial missions such as 'No Russian' in games, P4 opined that the purpose was:

> Justification for the years of war and terror that follow. Keeping the public on side by showing them the evil that is "the terrorists"
> And yes we have become desensitised to all the horror we see.[48]
>
> The western government, big corporations that have taken everything from minority/poor country's that have had there wealth stolen by the said government/corparations[49]

Given that in the various campaign modes across all of the games the player inhabits the avatars of mostly American or British playable characters (sometimes other imaginary nations, but never Russian avatars), if the intended ideological effects are to develop greater identification with the US and UK, then, for P4 at least, this mission has failed. Also, it needs to be remembered that for a good number of these participants the campaign modes, where the ideological heavy lifting is attempted, is simply ignored in favour of the online modes where none of this concern about the representations of different nations is a concern at all to the participants. To clarify that some of the participants did not bother at all with the campaign modes, I asked this question again (it had been asked previously in a slightly different guise much earlier in the focus group conversation). P3 responded by making clear that they had little interest in campaign mode (see quote on p.157).

[48] P4: Main focus group, Pos. 251-252
[49] P4: Main focus group, Pos. 261

With regard to the questions asking about understanding of real life conflicts, the participants responded as follows. Firstly, P1:

> In answer to the questions, *i feel like i am fairly informed of the 2 world wars due to my own researxh into the both wars. However im not sure how much COD has helped towards my knowledge of the subjects.*
>
> They have given me real life scenarios based towards the mnowledge i know however probably not taught me much about the facts of either. But almost shown a demonstration of certain scenarios that occured.
>
> ...*However other than enjoy the game i didnt really gain any knowledge about the wars and personnel from the characters.*
>
> *Id personally say that playing COD hasnt made any difference to the way i feel about people that do serve our country as i know a lot more about the situations from people that j know personally who have been involved in such however this is probably because i mainly played online rather than story modes*.[50]

The italicised fragments signify that P1 feels that he has learned about the conflicts featured in the games from his own research and from personal connections - and that these provide reference points for him to make comparative judgements on the level of realism being depicted in the *Call of Duty* games, therefore the dominant ideological power of such games that may be feared is non-existent according to this self-report. He goes on to refute the possibility for ideological transmission by once again reiterating that he is an online only player with very limited experience of the campaign modes which craft the narrative for each game.

P1's answers were largely replicated by P2. While there might be some tendency to see social desirability at work in the answer pattern, it is worth noting that because these questions had been slow to be answered as documented earlier, the actual answers submitted by P1, P2 and P8 all came via one to one WhatsApp message rather than being posted into the main group chat. I offered this facility to the participants as a tool to overcome social desirability bias in their answers. So, the possibility of this is reduced. P2 commented as follows:

[50] P1 ideology questions, Pos. 17-23

> 1 - I feel well informed about the real world conflicts. From the stuff from WW2 etc I [did] history at school and left with a B GCSE , *but outside the classroom and still to this day I will watch programmes on the wars as I find them very interesting. Where as with the new stuff I feel a little more it's not as clearly explained with what's happening / what we are doing*. You always hear stuff on social media and the news but never know what's actually true...
>
> 3 - *It has help in some cases of breaking down the rankings which the army/terrorist use. Like the is always one person at the top of the food chain which is the one giving the orders and most the time not willing to put them selves in the situations as they know how dangerous they can be*.
>
> 4 - I would say it has in once sense as mentioned before when your just sat playing the game it is easy to engage into gun fights , but doing it for real would be a hell of a lot harder. Which makes you realise how much some people give and sacrifice to make sure their country and people get what they want.
>
> 5 & 6 - I wouldn't class my self as any of them [pro-American, pro-Russian or anti either]...[51]

The first italicised fragment above reinforce the points made from P1's comments - the information about conflicts in the *Call of Duty* games is compared to other sources of information which have been explicitly sought for learning purposes. Speculatively, it can be said that the participant might trust the sources where they have sought out information about conflicts from more than the games as those have not been selected as learning tools (although of course, given the strain of argument elsewhere in this thesis, this does not prevent what might be considered an entertainment tool being also a learning tool).

The second highlighted fragment vaguely connects between ranking systems in online games compared to how real life organisations (whether state or non-state armed groups) work. However, the point made is vague and open to a degree of interpretation - which, if it means anything, means that it is incredibly difficult to draw conclusions other than the games do not appear to be having measurable impact on the ideological worldviews of this participant.

[51] P2 : ideology questions, Pos. 9-13

P8 was the participant who seemed the most comfortable with answering the questions about conflict and the influence or otherwise of the *Call Of Duty* games on his perceptions of these conflicts. He was the quickest to respond to the questions and the level of detail between his answers and P1 and P2 is clear to see from what follows below compared to the extracts from P1 and P2. However, while more erudite in his expression, the overall meaning is not at all dissimilar to what can be inferred from the testimonies of P1 and P2. His comments are below:

> I feel quite informed about aspects of ww2 covered in the games I've played. That was due to the campaigns focussing on key dates in history and developing levels around them. However, they are quite American-centric so how accurate can be questionable. As for modern conflicts I never really played the campaigns of MW or MW2. I was too focussed on wanting to jump in on the multiplayer. But I distinctly remember one mission in MW2 where the whole level was essentially walking around an airport shooting innocent civilians.
>
> *As with developing my knowledge I can only really talk about The Second World War. What I can say is that Call of duty definitely helped put a unique first person perspective on what combat was like and how each country conducted themselves*. In particular, the start of Cod 5 begins with you being tortured by a Japanese general in the Pacific. I only realised how accurate that scene was after reading more around world war 2 and watching documentaries. Call of duty gave me a median that captured my interest in war. Not only the war itself but also the technology used during 1939-1945. Even now I can watch a film or see a picture from the Second World War and name the majority of the guns I see. Lastly, COD5's campaign worked as a story board that explained how Europe was slowly being dominated by the Nazi's and the expansion of the Japanese imperial army, by which nations collapsed and which islands/cities were the axis' strongholds that the allies needed to target (ie) Okinawa and the Rhine...
>
> *Playing COD has made me more aware of the horrors of war. And how easily a situation can turn sour and the variety of ways that can happen. Personally, it's made me respect what the British Military do and from playing COD it's made me quite proud of what our personal do; so yes, In that respect COD has positively influenced how I see the British military worldwide.*
>
> I think with both Russia and America I have a clear understanding of what COD depicts as the 'hero' and 'Villain' of their stories. I found with COD the early games it was very much Pro-American propaganda and Anti-Russia where possible...[52]

[52] P8: ideology, Pos. 9-14

Similar to the responses from P1 and P2, P8 does not self-report any adverse ideological effects of playing *Call of Duty* games. Like P1 and P2, P8's answers also make clear that the information about real conflicts in the *Call of Duty* is refracted through an internal knowledge prism which means that this information is compared and contrasted to other knowledge sources of these conflicts. Additionally, P8 reports how playing the games have extended his knowledge of aspects of these conflicts - evidence for a positive learning episode. P8's comments on his respect for the British military and their work is very clear. A number of 'lessons' can be learned from the heightening of this respect. One lesson arising from this respect could be that this respect transforms the games characters into role models and thus act as a space for virtual social learning to occur. This one of the threads weaved by Bourke (2015) when discussing how and why young people aspire to be soldiers and she then navigates a range of types of war toys with which people can encounter. However, given the preference for the online modes of *Call of Duty* games over the offline - with scripted characters and use of cut scenes fashioning an archetypal narrative - then the room for role modeliing from game character to player is considerably squeezed. If any role modelling is likely to occur from online play it will be player to player - aspiring to be as good as or better than the best players one comes into contact with. It should also be noted that Bourke (2015) notes that academic studies consistently finding a causal correlation between playing war and progressing to military careers are 'patchy' as she terms it. The other main area for learning is that through learning more about what soldiers are tasked to do and the variety of dangerous situations they can be expected to work in can act as a deterrent to 'keyboard warriors' with idealistic expectation about a soldier's life from becoming warriors. As Bourke (2015), notes when detailing the story of a young man who volunteered for military service in Vietnam, there are a range of sources for learning the military knowledge that that person had at the point of joining the military. Additionally Bourke (2015) also observes the difficulty of playing first-person shooter games - the need to choose the right kind of weapon loadout and the skills to be able to use these in gaming scenarios require high levels of skill. Going back to P8, there is no room to construe any of P8's comments as evidence to suggest a negative correlation between game and player.

What did this coding reveal?

Given the variance in responses to questions in this code and given that the campaign mode is of no or little interest to many of the participants in this research, extreme caution should be exercised by anyone attempting to make a correlation between game and player in terms of how games fuel aggression. This point is consolidated by the pattern of responses to the questions about ideological views towards real conflicts. There is also academic concern over the ideological work being done in developing 'joystick soldiers' (to deliberately use the title of Hunteman's (2009) book). For P8 the representations of conflict within the game do not glamourise war and do not serve as a gateway into wanting to go and fight in real life wars but serve as a method of instruction about 'the horrors of war' (previously quoted on p.153).

Returning to the antecedents for this project - Willis (1978) and Grossman & DeGaetano (1999) - if some of the concern about games such as those of the *Call of Duty* franchise is about the capacity of such games to transform players into killers, then such concern can be set aside at this juncture. The responses here vis-a-vis RQ2 offer firm grounds for rejecting ideological transference in the sense that the games are shaping the ideological world views of their players. Such a notion has been rejected by the participants. The one avenue of ideological transmission acknowledged in the comments above is an enhanced respect for the British military. Beyond playing such video games, there are a range of opportunities for increasing one's respect for the British military - through national / cultural events such as Armed Forces Day and Remembrance Day. So increasing respect for the military - in terms of the risks faced when on active service and the tasks achieved - is not an ideological task which is solely undertaken by video games and the ideological weight of persuading people of the skills and attributes of members of the armed services and the desirability of acquiring these is beyond the scope of video game play alone. There are a range of ways in which this respect can be cultivated, therefore there is nothing especially problematic here. Relating back to RQ2 and the wider effects debate, the responses give much to reflect upon.

What is being learned when playing *Call Of Duty*?

In the previous discussion sections a number of points have been made about how playing the *Call of Duty* games can facilitate learning in a range of domains. In beginning to summarise this discussion of the focus group findings, this section will bring some of those threads together to form a coherent whole. The comments from the participants incorporated below will seek to add to the evidence base for the points already advanced in previous sections without repeating too much of the same quotes from the participants. The quotations from the focus transcript included below are drawn from two sets of coding - one where statements were coded as 'learning' and the other where statements were coded as 'feedback'. Again, drawing from the iterative principle at the centre of the grounded theory approach, these codes have been formed from a third wave of analysis arising from the preceding two waves. The purpose in including these statements here is to reinforce the points made that the *Call of Duty* games - at least for these participants - are strong and effective tools for facilitating learning. These statements are presented in three thematic areas - skill development, the value of feedback, and contextual learning. These thematic areas have been devised from analysing the data and looking to synthesise the discussion areas together coherently. These thematic areas bear considerable resemblance to the two most recent waves of trying to inject a skills element into the National Curriculum in England & Wales. Accompanying the Curriculum 2000 reforms to GCSE and A-levels was the incorporation of key skills (communication, application of number, information technology, working with others, improving own learning and performance and problem solving and the later development of the Personal, Learning and Thinking Skills (PLTS) approach (Guidance on the key skills units: Communication, Application of Number and Information Technology levels 1-3 and level 4, 2001; Parliament.uk, 2011).

Skill development

The following comment from P3 is a useful starting point as it encompasses both learning and feedback:

> ...trying to learn from every game with the rest of team was really interesting, and seeing the progression on our gameplay then helped fulfil the need for a reward after a game too[53]

This is a timely reminder that learning is intrinsic to the pleasure which these participants derive from their playing of these games, but also that desire to progress is fuelled by rewards (positive feedback). In a fragment of a sentence here is an encapsulation of core aspects of good learning design - that learning is pleasurable, that learners can see that they are making progress and progress is rewarded with appropriate feedback. Drawing from the formal Key Skills and PLTS frameworks, there is evidence of successful 'Working With Others' (Key Skills) and of 'Effective Teamworkers' (PLTS). In learning terms, this is a statement of the incentives for good learning, the comment from P8 (regarding the 'Gentleman's Agreement' on p.150) provides a reminder of the enforcement protocols which help players to learn or reinforce prior learning on acceptable behavioural standards.

So besides incentives for learning, the game community polices player behaviour and this demonstrates that the learning available from playing the games is bigger and broader than from the text itself - the game does not prevent camping, that prevention is undertaken by other players policing on a peer-to-peer basis, and these peers have learned this from other players. In short, from this first statement above 'the carrot' is evident and in the second statement 'the stick' comes into view. So the game design helps to motivate players and game culture helps to discipline and punish transgressors of subcultural norms. P2 and P1 in their own words make plain the value of playing *Call of Duty* games as learning tools. P2 commented:

> Playing games can learn people quite a lot of different skills in life which could go from working as a team , taking orders ... and then some games you can gain general knowledge from and some games now are made to make you think.[54]

This was echoed by P1:

[53] P3: Main focus group, Pos. 41
[54] P2: Main focus group, Pos. 186

> The same really, ability to work well under pressure, knowledge of weaponry types, communication skills when talking to others, reaction speed. People skills are also built and that improves self confidence.[55]

It is very clear that these participants at least firmly believe in the learning power of playing *Call of Duty* games. From the following comment from P4, there is evidence of the application of the skill of 'Improving Own Learning and Performance (Key Skills) and what in PLTS terms is an example of an effective 'Self Manager':

> I always do the story mission first on mid level then hit the PVP modes. Then try story on high. 👍[56]

Whilst the participant does not use any of the recognised discourse of learning, there is a clear strategy in place to familiarise himself with the game missions and use this to build a knowledge and experience base which he is then going to adapt his knowledge for the 'public examinations' of peer versus peer online play, and then reflexively use all of this accumulated knowledge and understanding to return back to the offline campaign mode and take on the increased challenge of undertaking the campaign mode on 'high' level (connectivism theory applied). This is the real life application of Gee's principles of fish tanks and sandboxes applied by a gamer without recourse to theory. From a relatively straightforward sentence, unencumbered by any academic discourse about learning and learner aptitude and attitude, an exceptionally well realised evocation of how learners can manage and challenge themselves to maximise their progress and performance in a learning endeavour.

In terms of how the participants show the skill of reflection (exhibiting in PLTS terms the skills of being independent enquirers, reflective and self-managers) whilst appropriately using IT (in Key Skills terms Information Technology and Improving Own Learning and Performance), there is the next comment from P3:

> There are official call of duty world league channels where they would put the game replays on after the big events, the events would be streamed to watch but if you missed a game you could go there and watch, and as with any sport commentators would talk about why a

[55] P1: Main focus group, Pos. 189
[56] P4: Main focus group, Pos. 42

> player is doing a certain thing or the tactic they are using so you could learn from that. And then from there pretty much all the major players have there own youtube channels you could watch too[57]

The level and type of reflective thinking hints at considerable self-assessment and a strong desire to improve performance and achievement levels. This in turn reflects high levels of motivation with the desire and ability to seek out these additional sources of information. Educators covet highly learners like these - but of course, these attitudes are the products of social and cultural formation: good learners are made, not born that way. So, the design of games such as *Call of Duty*, in addition to the marketing which helps to create a cultural buzz and the very strong fan culture which now surrounds the games themselves contains many of the essential ingredients for highly effective and rapid learning to take place - exactly what regulators and governments seek from the educational systems they supervise.

Value of feedback

Feedback and reward systems were fleetingly mentioned at the top of this section, and have been previously discussed in other parts of this discussion of research findings (e.g. p147-8). In those previous discussions, it has been mentioned of feedback mechanisms within the game to nudge the player into adapting their thinking and choosing a different course of action (e.g. re-directing the player's attention to focus on other visual or audio clues - as per the example on p.147). In addition to what has already been previously stated about game feedback mechanics, the following comment from P6 is helpful.

> Another was the landing at the beginning of the game. Done my nut in. That was probably the hardest bit I found. An interesting point is your own state of mind when playing, I found myself thinking I am not focussed on this and got frustrated after continuously doing the same route with slight adjustments. Then realised a route that was less treacherous and manageable to get to the pill boxes[58]

[57] P3: Main focus group, Pos. 71
[58] P6: Main focus group, Pos. 124

Elsewhere in the transcript P6 explicitly stated that this is one of the game's feedback mechanisms - in this case an NPC calls 'Over here' to help redirect the player's attention and thus to provide them with a significant clue to resolve the problem. This in-game feedback is the equivalent of a teacher providing formative feedback on student work - the comments being designed to identify what can be done well and identify the points for improvement with suggestions as to how these improvements can be made. Where the feedback is appropriate to the challenge and where the learner is able to understand the feedback and accept the need to act upon it, progress can then be made - and this is exactly what can be observed as being at work in P6's interactions with the game mechanics.

Conclusion

RQ1 - In what ways might the *Call of Duty* games facilitate the development of strategic and tactical thinking skills?

The key points emerging from this chapter towards answering RQ1 are the players desire to improve their performance; reflection on own performance and the role of feedback from the game and peer support. In facilitating this desire to improve performance, game design is important - the play scenarios and the quantity and quality of feedback needs to be well matched to motivate rather than demotivate. In addition to feeding motivation, appropriate game design and feedback mechanisms help to facilitate learning within the immediate context of enabling players to become better at the game but also the potential to transfer into other areas of learning outside of the game. Further, players are self aware and have demonstrated explicit understanding of the degree of self-reflection taking place and that they are making strategic and tactical decisions about how to play certain scenarios informed by this reflection. This self-reflection and the awareness of it then leads to the recognition by the players that learning is happening as they play and that this learning is not ringfenced to the ten minutes duration of an online game, but is incremental and

stretches back over time - thus foregrounding the constructivist and experiential models of learning.

RQ2 - To what extent does playing the *Call of Duty* games have demonstrable ideological effects?

This research question is a direct response to the concerns of writers such as Grossman & DeGaetano (1999) about the ideological impact of playing FPS games and is an indirect response to Gerbner's (1998) cultivation model of media effects. The participants in the main focus group had all been playing *Call of Duty* for a period of years - most of them dating their introduction to the franchise to around the point where the first instalment in the *Modern Warfare* sub-franchise, which was released in 2009. Some of the participants were approximately eleven years old when they first started playing these games - yet all participants were confident that they were able to distinguish reality from fiction easily and always aware that the situations and characters in the games did not simply crossover into reality. Owing to this, the participants rejected the notion that the games were promoting behavioural scripts which teach players to be more aggressive and violent in resolving problems. The one acknowledged area of ideological transmission arose from one participant professing an enhanced respect for the British military. However, this respect also exists in a contemporary context of wider social and cultural respect for the British military, as mentioned earlier, so the game is possibly not the sole cause of this ideological transmission.

RQ3 - How can involvement in gaming metaculture help to develop model learners?

The use of gaming metaculture directly echoed what had been found in the pilot study - it was seen as an essential element in helping players to improve their own performance. The advantage in the focus group was that this could be explored more fully. Watching gameplay videos of others on platforms such as YouTube or Twitch is confirmed here as useful tools for driving the desire for self-improvement through learning from peers. Further, it was clear from the discussion that there is a strong socialising dynamic which helps to promote the desire to learn and improve - this type

of desire is fundamental into crafting model learners. The other key aspects of findings for RQ3 is on the value attached by the participants to certain types of headsets and controllers. An object of speculation here is on whether the use of such hardware does impact upon performance - or whether there is a placebo effect at work in that having high specification goods enables the player to make progress because they believe they are going to. This is a worthy object for future research. This demonstrates how peer-to-peer communication does yield a high degree of impact - if you can learn what the right kit is from other players you can also learn the attributes of high performance players too and therefore develop model learners.

This chapter has demonstrated that gamers place significant value on gaming metaculture as a vehicle to drive their performance, thus partly answering RQ3 affirmatively. In the process of using the knowledge to be gained from engagement with gaming metaculture, the players are active agents in driving forward their decision making prowess and they are very aware of their strategic and tactical decision making, answering RQ1. Finally, with regards to fears that in playing such games, gamers are being exposed to ideological messages which may affect them negatively (transforming players into killers) this is rejected out of hand by the participants in this study (RQ2). It's more than time to stop worrying and learn to love video games.

Chapter 5: Mission 2 - Video focus group

Theoretical context

Culture is one of the many words which is used very frequently in a variety of social contexts, but is a word that is very elastic in terms of its meaning. As Mayra (2008) observes:

> ...culture is not a neutral term, but rather one loaded with significance that is related to values, carrying even political implications.
>
> (Mayra, 2008: p.21)

In this arena of competing value systems, Mayra (2008) notes that discussions of game culture easily morph into debates about the cultural value of games, and this has ramifications for associated academic work which will, consciously or otherwise, employ a value system which is either positive or negative about the role and function of video games in popular contemporary culture. Research papers read for this project's literature review nearly uniformly begin with a statement noting the popularity of video games as a cultural practice, but after this point researchers then go in different ways in terms of marking whether this fact is one for celebration or concern. Mayra (2008) wrestles with ethnographic approaches to defining culture in totalising terms - such as systems of shared beliefs, values and practices. Recognising the lack of fit to gaming, Mayra (2008) proceeds to argue for recognising that games and game playing do have meaning for those who play - and the number of video gamers increases year on year and spans generations. Precisely because the act of playing games does have meaning (otherwise why would any individual play video games if it held no meaning - in terms of escapism, for example) it is a cultural practice. Precisely because it is a high value industry in terms of revenue and players, generating $120.1 billion in 2019 (VentureBeat, 2020) it is important to take gaming seriously and seek to understand the meanings players attach to play and surrounding cultural practices Rather than looking to identify a totalising game culture, Mayra (2008) instead calls for:

> Under a closer look games can in fact play many different roles in such, overall life defining systems is cultures discussed by cultural anthropology, but in order to see them, the cultural analyst needs to be sensitive to the way identity is being negotiated and defined within late modern societies. The most notable that game cultures can be interpreted to be working within this context is in their role as *subcultures.*
>
> (Mayra, 2008: p.25)

The analysis of game cultures in these research discussions is best viewed in this spirit of working incrementally: as not seeking to identify one 'game culture' but recognising the multitude of microcultures pertaining to different genres and games. The intention is to lift up a *Call of Duty* pebble and seek to analyse in as much detail as possible the social and cultural practices at work, without necessarily jumping to generalising that what exists under the pebble marked *Call of Duty* will be the same for all of the other pebbles on this metaphorical beach.

In terms of trying to make sense of why people play video games and what meaning / pleasure they derive from this, Egenfeldt-Nielsen et al (2008) draw from the ideas of Estallo who has worked up an explanation based on reinforcement theory. Egenfeldt-Nielsen et al (2008) state: 'Moreover, players assign symbolic value to the games they play, so that they find their own subjective rewards in the act of playing.' (Egenfeldt-Nielsen et al, 2008, p.149). They also cite the work of Morris (2004) and Wright, Borta & Breidenbach (2002) in noting how online game play affords a sense of ownership and creativity and how online gaming communities can both reproduce and innovate away from the norms of social interaction. There will be evidence of both of these traits within the subsequent discussion. The work of Csikszentmihalyi (2008) on the development of flow theory is also recognised for conceptualising now video games engage and maintain player attention, and the evident overlaps to educational best practice have also been detailed elsewhere in this thesis. Beyond the positive, self esteem inducing reasons why people play video games, Egenfelft Nielsen et al (2008) also introduce the concept of 'grief players' who seemingly derive pleasure from interfering with the online game play of others - and arguably this pleasure spills over into the communicative practice within public gaming lobbies. This conjecture leads onto the concept of intra-mechanic conflict and extra-mechanic conflict which Egenfeldt-Nielsen et al (2008) posit. Simply put, intra-mechanic conflict is conflict which happens between players within the game which may or may not be seen as

acceptable within subculture norms and values); whilst extra-mechanic conflict is conflict between players outside of the actual game - this can encompass voice communication via the public lobbies and other various means of communication. Of course, one of the sources for extra-mechanic conflict is player behaviour in the game - and this then points to how games foster their own metacultures. In the previous research discussion on the first focus group, aspects of this meta-culture were discussed, specifically the use of specialised controllers and headsets to aid gameplay and communication and the use of platforms such as YouTube and Discord for the swapping and sharing of information about gameplay tactics. This is an even more prevalent theme in the upcoming discussion on the follow up focus group and a one-to-one interview with one of the participants. As Egenfeldt-Nielsen et al (2008) go on to explain (Egenfeldt-Nielsen et al, 2008, p.157), the metaculture is far more than just a space for players to vent their frustrations at other players - the metaculture is built from all the YouTube channels and streamers that showcase their playing skills, and from this other learn how to improve their own performance; not to mention the Facebook groups and the use of other social media such as Twitter and Discord to share and learn best practice.

In the view of Egeneldt-Nielsen et al (2008), these are the habits of serious gamers - and there is substantial evidence of such practice by the participants in this study. This perspective is solidified from the ethnographic study carried out by Payne (2010) who argues that communication is the most important lesson to be learned from playing *Call of Duty* online - what he terms 'ludic war' (Payne, 2010: p.211). The need for players to be able to communicate effectively in real time in pressurised situations is a vital skill, and this is something which appears in much of the ensuing discussion of research findings. Payne (2010) recognises that not all communication exchanges between players are designed to be helpful and constructive in furthering the achievement of shared game goals. He lists a variety of ways in which players can transgress subcultural norms (ibid, p.217-8). The first of these is 'play transgressions' which is where all parties are understood to be engaged in an exchange which is humorous in nature. The next stage on from this is what Payne (2010) labels 'intolerable transgressions' which involve 'off-colour conversation and banter generally not heard or sanctioned in public settings' (ibid, p.218) - though this could well vary in practice between different individuals and groups deem to be off-colour and banter.

At the sharp end is what are called ‘intolerable transgressions’ which are taken to violate subcultural norms to a serious extent - for example, this could relate to the practice of ‘teabagging’ discussed in Chapter 1 (Myers, 2019). When this was discussed previously, it was also mentioned how teabagging is used as a means to discipline and punish players who are not observing the preferred subcultural rules. Given the overtly sexualised nature of this means of punishment, and given that labelling people as ‘gay’ is still enagged in as a pejorative practice, which is well established by Healey (2016). This needs to be viewied as a means asserting a sense of hetero-normativity to this gaming environment - with the importing of ideas and values from outside of the game world membrane into it. This corroborates Healey’s (2016) argument of such games being ‘proving grounds’ for asserting a certain type of masculinity. In turn, Healey’s ‘proving grounds’ as found in Myers (2019) work, are spaces for the learning of the ‘hardened masculinity’ noted by Roberts et al (2017). This hardened masculinity values the assertion of heterosexuality over homosexuality and corresponds with the kinds of physical ‘banter’ Roberts et al (207) detected in their research with footballers. This point coalesces with the point made earlier regarding the ‘gentleman’s agreement’ and how the understanding of informal game rules follows the same arc as other social and cultural rules which help to assert or reinforce male dominance.

On discussing the quality of communication between game players in public gaming lobbies - a virtual space where anyone can go if you have access to the game - one of the participants in the follow up focus group declared “It’s toxic”. Before discussing the findings of the follow up focus group in detail, one of the first tasks to be worked through is to build up a theoretically informed contextual understanding of social behaviour in online spaces. One of the best starting points for any such discussion must be consideration of some of the ideas Goffman (1965). Of course, the publication of such ideas dramatically pre-dates the internet age and the easy access to online crowds or communities. However, some of his ideas still retain strong currency. In discussing the behavioural effect of walls and windows, Goffman (1965) recognises that walls can act as a barrier to communication and windows offer an opportunity for participation in communicative activity (Goffman, 1965: p.152)

Walls and windows are a good starting point for considering how the online environment in *Call of Duty* public gaming lobbies is structured. The first and highest wall is having access to the game. Once on the 'other side' of this perimeter wall, and entering into public gaming lobbies, the players are then in a walled environment where they can (and can choose not to) engage in communication with other people in the lobby. Depending on what kind of game is being played, this can be as few as two people or up to a hundred people in the new 'Warzone' game mode. Therefore the space that the virtual walls enclose is highly mutable, but the walls are still there. However, and very different to physical places enclosed by walls, in such virtual space there are windows everywhere also - every console user has the ability to export what is being said and done in the 'room' outside of it - either directly by sharing content direct from playing device (as the PS4 enables players to do) or indirectly by people recording lobby communications via other devices. Whether the windows are direct or indirect, all of this communication is portable outside of the room. It is debatable the level to which all users recognise this fact and adapt their behaviour in either a more prosocial or antisocial direction to suit, what remains though is that such virtual enclosed spaces are only as enclosed as one person virtually present allows them to be. Where the windows are open to prosocial viewers, there will not be an addition to the claimed toxicity of the communication environment, but where the windows are open towards more antisocially oriented 'grief players' then this raises the chances of the problem continuing. Goffman (1965, p.195) writes of the rules which govern parties - the rules which become generated in such microcosmic instances do so to govern the occasions itself and how the participants behave during it. For Goffman, the sharing of such rules - 'situational proprieties' as he describes them - is the social glue which transforms a group of individuals into a social group with its own social reality.

In discussing the tightness or looseness of social groups, in Goffman's meaning of the terms, arguably the *Call of Duty* online community (of course it is debatable about whether it is a community or a crowd) is being pulled in different directions by members of that community who have competing aspirations and that those that want tight groups are to be found in the ranks of the serious gamers who have participated in my study, while those happier with a looser community fit are not amongst my participants.

Learning code analysis

What did the questions ask for this code?

Given that the purpose of this second and smaller focus group was to drill down further into the participants views on communication, collaboration and gaming culture, there were no questions directly asked about learning, but this theme did come out again in some of the responses. Taking the grounded theory approach of being evidence led, it is impossible for these comments therefore to be set aside.

What are the overall answers?

The answers which have been coded for learning are embedded with answers or comments to other parts of the discussion - and these revolve around notions of the importance of practice and the amount of time and application given by the participants to developing as players. Writers such as Gee (2013), Engerman et al (2019) and Monjelat et al (2017) amongst other writers in the field have all documented this as a theoretical point and as a phenomenon which has been detected in research projects. The arguments of these writers and others are rehearsed in Chapter 1.

How do you know?

The following comment from P2 exemplifies how learning and reinforcement is closely bound up with teamwork - working with each other (which calls back to the skills agenda discussed in Chapter 4) and the clear, explicit understanding that practice is essential to being a serious player. P2 states:

> The experience of playing with each other is 100% more successful than just playing with good players. A team that knows each other will be a team that's better if they don't know the way the team plays, every single time. It's like when we played Advanced Warfare a lot, that game me and my team used to sit there for my hours when you said so practice just like throwing the ball with sounds daft and we just always just throw to each other but then when we went to LAN that

> was one of our best things and it was cool because we put so much effort in.[59]

Practice is two dimensional here - practice of working together and practice of a particular skill drill (the passing of the ball). The experience of working together and the skill level achieved by the constant practice of the drill which had been set up between team members. It is also clear how the learning cultivated by the skill drill is then able to be readily applied when they went into competitive games ("when we went to LAN"). This is an example of the overlearning noted by Gentile & Gentile (2008) of the sound educational principles which can be found in FPS video games such as *Call of Duty*. The reasons why such practice was essential is then clarified by P2:

> Yeah you've got to practice stuff like that at because on Infinite Warfare they had uplink as well but you could wall run so you need to practice and you could run across the side of a building and if you were quick enough to throw the ball over the top *but you'd have to practice at so many times so that you know exactly where to aim to get the ball over the building and into the portal but you'd never get it unless you practice it enough*[60]

Again, this reinforces the importance of practice in skill development and the value of overlearning in a non-competitive, training exercise between team members. Non-competitive overlearning is of considerable benefit to the participants when seeking to use the knowledge and experience of working together and the skill of passing and catching the ball in a time-pressured competitive environment. This element of non-competitive learning - skill and drill practice - complements the learning which can take place during competitive timed games. There is a recognition here that achieving the kind of 'fitness' levels needed for competitive play needs more than just match practice, it requires a tailored programme of development to ensure that the necessary skills have been learned, or over-learned, so that reaction is automatic in competitive games. Linking back to the findings discussed from the main focus group, there is further clear evidence of how playing *Call of Duty* does embed essential skills and attributes to build the successful life long learners that countries around the world are seeking to cultivate as evident in Chapter 4.

[59] P2: COD follow up video chat transcript, Pos. 59-60
[60] P2: COD follow up video chat transcript, Pos. 65

What did this section reveal?

While the retrieved segments are small in number for this code from this secondary focus group, the statements by P2 make very clear the value of teamwork and practice of skills in order to forge a competition ready team. In relation to the P21 skills framework (Fadel, 2008), the skills of teamwork / innovation; critical thinking / problem solving and self direction are all being facilitated here. Given the mantra used in the OECD document on P21 skills about learners needing to learn skills for jobs which do not yet exist, skill development in an online learning context (especially given the sudden changes in educational delivery wrought by the Covid-19 pandemic), this adds further weight to the claim of the benefits of learning through play. With regards to further answering RQ1, the evidence from the focus group further supports the direction of the responses from the previous chapter - playing *Call of Duty* is ultimately beneficial to developing strategic and tactical thinking skills owing to the teamwork and collaborative elements of what is discussed here. The overlearning of skills conceivably gives the player the cognitive space in game to be able to make quicker and better tactical decisions because the player is able to quickly access the behavioural script for the certain actions. This partly further answers RQ1 and is also partly a demonstration of where the research findings also go beyond the parameters of the research questions.

Tactical code analysis

What did the questions ask for this code?

As is the case with the previous section on learning, given the focus in this follow up exercise was not on all of the original question areas, there were no key questions asked about tactical knowledge, but this did again surface in aspects of answers and comments during the course of the discussion.

What are the overall answers?

In some ways, the responses for this code echo aspects of the learning code, in that tactical knowledge is bound up with other dynamics of online game play, such as teamwork and communication which are discussed separately later in this chapter. What became rapidly clear on analysing the responses in this code is how effective teamwork is fundamental to employing the right tactics at the right time. Knowing the tactics is not enough, being able to work successfully with others in the pressure of live, timed competitive battles is essential. As with the learning code, the concept of overlearning is relevant here to understanding how players / participants can get themselves prepared for the challenge of online competition. Thus, the responses partly answer RQ1 but also exceed the parameters of the question.

How do you know?

The following excerpt from the transcript starts from a point of discussion about the use of headsets and in-game team communication, but then develops into a discussion of tactics which re-emphasises that these participants are serious gamers (in light of the discussion about social hierarchies in the literature review), but more pertinently are gamers who intuitively recognise that to compete successfully requires highly effective team dynamics and a high level of skill because tactics used between serious gamer teams are so similar. In one respect, reading this excerpt is like reading about elite rugby training and playing - where everyone knows what tactics the opposing team will employ, but have the skills (mentally and physically) to circumvent the opposition and triumph. So, the attributes needed to win are similar to those that are needed to compete and win in elite sporting competitions. To be successful in any highly competitive environment requires expert levels of knowledge and skills combined with the ability to be flexible and adaptable in the heat of competition. In terms of personal development, these are skills and attributes which would be highly valued in societies (as discussed with regards to the skills agenda in educational circles on both sides of the Atlantic in recent years).

> [P2] You kind of have when you get to a certain level everyone knows the spots and everyone knows to push and everyone knows the defence tactics in general. That goes for the same when you know

> when you asked about the call outs,everyone uses the same ones throughout every match
>
> [Moderator] Right
>
> [P4] *Half the time it comes down to gun skill to disable them*
>
> [P2] And because everyone's doing the same kind of thing and using the same defences and pushes, that's when you can start to predict what play why someone else is going to do and maybe learn tactics to counter that play. *It's literally like a game of chess sometimes you might give a kill away to get the bomb planted*'[61]

P4's comment on the needs for skill shows that learning the desired tactics is only one element of the puzzle - the skills acquired through practice with weapons are just as essential to be successful in competition. P2's comment likening the game play of competitive *Call of Duty* to *Chess* was an intriguing one. The transcript indicates that this comparison was completely uninvited by the Moderator, and given that *Chess* is well recognised as a game requiring high level strategic and tactical knowledge to be able to play successfully, and is a game which enjoys some cultural esteem (Brown.edu, n.d) with world championships which are broadcast around the world (worldchess.com; arguably one of the main differences between *Chess* and *Call of Duty* is cultural value. Differing cultural values for different types of games echoes discussions earlier about different cultural values of the works of Shakespeare (p.13). The continued uneven approach to the regulation of forms of entertainment - no regulatory bodies for theatre or novels, but the existence of these for video games, film and television is but one indicator of this uneven cultural landscape. Both games require the player to undertake 'violent' actions via their avatars to make progress within the games and both games reward strategic and tactical thinking. This comment shows the amount of deep thinking and foresight required to be successful at this level of *Call of Duty* play - and this is in a highly demanding information rich, sensorily demanding playing environment. Playing *Call of Duty* (especially online game modes) is a highly demanding gaming environment that requires high levels of knowledge and skills. To achieve the level of mastery aspired to by serious gamers, the players have to be very dedicated in terms of giving lots of time and effort to improve their performance - as was partially glimpsed in the previous section

[61] P2,P4 and Moderator: COD follow up video chat transcript, Pos. 77-83

discussing the learning code. The comment by P4 also implies the need to be able to adapt and to be flexible about employing the agreed tactics. This is a point which comes through further in this comment by P1:

> Sometimes you have to play what's in front of you and every game is different, every team is different. They all have the same basic plays, everyone has the same basic way of playing but certain teams; have rush tactics and we'll go a lot further forward than others other teams sit back and you have to adapt your game to how you want to play that team so if they're sitting back it's not a good idea to run it's a good idea to sit back and pick your shots off at the people you need to pick off at. It varies from game to game very very differently[62]

Beyond working out what tactics the opposing team is employing, in competition there is also the need to work out something about the personalities in the opposing team in order to work out how they will play the game. This only adds to the level of challenge being faced in such competitive online play - this is a very challenging learning environment and will require resilient, independent learners who can absorb and react to feedback quickly. These are the learners that every educator desires to have on their courses.

What did this section reveal?

The key points emerging from these retrieved segments is that yes, tactics are important and it's important that the team knows them and can play them - but just as important is the planning work which goes into the team before game play commences is the ability to adapt quickly and correctly when in a demanding situation. In doing so, playing *Call of Duty* is arguably an excellent platform (or virtual classroom) for developing the skills and traits for people to be successful learners (Fadel, 2008). The need for team players both to understand team tactics and also to be able respond flexibly to the situations presented in game requires a high degree of tactical thinking. Additionally, when playing in teams, the ability to communicate to others is vital to ensure successful team performance. The participants put a high premium on the

[62] P1: COD follow up video chat transcript, Pos. 87

team working well as a collective unit. The skills of effective team working, adaptive tactical thinking and the trait of being a reflective, model learner are all being developed in the games, and this segment is further evidence of this point. As such, these responses further demonstrate that gaming can develop strategic and tactical thinking (RQ1) and stresses again the value of gaming metaculture - having the right kit - with regards to RQ3.

Teamwork code analysis

What did the questions ask for this code?

The themes of teamwork, working with others and collaborating in pursuit of improvement of individual performance and improving the effectiveness of team performance and were recurring issues in the main focus group discussion. This was largely an unintended by-product, having not been a major part of the agenda at that stage of the research. However, because it was such a substantive part of the conversation involving all of the participants at various stages, it was immediately clear that this was an issue which needed further work. The participants were asked to talk about what was needed for a team to operate successfully, and what strategies they used to improve individual and team performance. I was also intrigued to find out more about team dynamics and hierarchies particularly with regard to role allocation - which had surfaced as an issue in the main focus group.

What are the overall answers?

The overall picture that emerged from the follow up discussion and became evident in the retrieved segments which were coded as ‘collaboration’ was the supportive nature of the team that these participants have constructed - they were all very well aware that success came as a team and that individuals will need support at different points in a range of ways. It became clear that for the participants, in terms of internal team dynamics, there is a fluidity of roles hinting at a horizontal, flat leadership structure.

How do you know?

The first issue that I sought to address in the follow up focus group was about role allocation and to try to start mining for information about group / subcultural hierarchies at work in this process. What actually came through from the participants' responses was a stress on the fluidity of roles and the supportive nature of the team environment. The extract from the transcript below brings out the confirmation of the views previously expressed in the main focus group but then builds on that with emerging talk of role fluidity.

> [P3] The thing is the thing is hard though because some people are stronger on different maps and other people
>
> [P1] Yeah yeah yeah yeah so for instance , so on a certain map [P4] might know where the glitch is better or where the others are spawning so you haven't got a designated role[63]

This expansion beyond what was previously stated in the main focus group shows the value of the immediacy of the video based focus group - where participants had to think and react in real time, rather than the freedom or constraint to consider what might be the socially desirable response in a text based focus group. This brought out the dimension of fluidity of roles in teams - which had been hitherto obscured in the main focus group. The latter two comments above from P3 and P1 show recognisance of how players are better at one map versus another because of the environment presented. Different playing environments in the maps suit different playing styles in different ways. Additionally, the comment by P1 recognises that different players have different levels of knowledge of the map which can be usefully deployed by changing team roles on a map by map basis. What emerges here is clear evidence of the dynamic nature of teams - shifting roles within playing sessions on a map by map basis implies that quick and effective communication between team members is happening in real time and that there is considerable trust within the team environment. There is vital and valuable social glue being learned and reinforced in this microcosm and this social glue is arguably vital to social stability and solidarity on much larger macro

[63] Moderator, P1, P3 & P4: COD follow up video chat transcript, Pos. 43-48

scales. Here then, we have emerging evidence of the learning potential for collaborative video game play between individuals who are physically separate from each other but have developed solid social relationships to be able to withstand intense competition with a demanding sensory load and the considerable room for misinterpretation which online communication enables compared to face to face communication.

Since the lockdowns endured by many countries around the world during the course of 2020 to date, and the huge shift to online delivery of education at all levels, the need for greater understanding of how games can promote and facilitate learning of knowledge and skills is more acute than ever. At the time of writing, onsite delivery of education at all levels has been largely suspended in the UK and many other countries. With no real clear knowledge of when the pre-pandemic norms for educational delivery (in the UK, this means densely populated classrooms owing to the traditional way of delivering education plus the outworkings of sustained real terms cuts in education budgets for schools and colleges) might be returned to, there is an urgent need examine and utilise all available platforms for online learning, of which games consoles are an excellent tool.

The social and emotional team attachments also become clearer in these following comments from P2:

> [P2] So also you know people play different to others so also you know people have better days than others one day a person can we play an absolute blinder

> [P2]Yeah yeah any which case if someone playing absolute blinder the whole team feeds off at and allows them to do what they want to do in order to play better and to support them if you're not playing as well then you tend to sit back and somebody else does the shot calling and whatever else[64]

When considering this against aspects of the literature reviewed earlier in the thesis, for the writers who video games with concern and see their teaching capacity in largely

[64] P2 and Moderator: COD follow up video chat transcript, Pos. 51-54

negative terms (such as the cultivation of aggressive thoughts, feelings and behaviours as documented in Gentile & Gentile, 2008), the evidence here identifies some of the blind spots in this school of thought. The learning and reinforcement of social and emotional bonds via online video game play should be just as important an academic concern as the traditional concern about harm, which fits all too easily into the same trajectory of concern that has been apparent in the development of all popular media forms, as documented in Chapter 3.

When the focus group conversation moved on to the skills or qualities that the team looked for in an ideal player - particularly when looking to recruit a new member, what emerged was a sense of how the player needs to be able to fit into the team but also needs to be an individual who can take responsibility. This again calls back to the skills agenda in the UK and the USA - governments / societies / economies desire workers who can work well with others but also act independently and take responsibility. As with the above extract, what follows above is evidence of how video game play can promote such skills development.

> [P1]Ok that's all what you look for in a player it's somebody who can pick that up off the bat and you haven't got to go through it with them
>
> [P2]The more you play the more you play with each other you get to to it becomes like second nature so you automatically know no so no matter what map you play no matter what games are you playing you already know it what is person is going to do do and you only really get that by playing with them. So you don't have to say what I'm going to do this because you know what's coming. The experience of playing play with each other is 100% more successful than just playing with good players a team that knows each other will be a team that's better if they don't know the way the team plays every single time[65]

A new team member needs to be a learner / player who can learn independently, display resilience or grit and be able to work with others and adapt their playing approach to the challenges in front of them - yet again, the attributes of the ideal type learner are seemingly to be found in the ideal type gamer. What is also important to remember here is that ideal learners / players are made not born - expert gamers achieve that status through the iterations of practice. The desire to engage in this

[65] P1 & P2: COD follow up video chat transcript, Pos. 51-60

practice is going to be, in some part at least, cultivated by the game design and particularly the types of feedback offered and the frequency and meaningfulness of this feedback. Therefore, the research evidence here is taking us back to what aspects of the literature review revealed in terms of educational theory and game design and player behaviour. Therefore in seeking to evaluate the learning potential of video games, it is not just game design and player interactions with this that needs careful academic consideration, it is the totality of the social and emotional processes which enable good, deep learning to occur - and for that type of learning to occur, you need to build the right skill sets into learners. Aspects of these skills can be further found in the transcript extract below:

> [P1] If I was the rush player and say I'll push through the middle of the map I can put over through their teams to their positions and take a death so I can take the death and not kill anybody else to call out three opposition players and take one for the team but know exactly where there was three opposition players are which it then makes it easier for them to kill. Yeah a perfect example was the other day, I was playing with [P3] and [P10] on the 3v3. I mean [P4] and [P10] were left with more health than me and the guy was playing with literally sat in a corner so you can get behind him you couldn't do nothing. You have to face him so because [P4] had more health I say is right let me run him first, see if I can get a shot on him and then [P4] kind of like run the other way and pinned him, so while he's looking at me [P4] is killing him and I knew straight away he was going to kill me because I was weak we got the win so just tactics like that.
>
> [P3] Learning stuff like that's all the stuff that we learn from playing with each other.[66] (author's note - real names redacted from this quotation from the original transcript)

This shows a player who can act independently, but do within a defined team context - his action will make it easier for others to participate and easier for the team to win as a collective. This further strengthens the claims made above about the team dynamics and the social glue which is bonding them together as an effective operating unit. In addition, this is a very good example of the kind of in-game, in real time tactical considerations which have to be faced for the players to be able to achieve set objectives. This is explicitly crystallised as a 'learning objective' via the supporting

[66] P1 & P3:COD follow up video chat transcript, Pos. 84-85

comment from P3 - further testimony to the enjoyment of learning in such a scenario (the game) and environment (the team).

On asking the participants to consider and express a view on what the ideal team was like, P2 commented:

> [P2] And probably not having too many of the similar characters in one team like if it was a 4 man team you could have 4 people that wanted to be the team leader who are all loud because you just clash. Everyone would try to call the shots and you'll end up not listening to anyone. You have one or two strong characters in general anyway so that you've got two main people what suppose that's it really if the main one the one that's usually a Shot Caller he's having a bad day then someone else can step up. Suppose it's like if you relate it back to real life it's like some people like to tell people what to do and some people like to follow.[67]

This brings out the tension between horizontal and vertical leadership structures identified earlier. While role flexibility is highly valued, it is also evident here that there is a value on top-down directive leadership in the comments from the three participants here. A fuller discussion of the merits of different leadership styles and as performed by *Call of Duty* players is better realised in a more focussed work, but this does make clear that an effective team needs a mixture of people of different personality types in order to bond and work effectively. The risk of internal friction is heightened if the people within the group are all of the same personality type. In any working environment, there is capacity to see the veracity of this statement. Hearing it here, in a play environment, points to the value of learning about teams operating effectively because this identifies the pitfalls which can be avoided if such learning is transferred to other areas of life, though it is beyond the boundaries of the credible to offer a meaningful prediction on that issue in this thesis. The closing remark by P1 in this speaks to the strength of functionalist ideology when it comes to role allocation. While this is a very strong, direct statement, it does reinforce the previous point by P2 that teams will have a mixture of people and need to do so in order to be effective and reduce potential for internal conflict.

[67] P1, P2 & P4:COD follow up video chat transcript, Pos. 108-110

In trying to determine what can manage and minimise internal team friction, good communication, not surprisingly, emerged as a key to this. Of course, skill in communication is one of those highly valued skills which is an element of any skills agenda (Fadel, 2008; Department for Education, 2018a). On this issue, P2 commented:

> [P2] Sometimes we all go online and play online Monopoly; just messing about, not play COD, just other games which are more for fun so we still had like another relationship besides COD. You'll find a lot of the people would get angry with each other so give everyone a break from hearing then go on about COD.
>
> [Moderator]Ok so kind of like a team building exercise kind of thing?
>
> [P2]Yeah yeah yeah so if you had an in-game leader and the only time that you're ever talked to him when you when you were in that game and he was leading you you can imagine that is it would get quite infuriating always been told what to do where as if you go on another game you can have a laugh then and have more jokes and what have you.[68]

As indicated above, it was not a surprise to hear communication being listed as important in the process of managing team relationships. The value of the above comment though is in how physically separated (socially distanced, in 2020 parlance) team members use other online forms to interact with each other and to build the relationships needed for effective team play in the time pressure of online *Call of Duty* play. The remarks by P2 about playing online *Monopoly* start to map out how widely distributed the networks and culture of online play are. It is becoming clearer that what is being tapped into in this project is not simply a team focussed on playing one type of game, but the workings and spread of the gaming subculture. Having detected the spread beyond *Call of Duty* team networks to online *Monopoly*, there should be no reason not to think that these networks and intersections of team membership across different games will not spread much more widely (it became clear at this point in the focus group conversation that P2 was a member of more than one team for playing *Call of Duty*, and this is in addition to his semi-professional income stream). This provides further evidence to answer RQ1 and RQ3.

[68] P2 & Moderator: COD follow up video chat transcript, Pos. 113-116

What did this section reveal?

The retrieved segments for this code have shown the depth of team dynamics and have started to expose some of the skills required for such teams to operate effectively. The social and emotional attachments to team members have been noted and the ways in which players interact with each other to develop these social and emotional bonds. Furthermore, the breadth of the networks of online gaming has also started to be exposed here. In doing so, this extends the answer to RQ3, detailing how important gaming metaculture is to being a 'serious gamer' and flowing from this sub-culturally socially desirable labels model learner. What this segment details again is that where players have sufficient motivation then they can be moulded into highly effective learners. Both in terms of answering the research questions and more broadly for considering what the world of education could or should look like during and after the Covid pandemic has finally passed, this contains important points to note for educators.

Culture follow up code analysis

What did the questions ask for this code?

In the main focus group discussion, various aspects of gaming culture (predominantly about favoured types of equipment for gaming 'setups' and about acceptable forms of gaming behaviour) were strong currents in the flow of the conversation. Therefore, it was one of the main objectives in convening the follow-up focus group to drill down further into a discussion about gaming culture. I was intrigued to explore further about subcultural norms and values because this had been such a prevalent theme in the previous focus group. As with the focus on investigating collaboration further, questions asked were there to nudge conversation and to enable the participants to respond as fully as possible.

What are the overall answers?

The overall picture that emerges from the retrieved segments details the longevity of the playing 'careers' of the participants, dating back to times when the participants would have been at the end of their time in primary school or just into the start of their time in secondary school (which throws up issues about the efficacy of regulation of access to such video games) and how much they have always enjoyed playing it, and how it is been part of the social glue which has helped to bond the friendship group together as they have matured into adulthood and moved to different parts of the country. The other key dimension in this section which is additional to the main focus group is the condemnation of the tone of communication and social behaviour in public gaming lobbies. This brings back into view the division between serious and non-serious gamers which was addressed earlier in this discussion.

How do you know?

In terms of the longevity with these participants have been playing *Call of Duty* games, then the below extract makes the situation clear.

> [P1] To be fair we've all known each other since we were kids and let me know all of the same sort of interests so like me [P10] [P4] and obviously [P2] is [P4] younger brother so we all just grow up together and develop the same kind of interesting gaming and then developed into a team playing on Call of Duty like.
>
> [Moderator] Ok when did you start playing Call of Duty?
>
> [P1]Call of Duty 4 Modern Warfare 1 whenever that came out really.
>
> [Moderator] That's about 2008ish?
>
> [P1]Yeah it could have been yeah. Would have been about 12 or 13 then.[69]

[69] P1 & Moderator: COD follow up video chat transcript, Pos. 10-15

This shows that the roots of the team go deep in terms of time - the participants are now in their mid to late 20s, so they have been playing these games for half of their current lifetimes. The years that this group have been playing these games for points towards the games being engaging and entertaining. Without the games giving rise to pleasure it is hard to account for other reasons why the participants would keep coming back after so many years to this franchise of games. If the games are pleasurable, then they are of value to the participants. In terms of analysing the *Call of Duty* games as tools for learning, identifying the value that such games have for the players and seeking ways to retrieve this elixir to other more conventional learning formats is an avenue for further work. The pleasure the games give to these participants is evidenced through the following comments after being asked why they keep playing the games.

> [P4] Well we just enjoyed it.
>
> [P2] It was entertainment and you can learn a lot; yeah you could learn a lot from professional players. Professional players put a lot more hours in than we did. They knew every inch of the maps just so by watching them you would learn: oh I didn't know that was there you didn't know so you could punch that spawn that way and you know where they was going to spawn so you can learn just by watching that.[70]

Again, there is evidence of the participants making clear, explicit connections between the pleasure of playing the games and the pleasure of reflecting on the gameplay of others in collective weekend 'debrief' sessions, where the participants would gather together and watch video streams of other gamers and see what they could learn and then do themselves. In educational terms, they were managing their own learning, they were taking ownership of feedback and engaging in peer support / scaffolding. In short, model learners at work.

Turning to social behaviour and standards of communication, the participants are highly critical and in so doing position themselves on the serious side of the serious / non-serious gamer divide. This form of social division and hierarchy reproduction is

[70] P4 & P2: COD follow up video chat transcript, Pos. 67-68

documented elsewhere (Betzig, 1982; Wright, Breidenbach & Boria, 2002), and the reality of this subcultural social division is evident from what the participants say in the following extract:

> [P4] There's always times when people become just downright nasty and that you just ignore that.
>
> [P1]You do tend to sometimes come across games with the same kind of people got the same level of banter as you and you might play them more often than others..then other times you play against teams which are utter idiots.[71]

In both what P4 and P1 say, there is a clear disdain for the behaviour of some gamers, but evident within P1's comment is the divide between the 'us and them' - the serious and the non-serious gamers. Part of what came through in this focus group and the main focus group before it as a whole is the dedication of the participants to getting better at the game - to achieving mastery. That mindset is one which is evidently shown by other gamers who they have contact with - the teams that they choose to play against and the absence of this desire to improve is also clear to the gamers whose behavioural standards are not in keeping with their own (for example as shown through prejudiced 'banter' or outright abuse, the comment about the toxicity of public gaming lobbies is important here). This distinction is brought into slightly more focus with these final comments in this section below.

> [P3] General public lobbies are horrendous.
>
> [P4]They're toxic.
>
> [P1] They're the worst.
>
> [P3]We don't even go in public game chats anymore it's just horrible
> The higher up that you're going to more competitive generally there's a bit more of a mutual respect.[72]

Public lobbies are the space where gamers virtually congregate while waiting to be matched to the next available game. It is in these lobbies where players can have

[71] P4 & P1: COD follow up video chat transcript, Pos. 90-91
[72] P3, P4 & P1: COD follow up video chat transcript, Pos. 93-97

maximum interaction with each other. The disdain is clear from all of the comments above but P3 makes clear the distinction here between the serious and the non-serious gamers - the serious gamers (in the paraphrased view of P3) are the ones who know how to communicate and behave sensibly with other peers and show mutual respect.

What did this section reveal?

This section has made clear that there are clear behavioural standards which serious gamers can observe and expect to see in others; if a gamer is judged and found wanting in terms of these behavioural standards then they are not likely to be judged by their peers as worthy of the tag 'serious'. The other key finding is of the depth and breadth of the team's roots and the importance of pleasure in binding the team together - pleasure of playing the game, pleasure of reflecting on the gameplay of others together and the pleasure of being able to apply lessons learned to their own game play and see improvements in their own performance. In a project focussed on how games can be tools for learning, in an academic climate where there is a considerable degree of hostility to video games, the centrality of gaming as being a pleasurable activity is one that is worthy of future academic consideration. While the material does not directly address the research questions, what this does highlight is the emphasis on behavioural standards and the forming of a 'them and us' binary between serious and non-serious gamers. In this way, the participants are replicating - or subject to the wider cultural process - of replication of group formation that will take place in any environment. In defining themselves as serious gamers, the participants are displaying an adherence to a set of norms and values which they believe will enable them to progress well in the game. In this sense, the participants are the opposite of the 'working class lads' of Willis' (1978) study who prided themselves in their lack of adherence to school values and held in contempt the middle class students who did adhere to school values. The social rupture that initials separates working class boys from their middle class counterparts in Willis' (1978) study is financial capital. That is the root of the various competitive advantages that the middle class hold over the working class. This separation is replicated to some extent in this study, where the quantity and quality of a player's gaming capital is what

will separate the serious gamers from the ‘not serious’. While the participants here prize their skills and their highly motivated approach, it is disappointing, but not surprising, to see the fractures of wider society being replicated in this smaller social and cultural sphere In my study, the game is the school, and from there it’s the same story of perceived insiders and outsiders. From educational and game design perspectives, there is a task involved in trying to drive the non-serious gamers into the serious gamers camp, as this is where the most motivated players / learners are.

Communication follow up code analysis

What did the questions ask for this code?

Re-visiting the theme of communication was one of the priorities for this follow up focus group owing to various ways communication was addressed in the main focus group. The intended focus with this follow up discussion was to examine further the ways in which the participant team members communicate with each other while playing the game in real time and how they communicate with each other about the game outside of playing time. Linking to the preceding discussion on the theme of gaming culture, the original discussion on the theme of communication revealed a social microcosm worthy of much more exploration - more than this project can give to it, but once it had been uncovered, it was necessary not to ignore but to return and explore further.

What are the overall answers?

The key message coming back from combing through the retrieved segments for this code is the centrality of communication to effective team building and maintenance. It was discussed in the gaming culture theme about the tone of communications in public lobbies, and this discussion was dual coded for communication also, so the reinforcement of subcultural divisions (as discussed previously) is a material factor in this theme also.

How do you know?

On asking the participants about what makes for an effective team, the following extract from the transcript makes clear the importance of communication:

> [P3] Communication
>
> [P1] Yeah communication 100%
>
> [Moderator] So what about communication, and just come back to that then, what type of communication, how is it important?
>
> [P2] So you've got to learn the maps get the callouts if you're pushing one side and then you need someone who knows the maps and knows also what we call them and what they call on the map as well[73]

This extract reinforces points made previously throughout the research discussion of both focus groups - effective communication is vital to team members working effectively together in pursuit of common goals. Knowledge of the game, of the maps, is not enough; that knowledge needs to be disseminated across the team effectively and in a timely fashion to ensure the team can perform to its maximum. The supportive nature of this teamwork is also evident in P1's final comment here, and again this reinforces the claims made about the supportive nature of teamwork with these participants made previously. The participants were initially responding to a question about what was the skill most needed in a team player. The conciseness of the response from P3 which was immediately reinforced P1 shows just how this is the case. Given that the ability to communicate effectively with people is a prerequisite for success in any area of life, arguably, educators and academics should cherish a sphere for learning where communication is so vital to success.

With regards to out of game team communications, on probing this, the participants began describing the social interactions they have had over time, and talking about how they have congregated together to watch video streams of other gamers. Probing into the purpose of this led to the following comments:

[73] P3, P1, P2 & Moderator: COD follow up video chat transcript, Pos. 31-36

> [P4] It's kind of pointing out things in general, talking about things that you haven't noticed
>
> [P1]You generally hyping up your team if we were to push that you could do this you could do that side [P4] you can sit on or you can go there and go there and are there[74]

The comment from P4 foregrounds the learning value of these communication exchanges - the player / learners are clearly watching these streams with the purpose of being reflective and looking to learn – which reinforces points made in the discussion from the main focus group. P1's comment brought back into the role of the 'hype man' previously discussed in the main focus group discussion. The role of the 'hype man' is to be a motivator and a leader and from the way the role is described by P1, a successful 'hype man' will need excellent communication skills to both inform other team members where they might be mosts effective but will also need the skill in being able to choose the right lexis and tone in communications to be be able to persuade people effectively. Again, these comments bring into view the density of the communications in this subculture - there is so much to learn about all of this and this is an area for considerable work by academics in other future works.

What did this section reveal?

The key message from this discussion is the central importance of communication in being able to work as an effective team member. As with the previous segment, whilst communication does not feature in the research questions directly, there can also be no doubt that communication skills are a precursor to the acquisition and development of other realms of knowledge and skills. As such, where the games provide opportunities for players to engage and develop their communication skills, they are also being primed for development of other skills, including, but not limited to the types of strategic and tactical and skills and knowledge of past and present conflicts which are the focus of RQ1 and RQ2. The retrieved segments have begun to shed light on the web of communications that exists within such teams and the value placed on communication as a skill by team members. Perhaps the biggest reveal of this section

[74] Moderator, P4 & P1:COD follow up video chat transcript, Pos. 69-71

though is the exposure of the centrality to good communication (and hence effective communication skills) to enable all of the other elements of learning and progress to be facilitated. Effective communication between team members is the glue which helps to bind the team together and enables them to share information effectively (meaning it is the right quantity at the right time, drawing from Gee's thirteen principles (Gee, 2013). Badatala, Leddo, Islam, Patel & Surapaneni (2016) conclude in their paper how playing cooperatively in games such as *Call of Duty: Modern Warfare III* can exert a positive impact on teamwork and they note how the cooperative mode encourages players to work together to secure mutual objectives. This project gives further evidence in support of this work and this further embellishes the nature of pro-social benefits which can arise from video game play. Horowitz (2019) details a range of video games which have been demonstrated to have positive effects on communication, and specifically language acquisition for English as a second language learner in Puerto Rico. This work corroborates the work of Palaiogiannis (2014) who also noted the benefits of online communication in developing second language acquisition. The significant influence of game design on the learning framework for learning languages via the Duolingo platform, which wears it's gamification approach proudly on it's website (https://www.duolingo.com), which offers quick rewards, allows progression to further levels and gives immediate grading. All of this mirrors the approach to feedback and progression which has been demonstrated to be fundamental components of the game design of the *Call of Duty* titles. Returning to a point made previously, with online learning now the dominant mode of educational delivery (for the Covid moment at least), environments where players / learners can learn, practice and reinforce the skills needed for successful online interaction and working are to be welcomed and championed.

Video focus group conclusion

RQ1**:** In what ways might the *Call of Duty* games facilitate the development of strategic and tactical thinking skills?

In answering RQ1, the points which emerge from this focus group centre on processes rather than on specific tools - which has emerged strongly in the strain of answers to

RQ1 in the preceding chapter and different to what follows with the questionnaire analysis. Emerging very strongly in this discussion is the value of effective teamwork and the necessity of effective lines of communication between team members to enable successful communication. Knowledge of how to do things and the skill of being able to do things is important, but communication and teamwork are also core elements of the P21 agenda (Fadel, 2008). The experience gained in communicating with team members in play situations is arguably a sturdy stepping stone for such skill development and being able to transfer this skill development into other areas of life. Also, in light of the changed study and work environments which many people now face as a result of Covid-19, an opportunity to develop experience in communicating and working with others in online spaces is to be welcomed.

The operationalisation of the concept of overlearning is also of note here. The repetition of skill drills such as ball passing to be more than ready for when this skill is needed in competitive action and the utilisation of other online play space such as *Monopoly* to help bind the team together are the actions of people who are determined to improve as individuals and as collective units. In seeking to make such improvements, this also displays some of the elements of model learners discussed previously.

RQ3: How can involvement in gaming metaculture help to develop model learners?

The outcomes of this focus group further reinforced the previous findings with regards to use of gaming metaculture. The value of having the right kit was again re-emphasised as it had been in the previous focus group. In terms of of use of such metaculture helps to develop model learners, while having the preferred equipment will not make the player a model player or serious gamer (for which, read model learner) all by itself, having access to high quality tools does allow people to maximise the value of the learning opportunity - whether that opportunity is one regarding personal player development or as a learner in a formal education setting. Additionally, the point about team building made above regarding playing *Monopoly* online, while outside of the architecture of the *Call of Duty* world, using such online platforms is another dimension of gaming metaculture which hadn't been exposed in

the research previously. Again reflecting the point made above in response to RQ1, the use of gaming metaculture to develop model learners is not just about tools it is also about processes and these are just as important in developing model learners as having the preferred brands of equipment.

RQ2 is not reflected on here as this was not a topic of discussion in this focus group.

One-to-one interview with P2, semi-professional esports player

During the conduct of the main focus group it became apparent that P2 had a background in esports and competitive game playing for money outside of formal esports tournaments. There was an exchange of messages between P2 and myself at the end of the main focus group where he volunteered to go into more detail on his experiences if I wanted to hear this. Given that this project is trying to give voice to gamers, the 'silent majority' who have too often been excluded from debates about games, this was something I was happy to agree to. Rather than approach this research opportunity with a list of pre-prepared questions to structure and steer the conversation, as had been the plan with the main focus group, I wanted to take this opportunity to let P2 speak as much as possible and in so doing try to find out as much as possible about the inner working of gaming metaculture and the *Call of Duty* microculture. The interview was held by telephone, with the audio being recorded and transcribed afterwards. Following transcription, the interview was then analysed via MaxQDA 2020, in the same way that the two focus groups transcripts had been analysed. This meant that the same analysis codes could be applied, however, given the direction of the interview all of the contents were transcribed as fitting the 'gaming culture' theme. What follows here are discussions around specific aspects of the transcript to bring into clearer view the social and cultural practices at work within the wider gaming metaculture and the *Call of Duty* subculture.

The first extract details how P2 got involved in public esports tournaments:

> And then there was a bunch of people we played with for a bit and it was playing on Advanced Warfare and then when I was playing at this time was playing G.B. [game battles] winning tournaments and I had one of my mates says like, hey, there's an event going on in London. Why don't we go to it and then just sit here and, and we went to that one. And then we had the team, we got paid that time, our reputations from the pro players started to recognize us. And then after that, we then went to another one in Coventry to play Advanced Warfare.[75]

Beyond documenting his entry into public tournaments, this also sketches how social networks help to facilitate entry into other social and cultural practices - in this case being friends with one person led P2 into attending a tournament as a spectator before working up enough confidence and recognisability as a professional level player to compete himself. Castronova (2005) discusses the synthetic and virtual worlds and how what goes on inside virtual worlds comes to take form and meaning outside of the 'membrane' as Castronova (2005) of the magic circle of the gaming world. There is concrete evidence of this above - games which are played online come to have meaning and reality outside of the magic circle of virtual online play because of the cultural value which is accumulating for P2 through developing a burgeoning reputation amongst his peers at this point.

The personal and social value of the transitioning through the membrane between the virtual and synthetic worlds, to use Castronova's (2005) concepts, shows how much value is being attached by players and spectators to esports and to organisations sensing opportunity to drive brand recognition with a desirable market segment in becoming 'corporate partners' at such gatherings. This becomes clearer from the following comments in relation to my question about the standing of the esports tournaments that P2 was entering into:

> Yeah, yeah, proper championships yeah. When I went to London, and played in the arena on the Sunday, because I made it for what they classed as championships ... Because of obviously the, the high level that was played was pretty much professional. So if that was professional, well I had a jersey which was provided by the team which had my name and fit on like a football shirt. Right. My headphones at Molo had my name on it. There was like there's loads of co-benefits and obviously just going to the events was good.[76]

[75] P2, Interview Transcript, Pos.6
[76] P2, Interview Transcript, Pos.8

Whilst this comment was early in the conversation, what was already starting to become clear was the scale of esports events, which are largely hidden from view in terms of coverage in mainstream media. Such events have the trappings of major sporting events - watching any number of televised sports - football, rugby, cricket, golf, darts. tennis - the recognisability of personalised aspects of specific equipment will be reminiscent of seeing such things for players in other mainstream televised sports. The fact that items are being personalised - such as headphones and named jerseys - shows the fetishishation of personality within esports. This fetishisation is a marker of the value being shown by all of the stakeholders in such events. From a game played in online virtual spaces, this is quite a leap to achieving the look and feel of major sporting occasions. Gaming is a cultural practice to which significant numbers of people attach importance, another reminder then that this activity needs to be treated sensitively and with respect and deserving of academic curiosity and not dismissed without rigorous analysis.

At this point, with RQ3 in mind especially, I was becoming more curious about the nature of the spectacle of the event and asked P2 to give a sense of what the playing environment is like.

> And then, and then you play through so many brackets and you have to win 70 games. But then when you go to the championship Sunday, you've like you .... When you walk into the event where we was playing, like, you, I thought it was like a cinema. So imagine you walking. You've got all the seats that go back and then you've got the one main screen in front. Yeah. It was like that. But then when you played underneath there in a booth and the booth was like soundproof. So you could hear the crowd. It was tinted. So you can see that. But it was like a real cool experience.[77]

With the previously mentioned personalised jerseys and headsets, and with playing booths with tinted windows - with massed ranks of loud spectators, what is rapidly emerging clear of a conventional sporting arena - gladiatorial and competitive in nature, for the thrill and enjoyment of the participants and spectators. This shows the cultural value being attached to such events but also makes clear how the social and

[77] P2, Interview Transcript, Pos.15

cultural norms are being imported from the types of mass and individual behaviour to be found in other spectator sports. This claim is well supported by the following comments from P2:

> Yeah. I mean, obviously, when I went to players, it also offers like experience. The two major events, the one that I went to in London that was like it is very similar to a football event. Like you have your fans and you have, you have your major teams? When I went to Valiant at the time, it was excellent. Valiant was the biggest team in Europe. And when you would go there and their fans would be in their shirts, just like a football, you know, a football match. And then if people would be winning, they would go crazy. I love it. It is like a real good atmosphere to be in.[78]

This shows from a personal point of view the pleasure and enjoyment which can be derived from such events as both player and spectator. Whilst the meaning of such events can be surmised from photographs and commentary from other sources, this testimony provided for my study does make clear the profound personal meaning and value for gamers in such events. Calling back to some of the discussion about the nature of being serious gamers from both of the two focus group discussions, this other aspect of the gaming metaculture came back into view next in the conversation. In the next extract P2 discusses his and his team's reflective approach to learning from their game play and why they reviewed and implemented changes.

> We started in February. We got really highly placed. And then we come back. But then we knew we could have done better. So then we started it if you like. Why? Well no cos it was streamed, we could watch the game play back. And then we was trying to figure out loops in our own game, like sores in our own like team in the sense. And then we dropped the one player. And then I think it's about three months after that we was all playing.[79]

Like model learners, the team reviewed their performance and self-assessed for where the gaps were and worked out solutions to fill these gaps. These are the same processes which professional sportspeople also do - the constant iteration of Kolb's learning cycle in operation. There is also a hint of the high stakes (in subcultural terms)

[78] P2, Interview Transcript, Pos.21
[79] P2, Interview Transcript, Pos.29

involved in such esport competitions - the dropping of one player and his replacement by another. This was apparently due to performance considerations - in exactly the same ways that players in professional sports teams get dropped when the coaching team feel there is a better alternative elsewhere and this happens because of the pressure of the high stakes for which professional sports teams in football and rugby for instance are competing. While esports is relatively under the radar in terms of mainstream sporting attention, from the perspective of those involved in such competitions, this is a very important (and financially lucrative) activity to players and culturally valuable to the fans too. The financial stakes and incentives, once mentioned then became the next major talking point in the interview. On this point P2 stated "If an event was to be thrown out next week for instance for COD, you'd be talking a prize pool of a million pound."[80]

Given that the prize pool for the Wimbledon tennis tournament in 2019 was £38m (Anon, 2019) - an event without Wimbledon's profile, this is a substantial sum of money. The substantial sums of money available, and arguably a more 'democratic' open tournament system (becoming professional standard at *Call of Duty* will not come at the same financial cost over time as tennis coaching, for example), means there is an emerging sports / entertainment form which is widely accessible with less regards to one's culture and financial capital than other sports which, because of financial 'entry barriers' (coaching, specialist equipment, transport costs). Esports then are a form of well paid entertainment which is more accessible for those with working class backgrounds - in social justice terms, academics should champion such opportunities. The social, cultural and economic value of esports is an area worthy of forensic academic consideration.

Another reason why further academic consideration is needed for esports is because of the growing financial incentives and to try to better understand where the money is coming from to fund such events and what the organisations involved in such events seek to gain from the participation. On asking P2 about where the money is coming from to fund esports, this was his answer:

[80] P2, Interview Transcript, Pos.34

> Well that's yeah that's a new thing. Just literally just now introduced. They used to like, it was a lot easier to get into playing for that money like. That would start off as a big worldwide tournament and then it would be online and you'd sign up on Game Battles and then the top 24 teams then drop into another tournament and then it dropped down and down until it was 50 teams. And then the Game Battles website. The people that fund that like MLG they're called, they would then pay for everyone to go to America to play in this million pound tournament, which would have been like first place got quarter of a million split between, however you'd split it. So a lot of the time, like the organization themselves will take money out and then they would give the players so much money as well.[81]

The league being discussed above is the *Call of Duty* League (callofdutyleague.com, n.d) - which consists of twelve teams from countries across the world competing against each other, with rounds of competition being held in each team's home city. *Call of Duty* esports is now a multinational, multimillion dollar industry in its own right - showing how far and how big gaming metaculture is becoming. P2 also mentioned how star names from the world of sports are investing in *Call of Duty* esports - he cited the examples of the basketball star Michael B. Jordan and Celtic FC. Jordan has invested in the parent company who finance the New York Subliners team who play in the new twelve team tournament described above (Reames, 2019). Additionally Celtic FC have invested in an esports team to play in the *Call of Duty* World League (Celtic FC join *Call of Duty* e-sports competition, 2019). The reservations that Payne (2009) expressed about being able to define gaming as a culture - a total way of being - are perhaps being chipped away.

Having gained a sense of the scale of esports from the perspective of a player and explored the financing of such operations, I wanted to explore the fan's experience and how that contributes to a sense of occasion at esports events. P2 informed me that there were approximately 2000 people in attendance at the Gfinity event he participated in London - not an insignificant number, but this is multiplied by the numbers watching online. For a three day event P2 stated:

[81] P2, Interview Transcript, Pos.36-38

> It can be anything from like forty thousand to like 90000 on average or so on Friday and Saturday. And then on Sunday you're probably talking anywhere from like 130000 to like 300000[82]

Given the size of the physical and virtual attendances at such events, I was then curious to probe how the presence of the audience does or doesn't affect players and how they play, in addition to the financial stakes for players in esports competitions. Going back to the concept of the thin membrane between the synthetic and virtual worlds (Castronova, 2005), the opaqueness of this membrane is visible in P2 comments below.

> Now, you do get that. You do get that, like, this cause there's some like before like before all this, this new [Call of Duty] league came out, you could switch teams as much as you wanted and you could pay anyone what you wanted. But these leagues come in now just set like you can only pay everyone this much money and they can't leave them, more contracted in a sense. So they can't just pick and choose where they're going for the money. And before that you did get a lot of hatred and stuff coming out of people was like proper kicking up big fusses. And then you've still got people now which won't play with someone else… like incidents at Call of Duty events as times where the pro players, there's one between a player called Aches and Nay-Shot [?] and they was on a Search and Destroy and he killed him to win the map up. And then he was shooting his body. And then the other guy, like, got up and went into his booth and was like obviously confronted him, shouting at him.[83]

From a critical perspective to the effects of video games on society, this could be read as a textbook example of why Active Media academics have concerns about the ability of video game play to generate aggressive thoughts, feelings and behaviours. However, a quick perusal of disputes between players in other sports will reveal that there is nothing culturally unusual going on here. High performance sports players having sharp individual disputes is something which is common across all sporting endeavours, and examples from the careers of John McEnroe in tennis (Graham, 2017), Dylan Hartley in rugby (ESPN.com, 2016) and Roy Keane in football (O'Callaghan, 2017) demonstrate this - as individuals react to the challenges and

[82] P2, Interview Transcript, Pos.59
[83] P2, Interview Transcript, Pos.72

pressures of high performance sport. This is not to justify aggressive actions of the players described by P2 or of the players from other sports named here, but rather to contextualise how elite players in the public eye can react in very pressurised situations. It's possible that the actions of tennis players and rugby players perhaps do not attract the same type of criticism as these sports are played and watched more by more middle class audiences and therefore the pressures that these sports exert on the players is not so alien to middle class fans / spectators and because media coverage of such sports is quite reverential of these sports, which in turn begins plays a role in shaping the context for audience reception and cultural transmission. Given that esports does not (as yet) have the mainstream media exposure of much more established physical based sports and therefore does not have the same cultural profile and reach as such sports, this could partly explain why esports and gaming are not seen in the same light by academic critics of gaming.

Given the level of understanding now about the pressures players feel and how sometimes some of them can react to such pressure and given what had been said in the follow up focus group, where the tone of communication in public gaming lobbies was branded ‘toxic’ by one participant, and being mindful of how sporting crowds can behave as a mass, and when people behave as a group or mass then the behaviour being displayed has been learned: they have seen what others in the group do, and this has role-modelled group behavioural standards - this is social learning theory in action (Bandura, Ross & Ross, 1963). I then queried further about the overall tone of fan behaviour in arenas while games are being played. As a point of reference, I asked P2 if esports crowds behave in similar ways to football crowds with regards to positive and negative communications towards favoured players and opposition players. Below is P2’s response to this query.

> Yeah. There is, there is a lot of cheering going on. Yeah. There’s a, sometimes it does have a bit of an effect on the game as well, because there once was an event on and the team Optic - they're like the biggest one at the time. Like most fans, they're like, go crazy. The amount of followers, all their, like players on over a million Twitter followers and stuff like that. Have you ever played Search and Destroy on Call of Duty? [I responded affirmatively]
> If you plant the bomb , they have to diffuse it. It takes seven seconds and this guy from Optic planted the bomb. And then he ran off into the

> corner and you couldn't see it. And then when the guy started to defuse it, the crowd was screaming like 'he's duffusing'. So then the guy ran out and killed him because he was on there. If it weren't for that crowd shouting it, he wouldn't have knew and he would have lost. So the crowd can play like a big factor in some stuff.[84]

This incident simultaneously calls to mind the way crowds at sporting events such as football and rugby can respond to inform players of events they need to be aware of and the British Christmas theatrical tradition of pantomime - there are echoes of 'she's / he's behind you' - which is a firm generic convention and audience expectation. This highlights how so much of the way people behave in crowds at sporting events (and all other types of mass gatherings such as musical concerts and political rallies) is learned behaviour. The salient point here then is what observable behaviour can be seen displayed at esport events and by gamers playing individually is also learned behaviour - people are socialised into knowing that certain types of behaviour are acceptable and less acceptable depending on context. When speculating and theorising about video games this is a point too easily lost sight of - too much emphasis is placed on what the game does to the players and too little consideration of the processes of socialisation and cultural transmission from peer to peer and generation to generation (see Stiff & Kedra, 2020; Monjelat et al 2017; Myers, 2019; Engerman et al, 2019).

The study of any media industry over time will reveal a pattern of a large number of small scale entrants and then over time, to secure economies of scale and increase profitability, each media industry has then seen the processes of agglomeration and conglomeration reduce the number of organisations in any media industry and has led to the domination of each media industry by a handful of major companies. This has been true for the film industry (Cook, 2007), the television industry (Curran and Seaton, 2018), the radio industry (Waterson, 2020) and the games industry (McDougall & O'Brien, 2008). A similar process is happening in esports: the eclipse of one era and the beginnings of another are viewable in the following comment regarding the money available in competitions and entry barriers to newer competitions such as the previously mentioned multinational *Call of Duty* League.

[84] P2, Interview Transcript, Pos.73-75

With the developments afoot in esports, P2's observations on these changes are laid out below:

> Some people are finding it better, without a doubt, which is probably the main people that are in it because they are getting constant money now because of the new league. They have to be on like a salary in a sense now, whereas before you weren't on that, just if you won your event, you got the money. In a sense. So it has changed in that way. And also it's a lot harder now maybe to get up there with the pros. But it takes a lot more to break through to get known now.[85]

The arrival of the Premier League has meant substantially higher wages for footballers in England's elite football league and a growing gulf in earning between Premier League and non-Premier League players over the near thirty year existence of the league. However, with the rider attached that it has become harder for players to break into that elite league, arguably the same forces are at work on beginning to re-shape the esports world in favour of a more Premier League type business model which will create winners and losers. To adapt the French saying - 'the more things change, the more they stay the same' - in cultural terms so much of what we see at individual and mass level competition with video games is not quite so new after all.

Conclusions

These aspects of the primary research reveal the considerable parallels between what the skills and attributes of effective learners are theorised to be and the skills and attributes of 'serious' gamers. At points in this chapter and elsewhere in the thesis, the forcing of a paradigm shift in how education can and should be delivered caused by the pandemic-induced lockdowns has been noted. With schools and colleges reaching for a range of online solutions to enable learning to continue as normally as possible, the one item absent from the learning tools considered was the game consoles in lounges and bedrooms. Whilst it would be facile to argue that playing video games is an instant solution to the problems of learning virtually and remotely, their power has been overlooked. One of the reasons for this oversight is a lack of widespread understanding of the learning power of games and gaming metaculture.

[85] P2, Interview Transcript, Pos.88-91

In the table below the skills and attributes the research participants have detailed in their responses and the skills and attributes of effective learners are laid side by side. The degree of overlap and adhesion is considerable.

Skills and attributes of gamers - arising from the research	**Skills and attribute of effective learners, according to the Institute of Education[86] mapped to research outcomes**
Communications	● read and gather information and take notes
working with others	● appreciate when they need to seek help or ask questions
Self directed	● They can be relied on to work independently, even for long periods
Team work for effective tactical operation	● share ideas or work in a group ● organise and sequence their work
Teamwork for effective strategic direction	● share ideas or work in a group ● appreciate the purpose of what they are doing and make connections with other work;
Being able to react and adapt	● solve complex problems ● share ideas or work in a group
Fluidity interchangeability in team roles - In games and between games	● solve complex problems ● share ideas or work in a group

[86] Guidance Curriculum and Standards Unit 1: Structuring learning Senior leaders, subject leaders and teachers in secondary schools Designing lessons Pedagogy and Practice: Teaching and Learning in Secondary Schools, 2004

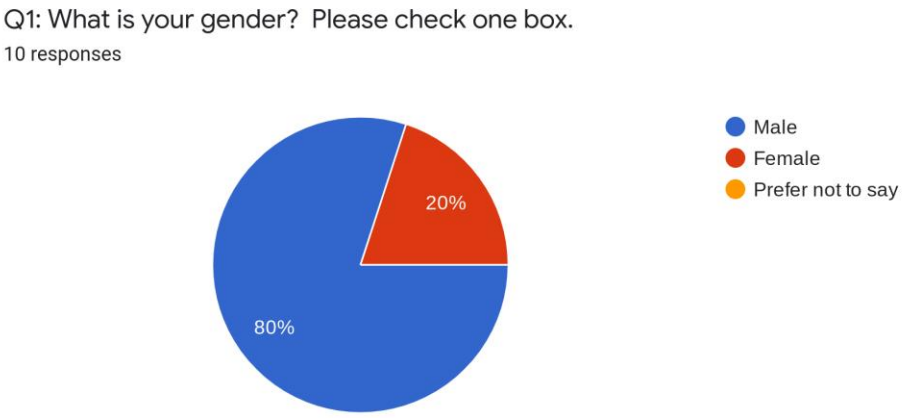
Resilience / grit	• They can be relied on to work independently, even for long periods
Enjoyment of learning	• appreciate the purpose of what they are doing and make connections with other work
Debrief - get together and exchange ideas	• evaluate their work and plan what to do next.
Self review and peer assess	• read and gather information and take notes • appreciate when they need to seek help or ask questions

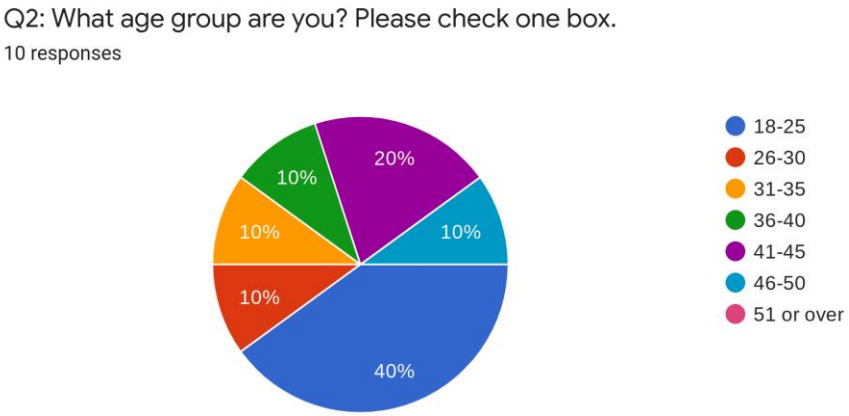
Effective learners are made, not born. However, there is huge disparity in the academic progress made by different social groups, and this surfaces when measuring the academic outcomes at age 16 in the UK by ethnicity (Strand, 2019). Differentials in academic outcomes of different parts of society is a contested and academic field all of its own, but setting aside any explanations rooted in 'racial characteristics' the statistics in that UK government research and report do give a clear indicator that all groups in society do not achieve equally. Given that there are inequalities between different social groups in academic achievement, consideration to how learners can learn the skills and attributes to be effective learners is much needed. The outcomes of this research clearly indicate that gamers recognise the range of skills and attributes needed to be a successful gamer and this list needs to be more widely shared and understood in academic and policy making circles.

Questionnaire analysis

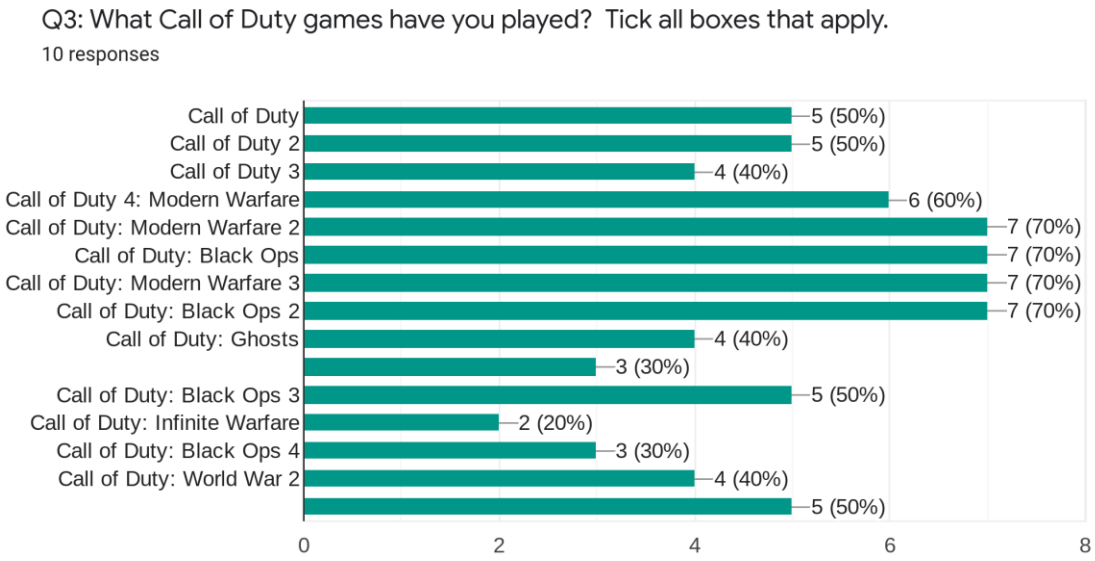
The questionnaire comprised 31 questions which was circulated to respondents via academic contacts and gaming networks. The participants to the focus groups were not invited to this - a deliberate move to widen the participant base and to be able to compare and contrast answers from the different research tasks more effectively. There were ten respondents who fully completed the questionnaire and the outcomes of these responses is discussed below.

Discussion

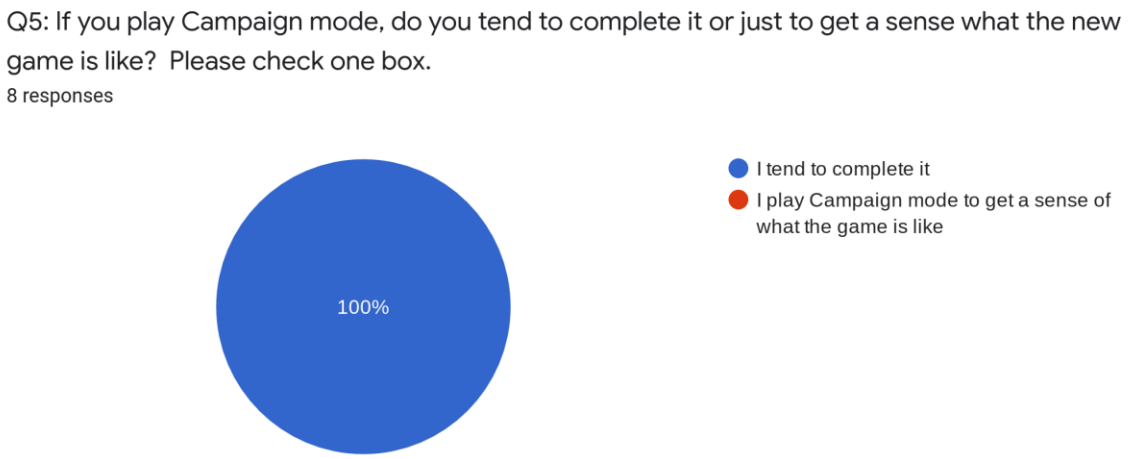




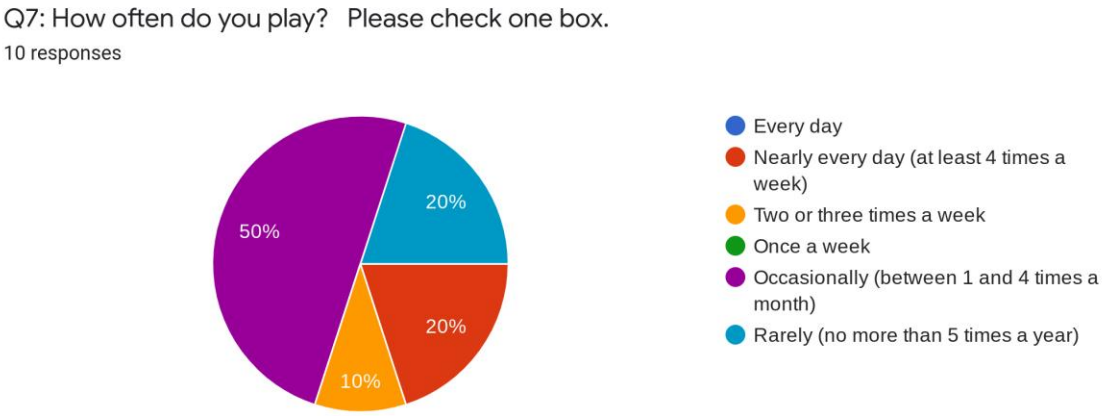
In keeping with the wider evidence available, the age range was quite dispersed across different generations, however the 18-25 age group was the most commonly represented group in the survey. Nevertheless, in what is a small and self-selecting sample, this does show that the respondents are broadly reflective of the overall age spread of gamers.



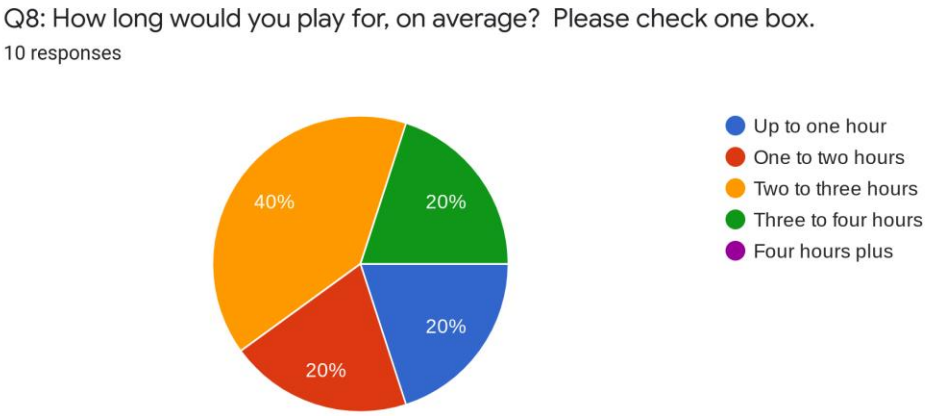
The *Call of Duty* games played question obtained findings in keeping with the overall global sales profile of the *Call of Duty* franchise over time, with the titles from *Call of Duty: Modern Warfare* to *Call of Duty: Black Ops 2* being the most popular. This pattern is broadly reflective of the sales patterns of the games from the franchise over time. This indicates that the participants are broadly a broadly representative sample of the audience for these games.



Given the role for the offline campaign mode to act as fish tank and sandbox (Gee, 2013), the intention with this question was to seek to find out how deeply committed players would be to completing the campaign mode and to what extent they would use the campaign mode as a means to get some familiarity before playing online. The result is quite striking - none of the respondents used the campaign as a short opportunity to play the campaign as a fish tank for online play. This suggests that the campaign modes do have the ability to get players to immerse themselves in their narratives. This may also signal that this survey reached a different kind of gamer than the main focus group did. This is good in terms of being able to triangulate and benchmark the research findings from the focus groups and individual interviews. In educational terms, this means that all of the respondents have had opportunities to become familiar with the pedagogical tools that the game uses to coax players from the start to the end of the campaign.

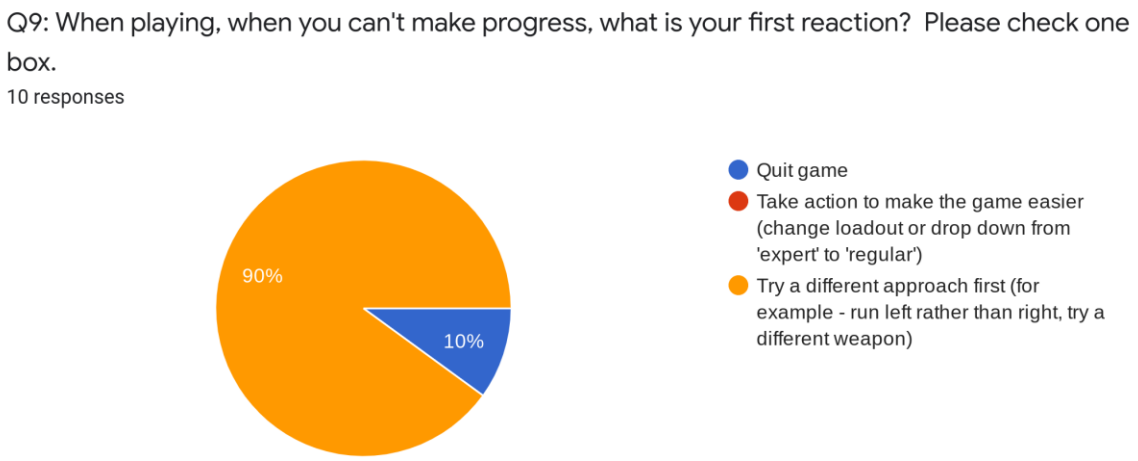


In comparison to the participants in the focus groups and interviews, these participants are relatively 'light' players - the most common answer was to declare that they played only occasionally, and with none of the respondents indicating that they played every day. Again, this gives a strong counter to the trends emerging from the focus groups and interviews which featured participants who have much greater frequency of game playing than these respondents. In terms of fleshing out the final answers to the the research questions this is useful as the outcome of the questionnaire then offered an alternative perspective to that of the participants in the other parts of the study,

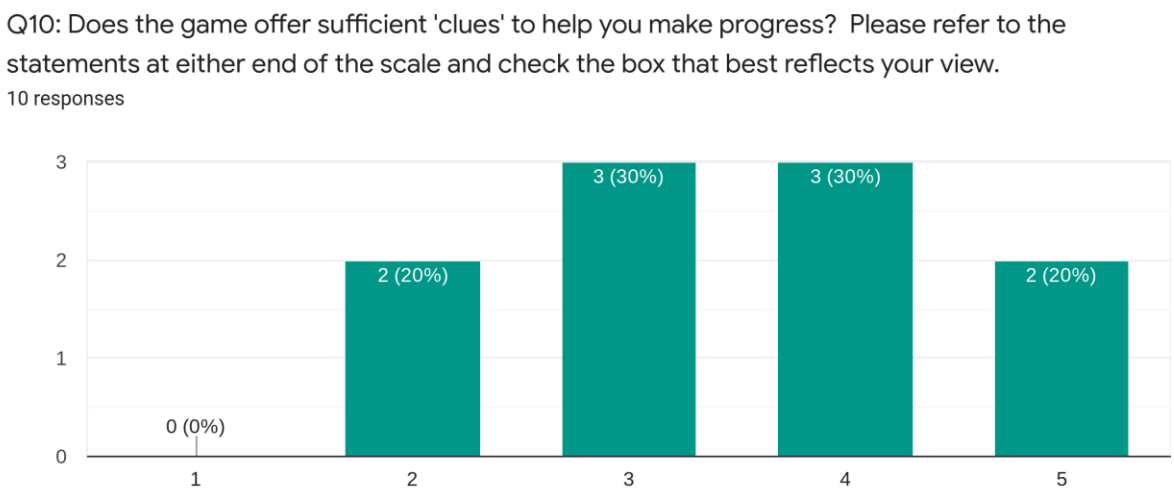


Whilst the respondents may not be daily players in the most part, they are mostly players who play for sustained periods of time - 80% of respondents indicated that they played a gaming session of over one hour, with 40% indicating that they play for two to three hours - a considerable proportion of anyone's time. Given the statistics

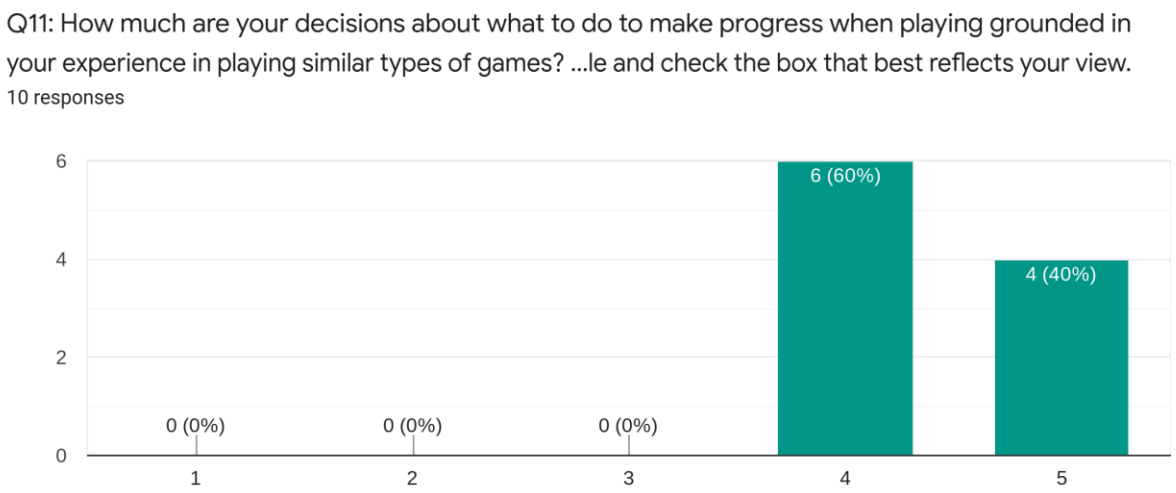
here, this can indicate that the respondents are dedicated and focussed when they do play *Call of Duty* games.



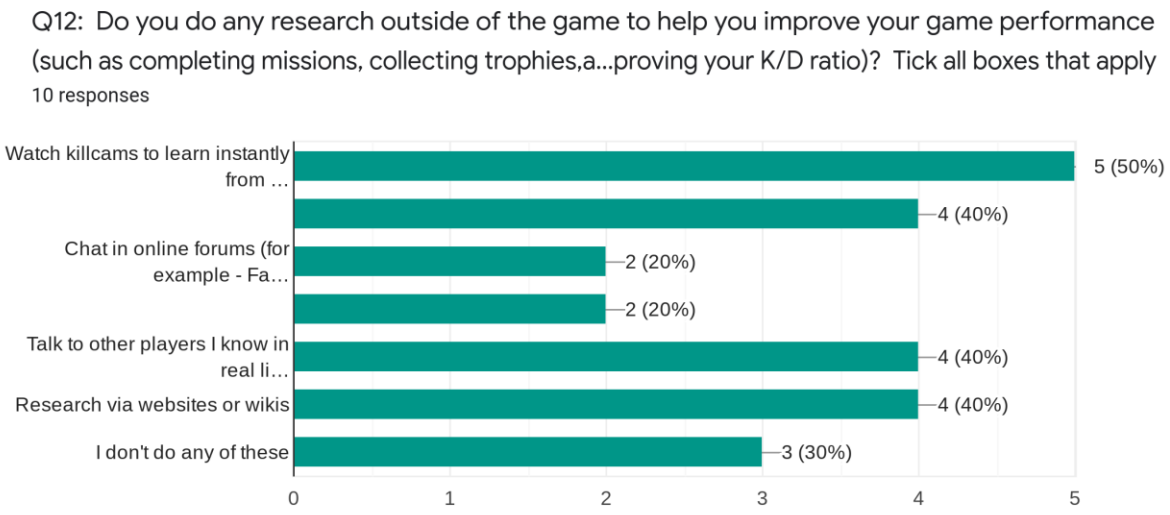
At this point, the survey changed direction away from collecting information on demographics and playing habits. This is the first question trying to detect pedagogical principles at work in the interaction between game and player. The results show an overwhelming response in favour of players who can and prefer to adapt their playing strategy - possibly in reaction to feedback from the game, which is what the next question sought to measure. This is the point in the questionnaire where the sequences of questions started to directly address the chosen research questions. The questions now discussed below address RQ1.



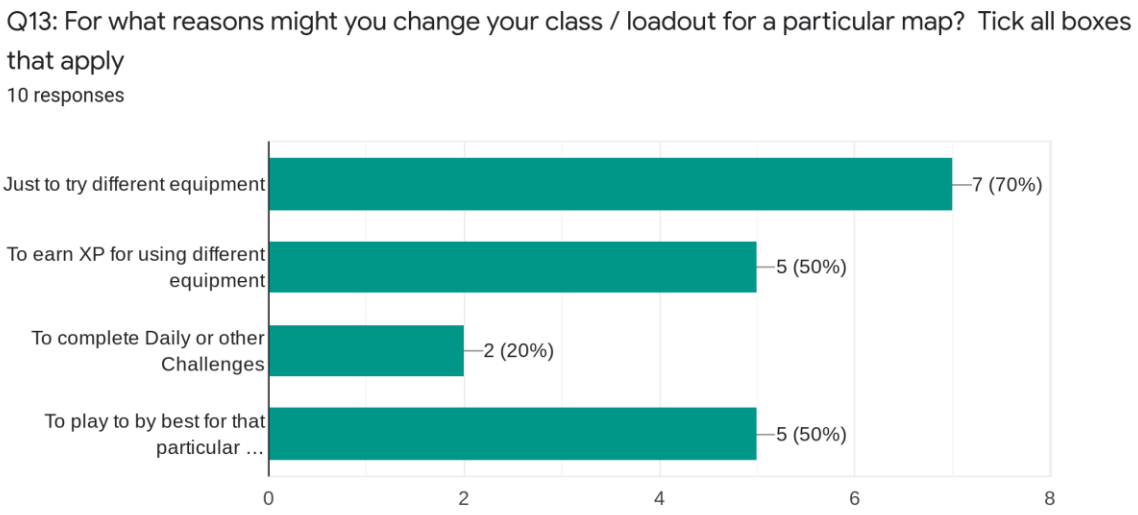
The Likert scale responses here indicate a weighting of response in favour of the game giving sufficient feedback to enable the player to react and amend their game play effectively to ensure further progress. This corresponds with the pattern of answer to Q9 above - giving further evidence that the games do give feedback of sufficient quality and timeliness to enable players to make decisions about how to change their approach to result in a more successful approach to playing the game (RQ1).



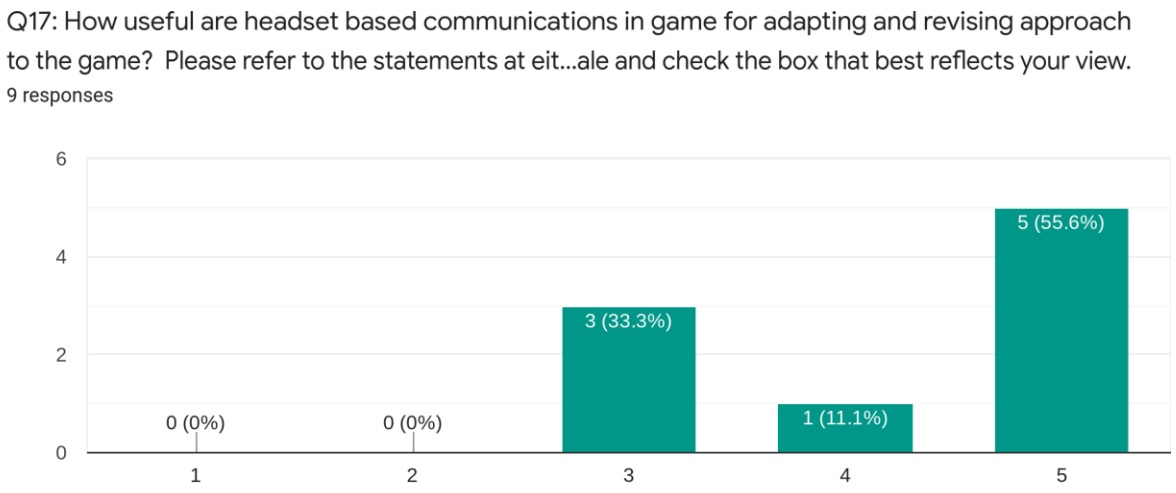
In addition to seeking to measure how the games provide effective feedback to enable the player to learn how to adapt their game play successfully, I wanted to assess how prior learning from other games could be usefully applied to the game being played. Given the debates about knowledge transfer and about the ease of which learners can move learning from one context to another, the result of this question is extremely interesting. The pattern of responses shows that all respondents indicated that prior learning from other games was applied to enable them to solve problems presented in the game being played. This does give some evidence towards building a theory of how gamers can shift knowledge from one content to another and do it successfully. As has been remarked earlier, this awareness is the theory of the constructivist model of learning made reality and this reinforces the answer to RQ1 building from the other elements of research.



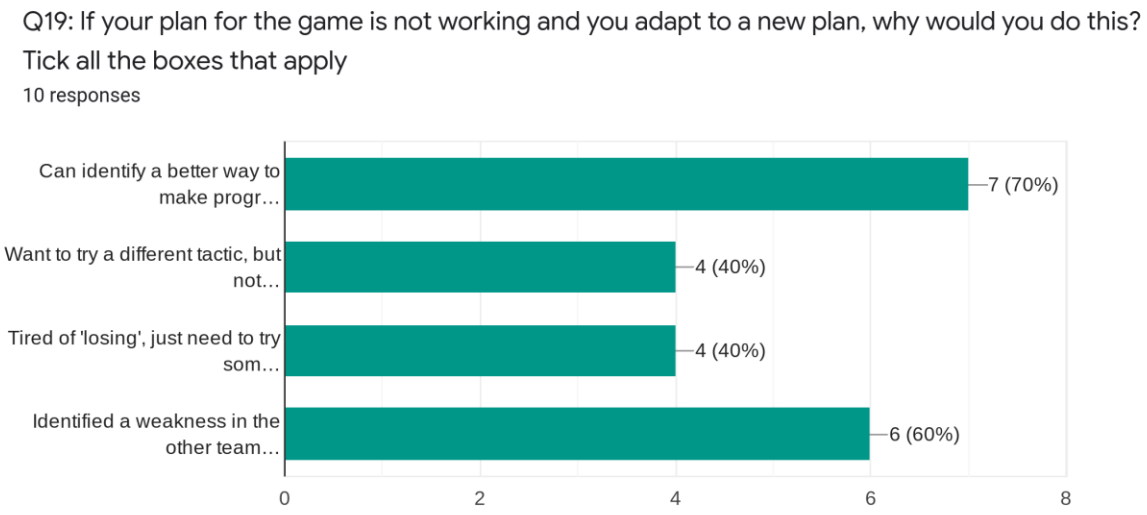
Given RQ3 and the high value of gaming metaculture placed by the participants in the focus groups and interviews, it was important to ask what kinds of access to various aspects of gaming metaculture the respondents used. Again, the findings are statistically significant with 70% of respondents utilising some means of gaming metaculture to help develop their prowess in the game. The most popular form of learning is from the in-game killcams - a powerful feedback mechanism provided by the game on demand, to enable the player to learn what their error was and thus gives them the opportunity to consider what to do differently - the player is firmly in control of driving their learning / performance in the game. The answers are also significant for RQ1 because if the respondents value feedback on performance, then this may also mean they are interested in how to improve, as this is one of the fundamental points of feedback: to be better next time. By taking time to explore other perspectives - from the killcams (the playing perspectives of other players) and from other gamers, logically this new knowledge is being acquired for deployment in the next game and so forth, so this feedback and peer support is steering strategic and tactical decision making.



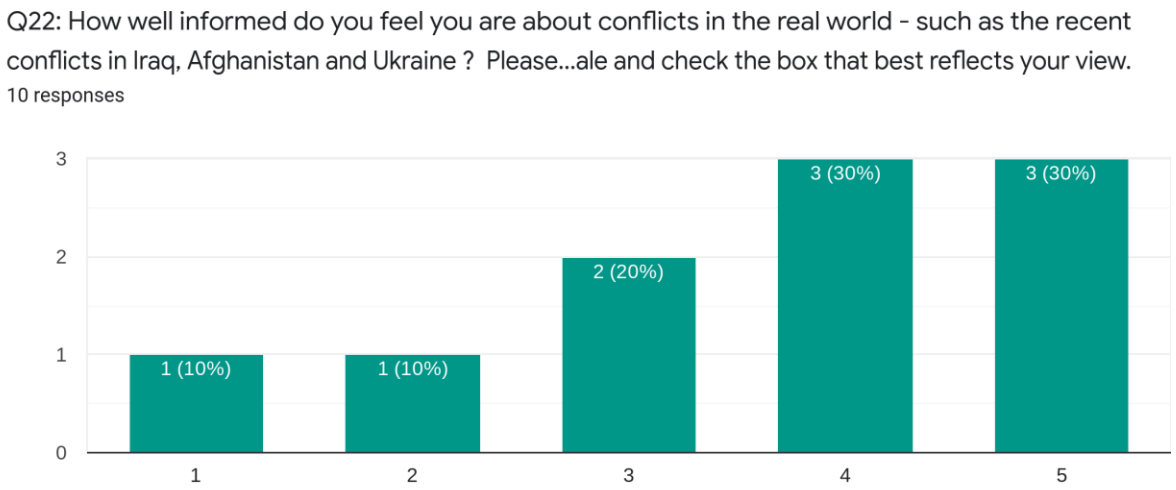
The intention with Q13 was to assess the degree to which players are taking conscious learning oriented decisions about their loadout for a game. In turn, this is a question which seeks to measure strategic and tactical thinking. Three out of the four possible responses were evidence of strategic and tactical thinking (only the first response (Just to try different equipment) does not suggest any strategic and tactical thinking). Respondents were able to tick a variety of boxes, so the overall picture is somewhat hard to define, but the responses to the second and fourth reasons especially (To earn XP for using different equipment and To play to my best for that particular game) do give a steer towards seeing that some of the participants are taking deliberate decisions on loadout motivated by prior learning and thus they are adapting their approach to the context. This complements other points made by other participants in the previous chapters and add further to the answers to RQ1 - that participants do take critical account of strategic and tactical decisions in deciding how to play the games.



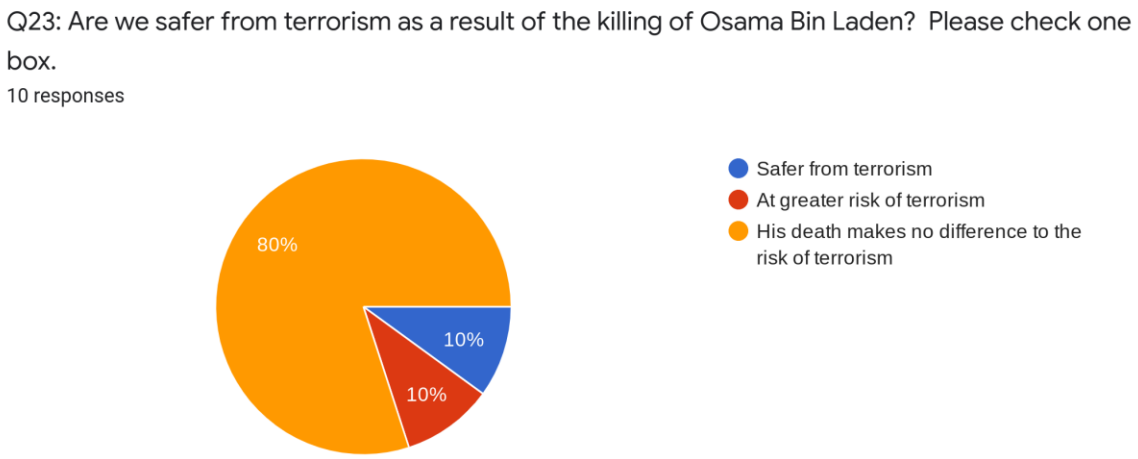
The intention was to test the importance of aspects of gaming metaculture (in this instance, the ownership and use of headsets in online gaming) and the intersection with how this use of headsets helps to drive player performance in real time. In doing so, this question fused the foci of RQ1 and RQ3 together. The results indicate the respondents viewed the use of headsets as a very effective tool for aiding in game communication between team members. Such in game communication - enabling the communication of intelligence and the ferrying of 'orders' down the ranks of the social hierarchy - can also be useful in providing feedback between team members. While playing especially, the primary purpose of peer feedback is going to be focussed on tactical adjustments to help the team to improve their performance. This reinforces previous claims in answer to RQ1. Here then the use of headsets facilitates an effective peer to peer support network to exist and from this network, effective peer to peer scaffolding to happen.



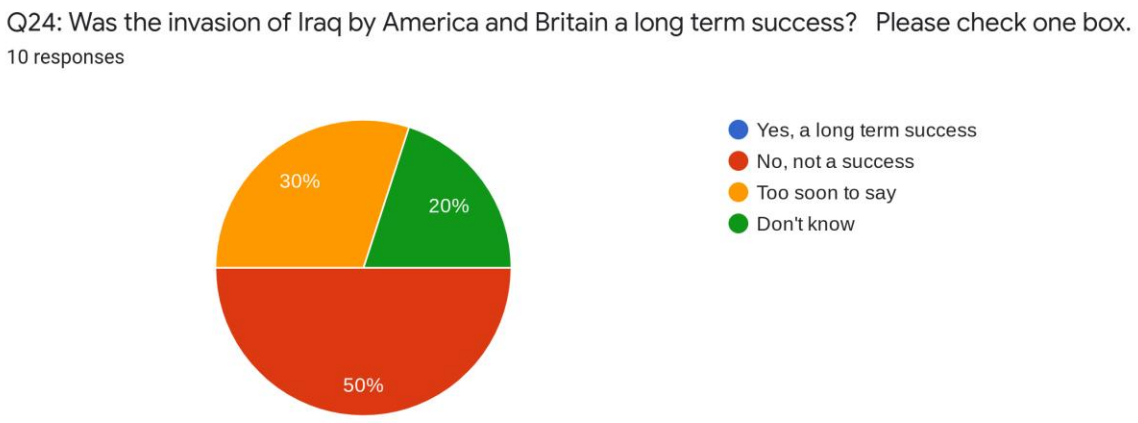
This was the final question on the theme of strategic and tactical thinking. The responses identify how players have learned something in the game which enables them to work out a different way to make quicker progress. This is evidence of highly reflexive players / learners who are agile enough to be able to react quickly to the situation they are in and make palms to adjust accordingly, further answering RQ1. Aspects of the gaming literature discuss the potential of games in facilitating the growth of such executive skills such as shifting - which essentially centres on the ability to move and adapt from task to task and do so in a timely manner (Dale et al, 2020; Parong, Mayer, Fiorella, MacNamara, Homer & Plass, 2017). It is an open question how well players can export such a skill outside of the game, but there is evidence here to say that players do recognise some aspect of that skill at work in their decision making.



The final wave of questions was designed to gather data on respondents' ideological views on past and present conflicts, and thus directly address RQ2. In particular, these questions were attempting to see if the respondents would make connections between the ideological messages arguably encoded into the *Call of Duty* games and their own views of conflicts. The first question in this theme sought a self report on how well informed the respondents think they are generally about present day conflicts. The pattern of responses indicates that the large majority of respondents feel that they are well informed about such conflicts. Given that writers concerned about ideological effects look too quickly to identify an effect and then look to the game as the causal variable, it is interesting to see how respondents themselves view the state of their knowledge on such matters. Here, the majority clearly feel they have sufficient prior learning to bring to bear on any encounter on the mediation of such conflicts.

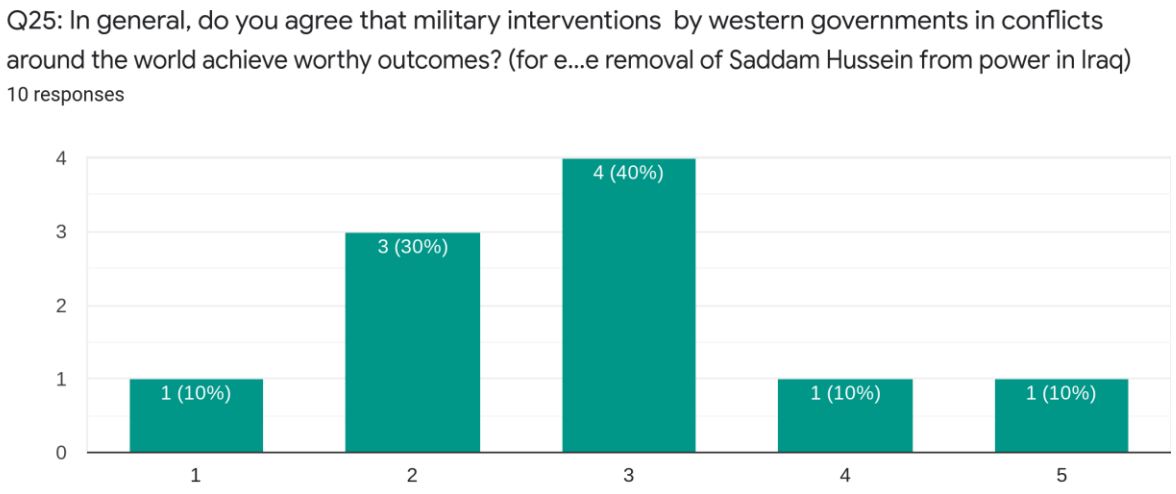


This question was seeking a value judgement on a recent conflict event. The *Call of Duty* games regularly presents Bin Laden like figures - the authors of international terrorist acts who have to be tracked down and ultimately killed. If there is such a simple cause and effect knowledge transfer, then this might be one of the easiest places to find it. However, given that 80% of respondents have adjudged that the death of Bin Laden makes no difference to the risk of terrorism, there is no evidence here of ideological transmission. This corresponds with the data gathered from the focus groups for analysis against RQ2.



Following in the same vein as Q22, if the ideological transmission was as neat and direct as some active media writers claim, then the pattern of responses to this answer should be remarkably different. The campaign modes of various *Call of Duty* games

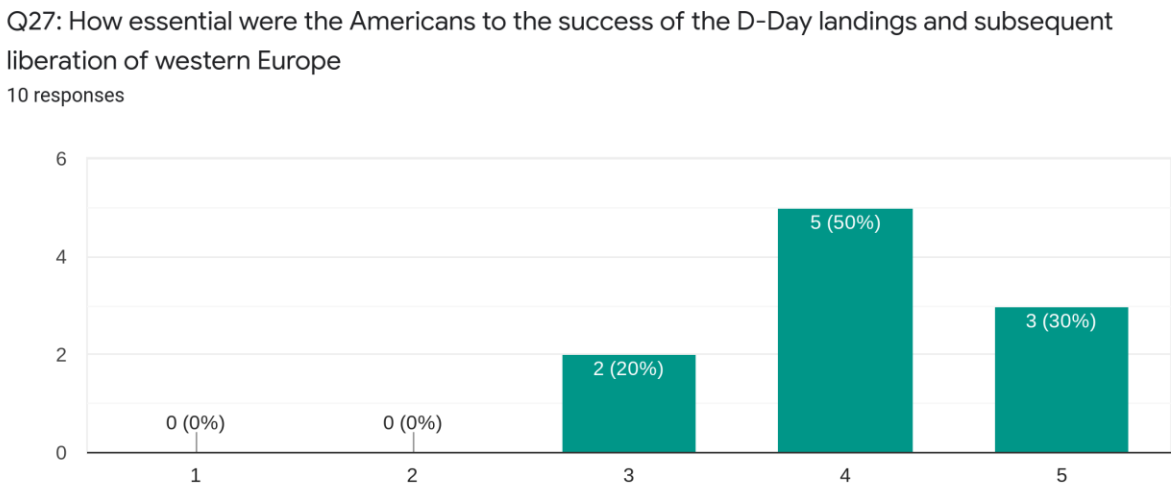
interpolate the player into scenarios where the deployment of American military power is the most moral and effective way of containing whatever conflict problem which has emerged to challenge peace and stability. The framing of the imaginary conflict in the games set in the present and the future do offer a simplistic view where the Americans are universally the good guys and 'the usual suspects' of Russian and Arabic characters are the primary villains. Given the deployment of a conventional small range of heroes and villains, where villainous characters have been proxies for Bin Laden (and considering the official American reasons for seeking the overthrow of Saddam Hussein was because his Iraq was part of an 'axis of evil' including other states and feeding from the anti-western disposition of Al-Qaeda), it is reasonable to think that if there was pure ideological transmission of 'hawkish' values from game to player, this is another arena where such effects would be obvious. However, given that no respondent has indicated that the invasion of Iraq in 2003 has been a long term benefit suggests that this is not the case. This follows the same pattern as previous answers feeding into the overall answer to RQ2 - that there was minimal evidence of ideological transmission.



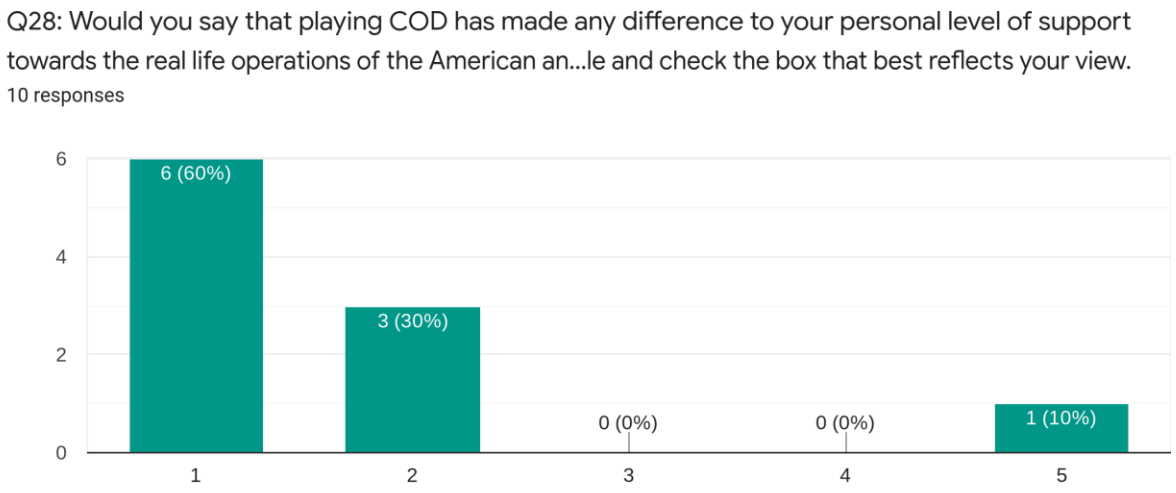
The findings from Q24, and the resulting analysis, are further supported in the outcomes to Q25. With the most common response being the middle ground - no strong feelings either way; this suggests a lack of ideological transmission effect from playing the game and hints towards the use of prior or additional learning in the

shaping of respondents' views about such a topic, reinforcing the claims above regarding RQ2 and complementing the answers from the other research stages.

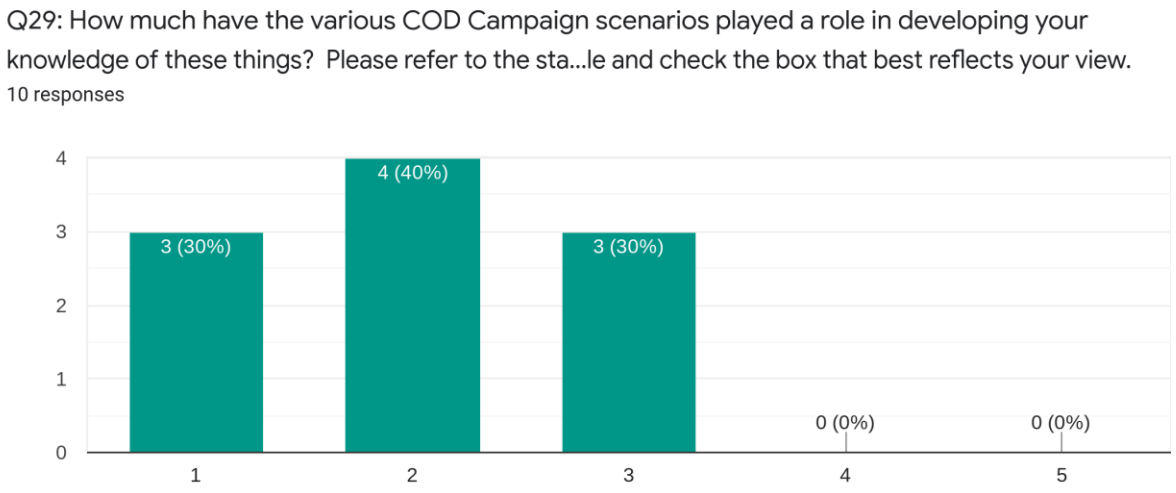
In some of the earlier World War II set games, there was some positioning of the player into the avatars of Russian characters fighting on the Eastern Front, so there is some consideration to be given as to how this has influenced the respondents' views. However, this has to be counter-posed with the evidence that the most popular games with the respondents are the present and future set *Modern Warfare* and *Black Ops* games. So the heavy weighting towards an understanding that the Soviet Union's campaign on the Eastern Front was pivotal to the Allied victory in Europe is indicative of knowledge of the contributions that the peoples of the Soviet Union made in World War II. That understanding is not compatible with narrow and stereotypical views of Russians as villains. The logic to be drawn from this is that the narrow stereotypes of Russians represented in the games is not a view which is easily and directly received by the respondents, indicating the presence of aberrant decoding in the process of interpretation, further problematising the direct effects narrative and underscoring the previous answers towards RQ2.

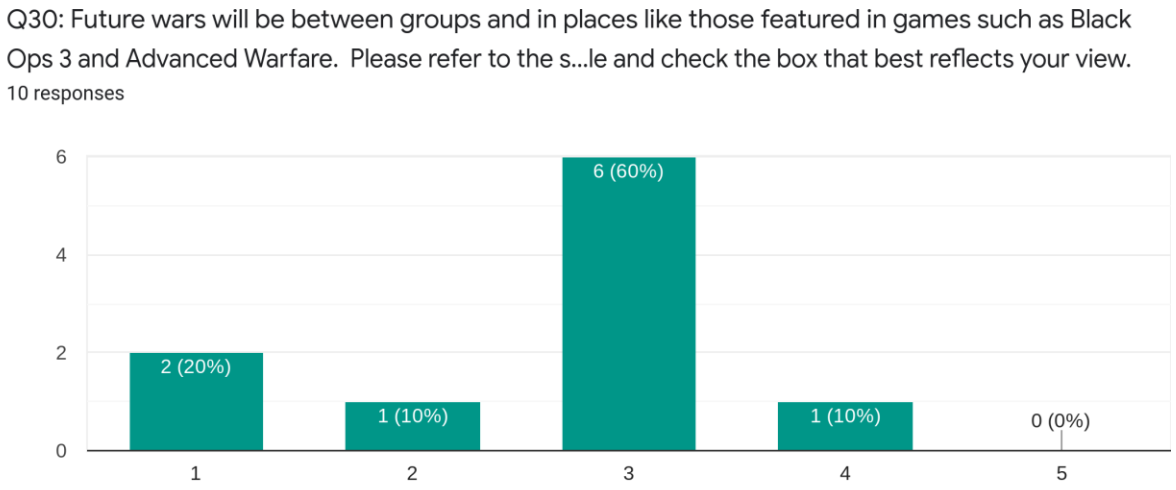


This was a reverse of the previous question, to examine respondents' views of the impact of the American military to the success of D-Day and the subsequent campaign to liberate western Europe. The answers follow the same pattern as the previous question, with a heavy weighting on answers which regard the American military as essential to D-Day and beyond. This does adhere to the game scripts and positioning of the players of the Americans as pivotal to the D-Day efforts and beyond. While there can be no challenging the size of the American component of the Allied forces which commenced the liberation of Europe, the substantial contributions of other nations - the UK, British Empire / Commonwealth countries' forces, other European nations (such as the Free French and French resistance units) are pushed to the margins in such games. The marginalisation of contribution on non-American elements of the Allied invasion forces is not something which is limited to games but is to be found in films and television also (such as the film *Saving Private Ryan* and the television series *Band of Brothers*) which have helped to establish contemporary 'knowledge' of the D-Day landings for the audiences of such products. Therefore, while it is possible to reach a conclusion that here there is evidence of ideological transmission from game to player, there are a lot of other potential social, cultural and educational variables which could be at work in producing this result. Without further evidence of the contexts for such learning about the role of the US military towards the D-Day landings, there is no movement either way here in the direction of the overall answer to RQ2.



The pattern of answers for Q28 is striking in two ways. Firstly, it is the only question which has produced such a polarised response, albeit with the overwhelming majority opting for answers which suggest a very limited (if at all) impact on their ideological views with regards to American military operations. Secondly, the extreme prevalence for reporting no ideological effects is also striking in that this is a clear rebuff to those who theorise that such connections do exist (but also being mindful of the limited sample size for this survey). This again correlates with previous answers towards RQ2. This analysis is supported by the pattern of answers to Q29 where the respondents are explicitly reporting no ideological impact of playing *Call of Duty* games.





The final question attempted to take the questions about ideological effects one step further by asking respondents to consider how likely the future settings of the *Advanced Warfare* and *Black Ops* games would replicate real world conflicts in the future. This would be one way of determining ideological effect - if players accepted that these would be the future sites of conflict then this could be considered evidence of ideological transmission. However, in keeping with other questions in this theme, there is no evidence to think that is the case and further cements the overall answers towards RQ2.

Debriefing - questionnaire answers to research questions

There are two main conclusions which can be drawn from this initial analysis. Firstly, this survey presents clear evidence that players do make constant adjustments to aspects of their approach to playing *Call of Duty* (and are consciously aware of this), both in real time and also using aspects of meta-culture outside of playing time to help themselves to develop into better players. In doing so, the *Call of Duty* games are exhibiting a wide number of the principles Gee (2013) argues are present in 'good games' and the players are acting like model learners in taking responsibility for their own development and seeking out sites to improve their knowledge and performance levels. The second key conclusion is that there is no substantial evidence to think that

players who become quite immersed in the games (as these respondents have indicated they do across the survey) are taking 'hawkish' ideological messages about American military power and neatly applying these to their own world views.

RQ1: In what ways might the *Call of Duty* games facilitate the development of strategic and tactical thinking skills?

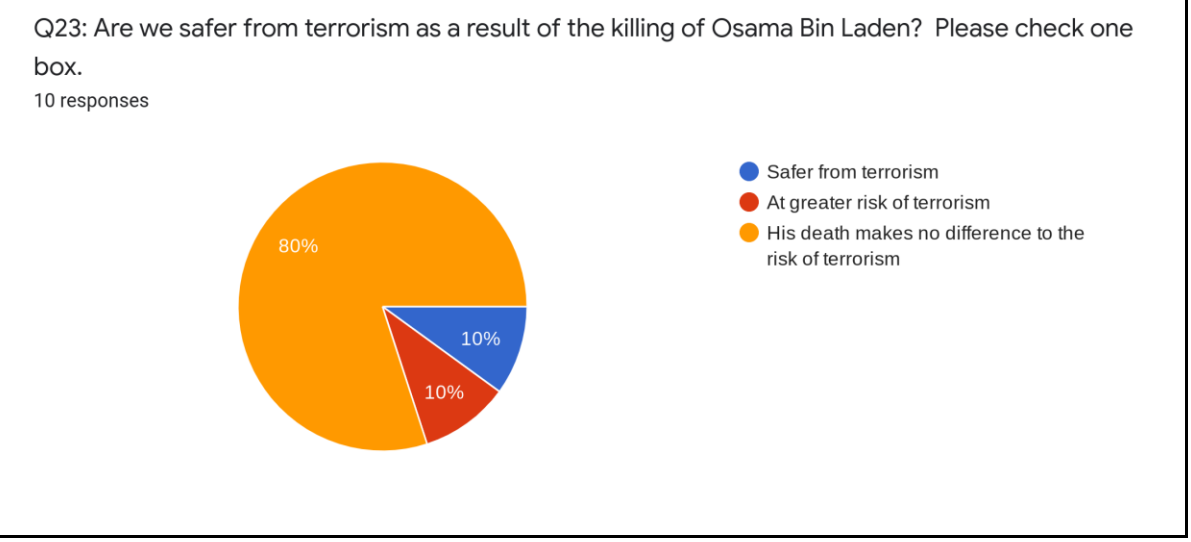
The answers to the questions which relate to RQ1 reinforce the findings from the focus groups and interviews. The key findings emerging from this research task are: players recognise that they adapt their strategy and tactics towards playing the game and this is partly dependent on the in-game feedback mechanisms (which was clearly valued by the respondents) and also partly owing to what they learn from peer support tools. The respondents also clearly indicated the value of prior learning from previous games in helping them to make judgements on the appropriate strategic and tactical decisions and how and when to revise these.

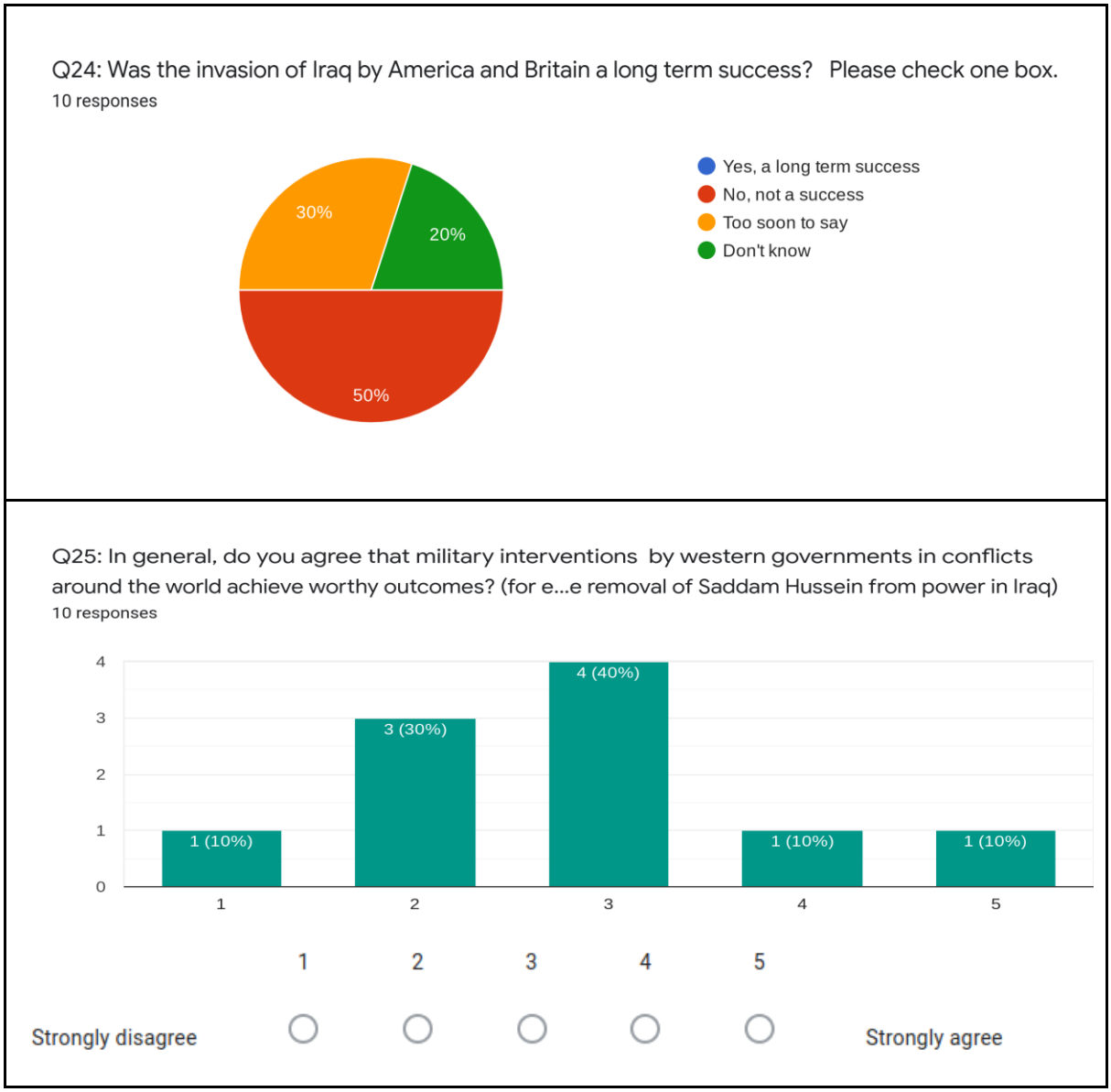
RQ2: To what extent does playing the *Call of Duty* games have demonstrable ideological effects?

The analysis from the focus groups work was that the participants firmly rejected any sense of ideological transmission from the games. If the *Call of Duty* games were offering pro-US war propaganda, as Penney (2009) queries, then it can be hypothesised that those who play the games the most might be more prone to expressing pro-US views on current and previous conflicts. This is the logic of the active media perspective. However, the data gathered in this questionnaire does not support that hypothesis, as is illustrated below. The key findings which emerge from this area of the research are: these participants also rejected a notion of there being ideological transmission from the games with regard to their thinking about real and imaginary conflicts and geo-politics; that these participants feel that they are well informed about global conflict; and that there is no straightforward extrapolation from the heroes and villains that the games present to participants views on the real life

people that such proxy characters are inspired by. This supports the equivalent data gathered in the main focus group and interviews conducted. This corroboration of the data collection from the qualitative research tasks can then rebut any methodological challenge about the nature of the relationships between participants and researcher in these tasks.

Figure 1: Ideological effects?





RQ3: How can involvement in gaming metaculture help to develop model learners?

The use of gaming metaculture directly echoed what had been found previously - it was seen as an essential element in helping players to improve their own performance. The statistic that 70% of respondents reported using some elements of gaming metaculture to help improve their performance is a very significant one. As with the data gathered towards answering the other two research questions from the questionnaire, this again corroborates the findings from the focus groups and interviews. Watching gameplay videos of others on platforms such as YouTube or Twitch is again confirmed here as useful tools for driving the desire for self-improvement through learning from peers. The other key aspects of findings for RQ3

is on the value attached by the participants to certain types of headsets and controllers. This demonstrates how peer-to-peer communication does yield a high degree of impact - if you can learn what the right kit is from other players you can also learn the attributes of high performance players too and therefore develop model learners.

The data from the youngest group of respondents (18-25 year olds) echoes the data gathered from the interviews and focus group in the recognition of the essential nature of good communication between teams being essential to successful game performance and the use of aspects of in game feedback (e.g. watching killcams) and gaming metaculture (e.g. watching videos on YouTube). However, when controlling the data on age and analysing the responses of the eldest groups of respondents (41-45 year olds, 46-50 year olds) there is a divergence of response where the elder respondents are not utilising the aspects of gaming metaculture to the same extent. The reason may be a generational lack of familiarity but from an education perspective, the point of interest here is that the younger group of respondents are likelier to be the ones who are and will be engaged in formal learning situations for some time to come. This being the case, they potentially have quite a bit to gain from being so used to such a reflexive and technologically rich approach to developing their own learning.

Figure 2: 18-25 year olds: skills 1

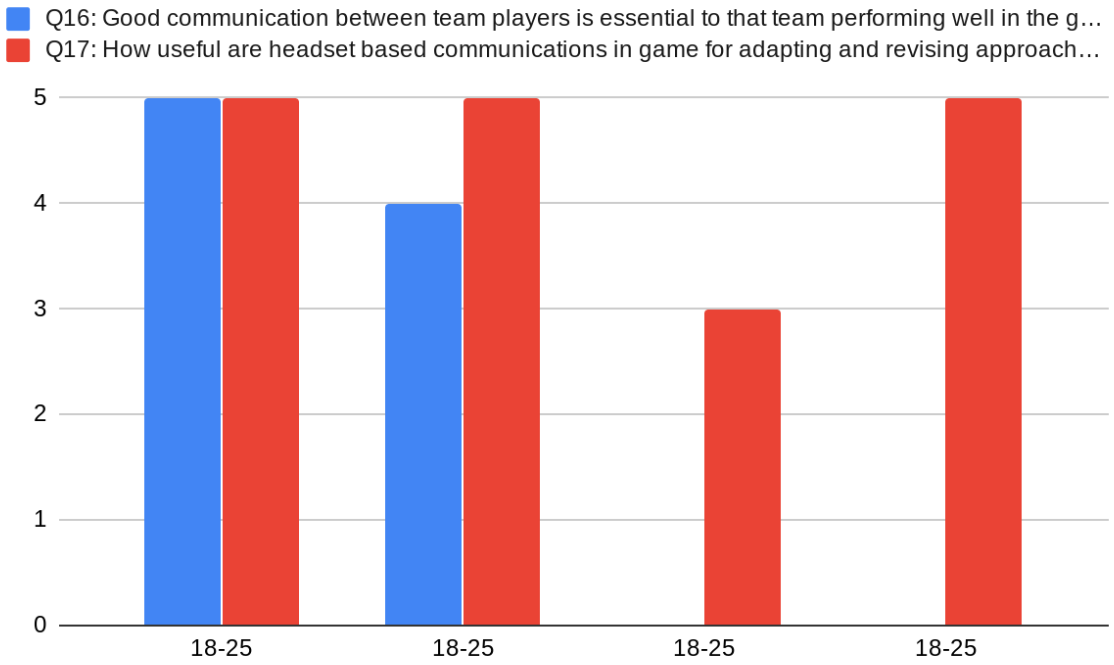


Figure 3: 18-25 year olds: skills 2

Q12: Do you do any research outside of the game to help you improve your game performance (such as completing missions, collecting trophies,accessing Killstreaks, improving your K/D ratio)? Tick all boxes that apply
Watch killcams to learn instantly from other players, Watch videos of others on YouTube (or found from elsewhere) to see what they do, Talk to other players I know in real life, Research via websites or wikis
I don't do any of these
Watch killcams to learn instantly from other players, Talk to other COD players via PSN or X-Box Live, Talk to other players I know in real life
Watch killcams to learn instantly from other players, Watch videos of others on YouTube (or found from elsewhere) to see what they do

Figure 4: 41-45 & 46-50 year olds: skills 1

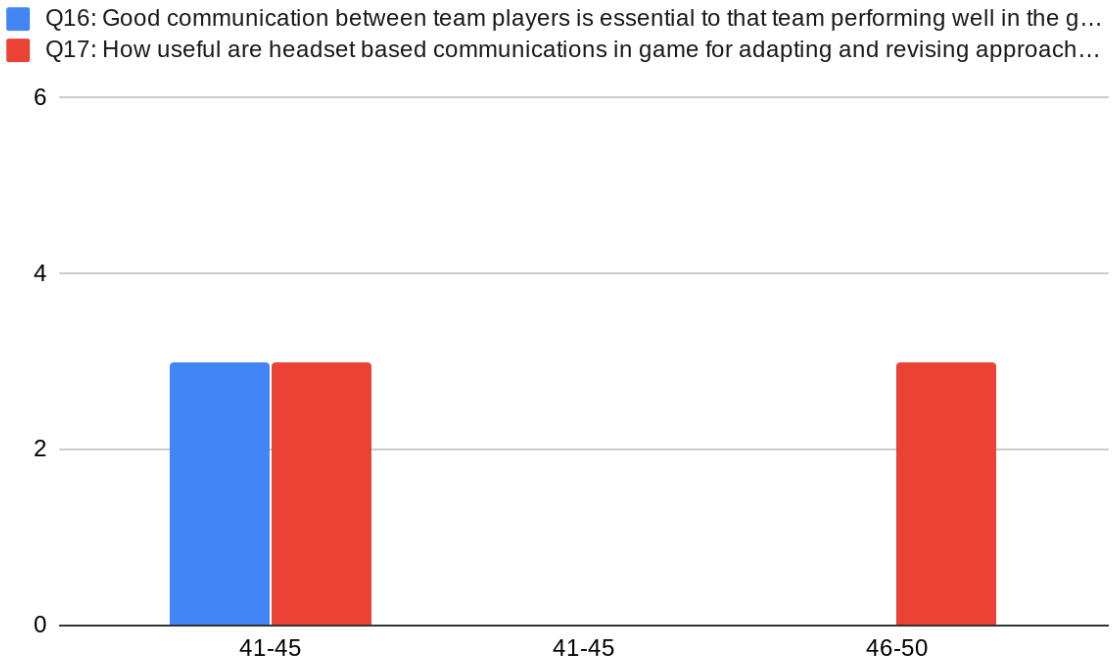


Figure 5: 41-45 & 46-50 year olds: skills 2

Q12: Do you do any research outside of the game to help you improve your game performance (such as completing missions, collecting trophies,accessing Killstreaks, improving your K/D ratio)? Tick all boxes that apply
I don't do any of these
I don't do any of these
Watch videos of others on YouTube (or found from elsewhere) to see what they do, Chat in online forums (for example - Facebook, PlayStation Community) to find out from other players what they do, Research via websites or wikis

Mission debrief - final conclusions and future directions

Theoretical approaches - some reminders

Earlier, the arguments of the Active Media school were presented: that playing what they consider to be violent video games has the effects of heightening aggressive thoughts, feelings and actions. Such theorising is inspired by social learning theory and priming effects theory. From these roots, the General Aggression Model (GAM) has been formulated and this has been the theoretical scaffolding for much of the work in recent decades by Active Media writers. More recently, the GAM has been adapted and built upon to formulate the General Learning Model (GLM). The GLM is a theoretical construct which has been used to scaffold academic work arguing that video games can be negative tools for learning.

Other theoretical positions have queried the findings and methodologies of the above. The work of Ferguson (2007, 2015) is a highlight of this theoretical rebuff. Different epistemological and ontological starting points generally have the effect of steering researchers in very different directions in what research methods they choose to use and subsequently the nature of the data captured which then feeds into what and how the data is analysed. So while the Active Media school is long standing, so is its opposite the Active User tradition, which finds its roots in the uses and gratifications approach theorised by Blumler & Katz (1974) and Halloran (1970) and in Hall's (1973) reception theory.

The credibility of grand narrative theoretical explanations has been ruptured by the work of Lyotard (1997), therefore any theory which claims to be able to offer a general model of any phenomenon needs to be queried and problematised. The top-down, powerful media/powerless audiences conceptualisations inherent in direct effects models and arguably within the Active Media have been problematised by the work of Foucault (1980). His querying of power relations also means academics should be wary of outside-in, top-down research which places the researcher in a god-like position with panopticon power to see into the interior lives of research objects.

This study has been built from an awareness of the theoretical ruptures opened by Foucault and Lyotard and from a rejection of positivism and the connecting adoption of the interpretivist paradigm. These epistemological and ontological positions have driven the design of the study in combination with an understanding of the deficiencies in the current published research in the area which has been investigated here - the learning of the process of the literature review finds its purest application at this point. The work of writers such as Arnseth (2006), Squire (2006), Gee (2008, 2013) and Kolb & Kolb (2010) have been theoretical anchors and the emerging games for learning work has been an inspiration, but this project has also had to plot its own course - decentring the role of the teacher in the learning problem and analysing how games themselves with extratextual metaculture form powerful tools for learning.

Research questions - and research answers

RQ1: In what ways might the *Call of Duty* games facilitate the development of strategic and tactical thinking skills?

Questions relating to strategic and tactical thinking were asked in each of the research stages and the accumulated evidence has a consistent direction to the answers. Owing to the clarity with which this emerged from the pilot study interviews, this was a necessity to ask in the focus group and in the questionnaire - with three separate groups of participants, unknown to each other, all offering a similar narrative. The primary research has generated a body of evidence that playing *Call of Duty* games does facilitate the development of tactical and strategic thinking skills. This is research evidence from three different groups of participants all unknown to each other and the conclusions all point in the same direction. The answers which have emerged from all strands of the research are:

Finding 1: Participants recognise that they adapt their strategy and tactics towards playing the game

Participants across all of the research stages have explicitly stated that they are making a variety of strategic and tactical decisions. Participants recognise that they will choose different loadouts depending on game scenario - or 'map' in the vernacular. Players are very much active agents in shaping how they play: in the same way that effective learners have cultivated the ability to choose the tools most applicable to the next learning episode, the participants in my study make choices on what equipment to take in to the next map and make decisions on what the best approach to playing the next map depending on the the environment (the playing map) they are about to enter into. This is akin to the coach of a sports team making decisions on how a team should play and selecting specific players to carry out that strategy.

In the first focus group, there was consensus between the participants on the need for players to be able to make decisions in real time on tactical adjustments to either recover a losing position or cement a winning one. Making tactical adjustments in such scenarios is a feature of many games and sports. Previously, the cultural status of *Chess* has been discussed: this is a game where it is acknowledged that you need an effective strategy and the ability to make in-game tactical adjustments to be able to win. In this context here, the crucial difference between playing *Chess* and *Call of Duty* online is the real time requirement for tactical decisions to be made. *Chess*, like all turn based strategy games (such as the *Civilisation* video game series), gives players time to make these tactical decisions. Playing *Call of Duty* online simply does not afford this luxury and thus players have to learn to make effective decisions very rapidly - and part of the way this is done is through effective communication and effective teamwork, which were points that were repeatedly made during both focus groups. Forcing players to act quickly requires them to access a range of skills and this skill development all helps to match the profile of experienced gamers to the profiles of effective learners, as was drawn out in Table 1 in Chapter 4, detailing the similarities between the skills of effective learners with the skills of effective players, as determined by the discussions of the research findings for this project.

Finding 2: Participants are self-reflective, self-critical and desire to improve their performance

Flowing from the pleasures of playing the games - stemming from knowledge of generic conventions, previous instalments from the franchise that have been played and from immersion in the flow of the game, the participants have reported their desire to improve their performance in the games. This motivation is key to becoming a more knowledgeable and skilled player but also signals the potential to transfer into other areas of learning outside of the game. Across all of the research tasks, the participants have demonstrated explicit understanding of the degree of self-reflection taking place and that they are making strategic and tactical decisions about how to play certain scenarios informed by this reflection. In between online games, the use of game replays has been identified in the pilot study interviews as a tool for self-review and for learning from others - in educational terms, self-assessment and peer-assessment, tools which are valued by educational theorists such as William (n.d.), for their ability to help learners develop their metacognitive skills and thus drive improvements in their progress. Additionally, with reference to offline Campaign play mode, in the main focus group participants noted how they would reflect on how they had just played and seek to make adjustments for the next attempt in the light of this self-review and taking note of the in-game feedback (and the most direct feedback signal in Campaign mode is when your avatar is killed). The use of game replays to identify mistakes in your own play is a highly effective feedback instrument, and is one dimension in how the game teaches the player how to improve.

Finding 3: Participants utilise role of feedback from the game and peer support

In facilitating this desire to improve performance, game design is important - the play scenarios and the quantity and quality of feedback needs to be well matched to motivate rather than demotivate. The desire to improve leads to a willingness to learn as much from feedback and peer support as possible. The in-game feedback (such as from captions appearing on-screen during play and the ability to watch kill-cams)

and the engagement with gaming metaculture to source the peer support to develop performance were strong recurrent features from all research tasks.

Finding 4: Participants strongly value effective teamwork and the recognise the necessity of effective lines of communication between players

There was a clear recognition by the majority of participants - especially the ones with more experience of playing regularly in gaming teams - about how individual and collective team performance feed into each other. The participants have described how they will change roles in some maps owing to differing skillsets and knowledge of different loadouts and also to cater for different levels of performance arising to non-game circumstances. Knowledge of how to do things and the skill of being able to do things is important, but communication and teamwork are also core elements of the P21 agenda (Fadel, 2008). The experience gained in communicating with team members in play situations is arguably a sturdy stepping stone for such skill development and being able to transfer this skill development into other areas of life. The concept of overlearning is also of note here. The repetition of skill drills such as ball passing to be more than ready for when this skill is needed in competitive action and the utilisation of other online play space such as *Monopoly* to help bind the team together are the actions of people who are determined to improve as individuals and as collective units. In seeking to make such improvements, this also displays some of the elements of model learners discussed previously.

RQ2 - To what extent does playing the *Call of Duty* games have demonstrable ideological effects?

This research question is a direct response to the concerns of writers such as Grossman & DeGaetano (1999) about the ideological impact of playing FPS games and is an indirect response to Gerbner's (1998) cultivation model of media effects. Questions about ideological transmission were put to the main focus group and featured in the questionnaire which was completed by a different set of participants to

those who composed the focus group work and different to those who took part in the pilot study interviews. The research has indicated two broad answers to this research question. The clear message coming through from different research tasks was that participants did not recognise that there was ideological transmission from game to player. The other message which was communicated from one of the participants in the focus group was of enhanced respect for British military service personnel because of the risks faced in conflict situations.

Finding 1: Participants rejection of the notion of ideological transmission from games to players

The consistent message coming through from both research sources was that there was no recognition of ideological transmission from games to players. There emerged a few reasons for this finding. Firstly, the participants in the focus groups were mostly unmoved by the Campaign modes - the majority of the participants were exclusively or near exclusively online only players. This preference for online over offline play is substantial for a discussion on ideological transmission. As noted previously, for ideological transmission to effectively take place from game to player, then the player would need to engage in completing the offline Campaign mode - this is where the narratives are threaded through and characters are introduced and removed as necessary to the narrative. When these narrative trappings are removed, and you playing an online map ─ for example 'Shipment' or 'Shoot House' as you can in the most recent game *Call of Duty: Modern Warfare*, while the online game does establish location for the map, there is no narrative and thus an absence of ideological steering - there are only players who choose (within set parameters) how to present themselves to the other players through name, clan tag (if used), flag and avatar dress. All of those visual and textual icons are capable of communicating meaning and thus ideology, but not ones dictated by the game - in fact this reinforces the point made in answer to RQ1 about player agency.

Also, when asked, the participants in the focus group and those who completed the questionnaire state that, in the majority, they feel well informed about the real conflicts represented to and alluded to in to the *Call of Duty* games and go on to make clear that they source their historical knowledge and understanding of world affairs from a

range of other sources beyond the *Call of Duty* world. One of the participants in the focus group spoke of how they had been introduced to events in the Pacific theatre of World War II which on further reading has been found to be true and thus acted as a catalyst to further independent research and learning. Readers approaching this topic from a sociological perspective, with an understanding of different agencies for primary and secondary socialisation, are unlikely to be surprised for such a finding, but this finding does challenge the narrative of the Active Media theorists who over privilege the role of video games in shaping the cultural frameworks and schemas for players. This thesis has noted the over-deterministic nature of such research and this finding evidences this.

One of the fears expressed by theorists such as Funk (2005) who are concerned about the impact of 'violent' media products is of the potential for desensitisation to occur from repeated exposure to the same messages. However, if anything, the evidence from the focus groups shows a reverse effect, where participants discussed a heightened awareness of the human cost of war and a heightened respect for those who fight wars. One of the focus groups participants has professional experience of working with veterans from the armed forces and could observe connections between the representations of conflict in the games and the experiences of veterans. The participants in the focus groups and those who responded to the questionnaire had considerable experience over a long time period - reaching back to the earliest games in the history of the franchise - of playing these games and reported no adverse ideological effect.

Finding 2: Separating reality from fiction

Beyond rejecting the notion of ideological transmission, the participants also made clear that they fully recognise that what they were witnessing was not real and that they can distinguish between fiction and reality clearly and easily. Castranova's (2005) concept of the membrane between game worlds and the real world, discussed previously (p.48), also applies here, which reinforces the similar point made by Kolb & Kolb (2010) (p.48). One of the points drawn from the main focus group referenced this point. Flowing from discussion about the 'No Russian' mission from *Call of Duty:*

Modern Warfare 2, whilst participants recognised the potency of the images (an armed group shoot indiscriminately into the crowds in an airport terminal) and the closeness of such events to real world events in recent years, all participants remained confident in their ability to distinguish reality from gameworld and none of them took the view that the way empowered the player to act in the game was compatible with actions in the real world. In a study which has been partly motivated by the desire to enable gamers to gain a voice in academia, this viewpoint has to be respected.

Finding 3: Knowledgeable and empowered players

Embedded into theoretical approaches such as the direct effects or cultivation model is a sense of vulnerability on the part of the receiver of mediated messages. In the direct effects approach, this vulnerability is acute, where the receiver of the message decodes quickly and accurately as intended by the sender; whereas in the cultivation model, the process of adoption of ideological positions is a slower process but arguably results at the same end destination. There are limitations in both theoretical approaches regarding individual agency and resilience towards messages which run contrary to the pre-existing dispositions of an individual and these pre-existing dispositions can result in aberrant decoding (Hall, 2001) and / or resistant readings (Fetterley, 1977) (as discussed on p.25). While the narrative driven offline Campaign modes of the *Call of Duty* games arguably present a pro-American, pro-military intervention to resolve conflicts around the world, the research findings from my study give no suggestions that this cuts through into participants' world views.

Participants in the focus groups and the questionnaire felt that they are well informed about current and historical conflicts, evident in rejecting ideas such as the US-led coalition's invasion of Iraq had been a stabilising event in global geo-politics. In taking this position, this runs counter to the narratives of various *Call of Duty* games - such as the most recent iteration, *Call of Duty: Modern Warfare* (2019), where the elimination of the leaders of 'failed states' and armed groups results in a return to narrative equilibrium by the completion of the Campaign. Additionally, participants also displayed scepticism towards political leaders and countries across the world - with some querying of the motivations for why recent conflicts in Iraq and Afghanistan

started and have continued to persist. In doing so, these participants demonstrate significant capacity to challenge ideological views and narratives even though they enjoy playing games which may propagate such views. Again, it needs to be remembered that the participants in my study were mostly motivated by playing online modes and the offline modes where the ideological heavy lifting is arguably undertaken is pushed to the periphery, rendering it ineffective as a tool for ideological transmission.

Finding 4: Enhanced respect for military personnel

The one acknowledged area of ideological transmission arose from one participant professing an enhanced respect for the British military, and this respect is centred on a heightened understanding of the risks faced by military personnel. However, this respect also exists in a contemporary context of wider social and cultural respect for the British military, as mentioned earlier (p.160), so the game is possibly not the sole cause of this ideological transmission.

RQ3 - How can involvement in gaming metaculture help to develop model learners?

Through every aspect of the primary research, the use of gaming metaculture has been regularly highlighted as a major factor in helping players to get better at playing the *Call of Duty* games. This first emerged through interviewees discussing the importance of watching videos of other gamers on YouTube. This was greatly expanded in the main focus group, and further elaborated in the second focus group. The proliferation of gaming channels, where gamers upload walkthrough videos (amongst other materials) to provide video tutorials to other gamers indicates something of the demand for such content and also indicates that there are a substantial number of people who are willing to take on the teacher function. In the absence of a teacher figure, then players learn to seek answers for themselves, thus taking responsibility for improving their performance in the game. In behaving this

way, then gamers are aping the behaviours of effective learners, as theorised by the P21 skills agenda (Fadel, 2008). Problematically for the teaching profession, but a huge opportunity for the gaming industry - especially in the context of the Covid-19 pandemic, the decentring of the teacher forces the player / learner to become more independent and take more responsibility for driving their own progress. Through doing more self assessment and peer assessment (which is what is happening when a gamer decides to watch walkthrough videos), players / learners develop their capacity to progress and enhance their ZPD (Vygotsky, 1978).

Finding 1: Technology as driver of independent learning

The use of headsets and specialist game controllers emerged as a significant finding in the main focus group. With regard to the research questions, the reasoning for this is interesting. Owing to the need for effective in-game communication because of the need to make very quick real-time tactical decisions, high quality headsets are needed so that players can speak and be heard - this reinforces the point made about the essential skill of communication earlier. Similarly, with the preference for Scuf controllers, this is motivated by the desire for players to be the best they can, and that requires having the best tools, and in games where speed and reaction time are critical and will mean the difference between winning and losing, then tools such as these are therefore highly prized.

The use of such equipment also facilitates role flexibility, enabling players to take on different approaches or playing styles when transitioning from one game to the next or in game if a tactical approach is deemed to not be working. High quality headsets enable this communication and collaboration to happen effectively, and here some of the essential skills of the P21 agenda (Fadel, 2008) are again reinforced. The use of such tools are extratextual features which contribute to the individual gamers feeling of readiness for play; but learning about these tools occurs through subcultural transmission - learning what other gamers use and thus uprating their 'gaming setup'[87]

[87] This is a term used by gamers to describe the range of equipment they have to play games, and is a recurring feature in discussions in gaming network groups

accordingly. This also makes clear that in analysing games and their players, the researcher is also analysing subcultural dynamics.

Finding 2: Access and use of digital technology is vital

In the questionnaire, 70% of respondents reported using some elements of gaming metaculture to help improve their performance is a very significant one and this finding complemented findings from the focus groups and pilot study interviews. The use of gaming metaculture extends beyond the use of specific headsets and controllers. Making use of platforms such as YouTube, Twitch and Discord as well as social networks such as Facebook and Twitter has become central to the sharing of information between gamers - information about gaming setups and information about how to progress on parts of games. These platforms enable gamers to interact with a large number of people, some of whom are highly knowledgeable and skilled. The social dimension of gaming also works with the cognitive development aspects of this project - RQ1. Gaining knowledge of how to become a better player by engaging in aspects of metaculture exhibits some of the qualities of an effective model learner - evident in the desire for self-improvement and in turn this can facilitate the desire to learn from others.

Above and beyond... the call of duty

Much of the evidence collated in the primary research goes above and beyond the parameters of the research questions. The explicit understanding that gaming is a way of learning came through the various strands of research, and this was mixed with the observation that this type of learning is fun. This is a very powerful message for anyone with an interest in education. In the Early Years curriculum (Government Digital Service, 2012) the understanding is that children like to learn through play, but this is an understanding that too quickly fades from view. The research of Kolb & Kolb (2010) involving a group of adults who play softball reinforces the importance of play as an ideal environment for learning for adults too. For those with an interest in pedagogical development, this dimension of the research findings is one to take careful note of. Well-designed games which can immerse the player into the

gameworlds created, and in the case of long running franchises such as *Call of Duty,* can keep people coming back for more, have much to offer anyone with responsibility for curriculum development and Communication skills. The high levels of motivation to play and progress facilitated by *Call of Duty* games is a product of offering players verisimilitude in terms of weapons, scenarios, military organisations depicted together with a mixture of online and offline game modes which give the player agency of how to play and when and facilitate knowledge and skills which are mutually beneficial across the different types of game modes (for example, what a player can learn a map in Team Deathmatch is transferable if playing Free For All). These factors plus the element of competition against other players online is the core of the *Call of Duty* appeal and in applying the principles of games design to learning design, it is the mixture of these elements which needs to be considered and adapted as necessary to suit the intended audience in terms of subject, intended learning outcomes and age.

In the first focus group, some of the participants expressed a sense of frustration at not being to make the level of progress desired at certain times. Failure is recognised as being integral to the learning process - both in terms of content / skill development but also developing as a learner and as a person. Failure in the games is viewed as being frustrating, but overcoming failure is fun and also leads to a sense of achievement and a boost in self-esteem. In combination with researching potential solutions to gaming problems from YouTube or from Discord, this leads to empowered players / learners. The ability of players to persevere with demanding tasks, in combination with accessing feedback from the game and feedback from peers in virtual arenas speaks to the resilience or grit which is also a highly prized attribute in the P21 skills agenda (Fadel, 2008) and in the UK (Unit 17: Developing effective learners Guidance Curriculum and Standards Senior leaders, subject leaders and teachers in secondary schools Creating effective learners Pedagogy and Practice: Teaching and Learning in Secondary Schools, 2004).

Playing online team games on a regular basis, as was the case with the participants in the focus groups, helps to facilitate the development of teamwork skills, which again ties into the P21 skills agenda (Fadel, 2008). Given the rupture in working patterns and preferred modes of educational delivery ushered in by the Covid-19 lockdowns, having learners and workers who are experienced in working in teams remotely and

communicating via internet based video and audio services seems like ideal training opportunities for aspects of the new realities that people across the world have had to adapt to in 2020 and for as yet an undetermined time period afterwards. There is no effective team working without team members having excellent communication skills - and this was one of the most prized attributes in a player, and this message came through very clearly in both focus groups. Communication skills are the underpinning agent to everything else that happens in team oriented games - it is essential to teams functioning effectively in pressurised conditions where reaction speed is always a factor. The norms of appropriate means of communication in such an environment - and how these are similar to and different from other groups and individuals with which an individual player may communicate will be learned from the process of becoming part of the team and through engaging in aspects of online play. Players will have to have been placed into a range of different positions in order to understand the most appropriate way to react and communicate that thought or emotion. The use of role play as safe space for putting individuals into situations where they need to work out how to react and communicate is central to the work of Baile & Blatney (2014).

The value of practice and working together is one which is also highly valued by the focus group participants. The opportunity to practice skills outside of a competitive environment enables the players to be ready and able to apply that learning when called upon to do so in competitive games. This use of such safe practice environments dovetails with the findings of the value of play environments in the work of Kolb & Kolb (2010) and Engerman et al (2019). This research adds another dimension to how and where such environments can be nurtured.

The subcultural norms and values also emerged as an important area to take note of during the course of the research. The participants in the focus groups were unappreciative of the standard of communication in public gaming lobbies, saying that there was too much abusive behaviour. They linked this to a split between serious and non-serious gamers, which is a factor that surfaces in other literature in other guises, notably Myers (2019) in discussing teabagging and Egenfeldt-Nielson et al (2008). Subcultural norms and values also surfaced as previously discussed in terms of gaming setups with the preference for certain types of headsets and game controllers. There was also much discussion in the main focus group of the existence

of a ‘gentleman’s agreement’ with regard to playing style which looks down upon ‘campers’ (players who find a safe spot on the map and use that to kill other players). All of this spoke with a dense web of norms and values which is ignored in the Active Media work and has yet to be fully accounted for in more positive academic work regards the role of games and gaming culture in society.

The rise of esports and the new multinational *Call of Duty* League, also emerged as significant cultural phenomenon deserving of much fuller academic analysis than is currently the case. The evident enjoyment by one of the research participants in this study of their experiences playing in esports tournaments and the degrees to which esports events are taking on the appearance and feel of more mainstream sporting events is likely to attract more academic scrutiny as the popularity of this leisure activity grows. In the lockdown period, when football in the UK was suspended, an esports tournament featuring Premier League footballers commenced and this will have only helped to raise awareness of this activity (Hawkins, 2020).

Games such as the *Call of Duty* games nurture effective learners into being through a range of feedback points, both during the game and on completion. The way that learning is contextualised (you are taught what you need to know when you need to know it, in accordance with Gee’s (2013) principles, the over provision of feedback and the extratextual opportunities for collaboration with other and to give and receive peer support effective means the *Call of Duty* games are very powerful tools for learning. Not only do they enable players to learn strategic and tactical thinking skills, but they also offer much more such as communications skills, and norms of (sub)cultural behaviour.

Limitations

The key limitation of this project is scale. The findings of this project are high in validity - great care has been taken to represent the voices of the participants as fully and as accurately as possible. However, to be able claim that the findings are more widely applicable to the experiences of other gamers is not possible. The capacity to have other focus groups to which the same sets of questions were posed would have led to a richer harvest of data and enabled comparisons across focus group cohorts to occur.

Also, the opportunity to interact with more 'casual' gamers would also have been useful, as comparator to the data harvested from researching with 'serious' gamers. The other key limitation is regarding the generalisability outside of the *Call of Duty*. In the literature review, the practice of 'teabagging' in *Halo* (Myers, 2019) was discussed - but this did not surface as a discussion point with any participant in my research. This suggests that when analysing gaming microcultures, the researcher needs to be careful of not assuming that how players behave in one gaming environment directly copies across to how they or others play other games - behaviour can be highly contingent on the environment.

Benefits

Earlier, on p.94, the intention to study the 'problem' of video games from the bottom upwards was stated as a fundamental objective of this project. The need to look at gaming from the perspective of gamers is clear from the focus of the much of the research surveyed in Chapter 1. In doing so, this project is a relatively rare academic intervention - which is a benefit in itself. The research design of this project also lends itself as a model to work from for other similar studies in the future. Having noted above the caution to be exercised when seeking to generalise points across different games, then there is here a model which can be transplanted and adapted to different games and their players. Over time, a number of studies could be conducted to join up in a patchwork quilt effect.

There are two other key benefits to this project. Owing to the radical impact of the Covid-19 pandemic on all areas of life, and the switching to remote / online forms of learning across all educational sectors, this project offers some powerful pointers about what is necessary for online learning to be successful. As has been repeatedly demonstrated in the primary research, the participants find meaning and derive a great sense of pleasure from playing the games because they offer challenges which are, in the words of Gee (2013), 'pleasantly frustrating'. The players want to become better players because the feedback mechanisms during and after games and the social reinforcement from playing with others is rewarding in itself. It is that sense of reward and pleasure in the process which educators need to be mindful of in designing learning for online environments.

The second key benefit is more with regards to pedagogical theory and practice - what this study demonstrates is that when players / learners have a learning problem which they find interesting and stimulating then they will engage very deeply with it and constantly seek to evolve themselves as players. With the right stimulus and the right supporting mechanisms all kinds of people can be nurtured towards becoming model learners. Stripped of baggage surrounding generic conventions and preconceptions of what certain types of games are like, the participants in this study have repeatedly demonstrated that a well designed learning vehicle can take those players a long way. So whether designing learning for online or offline environments, this project makes clear that educators have much to take account of from games design in order to at least minimise education systems churning out new generations of the 'working class lads' who were the focus of Willis' (1978) study.

Future work

Taking note of the limitations outlined, one dimension to future work would be to take the focus group questions and convene other focus groups with members of varying levels of *Call of Duty* experience and cross-compare the findings. It would also be of great interest to repeat the study with participants who are current members of armed forces to see where the similarities and differences may be players without such military experience. Reaching beyond the confines of *Call of Duty*, it would be useful to apply a similar approach taken in this project to other big selling franchises - such as *Fortnite*, the *Red Dead Redemption* games and the *Grand Theft Auto* games, Given the work of Engerman et al (2019) on the *Madden* game franchise, and in addition to the above suggestions about expanding to other *Call of Duty* cohorts, over time, studies across the most popular gaming franchises is likely to be able to tell us a lot of useful information about how real gamers perceive their interactions with the games they choose to play, the people they choose to play with and the wider metacultural forms they choose to engage with. Beyond a pure focus on the games, digging ever deeper into the ways in which games can be tools for learning across all domains should also be a primary factor in such work.

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