

**TO EXPLORE WHETHER THERE ARE BENEFITS TO PUPILS FROM THE INTRODUCTION, LEARNING
AND PLAYING OF MODERN BOARD GAMES (INCLUDING MODERN CARD-BASED GAMES) IN
SECONDARY PHASE EDUCATION**

by

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Are there potential benefits to pupils from the introduction, learning and playing of modern card and board games in Secondary phase education?

A mixed-methods, practice-led study in a coastal non-selective secondary school.

ABSTRACT

Might the teaching and playing of board games within a secondary school context have benefits for pupils? To provide a baseline for this work, an understanding of pupils' existing relationship to tabletop game play was sought. Differences in pupil experience were revealed, linked to favoured ways to learn, frequency of play, favourite games, and access to games at home. There was found to be a lower exposure to games for pupils eligible for Free School Meals, for those receiving SEND support and for boys. In response to this data, a group of post-16 mentors were trained in an experiential method for teaching games, utilising the concept of *Magic Circle* as a basis for developing a structured culture from which instances of a *well-played game* might arise. Pupils' responses to subsequent tabletop game play experiences were surveyed, suggesting potential beneficial outcomes for pupil wellbeing, and sense of social connection.

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Abstract

Might the teaching and playing of board games within a secondary school context have benefits for pupils?

To provide a grounding for this work we sought to gain a picture of pupils' existing relationship to tabletop game play. Online surveys were conducted with notable differences observed in reported frequency of play across pupil sub-groups.

Our baseline data showed a pupil preference for learning new games via the instruction of a player-guide. In response, our project model involved training a group of post-16 mentors in an experiential method for teaching games and utilised the concept of *Magic Circle* as a basis for developing a structured culture from which instances of a *well-played game* might arise. Our project subsequently sought to establish viable communities of table-based play. Through an iterative research and implementation process we have come to a clearer understanding of the essential constituent elements and possible utility of a model for adopting modern card and board games within school life.

Participating pupils reported the learning and playing of modern boardgames to be a positive experience accompanied by an increased sense of social connection to peers and a desire to play again.

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Declaration Form

Annex 2 - Declaration form PhD by Thesis or Portfolio

Declaration

I declare that:

- The work presented in this thesis is my own and embodies the results of my research during my period of registration.
- I have read and followed the University's Academic Integrity Policy and that the thesis does not breach copyright or other intellectual property rights of a third party. Where necessary I have gained permission to reproduce copyright materials.
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PGR handbook modifications approved by RDSC 28 April 2022

List of Abbreviations

BGG: Board Game Geek.

Ever6: Eligibility for Free School Meals at any point in the last six years

FSM: Free School Meals.

PP: Pupil Premium.

SEND: Special Educational Needs and Disability

SEND K: In receipt of in-school support for SEND.

SEND E: In receipt of an Education Health Care Plan for designated SEND.

Glossary

Board Game Geek: a community website cataloguing tens of thousands of card games and board games

Eurogame: a school of non-zero-sum board game design, originating in Germany (orig. *German Games*) and being characterised by low rule overheads, manageable play times and points-based victory conditions. It believes functional positive social relationship between players should be a core feature of a good game: Everyone spends the game building, growing, developing, changing, winning; some just win faster. Catan (with >40million copies sold) was the first to make the genre mainstream. Eurogames are no longer niche, but not yet as popular as the classics familiar to the research cohort. Even in the difficult present retail world nearly every big English town has at least one retail shop selling (mostly) Eurogames. The design school has continued to evolve and has become much more sophisticated over the last 50 years.

Ever6: a measure of pupil disadvantage in UK schools relating to eligibility for free school meals at any point in the preceding six years.

Free School Meals (FSM): FSM relates to a current assessed eligibility for receipt of free school meals in school.

Gateway Game: Also, *welcoming* game. A game with simple game mechanics which provides a suitable entry point for non-gamers to experience modern Eurogames.

Game Mechanics: Routines within a game, established by the rules, which govern player agency. These may be classified into distinct genres, making assimilating similar systems easier: e.g., Drafting, Auctioning, Card driven, Area control, Cooperative, Worker placement, Hidden movement, Puzzle, Narrative, Secret roles, Asymmetric powers. The degree of player interaction can vary and there are many solo mechanics (i.e., Bots)

Pupil Premium (PP): Pupil Premium funding is a school funding top-up intended to help to narrow the gap in academic outcomes typically observed for pupils from disadvantaged backgrounds. PP is one metric used to track disadvantage in UK schools.

Take That: A style of play incorporated within a game which involves players taking direct actions to harm the position of another player.

Preface

Upon setting out, I believed most children play games at home. It is an activity I picture the most parents wanting to engage in with their children. When I refer to games here, I do not mean digital games, of the sort played on phones and on consoles. I know they play those, and in increasing saturation. I mean card games. Or board games. UNO (Robbins, 1971) and Monopoly (Magie, Darrow, 1935), at least. Surely almost every child in the country plays UNO or Monopoly at one time or another?

It turns out my belief was somewhat naïve. If you had asked me in the autumn of 2021 how many pupils in our average class of KS3 pupils had not played a game in the last year, just something like UNO, or Cluedo (Pratt, 1949), I guess I might have thought 2 or 3 in a class of 30. What emerged was that at my coastal non-selective Secondary School, the figure was closer to 6 in every 30. One in five. This rises to one in four for boys and/or pupils in receipt of Free School Meals (FSM). That was a surprise. And it is a surprise which I believe should give us some cause for concern, reflection, and stimulus toward action.

This research project grew out of my initial data and a desire to respond to the possible implications of that data. The project is pragmatic in impulse and nature. It carries with it enduring questions about what young people might miss in their social, emotional, and cognitive development by not gathering around a table, proximally located, shoulder to shoulder, face to face, engaged together in game-based play.

This paper is part an examination of the existing relationship of a cohort of adolescents to boardgames. It is in part a telling of their responses to learning and playing modern boardgames. And it is in large part a disclosure of the journey of finding whether there might be a way to a culture of table-based play in a coastal non-selective secondary school. It is also, in lesser part, the story of an in-service Vice Principal's attempts to press into existing culture and discover whether the *table fellowship* encountered around game play might have anything to offer the young people he had served for almost a decade.

What is offered here is a hybrid of Grounded and Transformational approaches aspiring to be practice-led. Further questions arise, and some answers are signposted for a profession I have served some 30 years. I am in part participant observer, analysing pupils' self-reported existing relationship to tabletop games. I am part practice-based practitioner teaching games, training mentors, and fostering a culture for table-based play. I am part hobby gamer. And running through all of those I am an aspiring conduit of "good" to the young people I have desired to serve faithfully.

Introduction

Games (*serious games* or simulations) are widely used, in business, retail, NHS, military, emergency services, engineering, financial services, cybersecurity, aviation and other agencies to train staff, optimise resources and plan for contingencies. Understanding how to participate, use and exploit such tools, has obvious value as young people move from education to the workplace. Other more immediate educational, psychological, and social elements may present as softer, but are arguably even more valuable. In education, and for life, these are foundational skills.

Games have been part of cultural heritage down through the ages. Increasingly their immediacy as experienced in digital forms. Yet, I would argue, there remains an enduring place for physical games in our shared social experience. This research examined how card and board games feature within the lives and culture of pupils at a coastal Secondary School. Following initial evaluation of our baseline survey data, a group of games were taught and pupil responses to those games were again surveyed. The results are presented here.

When training board game mentors in school we model the use of a simple five-point method for teaching games. Five points is one point for each finger. It makes the method easier to remember.

Our method involves teaching the game backwards from the end to the beginning and goes like this:

1. What is the Big Idea of the game?
2. How does the game end?
3. How do I win the game?
4. How do I take my turn?
5. What other essential information do I need to start playing?

Our simple method is intended to orientate novice players within a new game space while also helping them to maintain a manageable cognitive load.

What follows here, within this introduction, is intended as a “What is the Big Idea of this Research?” It is offered with the hope of providing a stepping off point into some themes developed in greater depth and detail in later pages.

When we teach games, we provide introductory ideas. Key concepts and game mechanics may initially be alluded to without being fully developed. Games are meant to be played. The direct experience of playing them is the best way to learn. We are just seeking to give new players the confidence to get started – everything else follows in time.

This research project plays out at an intersection of the UK education system and the playing of modern tabletop hobby games – otherwise referred to here as *modern card and board games*, *Eurogames*, and *Gateway Euros*. There should be quite a lot here that is familiar if one has some experience of either or both fields. The very interest in reading this may suggest a personal interest in how the two fields might sit together. Perhaps a reader has familiarity with one, but not the other. Whichever is the case, an introduction to key ideas follows. Throughout that introduction is threaded an invitation to a personal reflection on the place of games in one's own life.

What are games to me? What is their place in life? What meaning do they hold?

We all have a board game story. We may have never played a card or board game, but we could almost certainly name at least one. Our story may be generously filled with good or bad experiences. Instances of play may be scattered thinly or liberally through our childhood and adult life. Memories of games may be attached to places and times, seasons and holidays, homes lived in and since vacated; friends or family members still present with us or having long since passed.

My own earliest board game memory is of a family Christmas in Somerset. Snow was gently falling outside, but inside the room felt warm and cosy. The walls were painted green, my small toes curled into the thick pile carpet. I was 5 years old. There was a Monopoly board, set upon a small, square wooden table. My 90-year-old Great Grandmother sat in a high-backed chair; her old walking stick handle curled over its right arm. I was standing close by, gently clinging to four slightly faded yellow pieces of paper money, creased gently at the corners. I was being taken for my last £4. I pleaded with Great Grandma, staring into her kind old eyes, waiting for mercy from the rent debt I owed. She was unmoved. No reprieve was coming. How could it be so important, I puzzled?

I often used to sit with Great Grandma. She would be holding a large magnifying glass in one hand and a book in the other, she would read me stories. The letters got big and then fell away as she moved across the lines of words. This frail, elderly lady loved me, and I loved her. I would take her presents fashioned from old cotton bobbins and yoghurt pots. How could she now be so defiantly unyielding? Shouldn't she just let me off?

This was a hard lesson being passed down the generations.

What other lessons did I learn through the years, I wonder? An unsuspecting, un-self-conscious player of board games, what other lessons did they quietly teach me? What did I gain, or lose, from my place around the table; rolling dice, placing cardboard chits, counting paper money and puzzling over whether it was Professor Purple in the Study with the Candlestick?

What do any of us gain from playing games? What barely recognised lessons have they taught?
What relationships and social connections have they served? And in what ways might we have been
the poorer without them?

What is the Big Idea of this research?

The Big Idea here is about discovering whether tabletop board games have something positive to offer our digital-drenched and increasingly, digital-fatigued adolescents. And if they do, seeking to discern and then model how they might find a place within our schools.

This research involved a project spanning a year in a UK secondary school in which we sought to discover and then describe something of the current relationship Key Stage 3 pupils (aged 11-14) have with card and board games. Our survey questions encompassed what was played, who it was played with and how recently a game was last played. We asked who it was that taught games, what methods pupils would prefer for learning games and who they would most like to share a new game with. Our resultant survey responses were matched with respondent contextual data to examine whether there existed any notable differences based on age, sex, economic disadvantage, or presence of Special Educational Need.

Having gleaned initial (baseline) data I went on to devise a method for teaching games and to shape a model for fostering a positive culture for play. A group of post-16 pupils (aged 16-17) were selected. These were trained to be good mentors and were taught some new games. Throughout this process our five-point method for teaching games was modelled and our deliberate fostering of a positive culture for play was made explicit.

After training, the mentors taught games to pupils in Key Stage 3 and to some of their peers. Data was collected in the form of post-game surveys. Any pupils who learned games with the mentors were able to go and access the games at the school library during social times.

As the project developed, I took games to excluded pupils being educated off site at a local Pupil Referral Unit (PRU). Towards the end of the year, we ran a modified version of the project with a group of primary to secondary transition pupils due to join the school the following September.

Why is this important?

An ever-increasing proportion of our lives are lived online. While online digital connection presents many benefits and opportunities, 70% of parents are concerned about the risks their 12–13-year-old children face online (Children’s Commissioner, Digital Childhoods, 2022). Boys are particularly vulnerable to negative impact on wellbeing, resulting from a self-reported lack of self-control in how much time they spend online (Internet Matters Digital Wellbeing, 2022). Surveyed boys report, “I keep playing the same games or watching the same TV shows/films even when I’m not enjoying it” (Internet Matters Digital Wellbeing, 2022, p.19)

Our research indicates that many young people remain unaware of the opportunities presented by table-based play. As one of our trained board game mentors stated towards the end of our project, “Before this, I didn’t even know that I liked board games.”

How does this research end?

Emerging from our data for the majority of pupils was a clear picture of the presence of some established practice of playing card and board games. The selection of games played was narrow, with one game in particular predominating. Against this was a clear indication that some groups of pupils (boys, the economically disadvantaged and those receiving SEND support) played less frequently and had access to very few games at home. One in ten boys stated they had no memory of ever having played a card or board game. That is twice the reported rate for girls.

On encountering new games, the very great majority of pupils reported playing to have been a happy time. For two thirds of pupils this was accompanied by a sense of closer connection to other players. Over half of players rated their desire to play again at ten on a ten-point scale.

The games we have played.

Unless specific reference is made to *digital games, online games, video games or console games*, then when we talk about games we are talking about card and board games. While they are referenced in the glossary, a couple of game related terms deserve some explanation right at the outset.

Our baseline survey asked pupils about card and board games. I deliberately sought to cast the net as wide as I could. When sharing responses about their relationship to games we are talking about any, and all card or board games.

Eurogames

When we discuss the games introduced and taught in the mentor and summer school phases of the project, we are talking about modern hobby games and more specifically, *Eurogames* (sometimes abbreviated to *Euros*). Eurogames belong to a school of non-zero-sum board game design, originating in Germany (orig. *German Games*) and being characterised by low rule overheads, manageable play times and points-based victory conditions. There is an emphasis on strategy, usually mixed with a little bit of luck. Guiding Eurogame design is the belief that functional positive social relationship between players should be a core feature of a good game. Everyone spends the game building, growing, developing, changing, winning; some just win faster. Catan (with >40 million copies sold) was the first Eurogame to make the genre mainstream. Eurogames are no longer niche, but not yet as popular as the classics familiar to the research cohort. Even in the presently difficult

retail world nearly every big English town has at least one retail shop selling (mostly) Eurogames. The design school has continued to evolve and has become much more sophisticated over the last 50 years.

If one is a casual, or occasional gamer then titles typical of this genre that you are most likely to be aware of are *Settlers of Catan* (now, *Catan*) (Teuber, 1995) and *Ticket to Ride* (Moon, 2004).

This genre of games is typically won by whichever player best navigates the restrictions and opportunities presented by the game to accumulate the highest number of *victory points* at game end. It is rare to encounter any mechanism by which players are knocked out of the game. Player elimination is absent from almost all games we used.

Gateway Euros

Our subset of games narrows still further and are sometimes referred to as *Gateway Euros*. These are games that are lighter in complexity than many Eurogames might be. They are sometimes also called *welcoming* games. They are the kind of games that you might share with a friend or family member new to tabletop hobby games. They are not too serious. These games have an open, *welcoming* feel and offer a potential *gateway* into a much larger world of strategy board games.

Board Game Geek

Throughout this document I refer to *Board Game Geek*. If one wished to discover more about card and board games in general or Eurogames in particular, there are few better sources of information to be found than by visiting the *Board Game Geek (BGG)*. *BGG* or *The Geek* is a community website which catalogues card and board games. It provides information, rankings, how to play tutorials, reviews, fan made content and support material. It has a store for embellishing the components of games and a marketplace for buying or trading second hand and hard to find games. The site holds information on approaching 25,000 games. To provide some indication of user community size, at the time of writing, the strategy board game *Catan* alone has over 120,000 user reviews logged. I have judged the information contained with the BGG website to have some authority and have leaned into it.

Navigating this research.

The main influences on our theoretical framework, our motivation, methodology, methods, data and conclusions are mapped out in the contents page. *Table 2: Project Design Showing Phases and Methods* is intended to provide an overview of the project and its stages and will provide a decent *reader aid* should it ever become unclear which group of pupils and which subset of the data we are describing at any given point.

It should be noted that the baseline data, mentor phase data and summer school phase data have been treated as three distinct data sets. The baseline provides a picture of existing relationship to games and is restricted to KS3 (ages 11-14). The mentor phase provides a picture of how a range of games were experienced by new players. Number of plays, teachers of games and ages of players (ages 11-18) are varied and uneven. The summer school phase involved slightly younger players (ages 10-11), has a smaller population size, but provided a far more consistent and controlled environment. In treating them separately it is hoped that they maintain stronger individual integrity whilst also providing a richer picture when viewed together.

There is a glossary of terms to support understanding of abbreviations and domain specific language belonging to the spheres of education and to hobby game play.

Background

In the autumn of 2020, I was experiencing repeated encounters with pupils who were manifesting symptoms of attachment deficit, struggling with self-regulation, and acting out the self-catastrophising of situations in which something had gone wrong in the classroom. A number of these pupils had additional educational needs. At least one was a child in care.

An avid player of Risk! (Lamorisse, 1959) and Axis and Allies (Harris, 1981) in my teenage years, games had waned in importance in my adult years. Exploring the ever more immersive world offered by PS1, XBOX, XBOX 360 and XBOX One consoles with my own children had relegated boardgames to a rarely opened cupboard of my life. That all changed when the arrival of a 50th birthday bought a gift of from an old childhood board-gaming buddy. As teenagers we had spent hours together with our respective brothers playing Risk! (Albert Lamorisse, 1959 BGG rank 22,774), Diplomacy (Alan B. Calhamer, 1959, BGG Rank 700), Axis and Allies (Larry Harris, Jr. 1981, BGG rank 1,603) and engaging with a wider group of friends in roleplaying games such as Dungeons and Dragons (Gary Gygax & David Arneson, 1974), Runequest (Steve Perrin et al, 1978) and Traveller (Marc Miller, 1977)

My birthday box contained three popular *Gateway Eurogames Games*: 7 Wonders (Antoine Bauza, 2010), Splendor (Marc Andre, 2014), and Codenames (Vlaada Chvtil, 2015). Our early plays of these games soon converged in February 2020 with the beginning of a COVID pandemic, *Lockdown* and all of a sudden, board games re-emerged in their significance for me.

During the autumn of 2020 I took my first tentative steps in introducing simple *Eurogames* as an intervention tool with pupils struggling with the school environment and with their own challenges related to self-regulation. These pupils were typically self-catastrophising breakdowns in relationships in the classroom, lacking any real attachment to school or to adults, and behaving in unsociable ways to peers.

While so doing, I seemed to be recognising some positive outcomes: pupil-teacher relationships strengthened, self-regulation returned faster than previously witnessed, and pupils initiated requests to play. As I continued to reflect on these, I began to wonder whether modern board games might have a useful wider application in school life.

Research problem

As educators, as Secondary School leaders, how best do we serve the adolescent young people in our care?

The disciplines of Sociology, History, Psychology, Education, Youth Studies, and Games Studies converge in the problem at hand as met by this piece of research. How might a current generation of young people be helped to grow and flourish and live meaningful, fulfilling lives – at this moment in time? What part should state education play? How broad and deep should the curriculum go? What ancillary social functions should rightly be considered essential features of school life?

These are all questions we ask as educators, working as we are towards the best possible outcomes for the young people in our care. Post-COVID, and in an increasingly digital age, filled with questions of identity and meaning, what practical steps might we take within schools to best support the passage of children for whom we *are loco parentis*?

Into this matrix dropped for me the question of table-based play, what lived experience and co-constructed meaning it provides? And what deficit might arise from the absence of this ages old cultural practice in the lives of children, young people and their families.

More specifically, more pragmatically, what might that look like for the young people who came to be in *my* care? And what might *I* do about it? For that matter, what might we as a whole school community do about it?

Having begun to ask these questions and to explore these ideas, to formulate practice and to ask pupils about their experiences, what wider implications or practical relevance might there be for education – and indeed, for anyone working with children and young people. For parents. For grandparents. For young people themselves.

Research question

To explore whether there are benefits to pupils from the introduction, learning and playing of modern board games (including modern card-based games) in Secondary phase education.

This is a multifaceted question and the whole might be served by elaborating on each part in turn. This is attended to in the paragraphs that follow.

Are there are benefits to pupils?

The question initially driving this research has narrowed over time. At the outset, this question was whether there are cognitive, social, and emotional benefits to disadvantaged pupils from the learning and playing of modern card and board games in school. Over time the practical focus of this question has at once required the asking of a more fundamental, descriptive question and has, itself narrowed in focus in response. It has invited consideration first as to what the existing relationship of participant young people to games might be. In reflecting on data arising from that existing relationship question, it has in turn narrowed to focus more closely on whether for this generation of pupils the experience of playing games is a positive one and to what extent playing games around a table might serve to strengthen positive connections. This has been an iterative process through which the priorities of the study have to some extent sought to follow some of those being expressed by the community itself.

Introduction of games

Prior to COVID there existed in our subject school a small group of pupils who would set up and play collectable card games in the school central heart. Post-COVID this disappeared entirely. No other game-based clubs existed. The school's teacher of Cooking used a subject based version of Trivial Pursuit. Beyond this, table-based games did not feature in school culture. This project and accompanying study involved a fresh introduction of games into school life.

Learning

The selection of games used in this research are examples of modern hobby Eurogames, a subgroup of boardgames in general. These games had not previously been encountered by participant pupils. For this reason, central to engagement with each new game was a process of learning a new rule set along with its accompanying demands for employing procedural, strategic, and tactical decision making. Games were taught using a simple five-point method in combination with the experience of playing with a more experienced guide.

Playing

At heart, this research is about the place of carefully instigated, thoughtfully structured opportunities for table-based play within the rhythms, patterns, culture, and constraints of school life. If play fails to arise from these presented opportunities, if no fun is had, no enjoyment experienced, then the purpose of playing is missing. The introduction and the learning of game *rule sets* may well have positive benefits. They may in fact be a very real part of the *fun*. But they exist to give rise to an opportunity for *playing* the game together with peers, around a table.

Huizinga identifies culture as arising from play (Huizinga, 1949). In what ways might table-based play in school, properly instigated, give rise to positive new personal and collective cultures in school?

Modern card and board games

The games used in this study were carefully chosen from the rapidly growing selection offered by the burgeoning tabletop hobby game market. These are games designed within the last decade, having characteristically light rule sets, playing times ranging from 20-60 minutes and demanding strategic decision making and the use and/or mitigation of chance (luck) in pursuit of predefined end game and victory conditions. Our selected games deliberately avoided player elimination and contained very minimal take-that mechanics.

Secondary phase education

This research project was conducted in a coastal UK secondary school at which the principal researcher was employed as a senior Vice Principal. The research is principally focused on the experience of 11-14 year olds (>330), a small group of Sixth Form pupils (aged 16-18), several pupils from the school who were in education directed off site at a Pupil Referral Unit and a group of Summer School pupils (aged 11) transitioning into Secondary phase education at the school. The findings of this research apply specifically to these pupils at this school but do, I believe, have wider application to similar pupils in similar school contexts elsewhere.

Contribution to existing knowledge

There exists little academic research into modern board games.

More specifically, there is a conspicuous absence of research about the relationship early adolescents have with modern card and board games; what implications might arise from a deficit of tabletop gaming; and what advantages or benefits such activity might offer either within or beyond school walls.

These questions are our focus of study here. Increasing knowledge is being shared about online habits, playing of video games and the instrumental digital gamification of learning to enhance attention, motivation and academic outcomes while research into the place of physical games remains sparse.

There exists related academic knowledge about tabletop gaming in ancient through to modern culture and the psychology of playing traditional games such as Chess, the information chunking and decision trees implicit and how this can be used to support machine learning. While Chess has been a major focus of attention, Go! and Mancala also gain attention (Gobet, 2004).

There has been interest in the benefits of gamification within education to increase inherent motivation; in turn improving engagement and learning outcomes. In these examples the game is secondary and instrumental to the primary aim of furthering some other curriculum knowledge or skill. In our own study, our interest is in the value of games themselves, cultural artefacts subject to ownership and personal use by young people through the freedom of their own agency.

The role of serious games in education has gained increasing attention with a focus on the way games might be used to model actual work environments and workplace problems. Serious games have increased in importance in the context of further education, higher education, and work-based learning programmes, but would appear to still gain only margin attention within Secondary phase education.

At the other end of the age spectrum, much knowledge exists about the place of play in learning for child development. Some of this work centres on structured play, some on unstructured.

There persists a notable gap when considering the landscape of tabletop play for 11- to 14-year-olds.

This research takes some small steps towards offering an insight into how 11- to 14-year-old pupils in a coastal non-selective Secondary School experience the playing of modern card and board games. It presents a picture of what existing tabletop play habits look like for these young people and goes on to report on pupils' experiences of playing new card and board games.

Structure of dissertation

This paper is structured to provide a brief survey of current literature, followed by an explanation of the methodology employed in our research. Our findings will then be presented, deriving both from quantitative and more qualitative sources. An interpretation of these findings will be offered and finally some reflections on shortcomings of the study, reflections on things I would do differently given the opportunity and some suggested avenues for further research.

THEORETICAL FRAMEWORK

The theoretical centre of this study sits within a framework of ideas about culture, tabletop games and playing them well together. That theory, taken together, has continually informed and shaped the research project as it has progressed. The aim of the project was to discover ways to foster a culture of tabletop gameplay within the physical and temporal social spaces of school life. That is a culture change project, one rooted in play.

In creating our delivery model, I have utilised existing theory relating to play, games and culture as presented respectively by Huizinga (1949), Caillois (1958), and de Koven (2016). Wood’s work on Modern European Board Games (Woods, 2012) has added texture while Sato & de Haan’s (2016) study of an Experiential Method for Teaching Games provided a starting point for our own.

Use of Key Theory in establishing a Theoretical Framework

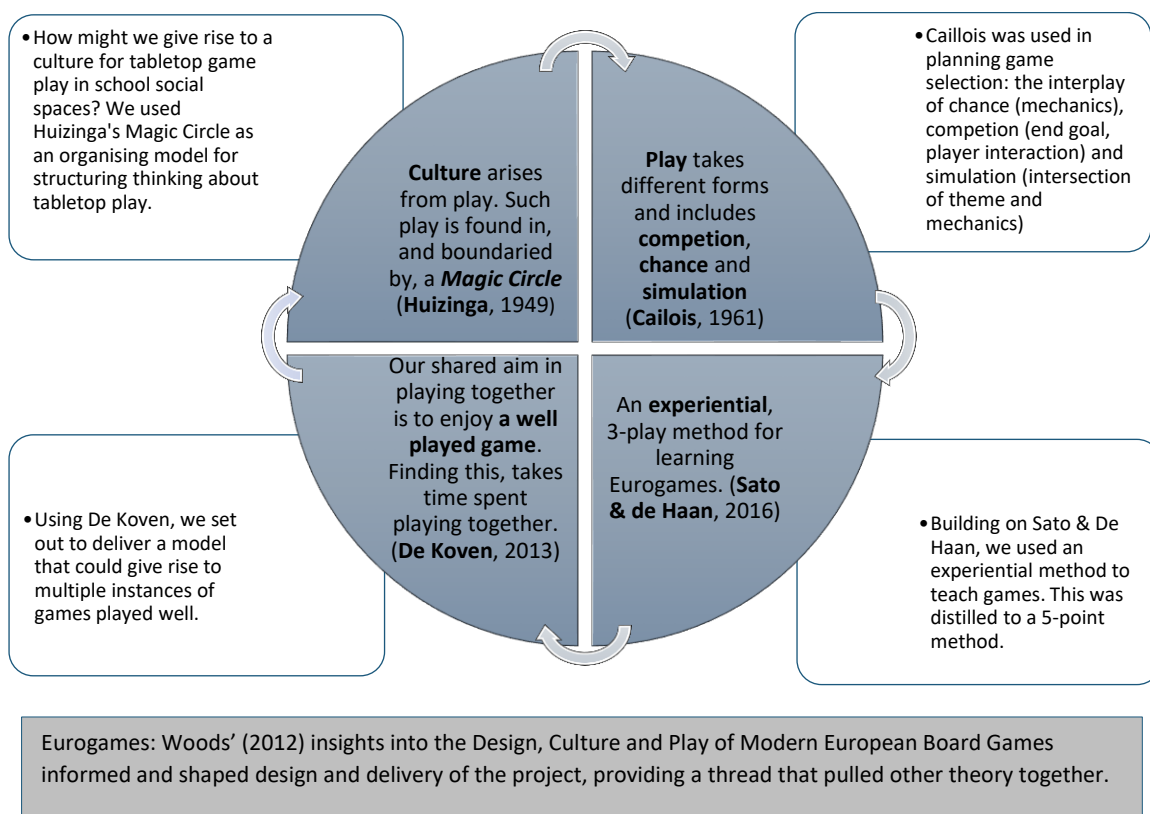


Figure 1: Use of Key Theory in Establishing a Theoretical Framework

Play and Culture – Huizinga (1949)

Culture arises from play and from the social, physical, and temporal structures that define the play act (Huizinga, 1949). Huizinga defines play as “an activity which proceeds within certain limits of time and space, in visible order, according to rules freely accepted, and outside the sphere of necessity or material utility.” (Huizinga 1949, p.132) The presence of this defining set of characteristics of play has become known as the *Magic Circle* and been developed further by other theorists, including Salen & Zimmerman (2006) and Juul (2003). This idea in this form has served to shape thinking in game studies and has shaped our study. We have used it to provide a model of conditions, structure and formative culture for the type and shape of play with which we are concerned.

Play as Competition, Chance, and Simulation – Caillios’ (1961)

In selecting games for play I have been guided by Caillois’ (1961) classification of types of play and accompanying considerations of the interplay of competition, chance, and simulation. I have reflected on the possible meaning of these for our pupils and the way they might best manifest in educational life. These three ideas have carried over into the choices made when selecting appropriate games. How might player interaction, competition to win, demands for mitigation and exploitation of chance and questions of theme (simulation, mimicry) best be managed to encourage positive playful (and learning?) experiences?

Work, Play, or Games? – Suits (1978)

The games we are using fit a Suitsian definition of games. Within UK schools there is plenty of evidence of ant work. But what of the Grasshopper and his insistence that playing games is a higher good than to be working like ants? We are led to ask what the place of play in school should be and, importantly, how much temporal space should it occupy alongside the important task of teaching and learning a secondary school curriculum at least as ambitious as the national curriculum (Education Inspection Framework, 2019). Are the two really in competition?

An Experiential Method for Teaching Games – Sato & de Haan (2016)

Sato and de Haan (2016) build on theory supporting an experiential learning approach, applying it in turn to the teaching of board games. Informed by Dewey (1938), Kolb (1984) and Vygotsky (1978) they use Sturn’s method (Board Game Geek, 2008) in teaching two gateway strategy games to undergraduate students. Their work was incorporated into this project as a basis for teaching games to mentors and other pupils.

Modern Gateway Eurogames – Woods (2012)

Eurogames are a genre of strategy board games originating in post-war Germany, later gaining popularity in mainland Europe, and eventually being imported to the UK and USA. Woods (2012) charts their history and development, evaluates their design features, explores their use as hobby games and provides something of an ethnography of modern hobby Eurogames and of those who play them. The insights he provides into Eurogamers, their reasons for playing and their approach to competitive play have assisted in fine tuning our project design for secondary school play.

Project Intent and Scope

The end goals of the study have been as much practical as theoretical. For the last fifteen years, my work as a senior school leader has been within communities experiencing high levels of disadvantage and challenge. This current practice-led research sits within that wider piece of school development leadership, driven as it has been by a sense of moral purpose to play a leading role in delivering better outcomes for the young people and families served. I hold to a broad definition of outcomes – encompassing but extending beyond important examination grades.

The approach taken throughout this study has been one of pragmatism, directed toward discovering what current access to games looks like for pupils; to considering what shape a game delivery strategy might take in school; to observing and interpreting pupils' experience of and responses to the new games they have played.

Throughout, there has been a desire and intent to find new ways to have a positive impact on outcomes for young people. My initial questions grew from my interpretation of co-constructed game-based encounters with a handful of struggling pupils. In utilising quantitative methods early on to map existing relationship to games I have borrowed from post-positivism, desiring to know objectively what has been played, when, by whom. In overlaying this data with data about pupil groups I have sought to identify trends which might raise questions of social justice for pupils from economically disadvantaged backgrounds and for pupils with SEND.

This study has not been constructed to test intervention with boardgames against a separate and distinct control activity and to seek to measure impact of one against the other. Rather, it seeks to move towards an emic understanding of a current cultural significance of card and boardgames in the play habits of a current generation of young people with their families and peers. In the apparent absence of similar studies, some marginally novel theory is offered, grounded in the responses of our research community. Rooted into, wrapping around, and derived from this methodology and subsequent emerging theory, is a transformative impulse which serves to direct and shape the ongoing project and later, wider work.

I have set out to ground a current working theory for school-based engagement with tabletop games from the survey responses, participant observations and coding of field notes derived from our work within this project with our pupils. That theory seeks to describe a current, snapshot picture of game play as it existed in the autumn of 2021 and the summer of 2022 within this school community and then to describe the experience of sharing new games with that same group of pupils and their responses to those table-based game experiences. This work adds to our knowledge and provides a

model upon which to base future work. It is ethnographic in that it seeks to describe something of the lived experience of introducing, teaching and playing games within this school community. I cannot say to what extent this account might be a typical or atypical reflection of table-based game play in the wider community of 11–14-year-olds. I suspect that it is not atypical – I see no reason to assume it would be. I cannot, however, assert it with any evidence-based certainty; such knowledge extends beyond the boundaries of this localised work.

It is as that current research moves through iterative cycles of refinement that the priorities and impulses of a transformational paradigm seek to embed changes to school-based practices which might bring meaningful lasting benefits to all young people – but specifically to those experiencing social and economic disadvantage, learning with SEND, experiencing difficulties with self-regulation, in danger of suspension or permanent and exclusion, isolated, lonely or socially marginalised. While I enjoy sharing a game with anyone, I am beginning to recognise some of the benefits of the practice to be realised most acutely here.

Literature Review

Contribution toward filling a gap in exiting literature.

This study makes a two-fold contribution to filling a gap in existing literature, specifically:

1. Describing the existing relationship of 11–14-year-olds to the play of card and board games.
2. Reflecting on the potential application of tabletop game play in secondary phase education (ages 11-18) and the responses of adolescents to the playing of modern hobby games.

Current literature explores many aspects pertaining to the nature and play of games but there persists a gap in current literature in exploring fully the place of tabletop games in school, particularly for adolescents. These gaps are most notable when in relation to UK Secondary phase education and in relation to games which might be understood as being non-classical. Literature does consider the gamification of education – mainly explored through digital media, but some literature exists which considers educational adaption of some mainstream hobby games and some limited adaption of modern hobby games to reflect national curriculum content.

The literature on serious games focuses mainly on higher education and on industry.

Games in Education

Do tabletop games have a role to play in schools? If they have a role, should that be primarily curriculum based? Might card and board games have a wider application too, to social and emotional wellbeing and encouraging of human flourishing? Might this latter application even be considered the more fundamental function of the two?

Expectations on schools are considerable. The Education Inspection Framework 2019 (Ofsted, 2019) re-emphasises an “ambitious” knowledge-based curriculum, alongside pupil outcomes as the central work for schools. Beyond this, schools are shouldering an increasing responsibility for safeguarding, matters of pupil wellbeing and mental health. *Post-lockdown* and in the face of ever-growing concerns about the impact of social media and time spent online, this role for educators does not look like diminishing any time soon.

Caught between tightening budgets, an ambitious knowledge curriculum and a seeming epidemic of youth mental health demands, game playing of any sort will need some clear evidential backing to find and hold a place within school life.

There are many activities we undertake in schools aimed increasing knowledge and understanding, or skills for the workplace. We provide instruction within PSHE programmes on how to make safe and healthy choices. Pupils enjoy an hour or two a week of statutory PE to encourage physical

exercise (and, increasingly, mental wellbeing too). But how many opportunities do we provide which intentionally offer experiences which strengthen relationships, combat loneliness and develop social and emotional wellbeing? Providing such experiences would be good in themselves in the moment, but if suitably enjoyable and reproducible might have enriching impact beyond the moment as young people adopt those practices for themselves, in turn sharing in them with peers.

If tabletop games are to have a place in school is that role most effectively targeted towards supporting the knowledge curriculum, developing metacognition and executive function, enhancing personal wellbeing and social interaction, or all of these?

Classical Games in Meta-analysis

Noda (2019) provides a systematic review of the literature pertaining to the effectiveness of intervention with board games in the areas of educational knowledge (11 studies) and cognitive function (11 studies). The study is not exclusively restricted to games in schools. Board games may improve motivation in learning, subject related thinking, and peer communication (Noda 2019, p.19)

Within the (n=27) studies Noda selects, as with much of the existing body of research, there is a predominant focus on classical games such as Chess, Go and Shogi. While these classical or traditional games do not fall outside of the scope of our research the study presented here does extend beyond this narrow but deeply important group of games. Shogi's meta-analysis draws in and includes the finding of similar research conducted by Gobet (2004)

Noda cites (n=11) studies reporting the effectiveness of boardgames in educational knowledge. These games targeted knowledge acquisition and retention in curriculum areas such as nicotine and smoking, breastfeeding, pharmacology, diet and anatomy, and safe places to cross the street. In many of these studies (n=9) it proved not possible to calculate impact (using Cohen's d) either for effect size between pre and post-tests and/or for effect size between mean gain for the experimental group and other groups.

Noda et al concludes that "board games and programs that use board games have positive effects on various outcomes, including educational knowledge, cognitive functions, physical activity, anxiety, ADHD symptoms, and the severity of Alzheimer's Disease." (Noda, 2019) In addition to these considerable benefits, board games were shown to enhance "the interpersonal interactions and motivation of participants and promoting learning" (Noda 2019). These findings are accompanied by the observation that the number of published articles in this area remains limited, echoing observations made fifteen years earlier by Gobet, de Voogt and Retschitzki (2004).

There remains only a limited volume of research in the area of board games and their possible positive effects for players, including adolescent young people.

Go! Alzheimer's and Depression

Playing of Go! Has been seen to diminish incidence of depression and playing for a period of 6 months or more alleviated the symptoms of Alzheimer's Disease. (Lin, Cao, Gao, 2015). With regards participants with symptoms of depression who were passive in playing the game, "We would let the game trainers play with these passive losers and let them win on purpose. Most of them could become active again for playing the game finally." (Lin et al, 2015, p8). In Lin's study the *metagame* space is managed by a participant with greater power and agency to ensure a more positive outcome for a participant with compromised agency like the Alzheimer's sufferer. In our own study, mentors manage the metagame space for the benefit of novice players/mentees.

Chess and transfer to academic and cognitive skills

In a study investigating the use of chess to support cognitive development, 20 5th grade pupils were given 2 years of chess instruction. Following testing, and when compared with a 20 pupils strong control group, chess players were seen to obtain better results than controls. (Christiaen et al 1981)

When evaluating chess instruction and far transfer, one meta-analysis concluded that the majority of studies fell short of ideal design, failing to fully account for an isolation of the impact of chess vs chess instruction vs researcher bias. The authors conclude, however, that chess exerts a slight positive influence on both academic and cognitive abilities (Sala, Gobet, 2016). In reflecting on future study, there is an encouragement to consider whether some features of chess such as quantitative relationships between pieces and problem-solving scenarios are shared in common with other board games.

Competitive and Cooperative Board games and social relationships

In investigations of the effects of cooperative and competitive games on behaviours of pre-schoolers (4- and 5-year-old children), aggression was seen to increase in competitive games and decrease in cooperative ones. (Bay-Hinitz, Wilson, 2005). The authors define competitive games as being ones in which there are both winners and losers and being structured such as to promote "strong motivation to succeed as well as an interest in seeing one's opponent fail" (Bay-Hinitz, 2005, p.435)

One teacher in the study observed that “cooperative board games needed to be more appealing” (Bay-Hinitz, 2005 p.444) with participation rates ranging from 30% to 45%. “Games act as setting events that make cooperation more probable” (Bay-Hinitz, 2005 p.444)

“To the degree that the roots of aggression lie in the failure to learn and practice positive social behaviours in early childhood, preschool environments that promote the widespread use of cooperative games (coupled with limitations on competitive games) may reduce tendencies to respond aggressively and may positively affect future social behaviour” (Bay-Hinitz, 2005 p.444)

Regrettably, the study does not differentiate between the relative outcomes for table-based games vs non-table-based games, be they competitive or non-competitive. In addition, conclusions of the study are applied to pre-schools. The degree of reliable transferability to a Secondary School context is unclear. But perhaps there is a role for positive social reinforcement through board game play in early adolescence too.

Social Relationships and Achievement Outcomes

There exists considerable evidence that improving the social relationships of early adolescents impacts academic outcomes positively (Roseth, Johnson and Johnson, 2008). This is identified as being of particular importance during periods of stress, such as those encountered at points of school transition. (Berndt, Hawkins, & Jiao, 1999, Wentzel, Barry & Cadwell, 2004)

Improving social-emotional factors, including relationships, can also be seen to improve outcomes for disadvantaged students (Becker and Luthar, 2002). Becker and Luthar review academic and school attachment, teacher support, peer values and mental health as factors impacting disadvantaged middle school (early adolescent) pupils and urge school leaders to provide “protective processes” (Becker, 2002, p.199) In the United States, evidence of outcomes from the Child Development Project (CDP) which sought to enhance protective factors such as school climate and social bonding, reveal positive links to intrinsic academic motivation, concern for others, conflict resolution and assistance of peer learning (Schaps & Lewis, 1999, cited in Becker 2002, p.200).

If promoting a positive culture of tabletop play of modern card and board games in schools was found to promote personal happiness, social connection, and bonding between peers, then might a positive further impact for connection to school, intrinsic motivation for learning, and potential academic outcomes also be theorised?

Beyond this, citing multiple theorists, Becker affirms the presence of a supportive relationship with an adult as being “one of the single most commonly identified protective factors in the literature on

resilience” (Becker, 2002, p 204) It is our belief that tabletop games with their structured play form and concrete location might provide an appropriate and potentially beneficial medium through which adult and older peer support might be mediated to younger players through the teaching and playing of games.

Board Games and Play Therapy

The use of board games as motivational therapeutic tools used in support of child psychotherapy has grown over recent years with over 1,000 specifically designed games now available for treating young people (Stone and Schaeffer, 2020). Social benefits of playing board games include “communicating verbally and non-verbally, reciprocal respect, learning how to share, patience, taking turns, and having fun while connecting to others” (Stone, 2016, p.3) .

Games are suggested as useful tools in building therapeutic alliances between young people and adults and as shared activities with which to prolong the engagement of young people. Specifically designed therapeutic board games have been directed towards supporting treatment of anger, aggression, ADHD, anxiety, fear, grief and loss, development of social skills, working with autism, building resilience, supporting sexually abused children, and fostering parent-child attachment. (Stone, 2020)

Specific modern board game recommendations are provided for support of social skills development. These include UNO for self-management and for use in the early stages of social skills programmes for the assessment of levels of basic social skills including turn taking, assertiveness and managing peer relations; Snake Oil (Jeff Ochs, 2010) for peer relations domain and a foundation for empathy, FLUXX (Looney, A., Looney, K., 1997) for rule-following, Codenames for self-management and theory-of-mind skills (Stone, 2020)

Board games and developing speaking of English.

Board games have been successfully used in support of developing confidence in spoken English language in ESL programmes. A systematic review of eighteen articles and journals focused on use of board games to develop English spoken language (Wong and Yunus, 2021).

Pupils were found to express benefits to learning attitude, learning competence and that playing board games together “enhanced their learning community development” (Wong and Yunus, 2021, p.6)

“The stress-free ambience offered by board games allowed pupils to forget their shyness and express ideas naturally.” (Wong and Yunus, 2021, p.8)

Within this study and in review of the underlying articles on which it is based, it is not always clear whether traditional board games or specifically designed language games have been utilised. Specific mention is made to modified versions of Monopoly and Snakes and Ladders (Uncredited, BCE 200), but also to a small number of strategy board games utilising social deduction game mechanics. These include Werewolf (Davidoff, D., Plotkin, A. 1986), The Resistance: Avalon (Eskridge D. 2012) and Mafia (Davidoff, D., Socha, P. 2007).

Utilisation of existing research theory

Existing theory has been used in establishing our theoretic research framework as discussed above and illustrated in Figure 1 (page 28).

Our baseline data pointed to a pupil preference for observational or experiential learning of a new game with the support of an experienced player-guide.

In selecting an approach for teaching games, the work of Sato and de Hann (2016) offered a starting point – which through the iterative nature of this research did in fact prove to be a point of departure, adapting both Sato’s three-teach experiential approach and Sturm’s (2008) method of teaching.

Sato and de Hann (2016) employed an experiential learning model for the teaching and learning of *gateway* strategy board games employing “demonstration, observation, reflection, discussion and repeated experiences”. They found this to be a favourable strategy for teaching games to undergraduate students with whom they played Ticket to Ride (Moon, 2004) and Hey, That’s My Fish! (Jakeliunas, 2003).

Sturm’s model was adapted to a five-point teaching model which was used to teach games to pupils and which board game mentors were trained to use. The five points may be applied in any order most relevant to the game but there can be an argument made for tending to teach most games backwards from end conditions:

1. What is the big idea of the game?
2. How does the game end?
3. How does a player win the game?
4. How does a player take their turn?
5. Any other essential information necessary for starting to play the game.

Layered over this was the understanding that in our first play the focus was understanding the procedural rules and rhythms of the game. In the second play there would be some discussion of strategy arising from the first games. In the third game set-up would be covered along with any advanced or alternative rules. The reality of the project as it developed was that this aspect of our ideology diluted over time. As mentors and pupils took hold of games, owning them for themselves as their own cultural objects, they just got on and played together. I happily afforded them the freedom to do so.

Ideally the teacher-guide would be a player-teacher-guide and would *narrate their move* along with some reasoning for their choice of action. Simple player aids would be provided where appropriate to reinforce basic rules, round sequences, and iconography.

This methodology was employed when teaching games directly to pupils and when training mentors. It was the methodology mentors were themselves trained to employ when teaching games to other pupils.

Positive outcomes of adolescent playing of card and board games, and current trends in tabletop game play at home – an area of overlooked theory.

This research seeks to initially answer the question of what existing relationship pupils aged 11 to 14 have with card and board games, whether they be traditional or modern games. Since the early 1980s the prevalence of home computers, games consoles and hand-held devices has expanded at an unprecedented rate. Research has focused on both the benefits and dangers afforded by immersion in digital games. As both a parent and as a secondary school practitioner I have experienced anecdotally both the joys and the dangers that straddle either side of this debate. Within school we have noted over several decades a trend away from families sitting and eating meals regularly around the table at the same time we have witnessed a trend of young people spending ever longer periods of time immersed in a digital world of gaming, online browsing, and social media.

Our initial inquiry sought to ascertain against this growth of digital play and digital immersion what was happening for our pupils around table-based play. I have been able to find little evidence of this being a driving concern of any current research. In that respect this research takes an initial step in describing what this picture might currently look like for early adolescents.

In seeking to describe this existing current relationship with board games in 2021, post COVID lockdown and beyond, I seek to ask a further and more important question: at a time when digital immersion and isolation due to lockdown have seemingly combined to create almost epidemic proportions of loneliness, unhappiness and mental health challenges for young people what place might table-based games have in offering social and emotional benefits for the well-being of young people? As this project is school based, possible cognitive benefits are also considered important. While an increasing body of research exists describing the wave of mental health issues facing young people at this time there again appears to be a hole in the research as to whether table-based play, in which young people gather round the table in physical proximity, facing each other and engaging in sustained social interaction and mirroring around a game, might contribute to positive outcomes for young people. This research seeks out some initial answers to those questions while recognising the limitation of our findings to one local community of school pupils.

There is nothing ground-breaking about board games. Archaeological evidence shows that they have been with us since ancient civilization. Traditionally, within British culture, games have been a feature of play in many homes. We have grown up with games based around playing cards and board games such as Chess, Scrabble, Cluedo and Monopoly. These games have formed part of the common childhood experience, and as result, form part of the cultural capital of many adults born

since the 1960s. In the 1980s, pop band Buggles sang “Video Killed the Radio Star”. In like fashion one might ask whether video games may have killed the traditional board game, as digital sweeps away analogue game play. The evidence of annual sales of games like Monopoly published by Hasbro would seem to indicate that they haven't yet, at least not decisively.

Research charts a movement away from the family meal table but what is the trend in relation to the family game table? It seems to us that this question has not yet been adequately researched. What is the current state of family engagement in the practice of sharing and playing table-based games? If, as may be the case, the practice is being lost from many homes, what might be the possible impacts on social, emotional, and cognitive development, and how might these ever be accurately measured? Our research is a limited attempt to begin ask some of these questions. The subject of our enquiry is not ground-breaking, but it does seem to be deeply important.

More important still are whether and what the impacts might be on social and cultural capital deficit for some young people from disadvantaged backgrounds.

If a divide were to exist between rich and poor in the playing of tabletop card and board games, then might we need a concept such as *board game poverty* to apply to the experiences of some disadvantage pupils? This leads to a further question that I have been unable to find answered in existing research: what different experiences might be had by pupils who are not disadvantaged versus those who are economically disadvantaged? Our research sets out to offer some tentative answers to these questions for the young people in our study population.

Relationship to existing theoretical discussion.

Games and Life

“Playing a game is the voluntary attempt to overcome unnecessary obstacles.”

(Suits [1974] 2014, p.43)

What are we doing when we play games? And why do we believe they hold something important for schools?

In most areas of life, we are driven by efficiency in achieving goals. At the most basic level, these needs are for food, drink, rest, and safety. These needs famously form the base of Maslow’s Hierarchy model (Maslow 1943, 1954). We usually pursue these goals with the greatest efficiency possible. We have good reason and a basic, instinctive need to do so.

In education too, we operate within a goal-driven world, seeking to find ever more efficient ways to move knowledge from the external world to the inner world of our pupils’ minds. As teachers we seek ever greater efficiencies to meet external expectations for outcomes, measured in exam results graded on the curve. We seek to move further up this curve, running ever faster than the other hamsters in the wheel, our energy translated through our pedagogy and harnessing of cognitive science to achieve ever more efficient transfer. Our spiralling frenzy for ever greater efficiency in the act of “knowledge insertion” has led some to ask whether our efforts may not in fact be in danger, ultimately, of “cheating education” (Aldridge, 2018), of seeking to remove natural barriers to learning that are more rightly our pupils’, rather than ours, to navigate. Perhaps these obstacles are theirs, not ours, to learn to work within, climb beyond and ultimately summit, to truly own the prize well earned. We stand as aids to that struggle rather than circumventers of it.

Games, we are told, are efficiency puzzles but ones in which achieving the end goal entails navigating a set of deliberately imposed constraints placed on the path between us and the goal (Suits, 1978). These obstacles are defined by the rules of the game and the chosen necessity of their successful navigation is, essentially, what makes the game. Unlike the pursuit of basic needs in real life, games, by very nature, make achieving the end goal more difficult, not less difficult.

In games, the stakes involved in winning and losing are generally low – unless by means of some kind of wager we agree by our own volition, or that of another, to increase them.

If life were a game, then its play would necessitate the navigation of innumerable barriers and obstacles. Its rules of play would be complex – with some rules explicitly stated while others

deliberately hidden. Players would need significant cultural capital at their disposal to navigate this game successfully. They would require deep wells of resilience from which to draw as they would, most likely, encounter manifold setbacks along the way. The stakes would be high – for time, happiness, and life its very self would be the substance of the wager accompanying play.

Our philosophy of education and our ideologies relating to the nature and function of the state, of economic ideals and social construction will ultimately govern and shape how we view the purpose and function of education. Wherever we might differ in those views, we must surely find a general agreement in the notion that school ought to play its appropriate part in preparing children for life and adulthood – with all its accompanying barriers and obstacles to be overcome.

I would argue that learning to play games may, after all, have quite a lot to offer in the preparation for playing the game of life.

As one moves on to the middle section of Maslow's hierarchy and to psychological needs: esteem, accomplishment, friendship, belonging and love, these goals might be attended to, in part, through the playing of games within families and with peers. Within our data, these are categories which have emerged as important: game play as a happy experience, feelings of social connection to peers, desire to play again. These experiences are encountered and reported from within a shared, co-constructed social story. They arise from individually and collectively making a journey through a series of constraints and obstacles, towards an end goal. Each player exercises personal agency within a decision space which may be constrained to a greater or lesser extent as governed by the game. This opportunity to express personal agency might be considered an activity in relation to a game as a form of art (Nguyen, 2020). There will be one winner of the game and multiple losers according to the normal end goal criteria of a game. How is that loss experienced? Our data would seem to suggest that in these relatively low stakes settings, losing presents little tangible barrier to a desire to play again. The absence of a win seems to be of only minor consequence.

It seems that if games are well chosen, if culture for play is deliberately attended to and nurtured, winners and losers of the game might equally become winners of the shared experience of playing together within the game space. This co-constructed and mutually mediated happy experience, this opportunity to have fun, together, belonging to one another and to the game in that proximal and temporal moment – that makes everyone a winner. Nguyen explains this phenomenon by way of distinguishing between game *goals* (the criteria by which I win the game) and our intended *purpose* in playing the game at all.

For the pupils in our study, *casual, social players, striving* towards the end goal of the game might be interpreted as being only instrumental to a better win, a more fundamental purpose – that of experiencing a *well-played game* (de Koven, 2016) in community with peers.

Location within current knowledge of utilisation of board games within school.

Adding to the existing body of knowledge.

This research adds to the existing body of knowledge around youth and family studies through the insight it offers into habits of play around card and board games for a group of pupils in the age range 11 to 14. It further adds to this field by providing insights into how this group have experienced the learning and playing of new board games with their peers, and their expressed preferences for whom they may wish to share new board games that they have learned.

Insights might be provided somewhat tangentially to educational studies with participants expressing their preferences around favoured ways of learning a new game. During lockdown for many pupils, learning moved online. Resources from sites such as Oak Academy provided video-based learning in place of learning traditionally experienced face to face with a teacher or from written sources. How might this have impacted pupil's expressed preferences around learning in new game?

This research adds insight to the current body of work around the mental health and well-being of young people. It asks whether table-based play may have positive well-being outcomes for said group and it offers insights from pupil's experiences of such table-based play within the school setting.

Finally, to the small body of work around effective ways of teaching games, particularly in school, this study offers reflections on some of the factors impacting successful implementation of a school-based board game strategy.

Research Methodology

This study has adopted a pragmatic mixed-methods, practice-led, participant-observer approach. The nature of the methodology has evolved over the duration of the research with different approaches carrying greater importance in specific phases. In the initial phase, early baseline data is wholly quantitative in nature and derived from online survey responses. In the second phase there was a mix of quantitative survey data combined with participant observation and ad hoc informal interview. In the final phase built around a summer school transition event, two separate groups of

survey data were collected and further informed by analysis of field notes and a small number of semi-structured interviews.

Methods:

A mixed methods approach was taken using two quantitative surveys supplemented by participant observer fieldnotes collected during Summer School and when working with a small number of the school's students educated in alternative provision. A limited number of semi-structured interviews were conducted with summer school students and with a mentor. In all cases, an explanation was provided of the research basis for the work and informed consent was sought and received.

How, when, where, and what of the research that was conducted.

This research was conducted within a coastal non-selective secondary school in the period between Autumn 2021 and the Summer of 2022. The researcher was at the time working as Senior Vice Principal at the school. The research was conducted with existing pupils based at the school, a small group of the school's pupils educated off site in alternative provision and a cohort of year six to seven transition pupils due to join the school in September 2022. The school has higher than average levels of economic deprivation and falls within the 80th percentile of schools nationally for additional educational need. The school is located in a county which runs the 11-plus selection system. As a non-selective school in that setting, many pupils tend to have a lower than average ability on intake. The school was academized as a sponsored Academy in 2009 and benefits from the sponsorship of Canterbury Christ Church University. I had been employed in the school for a period of nine years and therefore had some existing relationship with many of the pupils participating within this research project. I held a position of respect within the focus community and, as a result, an unequal power relationship with pupils participating in this study.

This school-based project was subject to development over time within an iterative process but can be broadly understood to have had seven phases of development and delivery (see figure 1). Whilst survey structure and questions remained consistent phase to phase throughout the study, each subsequent phase was in part shaped by new learning gleaned in preceding phases.

Ethical and consent:

This research was conducted within a Secondary School at which I was employed and a PRU providing off site alternative educational provision to a small number of our pupils. I was seconded to the Management Committee of the PRU on behalf of the Principal. Permission was sought from and provided by Headteachers at both educational establishments to conduct research. The surveys underpinning this research were devised to provide baseline and impact data for a school-based project and were in keeping with normal ways of working within the fulfilment of my role as Vice Principal. Permission was sought to use the responses generated as a secondary source along with existing pupil characteristics data. Within the school project this contextual data, when combined with the responses to surveys, was intended to provide a richer understanding of the experiences of the cohort and so facilitate more informed shaping of the project and any accompanying targeting of provision. Pupils were briefed as to the secondary use of the data for the purposes of academic research and informed consent was obtained.

In the case of the baseline survey, conducted via Teams, pupils were given a verbal briefing explaining the primary (in-school) and secondary (research) purposes of the data. This was explained again in a header text for the actual questionnaire. A confirmation or rejection of permission response was required at the end of the survey, prior to submission.

Pupils were briefed prior to playing games as to the intended use of their post-game survey responses. They were informed that they were free to complete a questionnaire, or not, as was their wish. Questionnaires were completed either as paper-based or accessed on Teams via QR code using pupil phones, or via Academy laptops available in the room. In each case, supporting text was included informing of the use of data and an agree/disagree option was completed at the end of the questionnaire. In the case of paper-based surveys, a signature confirmation was also collected. This was true of mainstream pupils and those playing games at the PRU.

Post-16 Mentors were asked to complete a questionnaire following game sessions with younger pupils. These were optional and carried the same verbal briefing, text briefing and consent confirmation requirements as used in the baseline and post-game surveys.

At sign-in for the Summer-School phase of the project, parents signed agreement for the game-based activities as part of the core provision. Photo permissions were also provided at this stage. Participating pupils were fully briefed as to the purpose of the baseline and post-game surveys and provided informed consent in the same ways as described above. Where semi-structured post-game

interviews were conducted with pupils, these were subject to a further briefing and permission form being completed.

A full ethics request was made to Canterbury Christ Church University's Ethics Board and permission was granted to conduct the research as presented. Permission to conduct research at the PRU and Summer School were sought and granted via a supplementary request to the CCCU Ethics Board. Permission was given for video recording of games at the Summer School, but this methodology remained unused in this study. Collected data is subject to a data plan and is used anonymously.

Research Timeline

October 2021 – Baseline data collected via online surveys hosted on Teams and completed in IT lessons. Surveys explored existing relationship to card and board games. (n=310)

November 2021-January 2022 – Training post-16 Boardgame Mentors. Collecting post-game surveys via Teams. (n=33)

January 2022-March 2022 – Boardgame Mentors teach games to pupils in KS3. Post-game surveys collected via Teams and on paper. (n=83) In addition, surveys were completed by Year 11 pupils (n=10)

July 2022 – Summer School. Fresh baseline data collected in paper surveys (n=23). Games taught over the course of four days. Post-game surveys collected (n=92)

Total sample size: Baseline surveys n=333 Post-game Surveys n=218

Table 1 Project Overview in Seven Stages

To explore whether there are benefits to pupils from the introduction, learning and playing of modern board games (including modern card-based games) in Secondary phase education.

Project Phases:	Phase 1 Baseline Data Collection	Phase 2 Design Delivery Model	Phase 3 Game selection	Phase 4 Post-16 Mentor Training	Phase 5 Mentors share games with KS3 pupils	Phase 6 Pupil Referral Unit	Phase 7 Summer School
Focus Question	What is the existing relationship of pupils to card and board games?	Delivery via post-16 mentors Experiential learning approach 5-point teaching method Magic Circle + A Well-Played Game => A positive culture for play	Which games will be good choices to teach? Gateway Strategy Games BGG Weight <2.5 Faster play times <30 minutes <1 hour	What are the key concepts mentors need to successfully teach and share games? How do mentors experience the activity of learning games?	How do mentors experience the activity of teaching games? How do KS3 pupils experience the activity of learning games?	Use of games as intervention with target school pupils placed in Alternative Curriculum Provision Field Notes.	What is the existing relationship of KS2-3 transition pupils to card and board games? How do KS2-3 transition pupils experience the activity of learning games? Application of prior learning to new Summer School group of pupils.
Date range	October-Nov 2021	Nov-Dec 2021	Nov 2021	Nov-Dec 2021	Jan-Mar 2022	May-July 2022	July 2022
Research Approach	Quantitative Baseline survey (n=310)		Prior knowledge & desk research via Board Game Geek	Mixed Methods	Mixed Methods	Qualitative	Mixed Methods 4 games learned in 4 days
Methods	Online questionnaire: "Baseline survey"		Desk based and prior knowledge	Online questionnaire: "Post-Game Survey" (n=33) Participant observation, ad hoc informal interview	Online questionnaire: "Post-Game Survey" (n=83) and "Mentor Feedback" survey Participant observation, ad hoc informal interview	Field Notes, unstructured interview	Paper questionnaire: "Baseline Survey" (n=23), Paper questionnaire "Post-game survey" (n=92) Participant observation, analysis of field notes, unstructured and semi-structured interviews

Project Phases

Project Phase One: Baseline Data Collection

Phase one of our project consisted of baseline data collection. A questionnaire was prepared and delivered as an online survey via the Teams software app installed on the school system. Key stage 3 students (aged 11 to 14) were invited to complete the questionnaire over the school network at the start of an IT lesson. A form of words was prepared and shared which explained that in this school-based project leaders were keen to understand pupils current experience of card and board games. In keeping with obtaining informed consent pupils were informed that their responses would be used for the purposes of in-school research and academic research.

During this phase 310 surveys were returned. With the consent of the Head Teacher of the school, on-file contextual data was used and reconciled with the accounts of pupils completing the survey. This matching process was completed manually based on surname and forename, within Excel. Matched data was analysed and examined for trends. In addition to whole cohort responses to questions, the data was also scrutinised on a comparative basis between pupil groups. For example, those pupils with additional educational needs and those pupils without additional educational needs, those peoples eligible for free school meals compared with those peoples not eligible for school meals, those pupils recorded on the system as boys versus those students recorded on the system as girls.

Project Phase Two: Designing the delivery Model

Our delivery model has been described in some detail elsewhere, chiefly within the section describing our theoretical framework. That framework was used to shape our practice, further informed by our baseline data.

As our research progressed the model was further refined through an iterative process of responding to feedback in the form both of post-game surveys and through our observational activities. Our delivery model required a sensitivity to the spaces, patterns, and rhythms of school life. This eventually developed into a formative theory which moves beyond the immediate scope of this research and is referenced briefly within the appendices of this document.

Project Phase Three: Choosing the Games

Based on the researcher's prior experience, a short list of games was drawn up. A range of criteria were used in determining which games met selection. Games were chosen which were appropriate for entry level players and were playable within the bounds of a one-hour lesson.

Game complexity records were consulted on the Board Game Geek website (see table 2). All games involved in the project had a complexity rating lower than 2.5. The range of complexity offered in the BGG weight or complexity rating is from nought to five. All games involved are categorised as strategy board games or card games.

Consideration was given to possible educational content within games and appropriateness of theme matched to the age of pupils to whom games were being taught. Consideration was given to content and theming which were not wholly appropriate, based for instance, on the insights provided by critical theory. Further discussion is provided elsewhere within this thesis. Games with such theming were avoided.

Gateway Eurogames, sometimes referred to as *welcoming games*, lie at the lower complexity level of strategy board games. The online community Board Game Geek allows hobbyists to rate games on the basis of their enjoyment to play and on the complexity of their rule set and internal mechanisms. Gateway games are usually deemed to offer a good introductory experience to players new to the hobby and have, for that reason, formed a pool from which the games chosen for this project have been selected.

In his study of Eurogames, gamers and their accompanying culture, Woods (2012) devotes a whole chapter to the demographic of Eurogamers and specifically those belonging to the Board Game Geek community. Based on the evidence of his research he describes this as the “hobby of the over educated” (p.125) with 78% of respondents to his surveys being in receipt of a graduate level education. This is the community offering their evaluation of the complexity of the games used within this study. Higher complexity and overall rating tend to correlate on the site; hence a *family* category rank is also provided. Wood’s research is now a decade old, and the mix of the community has no doubt changed, but games enjoyed by large numbers of well-educated individuals might be considered to be of possible educational value to pupils still only part way through their education.

The following table carries data showing the complexity ratings for the games used. Following the play of each game, pupils completed a post-game survey. Responses included pupil player ratings of how hard they had to think while playing the game and how good a grasp pupils perceived themselves to have of the rules of each game. That data is presented later.

Table 2: Selected Project Games Overview

Title	Year	BGG Rating	BGG Rank	BGG Family Rank	BGG Votes	BGG Complexity (/5)
Sleeping Queens	2005	6.5	2,233	746	3,877	1.05
Sushi-Go	2013	7.0	505	134	40,888	1.16
Kingdomino	2016	7.3	250	50	40,608	1.21
Ticket to Ride London	2019	7.1	1,012	243	3,512	1.32
Azul	2017	7.8	65	9	71,287	1.76
Splendor	2014	7.4	192	38	69,687	1.79
Marvel Splendor	2020	7.6	715	144	2,783	1.90

Project Phase Four: Post 16 mentor training.

When this project was originally conceived it was anticipated that the lead researcher would teach games directly to pupils. During the initial phase of the project a small quantity of funding became available to the school to be used in a pursuit which would build confidence and communication skills in pupils. A proposal was made to use this money to fund the external training of a group of post-16 mentors.

Driven by the convenience of timetabling, a group of Year 12 International Baccalaureate pupils were selected as mentors. The selection was of the whole teaching group. No further selection within this group took place. Alongside the training these pupils received in how to be a good peer mentor, training was delivered in how to teach a board game and how to create a positive culture for play. Selected project games were taught, with this part of mentor training being delivered directly by the researcher.

Pupils were coached in a five-step method for teaching games adapted from the work of Sturn as cited in Sato and De Hann (2016). They were coached in strands of the concept of *Magic Circle* as presented by Huizinga and this was used as a model to structure dissemination of culture. It was impressed upon mentors that their role was to establish table-based culture for play with pupils who potentially had no such established culture, or who had experienced less positive experiences of such a culture. As part of their mentor training pupils were helped to reflect on characteristics of a good mentor including showing up, demonstrating an interest in mentees, maintaining a calm approach, how to respond to a difficult or disengaged player, and how to handle, share and report a well-being or safeguarding concern.

Project Phase Five: Mentors share games with Key Stage 3 Pupils

In this phase of the project structured opportunities were provided for mentors to share games with cohorts of key stage 3 pupils. These opportunities were of two main varieties. In the first, a whole class group were timetabled in place of their normal lesson to come and play games led by the mentors. In the second type, mentors engaged with pupils considered vulnerable during tutor time and used games as an intervention to support those young people. In both instances, Key Stage 3 participants were informed of the nature of the project and were invited to provide a post-game survey response. Surveys were available to be completed via the school network, on the pupils' mobile phone via a link, or on paper. In each instance informed consent was obtained as part of completing the survey. Pupils were free not to make a survey return. Following the teaching of games, mentors were invited to record their experiences in a mentor feedback survey. Informed consent was obtained. Mentors were free either to make a return or not make a return.

Project Phase Six: Pupil Referral Unit

Running concurrent with the latter stages of the mentor phase (phase 5) and prior to the Summer School (Phase 7), games were shared in an off-site alternative curriculum provision with current pupils of the target school. No baseline surveys were captured, but a few post-game surveys were recorded and the results of these were supplemented by field notes compiled by the researcher. Permission to use this data was achieved in advance from the Head Teacher and permission to use was included in the ethics submission granted by Canterbury Christ Church University's Ethics Board.

Project Phase Seven: Summer School

Based on prior work in this school-based project, I was invited to deliver a games component in the school's year six to seven (ages 10-11) summer transition programme. Employing learning gleaned from the other phases of the project a delivery model was devised and delivered to all pupil members of that cohort prior to delivery of any games. Intervention pupils were invited to complete the baseline survey used with the earlier Key Stage 3 cohort in phase one. All pupils present on the first day completed this survey. Prior to completion, pupils were informed that their responses would be used for academic research. Informed consent was received in all cases.

A short list of games was compiled based on criteria of game length of around thirty minutes or less, player count of two to four players, *gateway* level complexity, absence of player elimination,

minimal or absent *take that* style player interaction. Prior experience of how games had been received elsewhere within the wider project was also considered.

Selected core games were as follows:

Day 1: Sushi Go (Phil Walker-Harding, 2013),

Day 2: Kingdomino (Bruno Cathala, 2016),

Day 3: Splendor (Marc Andre, 2014), Marvel Splendor (Marc Andre, 2020).

Day 4: Ticket to Ride London (Alan R. Moon, 2019),

In addition, we taught Sleeping Queens (Miranda Evarts, 2005) before the scheduled start of day two as pupils arrived and Azul (Michael Kiesling, 2017) on the morning of the final day during the board game event, unplanned in the original programme.

Once per day for 50 minutes pupils were taught one game. Following the learning and playing of the game, pupils were invited to return a post-game survey like those used in Phases four and five of this research. Again, informed consent was obtained. All pupils learned the same game on the same day. Four different games were learned over a four-day period. Post-game surveys were completed on each day by each pupil. On the fifth day a two-hour window was provided in which pupils could select a game they had played during the previous four days to play with their peers. No post-game surveys were requested on this occasion, but participant observation was made, and field notes collected, some unstructured interviews were conducted.

Working in tandem with the lead researcher were two members of the researcher's family who had been trained in the methodology similar to the training received by the post-16 mentors. One of those mentors delivered games on the first day only. The other delivered games on three days.

Data analysis strategies employed.

Data analysis has been conducted within Excel with a central focus on mean averages, percentage responses, ranges of responses. Much of this work has been conducted using embedded formulae, some using existing Excel functionality within data and sort functions.

Software and tools used for data analysis.

Quantitative survey data has been collected in Forms, via Teams and subsequently transferred for analysis within Excel.

Research limitations and hurdles that had to be overcome.

It would have been desirable to return to complete further interviews with participant pupils. Changes in the circumstances of the school made this less easy than it appeared might have been the case earlier in the project. Such interviews would likely have provided for greater explanatory rigor.

Birks and Mills (2015) contend that effective grounded theory achieves a rich, explanatory function of a given phenomenon. Our research may fall some way short of providing such an explanation of *why* games are providing a positive experience, or *why* pupils are experiencing them as fun. Of why particular instances of games are found to be more fun than others or require harder thinking than others. I can offer my own observed insights derived from my participant observation in some tentative hypothesis, but further semi-structured interview is likely to have yielded richer, more fully saturated data.

In the absence of further data retrieved from the conveyance of the direct voice of pupil participants, this research remains mainly descriptive in nature and scope. This research, standing on its own merit as presented, adds to value to the existing body of literature.

Justification of selected research approach and research methodology.

The choice of initial quantitative survey data seems well chosen to provide a picture of the existing relationship of pupils towards card and board games. The addition of pupil contextual data adds richness. The data revealed notable differences in access for pupils from distinct groups, chiefly those of sex, disadvantage and SEND. This data also revealed no reported instances of prior experience of any of the games subsequently selected for use. It was also clear that existing pupil expertise in these games could not be employed in sharing games with peers – such expertise did not exist. It would need to be created. This, in turn, led to a modification of the anticipated project design through the training of mentors.

Repeated iterative cycles of surveying, of teaching games, of surveying responses have provided layers of data from which key insights have emerged and project refinements made.

Research Findings and Discussion

“...play taunts us with its inaccessibility. We feel that something is behind it all, but we do not know, or have forgotten how to see it” (Fagan, 1981, cited in Sutton-Smith, 1997)

Data Set One: Baseline Data – Existing Relationship to games.

Method

Baseline Survey – Current experiences of playing card and board games.

An online questionnaire was designed and hosted on the school virtual Teams area. The school Computing department were briefed and agreed to allow time for each class to access the survey as part of their learning how to access Teams in preparation for the possibility of future COVID-related virtual education. The survey required log in by individual pupils using their school account to access. The survey was set to require a response to all questions. The data was collected as a baseline for this in-school project and is in keeping with our normal way of working. The resultant data might be considered a secondary source for the purpose of this research although the research lead initiated the creation of the data and dictated its shape. No researcher was present during its collection.

An exceedingly small minority of pupils responded to the survey on two or three occasions. These cases were managed as follows:

- Paired entries at the same date and close time. A pupil had forgotten their password or had needed to share a PC and so had used another pupil’s account. In this case, contextual data could not be matched and so the second record in a pair was discounted.
- A pupil had multiple entries, falling on different dates. In this case the first entry was used, and later entries were discounted.

The total population for each year group and number of respondents per year group are shown in the table below. Pupils completed the survey in their IT class groupings. Not all classes completed the survey, but these were not selected. As such, completion and non-completion was therefore partially randomised, but on an ad-hoc basis.

328 responses were submitted once duplicate responses were removed. Around 94.5% of respondents were in years 7-9 (KS3). It was decided to remove the 4.5% of respondents who were from year 10 and the 1% from year 11 from the sample for the purpose of this analysis. This was felt to provide sharper focus and had a secondary benefit of balancing proportions of boys and girls as all responding pupils in year 10 were boys.

Year Group	KS3			Total
	7	8	9	
Total population	156	171	134	461
Completed surveys	119	99	92	310
Sample group as percentage of full population (%)	76.3	57.9	68.7	67.2

KEY STAGE 3 BASELINE SURVEY COMPLETION



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Figure 2: Table showing total pupils on roll population size and survey return rate for Key Stage 3

Gender

N=156 respondents (50.3%) were identified as male by the school MIS (SIMS), with n=154 (49.7%) identified as female.

Table 3: Baseline Data Cohort Characteristics - Gender

Respondent Gender	Male	Female	Total	% Male	% Female
	Count (n=)	156	154	310	50.32

Age

All included respondents belonged to KS3 (year 7 to 9, ages 11 to 14) (n=310)

Table 4: Baseline Data Cohort Characteristics - Age Distribution

Year group	7	8	9	10	11
Count (n=)	119	99	92	15	3
% of respondents	36.28	30.18	28.05	4.57	0.91

Economic Disadvantage and Special Educational Need

Of the pupil respondents completing baseline surveys, 40% (n=124) were currently eligible for free school meals and 46.7% (n=145) were in receipt of Pupil Premium (FSM Ever6) funding. 30.97% (n=96) of respondents were coded as receiving SEN support (but non EHCP) with an additional 1.61% (n=5) subject to an active EHCP.

Table 5: Baseline Data Cohort Characteristics Distribution - FSM, PP, SEND

Pupil Characteristics	Count (n=)	%	Total
FSM	124	40.0	
Not FSM	186	60.0	310
PP (Ever 6)	153	46.7	
Not PP	175	53.4	310
SEN K	102	31.1	
SEN E	5	1.5	
Not SEN	209	67.4	310

Who do you usually play a card or board game with?

Pupils reported that parents were the preferred group for them to play a card or board game with, closely followed by siblings. They are only half as likely to play with friends as they were parents.

18.1% of pupils reported playing games with grandparents.

Table 6: Distribution of groups pupils usually play board games with

Who do you usually play a card or board game with? (%)	
Parents	59.4
Siblings	52.3
Grandparents	18.1
Friends	29.0
Cousins	1.3
Aunts and Uncles	1.9
Teachers	1.3

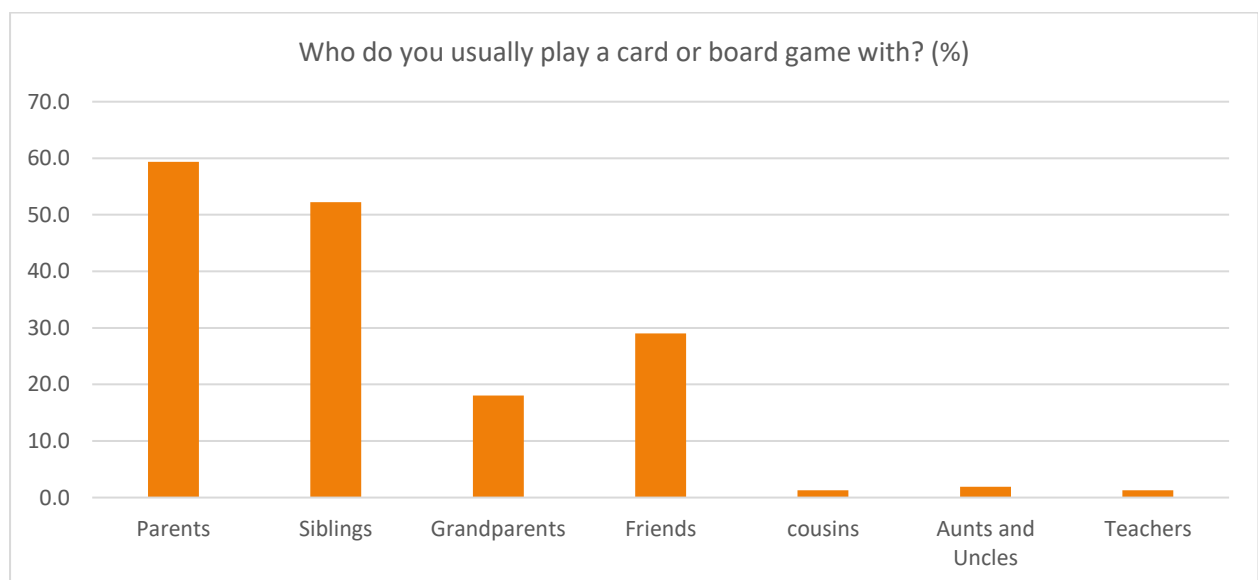


Figure 2 Graph showing distribution of groups with whom pupils play games

Who usually teaches you how to play a card or board game?

While siblings are a significant group for playing card and board games with, they are around half as likely to be teachers of games as they are to be fellow players. Siblings in this case may have been older or younger, no distinction is made in our data.

Parents are more than twice as likely as any other group to be the teachers of how to play games for our sample of 11–14-year-olds.

Table 7: Who usually teaches you to play a game?

Who usually teaches you how to play a game? (%)	
Parents	70.6
Siblings	26.8
Grandparents	23.5
Friends	25.5
Aunts and Uncles	1.3
Teachers	1.6

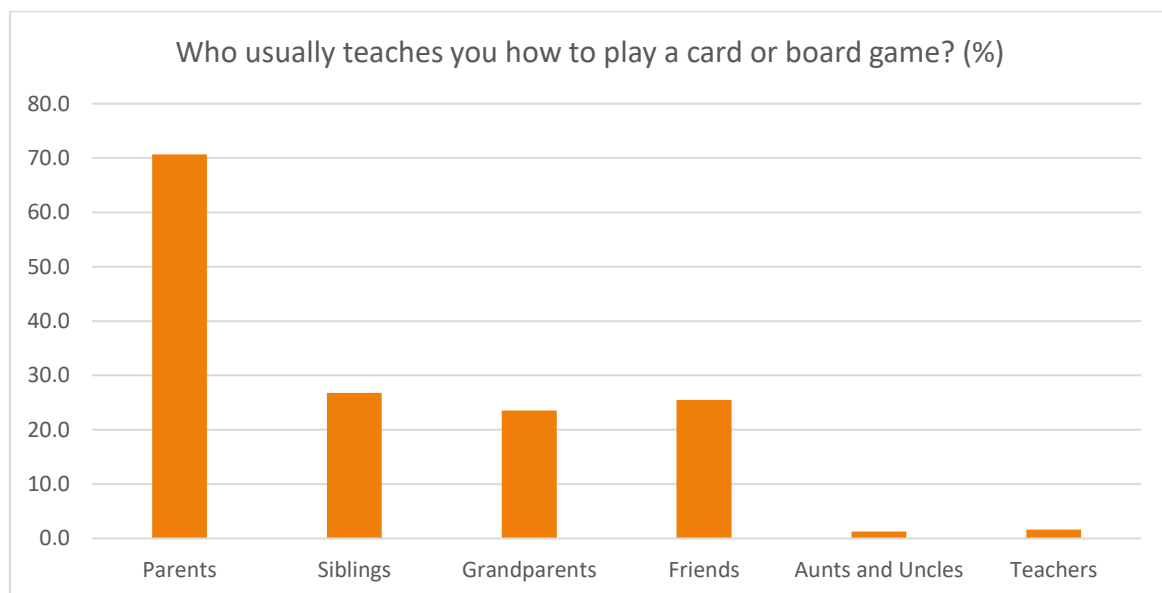


Figure 3: Graph showing the distribution of family and peer groups usually teaching games to pupils

What is your Favourite Card or Board Game?

Responses to this question were added into a small text box as free text. Responses have been hand-collated using filters in Excel.

Monopoly was most frequently cited as being our pupils' favourite game, more than twice as popular as its nearest rival, UNO. Several other Monopoly versions were mentioned including Deadpool, Fortnite, Mario, Cheaters, Empire. These may point to the potential importance of theming in games in attracting young people, as well as to the ubiquitous place Monopoly holds within our game playing culture.

In entering Monopoly as free-text response, pupils used ten different spellings. All variations were considered recognisable as Monopoly and so are included in the data count.

Table 8: Incidents and frequency of favourite games cited.

Pupils' Favourite Games		
Game	Count (n=310)	Percentage of cohort (%)
Monopoly	128	41.3
Uno	58	18.7
Cards	12	3.9
Snakes and Ladders	10	3.2
Snap	10	3.2
Cluedo	8	2.6
Chess	4	1.3
Dobble	3	1.0
Checkers/Draughts	3	1.0
Battleships	3	1.0
Cards against Humanity	3	1.0
Scrabble	2	0.6

What was the last Card or Board Game you played?

Responses to this question were added into a small text box as free text. Responses have been hand-collated using filters in Excel.

Monopoly was again the most highly cited game. While 41% had stated it to be a favourite, however, fewer pupils cited it as last played. I did not ask pupils about this disparity but assume that the length of the game impacts frequency of play. This is in direct contrast to UNO. Here, identical numbers of pupils cited this fast, portable card game as both favourite and last played. In the case of UNO, barriers to play presented by portability, component number and play time are low. These make it an easy *favourite* to table, certainly much easier than Monopoly.

Table 9: Ranking of Games most recently played.

Game played most recently		
Game	Count (from population n=310)	Percentage of cohort %
Monopoly	93	30.0
Uno	58	18.7
Cards	24	7.7
Snakes and Ladders	17	5.5
Snap	8	2.6
Chess	6	1.9
Cluedo	5	1.6
Dobble	5	1.6
Game of Life	4	1.3
Guess Who	4	1.3
Checkers/Draughts	3	1.0
Connect 4	2	0.6
Exploding Kittens	2	0.6
Frustration	2	0.6
Jenga	2	0.6
Scrabble	2	0.6

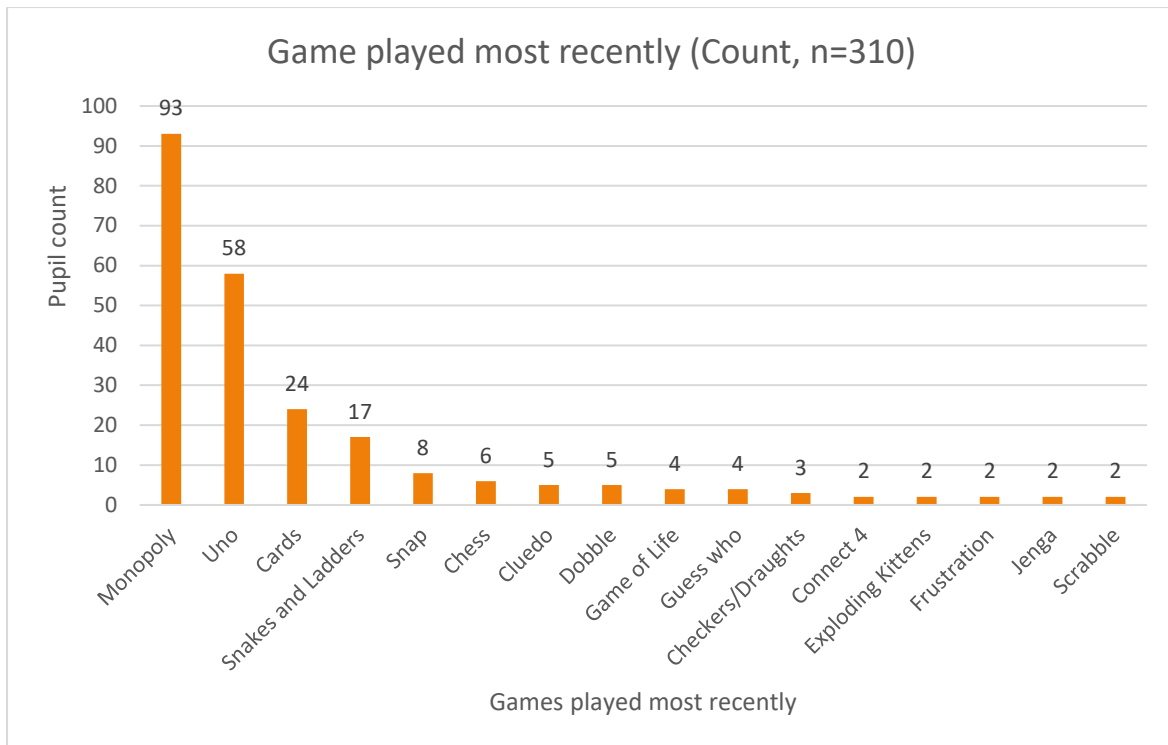


Figure 4: Graph showing the distribution of named games, most recently played.

When did you last play a card or board game?

Pupils were asked when they last played a card or board game. Response possibilities were limited to those detailed below.

Around half of pupils (50.3%) reported having recently played a card or board game (within the last month) with closer to 80% (79.35%) having played in the last year. A fifth of pupils (20.6%) had not played within the last year or ever in memory.

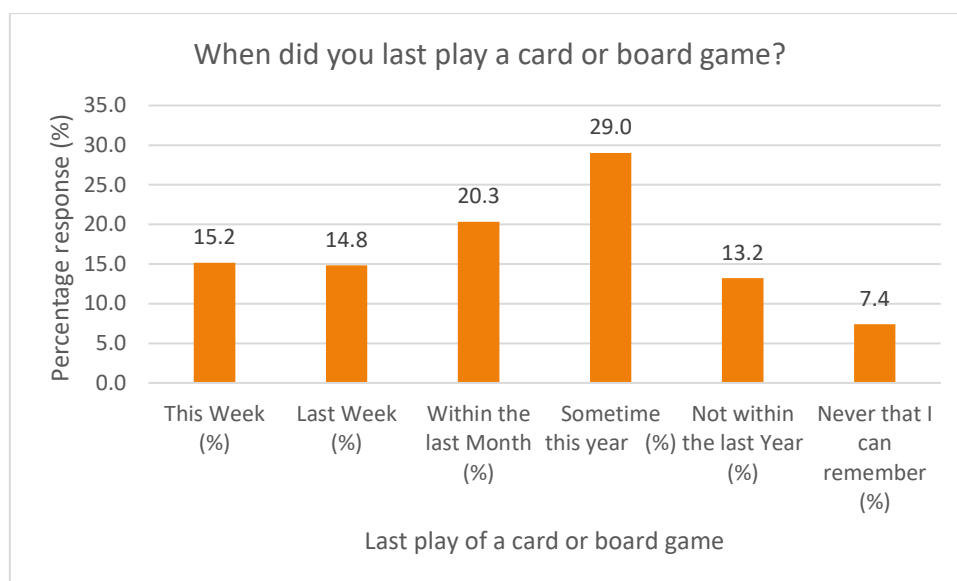


Figure 5: Graph showing period since a game was last played.

Data was analysed for the whole cohort and by individual pupil characteristics. Additionally, responses were grouped to provide cumulative totals for *recently played* (this week + last week + within the last month), *played sometime in the last year* and *not played this year or ever in memory*. Trends for different subgroups of pupils are reported in the table below.

Table 10: Period since last board game play, presented by pupil characteristic (Gender, FSM, PP, SEND)

Last Played a Game (Cumulative %)	n=	This Week (%)	Last Week (%)	Within the last Month (%)	Sometime this year <1 YEAR (%)	Not within the last Year (%)	Never that I can remember (%)	>1 YEAR (%)
Male	156	17.3	30.1	46.8	75.6	14.1	10.3	24.4
Female	154	13.0	29.9	53.9	83.1	12.3	4.5	16.9
FSM	124	15.3	30.6	47.6	74.2	17.7	8.1	25.8
Not FSM	187	15.5	29.9	52.4	82.9	10.2	7.0	17.1
PP (Ever 6)	146	17.1	32.2	48.6	77.4	15.8	6.8	22.6
Not PP	165	13.9	28.5	52.1	81.2	10.9	7.9	18.8
SEN K	96	11.5	22.9	42.7	76.0	17.7	6.3	24.0
SEN E	5	20.0	20.0	40.0	60.0	40.0	0.0	40.0
Not SEN	209	16.7	33.5	54.1	81.3	10.5	8.1	18.7

Gender

Gender data was extracted from SIMS and securely stored at the time. All pupils in the sample were recorded as either male or female.

A little under half of boys (46.8%) and a little over half of girls (53.9%) had played a game *recently* (within the last month). Approximately three quarters of boys (75.6%) reported having played a game within the last year. This figure was 7.5 percentage points higher for girls at 83.1%

For the group as whole, one in five pupils had not played a game in the last year, or never in memory. For boys, this figure was higher at 1 in 4 boys. One in ten boys stated that they could not remember ever having played a card or board game. This was more than twice the rate reported by girls.

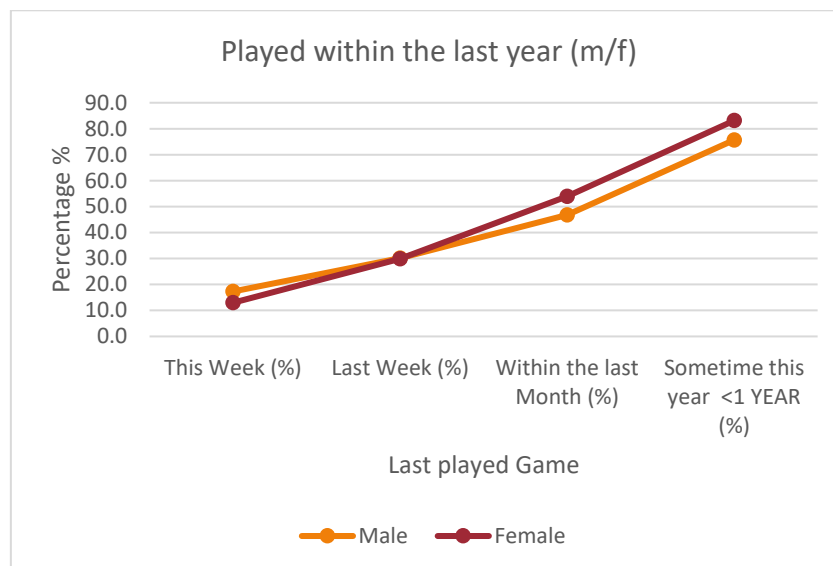


Figure 6: Graph showing period since last game play by gender

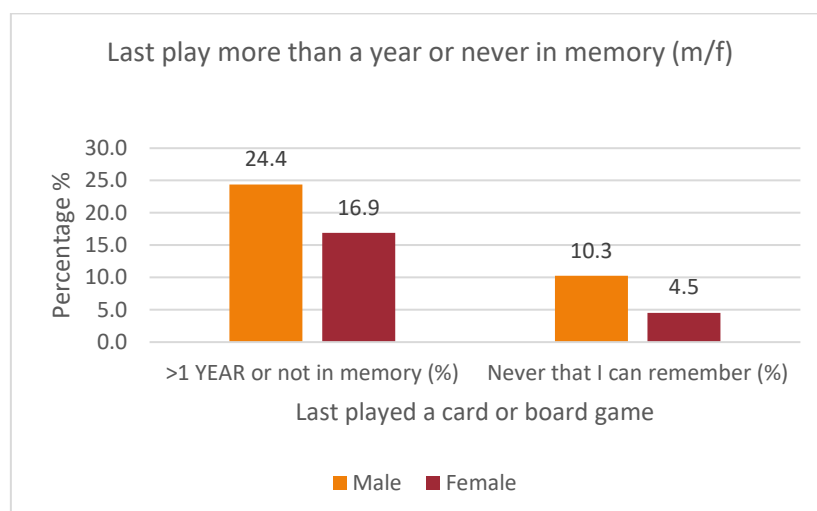


Figure 7: Graph showing the percentage of pupils (by gender) with last game play longer than a year ago

Economic Disadvantage

Data was grouped by eligibility for Free School Meals (FSM) and Pupil Premium (PP, Ever6). These are both used to track economic disadvantage in schools. FSM relates to a current assessed eligibility for free school meals. PP (Ever6) is a funding top up provided to pupils who have been eligible for FSM at any point during the previous 6 years. Pupil Premium funding is intended to help to narrow the gap in academic outcomes typically observed for pupils from *disadvantaged* backgrounds.

Little gap was observed between FSM and non-FSM pupils in reported play *this week* or *last week* with about 30% of both groups likely to have played. There is a 4.8 percentage point gap at a month, increasing to 8.7 percentage point gap up at one year.

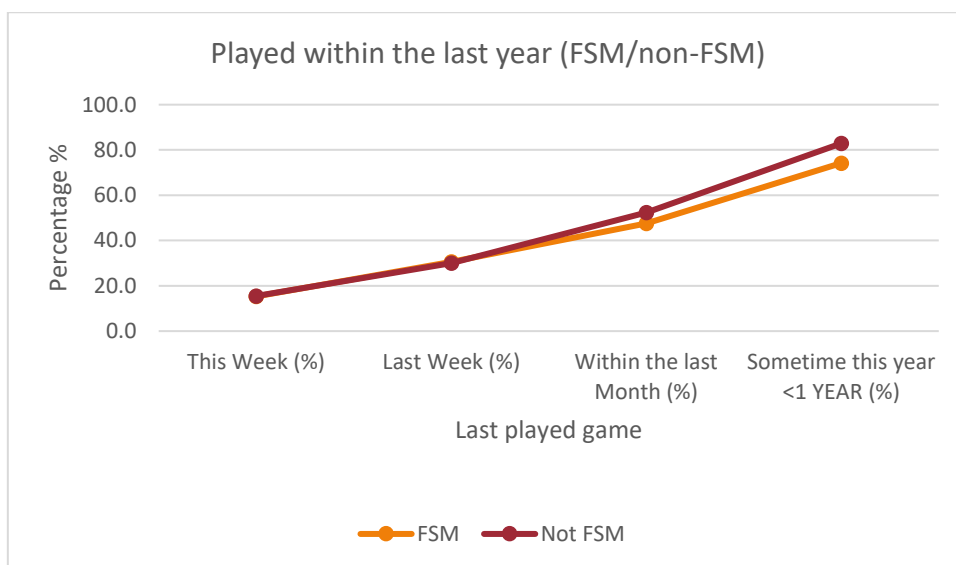


Figure 8: Graph showing period since last game play for pupils eligible for Free School Meals

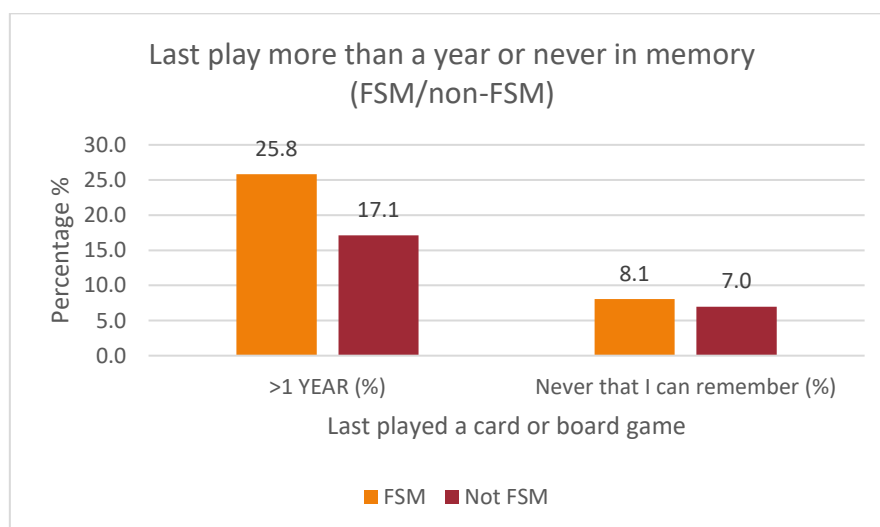


Figure 9: Graph showing percentage of pupils eligible for FSM who had not played a game in the last year.

25.8% of pupils eligible for free school meals, or 1 in 4, reported not having played a game in the last year, or ever in memory. This compared to 17.1% for non-FSM pupils, a gap of 8.7 percentage points. Most of this gap appears at *not within the last year* (7.5 percentage point gap) with just a 1.1 percentage point gap for FSM and non-FSM pupils reporting not having played within living memory.

SEND E & K

One hundred and one pupils surveyed were listed as in receipt of support for SEND (K or E) Five of these pupils were in receipt of an EHCP. Pupils with SEND (with or without EHCP) were the least likely to have played a card or board game within the last month. Pupils in receipt of a EHCP were the group least likely to have played a card or board game within the last year. Two of the five pupils in receipt of an EHCP self-reporting not having played a card or board game within the last year were both listed as in receipt of FSM.

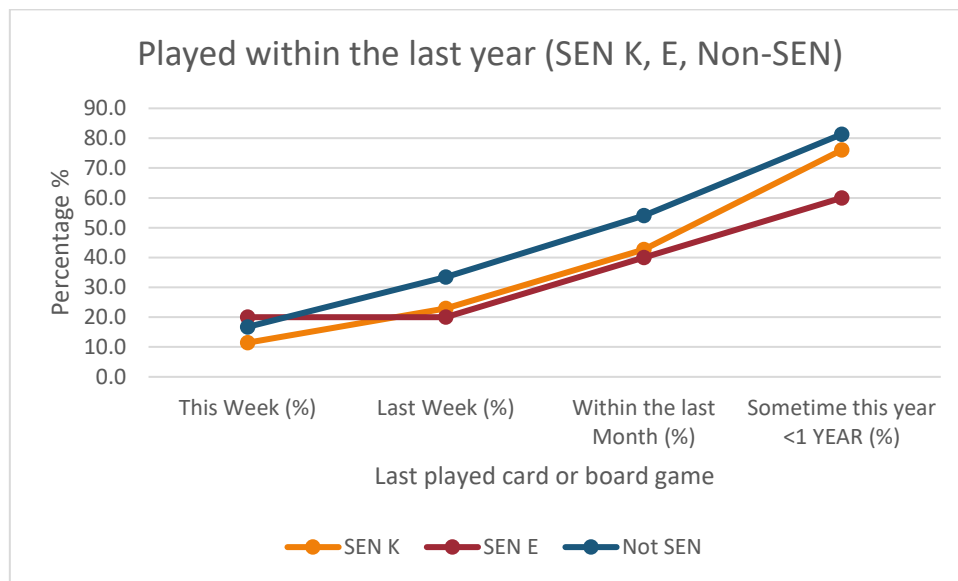


Figure 10: Comparison of percentage of SEND pupils and non-SEND pupils playing games within the last year

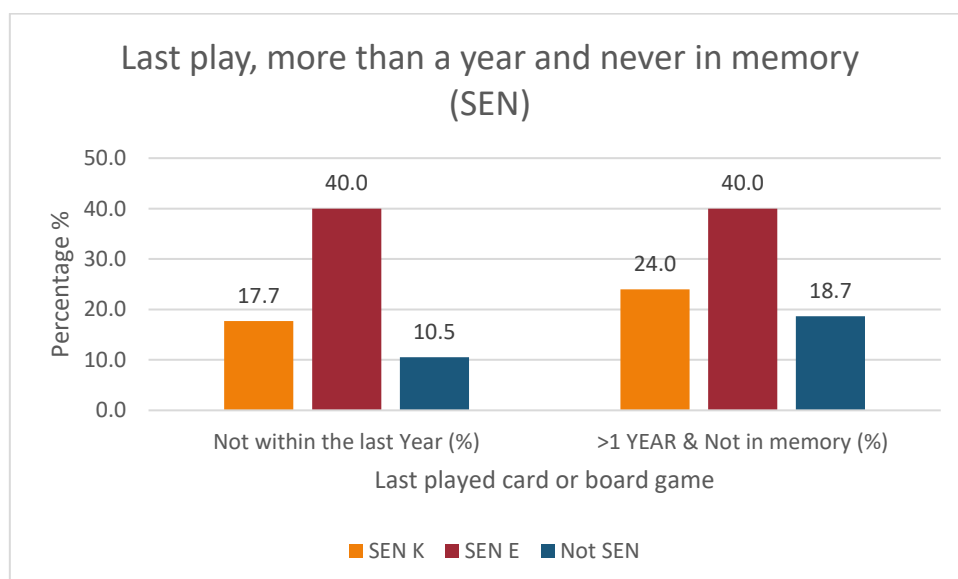


Figure 11: Graph showing comparison percentage of SEND and non-SEND pupils not playing a game in the previous year.

How many Card or Board Games do you have at home?

This data was captured via a small text box. This method was chosen based on an open interest in what pupils might report. On reflection it would have potentially been of greater statistical value if offered as fixed number range responses.

A small number of pupils (n=7) responded with *lots, loads, or too many to count*. These responses were all taken as meaning more than ten.

The responses have been presented broken down between pupils eligible for Free School Meals and those non-eligible. 6.5% of pupils eligible for FSM reported owning no games at home. This was more than double the figure for pupils not eligible for FSM (2.7%). This more than double trend continued for less than 5 games at home. Here, over a third of pupils in receipt of free school meals reported owning less than 5 games at home against less than half that rate for non-FSM pupils.

Table 11: Comparison of ownership of games at home by Free School Meals eligibility

%	Own No Games	Own 5 or less games	Own >5
FSM	6.5	37.9	62.1
Not FSM	2.7	18.7	81.3

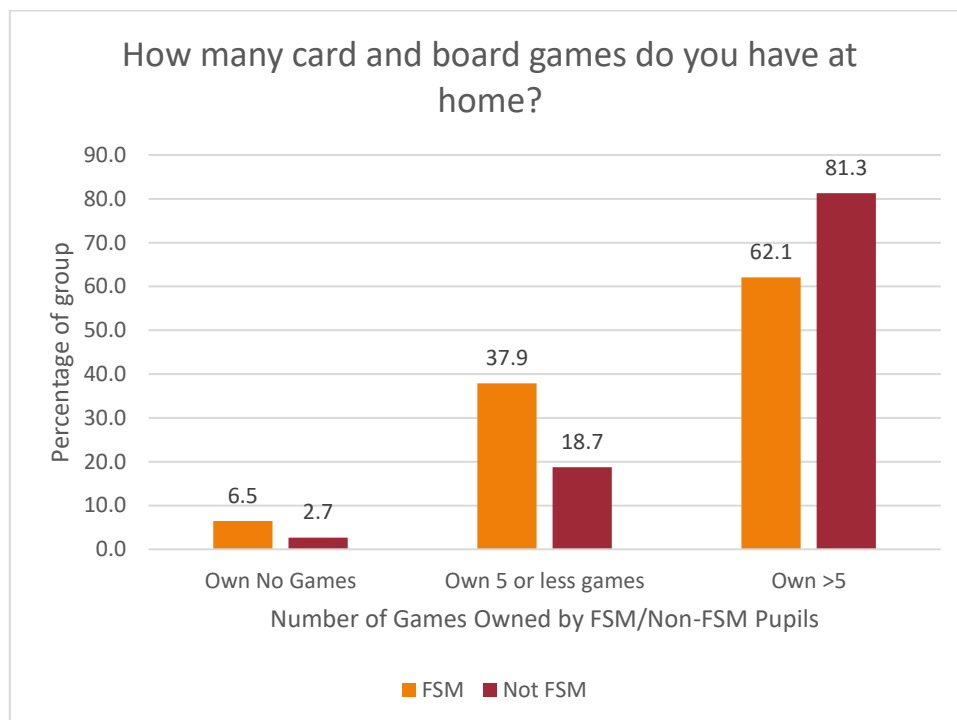


Figure 12: Graph showing numbers of games owned at home by FSM eligibility.

A little less than half of pupils (45%) reported owning ten or more games. Of this sub-group, 62.4% reported having played recently (within the last month) while 40.1% reported having played at some point within the last two weeks. 6.4% of pupils who reported owning more than ten card and board games had not played with those games within the last year.

Which methods would you prefer to use to learn a new game?

Five possible answers were provided. Pupils could select as many answers as they wished from the list. Video tutorials ranked lowest for this group, even behind reading a rule book. This might be considered surprising given high levels of access to platforms such as YouTube. In my original project design, I had considered using different teaching methods for different groups and measuring subsequent rule confidence responses across groups. The baseline data received here was instrumental in us choosing to abandon that idea and instead adopt a delivery methodology in line with Sato’s (2016) experiential model.

Pupils’ favoured method of learning was watching others play the game. This option was selected at three times the rate as that for watching a video tutorial.

Table 12: Preferred pupil method for learning a new board game.

Which methods would you prefer to learn a game (n=310)	Count	%
Reading the rule book	100	32.3
Watching a 'how to play video'	48	15.5
An experienced player telling you	134	43.2
Watching others play the game	148	47.7
Playing the game, yourself, with an experienced player	113	36.5

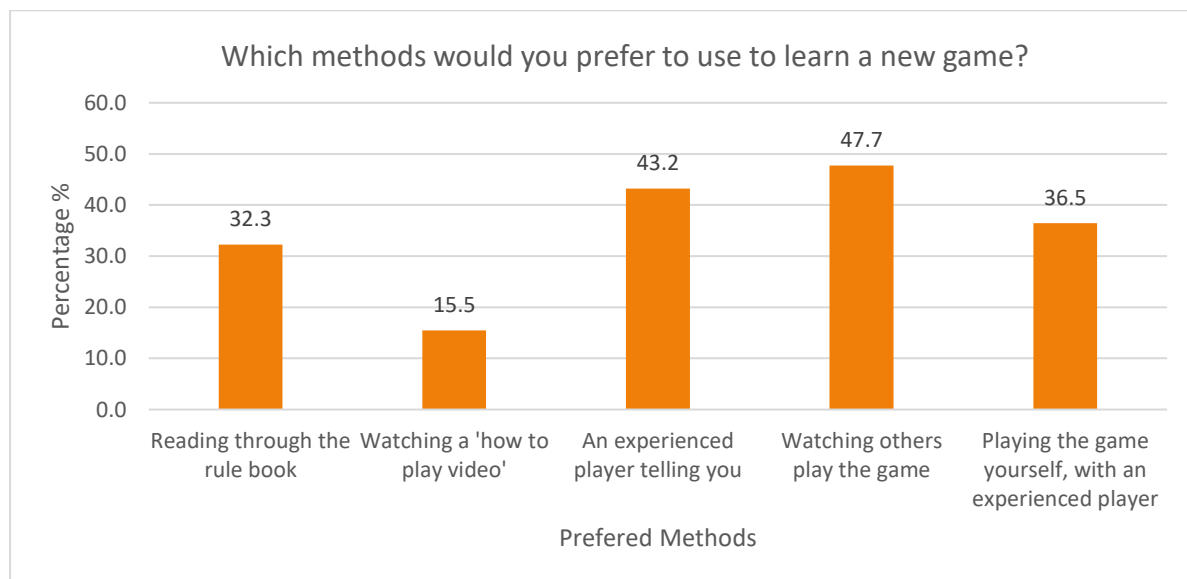


Figure 13: Graph showing percentages of pupil preferences for new game learning methods.

When evaluated by year group several further trends present themselves. Watching a video tutorial remains the least favoured method across all year groups, while watching others play is the strongest across all years. In year 9 the more relational methods of playing, telling, and watching all become more important, while reading weakens as a chosen method. Despite this, reading remains for year 9 pupils more than twice as popular a method for learning than watching a video tutorial.

Table 13: Preferred method for learning a new game by year group (7, 8, 9)

Which methods would you prefer to learn a game (n=310)	Year 7 (n=119)	Year 8 (n=99)	Year 9 (n=92)
Reading the rule book	35.3	33.3	26.1
Watching a 'how to play video'	20.2	13.1	12.0
An experienced player telling you	44.5	36.4	48.9
Watching others play the game	48.7	41.4	53.3
Playing the game, yourself, with an experienced player	33.6	31.3	45.7

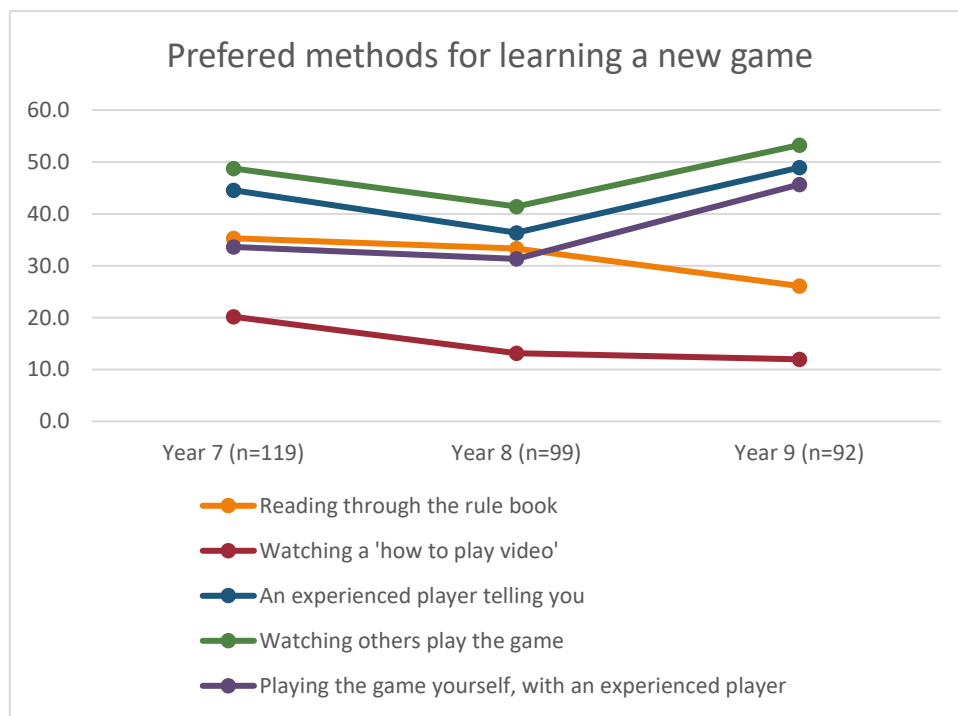


Figure 14: Graph showing preferred methods of learning a new game by year group.

Table 14: Preferred method for learning a new game, presented by pupil subgroup (SEND, FSM, Gender)

Which methods would you prefer to learn a game? (n=310)	SEND (n=101) %	Non-SEND (n=209) %	FSM (n=124) %	Non-FSM (n=186) %	Male (n=156) %	Female (n=154) %
Reading the rule book	41.6	46.8	37.1	29.0	35.3	29.2
Watching a 'how to play video'	20.8	12.9	17.7	14.0	20.5	10.4
An experienced player telling you	38.6	45.5	37.9	46.8	42.3	44.2
Watching others play the game	51.5	45.9	50.8	45.7	47.4	48.1
Playing the game, yourself, with an experienced player	31.7	38.8	35.5	37.1	35.3	37.7

SEND

Pupils in receipt of SEND support were marginally more likely to state a preference for watching a video tutorial or watching others play as methods of learning than were their non-supported peers.

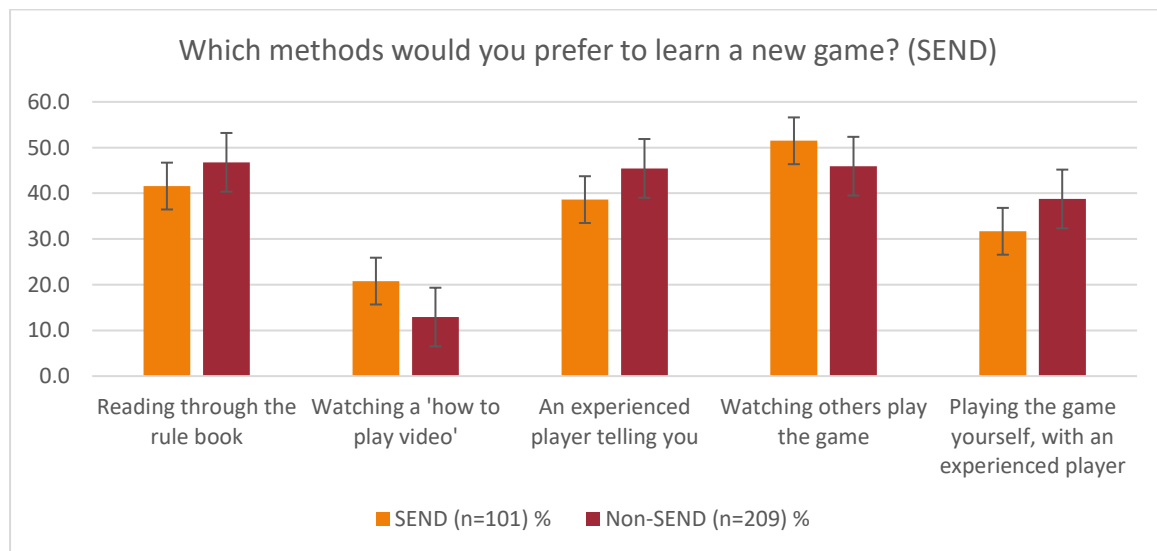


Figure 15: Graph showing preferred method for learning a new games for pupils with SEND.

Free School Meals

Pupils eligible for free school meals reported a preference for *watching others play*, as a method for learning a new game. They did so in greater proportion than their non-eligible peers. This was also true for *reading a rule book* and *watching a tutorial video*, which again was the least preferred method by some margin. These pupils selected *telling* in smaller proportion than their peers. Both groups showed a similar affinity for learning by playing, although this method was less favoured than reading the rulebook for pupils eligible for FSM.

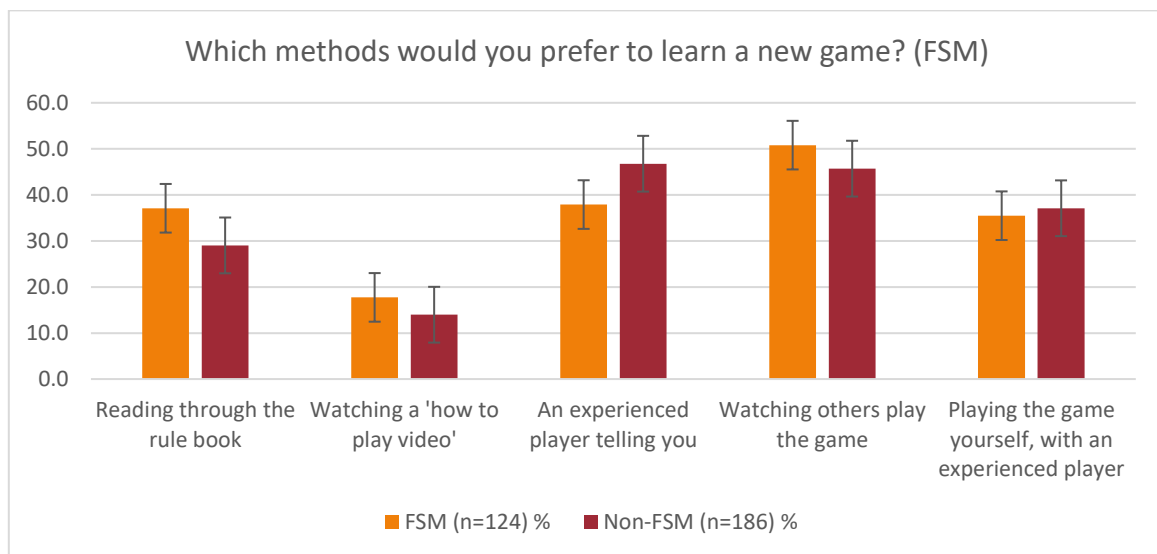


Figure 16: Graph showing preferred methods for learning a new game for pupils eligible for Free School Meals (FSM)

Gender

Responses by gender were broadly matched for *telling*, *watching*, and *playing*, but a greater proportion of boys selected reading the rules (35.3%) than did girls (29.2%). With much interest in the reluctance toward reading for many boys this piece of data may be of interest. Is boys' openness here because of the instrumental nature of the reading at hand? The proportion of boys who would opt to watch a video tutorial (20.5%) was almost twice that for girls (10.4%)

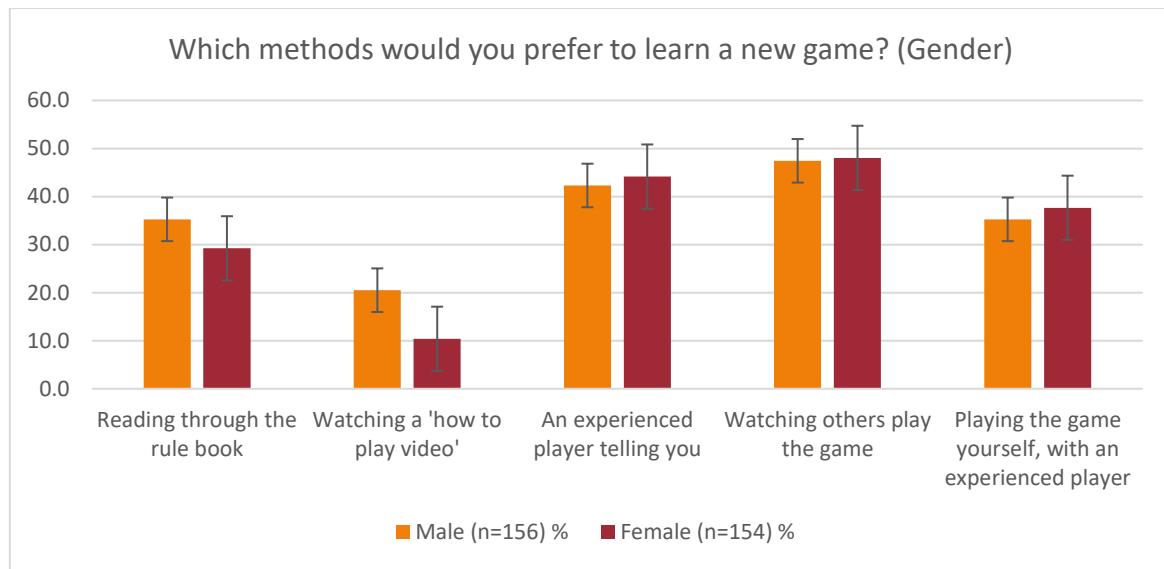


Figure 17: Graph showing preferred methods for learning a new game presented according to gender.

The proportion of boys who would opt to watch a video tutorial was almost twice that for girls, but boys would still prefer to read a rulebook over learning to play from watching a video.

Who would you like to share a new card or board game with?

“If you were given a new board game, who would you most want to play that new game with?”

Pupils were able to select multiple responses from provided options and could add others using a small text field. A little under two thirds of pupils (200 pupils, 64.5%) selected the category of “Parents or Carers” or left “Parents” unselected but added “Mum” or “Dad” individually into the free text box.

A large majority of pupils (94.9%) selecting Grandparents had also selected Parents or Carers. A small number of pupils (5.1%) selected Grandparents without also selecting Parents or Carers.

The stated desire to share a new card or board game with parents or carers diminished as pupils moved from year 7 (70%) into year 8 (60.6%) and then year 9 (56.6%). Over half of pupils in year 9 still selected this option.

For the cohorts in years 7 & 8, sharing a new game with siblings was preferred over sharing it with friends. This phenomenon reversed in year 9 however, with a greater number of pupils (53%), selecting friends than siblings (43.5%). Even in year 9, marginally more pupils selected the option to share a new game with parents (56.6%) than with their friends (53%).

Table 15: Pupil preferences for who they would choose to share a new game with

Who would you choose to share a new game with?

	Year 7 (%)	Year 8 (%)	Year 9 (%)
Parents	70	60.6	56.6
Siblings	47.9	51.5	43.5
Friends	36.9	41.4	53
Grandparents	23.5	20.2	22.8

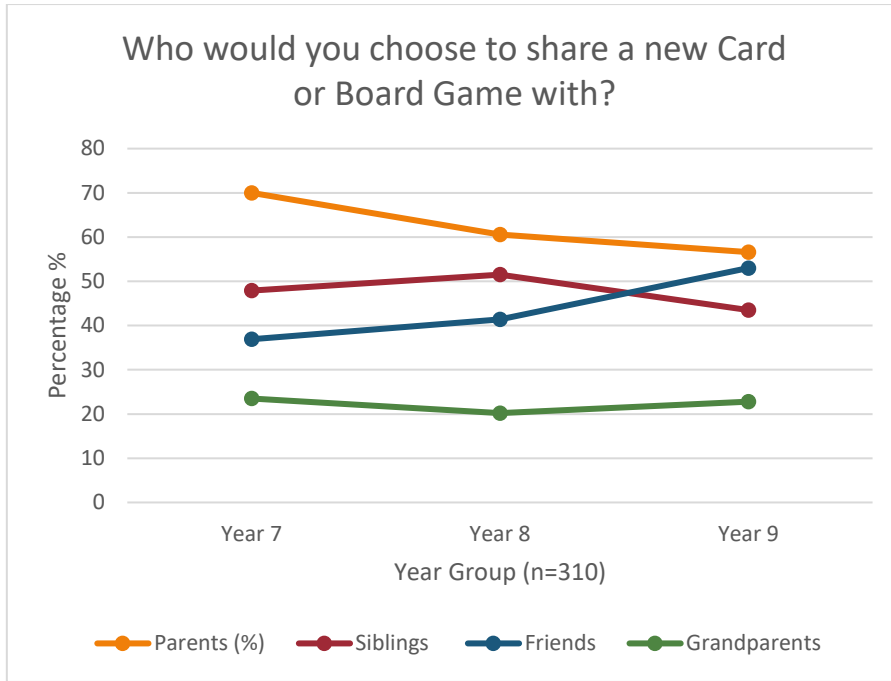


Figure 18: Graph showing pupil preferences for whom they would share a new card or board game with

Data Set Two: Post-Game Surveys from Mentor phase.

The following data arises from post-game surveys that pupils were asked to complete following playing a game. As is discussed in more detail elsewhere, pupils were free to complete a survey or not complete. Where responses were submitted, informed consent was obtained for use of those responses for the purpose of academic research.

Desire to play a game again.

Within post-game surveys, pupils were asked to rate their likelihood of wanting to play that game again. A ten-point star scale was provided for responses, with 1 marked low and 10 marked high. Across the 83 returns from pupils in years 7 & 8, the mean average score was 8.36, implying a high level of desire to replay the games. Responses to specific games are detailed later in these findings. The table below shows a breakdown of responses by pupil sub-group, with little variation evident. Desire to play again can be seen to be high for all pupils, regardless of sub-group.

Table 16: Pupils' desire to replay a game, shown by pupil subgroup (Gender, FSM, SEND)

How likely to want to play this game again?	
Pupil Group	Mean rating (1-10 scale)
All (n=83)	8.36
Male (n=42)	8.36
Female (n=41)	8.37
FSM (n=27)	8.26
Non-FSM (n=56)	8.4
SEN-K (n=23)	8.43
Non-SEN (n=60)	8.33

The comparable mean score for the KS4 and KS5 grouped responses (n=43) was slightly higher, at 9.06

Most games played by post-16 pupils would have been taught by the lead researcher and would have been played with a closer existing friendship group than may have been the case when post-16 mentors taught games to Key Stage 3 pupils.

Feeling Connected

Pupils were asked how connected they felt to other players. A five-point Likert scale was provided, running from much less connected to much more connected.

The following tables of data relate to (n=83) pupils responding from year 7 & 8 who could be matched to their contextual data (discussed elsewhere). No pupils recorded responses at *much less connected* and on that basis that response level has been omitted from the tables below.

Approximately one third of pupils in the year 7 & 8 group reported feeling a little more connected with a further third reporting feeling much more connected. As is presented further below, a greater proportion of boys than girls reported in the highest category for feeling connected.

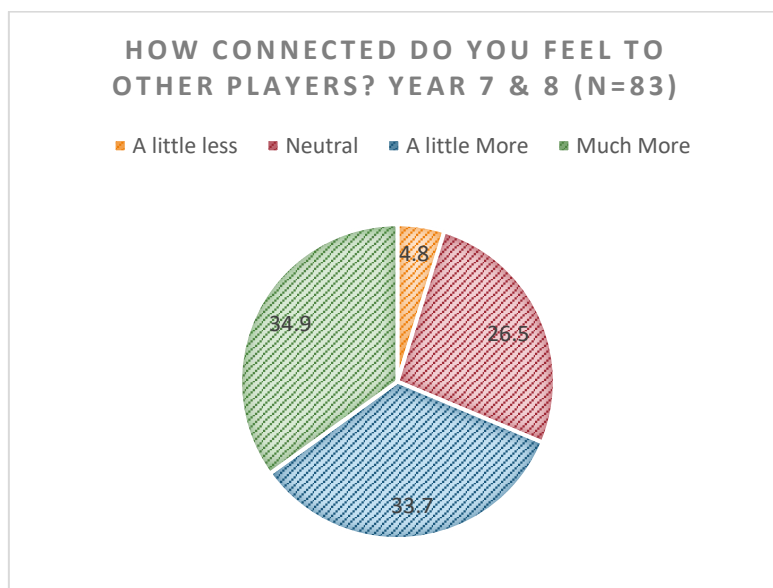


Figure 19: Chart showing pupil sense of connection to other players after playing a game.

Table 17: Pupils sense of social connection to other players after playing a game.

How connected do you feel to other players?	
	Year 7 & 8 (n=83) %
A little less	4.8
Neutral	26.5
A little More	33.7
Much More	34.9

Gender

A notable difference was observed in the way boys and girls responded to the feeling connected question. A group of boys clustered in a game of Exploding Kittens (discussed elsewhere) responded that they felt a little less connected. More striking is the divergence in response elsewhere, with many more girls feeling a neutral or little stronger connection whilst boys recorded higher responses for feeling much more connected: a 16.1 percentage point gap at this response level.

Table 18: Pupils' sense of connection to other players (Gender)

How connected do you feel to other players?		
	Male (n=42)	Female (n=41)
	%	%
A little less	9.5	0.0
Neutral	19.0	34.1
A little More	28.6	39.0
Much More	42.9	26.8

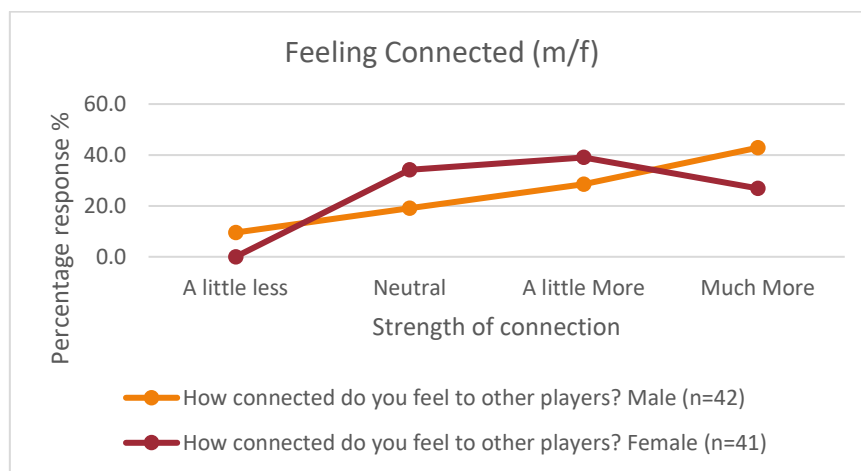


Figure 20: Graph showing pupils' sense of connection to other players.

Free School Meals

Pupils eligible for Free School Meals recorded higher responses for feeling *less connected* than did their non-eligible peers. Three boys clustered in a single game of Exploding Kittens (mentioned above) were also eligible for Free School Meals. They all recorded responses at *a little less* to that game experience. That impact is seen in the data table below.

Table 19: Pupils' sense of connection to other players (FSM)

How connected do you feel to other players?		
	FSM (n=27) %	Non-FSM (n=56) %
A little less	11.1	1.8
Neutral	29.6	25.0
A little More	25.9	37.5
Much More	33.3	35.7

SEND

Marginally higher proportions of SEND pupils recorded responses at neutral than did non-SEND pupils, but this effect was marginal. Data Set One (Baseline data) showed pupils with SEND as being less likely to have played a game recently than their non-SEND peers. Responses below show similar levels of felt connection at *much more* with a marginal gap at *a little more*, dropping to *neutral*. If pupils with SEND are less likely to be playing games at home than are their non-SEND peers, then this might imply a marginal *feeling connected* gain to be made through the opportunity or encouragement to participate in tabletop game play at school.

Table 20: Pupils' sense of connection to other players (SEND)

How connected do you feel to other players?		
	SEN K (n=23) %	Non-SEN (n=60) %
A little less	4.3	5.0
Neutral	30.4	25.0
A little More	30.4	35.0
Much More	34.8	35.0

Feeling Connected: Key Stage 4 and combined group

Feeling connected responses for KS4 & KS5 pupils saw a similar proportion of responses at *neutral* connection (27.9%) as for those seen at KS3. A greater proportion of responses were given at *a little more* (41.9%) and a slighter lower level at *much more* (30.2%). No pupils in this group reported feeling less connected. 72.1% of KS4 and KS5 pupils reported feeling more connected to other players. This compares to 68.6% for Key Stage 3.

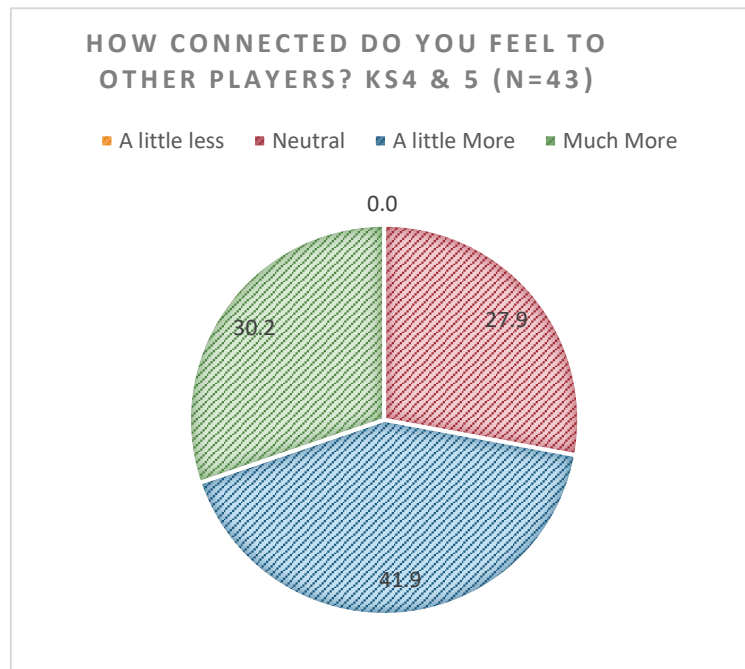


Figure 21: Chart showing pupils' sense of connection to other players (Key Stages 4 & 5)

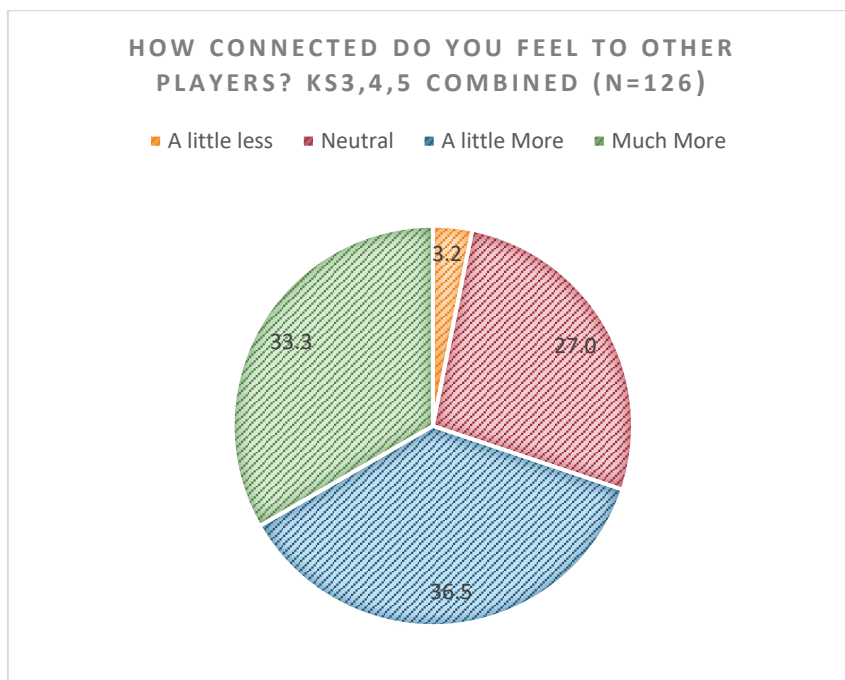


Figure 22: Chart showing pupil's sense of connection to other players (All Key Stages combined)

Developing Confidence

Responses of the (n=83) year 7 and 8 pupils with matched data in the levels of confidence expressed. Girls reported higher levels of confidence in their understanding of the rules and of developing a winning strategy while remaining slightly less confident to teach.

Table 21: Pupil game confidence, key metrics

	Male (n=42) (/10)	Female (n=41) (/10)
How confident are you?		
Understand Winning Strategy	7.1	7.7
Understand Rules	7.25	8.4
Hard Thinking	5.75	5.8
Confident to Teach	6.4	6

Widening of the Game pool

The following section details a widening of the pool of games being played in the mentor phase of the project and provides data about pupil responses to those games.

I had curated and added to the school library a modest collection of gateway games – extending beyond those initially selected for the project. Over time these were picked up and became incorporated ad-hoc within the project and into the data covering this phase.

Occasionally a sub-group of our post-16 game mentors would ask if I could teach them another game. At other times, Toby (one of my sons) who was working as a Maths mentor, would teach a game. In this way, Cockroach Poker, Century Golem, and Monopoly Deal began to be played. As such these additional games were picked up and incorporated into the project. The project was about teasing out the existence of benefits to pupils. Pupil agency expressed in self-directed adoption and sharing of games appears to us to hint at the possibility of inherent personally experienced benefits of one sort of another.

During this phase, and beyond it, mentors would come and ask to borrow games to play in their social times. At other times they elected to remain on site when lessons had ended in order to share a game together or to share a game with friends who were not part of the project. It quickly became clear that on these occasions, try as I might, they were not going to keep up the practice of

completing post-game surveys. That dramatically impacts the completeness of the data set corresponding to this period. Far more instances of games occurred than have been captured in post-game surveys. Unrecorded outcomes certainly exceed recorded ones. In the end, a copy of Splendor sat permanently in the post-16 area. Several mentors purchased their own copies of Monopoly Deal.

While part of me wished to request, “would you please just fill in my surveys so that I capture all this great data?” the bigger part of me understood the futility. And this futility was not simply that they would soon, once again, forget and neglect the practice. It was that the practice itself stood in some very real sense, counter to the experience of play. As I watched them during this period, I became more aware of an after-glow experience to their play in which the game melted into the metagame and became a memory of a game and gently warmed a conversation as they stood up and moved on, taken back into real life. Together, each carrying a residue of the shared, co-created experience with them as they went back into the day. To intrude too far into this space was to step unbeckoned into a place that was not mine. It was theirs.

“Did you have a good game?” or “Did you enjoy playing?” became as much as I felt I wanted to ask on these kinds of occasions.

The Games

Cockroach Poker

Cockroach Poker (Kakerlakenpoker, Zeimet, J. 2004) is a bluffing game for up to six players. I had played it with KS3 pupils in the central hall before school (without requesting surveys). Toby taught this game to groups of pupils in year 10 and 11 (aged 14-16). It became a popular game with them. They would go to the library to borrow a copy and play it at break and lunch time.

A small number of surveys were submitted (n=14) from n=12 discrete pupils. Most pupils reported having learned the game from an experienced player (n=9) but a few (n=3) reported having learned by watching others play. Mean rating for wanting to play again was 9.1 for this group.

All pupils (100%) responded that this was a *happy time*. When responding to the feeling connected question, one response was neutral, ten (71%) felt a little more connected, three (21%) felt much more connected. Additional comment was left in five cases (36%) with four instances of '*fun*' or '*really fun*', one added "with friends" and another that it was '*great*'. One pupil reported that they were going to buy the game.

Table 22: Pupils' developing confidence - Cockroach Poker

Cockroach Poker	Mean
Survey Responses – Developing Confidence	Average (/10)
Confidence in Rules	8.71
Understanding of winning strategy	8.00
Hard Thinking	6.50
Confidence to Teach	7.78
Desire to play again	9.07

7 Wonders

7 Wonders (Bauza, A. 2010) has one logged instance of play. It arose from a request by mentors for me to explain how to play. I did not play-teach it, I simply provided an overview which they supplemented with the rules. Four mentors played the game together. Surveys submitted (n=2) yielded data shown below. Playing together was self-reported to be a happy time, with neutral or moderate connection.

Table 23: Pupils' developing confidence - 7 Wonders.

7 Wonders Survey Responses – Developing Confidence	Mean Average /10
Confidence in Rules	7.00
Understanding of winning strategy	4.50
Hard Thinking	6.50
Confidence to Teach	5.00
Desire to play again	7.50

7 Wonders is a card drafting, civilisation building game played over three phases. Successful strategies demand tactical resource management and identification of synergies in drafted cards. It is ranked 88th overall on BGG with a Family rank of 12. Its BGG weight at 2.32/5 implies greater strategic complexity than any of the games chosen for our core project games. It requires multiple plays for confidence in strategic decision making to emerge and this is perhaps seen in the securing confidence data above. It is a game I would ideally have chosen to play-teach rather than tell-introduce.

Century Golem

Century Golem (Matsuuchi, E. 2017) has three logged plays by mentors who, data shows, then shared the game with pupils in year 8. Survey responses (n=4) are from discrete pupils (n=4) and span two separate occasions of play. All players reported the games as being a happy time with half reporting neutral and half moderate connection. Accompanying additional comments included that 'it's fun' and 'it's great'.

Securing Confidence responses indicate some surprising divergence between player confidence in the rules and strategy versus confidence to teach.

Table 24: Pupils' developing Confidence - Century Golem

Century Golem Survey Responses – Developing Confidence	Mean Average /10
Confidence in Rules	8.00
Understanding of winning strategy	8.00
Hard Thinking	6.00
Confidence to Teach	4.00
Desire to play again	7.00

Century Golem is a card/hand management game in which players open draft cards from a marketplace, upgrade gem resources to combinations of more powerful gems in order to purchase Golem cards with variable gem costs and providing variable victory points. Winning strategy requires optimisation decision making around the relative cost to utility of cards, along with the timing of when to play these cards. Century Golem has a BGG weight of 1.68/5, an overall rank of 233 and a family rank of 38.

Exploding Kittens

Exploding Kittens (Inman, Lee, Small, 2015) survey responses (n=19) were exclusively submitted by pupils in years 7 or 8. A few responses recorded a second instance of play (n=9). Methods of learning were by playing with an experienced player (n=12), watching others play (n=5) and reading the rules (n=2).

Over this phase of the project there were 4 instances of pupils returning 'somewhat less connected' responses to post-game surveys. Three of those instances arose from a single recorded game of Exploding Kittens. Six pupils (31.5%) returned neutral response to the connection question, 31.5% felt *a little more connected* and 21% reported feeling *much more connected*. There exists a wider divergence with respect to perceived connection within this group of pupils and with this game than with any others.

Exploding Kittens was not included within the selected main project games and was not part of the core library. Its inclusion was made at the request of a post-16 mentor who had played it at home and wanted an opportunity to share it. I had previously discounted it based partly on title and, therefore, perceived theme, but more so because of its central *take that* mechanics. I had deliberately excluded games with any core mechanisms promoting negative player interaction. Such mechanics were viewed as potentially damaging to the experience of a well-played game for novice players and socially or emotionally vulnerable players. It remains my conviction that games with higher player interaction are best kept for situations where repeated instances of a well-played game have begun to foster a secure community of play, or where a strong community-friendship group already exists, and tabletop game play is being introduced within that established setting.

Table 25: Pupils' developing confidence - Exploding Kittens

Exploding Kittens Survey Responses – Developing Confidence	Mean Average /10
Confidence in Rules	6.79
Understanding of winning strategy	6.95
Hard Thinking	6.47
Confidence to Teach	5.95
Desire to play again	6.74

Exploding Kittens has a BGG weight rating of 1.09/5 making it at the very light end of games introduced. It has an overall BGG rank of 3,610 and is ranked 546th in the Party Games category.

Monopoly Deal

Monopoly Deal (Chapman, K. 2008) is a card game based on the classic boardgame, Monopoly.

Survey responses (n=20) cover at least six different instances of games of Monopoly Deal. Some pupils report having played on multiple occasions.

30% of pupils (n=6) reported a neutral connection, 25% (n=5) a little more connected, 45% (n=9) reported feeling *much more connected*. Codes of *fun* and *great* were again repeated in additional comments. 95% of pupils recorded playing as a happy experience. One pupil did not. They left a comment, aimed at a mentor, arising from having their property stolen in the game. It should be noted that this same pupil scored desire to play again at 10/10 despite the low *feeling connected* response submitted.

Monopoly Deal was not included within the initial core. Part way through the project, Toby taught about half a game to a group of post-16 mentors. There was not time to finish the initial game, but they liked it sufficiently that they went and bought a copy that afternoon, beginning to play and teach it. It remained a favourite beyond the scope of this research, becoming a core game for the intervention work mentors continued with pupils in years 7 & 8 during tutor time.

Monopoly Deal	Mean
Survey Responses – Developing Confidence	Average /10
Confidence in Rules	7.9
Understanding of winning strategy	8.1
Hard Thinking	6.45
Confidence to Teach	6.35
Desire to play again	8.75

Monopoly Deal has a BGG weight of 1.32/5, an overall ranking of 2,414 and a family ranking of 891. This compares favourably with its boardgame parent. Monopoly has a BGG weight of 1.63/5, a main ranking of 24,788 and a family ranking of 3,015.

Sushi-Go

Sushi-Go is a card drafting game played over three rounds. Pupils submitted 41 post-game surveys. Sushi-Go had more repeat plays than any other game, partly due perhaps to its relatively fast playing time. It gained the highest rating for desired repeat play of any game used in the project at 9.39. Pupil confidence in understanding of rules was also highest here. Sushi-Go also scored highly on accompanying feeling connected ratings with this group. Of the 41 pupils submitting a survey, 29 reported feeling *more connected* to peers (70.1%) with 39% feeling *much more connected*.

Sushi-Go utilises a card crafting mechanism in which players select a card from their hand to keep, place that card on the table, and then pass the remaining hand of cards to the next player around the circle. This down and pass rhythm continues throughout the game and may contribute to an enhanced sense of playing together.

Table 26: Pupils' developing confidence - Sushi Go

Sushi Go	
	Mean
Survey Responses – Developing Confidence	Average /10
Confidence in Rules	8.86
Understanding of Winning Strategy	8.31
Hard Thinking	5.67
Confidence to Teach	7.28
Desire to Play Again	9.39

Desire to Play Again

When asking pupils whether playing had been a happy experience, only a binary option was provided for response. To supplement this, pupil self-reported desire to play again was envisaged as being a valuable secondary indicator of enjoyment of a play experience. A ten-point star scale was provided for this response (in keeping with the various confidence responses), allowing pupils to record a relative strength of desire to play again. The mean rating score for desire to play again was 8.6/10, the median and modal responses were both at 10.

Pupil responses for *desire to play again* are provided in the table below, arranged by game played. There is considerable difference in the frequency of post-game survey responses provided for each game, and therefore, reliability of response for each game title. Despite this, responses for all games have been given on the basis that each response has its own validity – even if it is just one pupil’s reported experience of desiring to play a game again. Response frequency is provided for each game to aid reader judgement of data strength for any given game title.

Table 27: Pupils' desire to play again, rated for each game.

Game	Desire to play again /10	Number of returns
Sushi Go (n=41)	9.4	41
Monopoly Deal (n=20)	8.8	20
Exploding Kittens (n=19)	6.7	19
Cockroach Poker (n=14)	9.1	14
Splendor (n=13)	8	13
Century Golem (n=4)	7	4
Takenoko (n=3)	8	3
Marvel Splendor (n=3)	10	3
Sleeping Queens (n=3)	9	3
7 Wonders (n=2)	7.5	2
Ticket to Ride London (n=1)	10	1

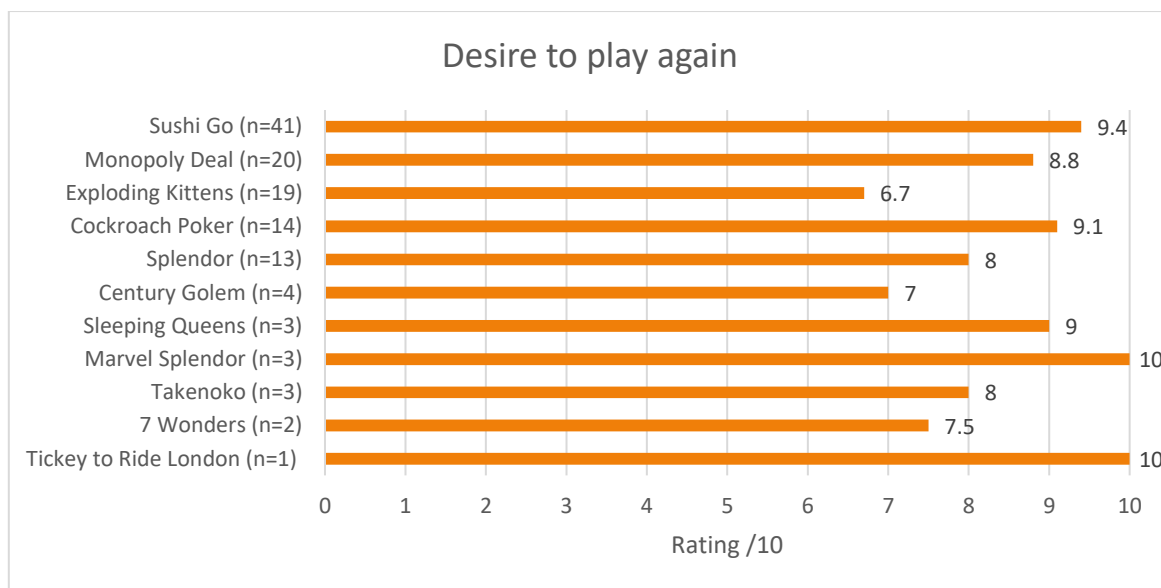


Figure 23: Graph showing pupils' desire to play again, by game.

The Summer School Phase

In July 2022 I was invited to contribute a board game component to the Primary to Secondary transition Summer School. A supplementary request for ethics approval was made and granted to cover this activity.

This phase of research provided an opportunity to refine delivery and to ask our research questions again, with a new group of pupils. The pupils were drawn from a range of local primary feeder schools. The selection process was via a SENDCo-led needs analysis, in cooperation and communication with parents.

Attendance fluctuated through the week, with 29 pupils present on the best attended day.

Four 50-minute sessions were delivered with pupils throughout the course of each day. Pupil groupings were determined by the SENDCo and tended to mix pupils from different feeder schools. One game was taught each day and a post-game survey was completed on exit from the session.

On the fourth day an enforced change to the programme meant that only three sessions ran, and survey returns were lower in number for this reason. On the final day (day 5), game boxes were set out on nine tables and pupils were invited to self-arrange into groups and choose games to play through a period of two hours.

Discrete Data for Phase 7 – Summer School

Mixed Methodology

Summer school pupils completed a baseline survey on their existing relationship to games, identical to the one completed in the previous autumn by the school KS3 cohort. Following each game played pupils were asked to complete a post-game survey. Again, this was identical to the one used previously. Informed consent was sought and recorded by respondents on the survey return.

In addition, fieldnotes were recorded and semi-structured interviews were conducted with a small number of pupils. A semi-structured interview was also conducted with Rebekah, who was working with me as a game mentor. Informed consent was obtained prior to interviews.

Baseline data – Existing relationship with tabletop games

Pupils in attendance at summer school on the first day completed a paper version of the baseline questionnaire (n=23). An explanation of the use of data for academic research was provided and informed consent obtained to use the data anonymously.

Some pupils did not attend on day 1, joining later, this resulted in higher numbers of post-game than baseline responses. While acknowledging that the lower sample size means that the results may not carry the same statistical significance, they do provide some insight into this cohorts' existing relationship with tabletop games and provide a point of comparison with the earlier, mentor phase cohort. Of added note is that these are 11-year-old pupils transitioning from Primary to Secondary phase education and are, therefore, a few months younger than the youngest pupils in the original baseline. Pupils were not supported in completing these questions, but they were casually supervised. The questionnaires were completed quietly with a minimum of discussion between peers.

When did you last play a card or board game?

Pupils were asked when they had last played a card or board game and recorded responses against a labelled 6-point scale ranging from “this week” to “never that I can remember”.

Thirteen of the summer school pupils (56.5%) reported having played a game recently (within the last month) compared to 50.3% in the original baseline (n=310). A further six pupils (26.1%) reported having played sometime in the last year. Three pupils (13%) reported not having played a card or board game within the last year and one pupil returned “never that I can remember”, lower than in the original baseline (20.7%).

How many card and board games do you have at home?

Pupils were asked how many card games and/or board games they had at home. Three pupils responded that they had no games, two pupils had one game. The modal range was 1 to 5 games. The highest reported size of game collections were 31 games. Other pupils reported as shown in the frequency distribution below.

Mean *games at home* responses for the four pupils who had not played *within the last year* or *ever in memory* was 1.25 games. While the sample is too small to demonstrate any reliable correlation, some possible relationship between the two may be inferred from pupil data.

In contrast, for those pupils reporting having played either *this week* or *last week* (n=10), games at home were in a range 0 to 28 with a mean of 13.6 games.

There are exceptions, but owning games and playing games seem to go together. We might ask who are the purchasers of games at home? If parents or grandparents purchase games, are they the instigators of play?

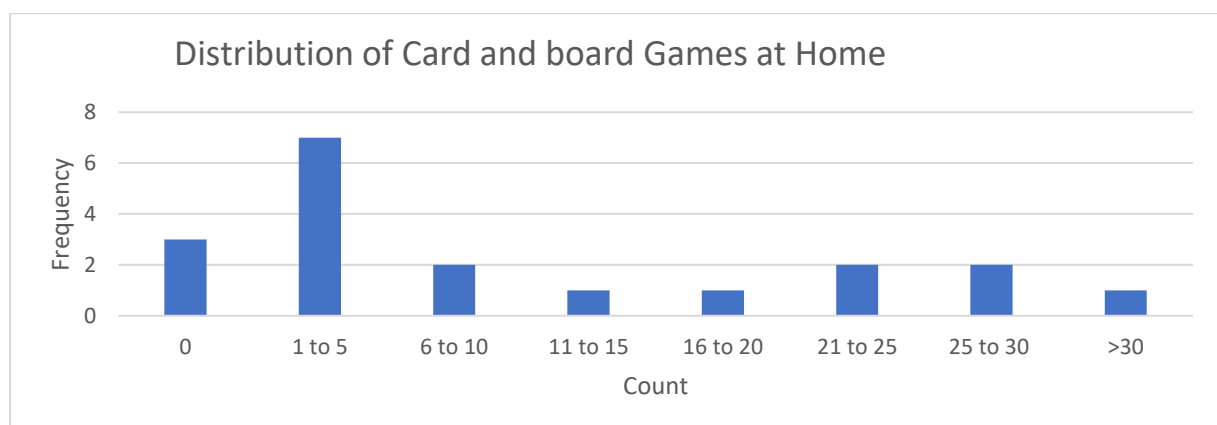


Figure 24: Graph showing distribution of number of card and board games owned at home

Who do you usually play card and board games with?

Who usually teaches you card and board games? If you had a new game, who would you like to share it with?

These questions were intended to explore existing experiences of summer school pupils as to who they played games with, with whom the learning of a new game originated and who, if they were to receive a new game, they would like to share that game with.

The following table ranks responses of pupils. While siblings rank highest as to game play partners, it is parents or carers who are most like to teach games, with grandparents second most likely. Siblings were found to be highly unlikely to be teachers of games (4%). This is in stark contrast to mentor phase data in which 26.8% of pupils identified siblings as teachers of games. Perhaps that is to do with sibling relationships or may simply be that older siblings are perhaps more likely to teach younger siblings, and this happened to be a group with mainly younger siblings. An alternative explanation might be that children are unlikely to seek out, learn and teach a card or board game – and so older relatives and friends constitute the chief gateway to learning a new game.

The majority of this group of 10 and 11-year-olds transitioning from primary to secondary education stated that the group they would most want to share a new card or board game with is their parents and carers. At a time when as a society we bemoan the time our children and young people spend *glued* passively or actively to a screen and sense the early loss of children to the pull of peer pressure and youth culture, 57% of this small sample would, at least at this point in their development, choose to share a new game with their parents – some way ahead of their friends (39%). The proportion of pupils in the summer school cohort reporting a desire to share a new game with parents (57%) was some way below that of pupils in the mentor phase year 7 cohort (70%).

No method was employed to determine what proportion of this sample had living grandparents. That as it is, it is interesting to note that over a third of this group learn and play tabletop games with grandparents. While only a quarter suggested they would want to share a new game with a grandparent there are implications here for promoting beneficial, multi-generational play. This is an area of intended exploration in later phases of the game project – specifically providing opportunity for pupils to invite parents and grandparents into school to teach them a new game in a supported context.

Table 28: Rankings of family members and friends with whom games are learned, played with and new games shared.

When you play a card or board game, who do you usually play with?	If you learned to play a new card or board game who would be most likely to teach you the game?	If you were given a new board game, would you most want to play that new game with?
Siblings (48%)	Parents or Carers (61%)	Parents or Carers (57%)
Parents or Carers (44%)	Grandparents (35%)	Friends (39%)
Friends (39%)	Friends (35%)	Siblings (35%)
Grandparents (35%)	Siblings (4%)	Grandparents (26%)
Others (13%)	Others (0%)	Others (4%)

Developing Confidence

A group of post-game questions were directed toward player knowledge and understanding of each new game. Within the originally conceived project design, these ratings were to be tracked across three plays. It was hoped that the ensuing data might provide a guide to variable play frequency needed to achieve self-reported competence for each game. Final project execution did not, regrettably, cater for provision of this three-play data.

Pupil survey data is expressed as mean averages of responses. A range figure is provided to illustrate the spread of individual responses contributing to that mean.

In all cases, confidence to teach a game lags behind understanding of rules and understanding of a winning strategy. With the exception of Kingdomino, strategy always lags understanding of rules. The Kingdomino outlier may be explained by the observation that some pupils found the concepts involved in playing more accessible than the concepts involved in scoring.

Table 29: Pupils' developing confidence responses to specific project games.

Day/Game	BGG Complexity (/5)	Hard Thinking	Understand Rules	Understand Strategy	Confident to teach	Desire to Play again
Day 1 Sushi Go (n=29)	1.16	4.59	7.66	7.32	5.97	8.10
Day 2 Kingdomino (n=21)	1.21	6.62	8.18	8.33	7.05	8.67
Day 3 Splendor (n=25)	1.85	6.20	8.36	7.52	6.56	7.92
Day 4 TtR London (n=17)	1.32	6.94	7.94	7.41	6.59	7.82
	Rating Range	2.35	0.70	1.01	1.08	0.85

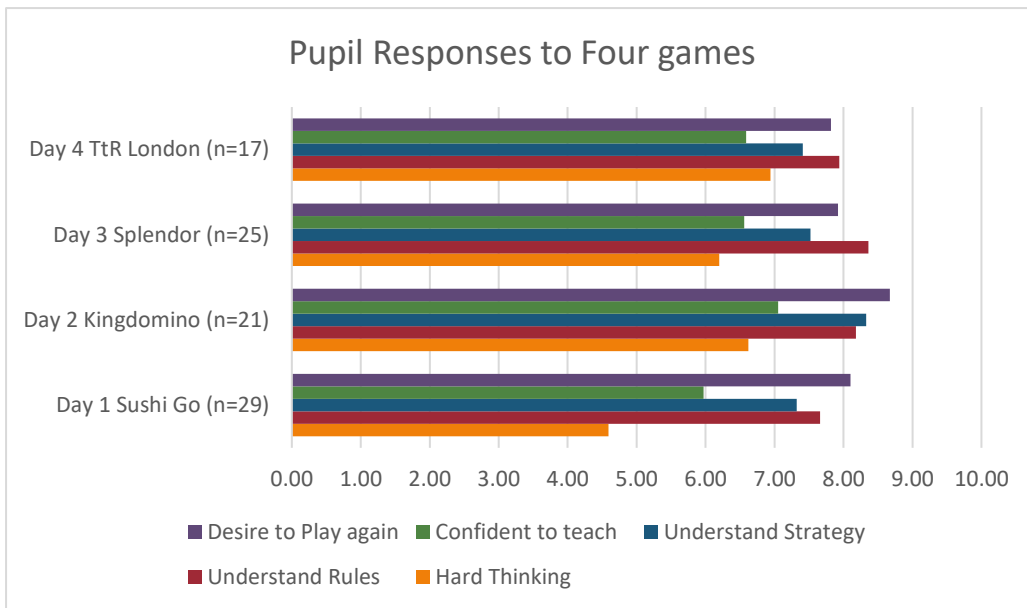


Figure 25: Graph showing summer school pupils' developing confidence ratings for specific games.

Enjoying the Game

Pupils at Summer School rated their likelihood of wanting to play a game again at 8.13 out of 10 (aggregated data across all games).

98% of pupil responses stated that playing together had been a happy time.

All games were rated within the upper quartile and were within a 0.85 range of one another with respect to pupils' self-reported desire to play again. Kingdomino appeared to be a narrow favourite. Of the four games played, Kingdomino is closest to multi-player solitaire in its design, with each player working on their own spatial puzzle. It is interesting to note that this is the only game in which self-reported understanding of strategy exceeds the rating for understanding of rules. The game requires building within a 5x5 parameter. Laminated player grids were provided as scaffolding to support these novice players in achieving that scoring constraint. Once the grid is filled, the game ends. Ending and completing come together and may contribute to an added sense of satisfaction.

The very great majority of pupils responded positively when asked:

“Was playing this game together a happy time?”

Table 30: Summer School pupils' responses of playing being a happy time - presented by specific games.

Day/Game	Playing was a happy time
Day 1 Sushi Go (n=25)	100%
Day 2 Kingdomino (n=21)	95%
Day 3 Splendor (n=25)	96%
Day 4 TtR London (n=17)	100%

Feeling Connected

When submitting post-game survey responses, 23.9% of pupils reported feeling a little more connected to other players, while 41.3% felt much more connected. Taken together, almost two thirds of summer school pupils reported feeling more connected to peers after playing a board game together. 31.5% of pupils reported a neutral feeling of connection, while 3.3% reported feeling less connected.

Speaking to pupils later about feelings of less connection revealed that for one pupil a sense of multiplayer solitaire in Kingdomino had given rise to this feeling,

“It felt like we were all doing our own thing a bit.”

Another pupil had experienced struggling with feelings aroused when another player took a card that he had wanted.

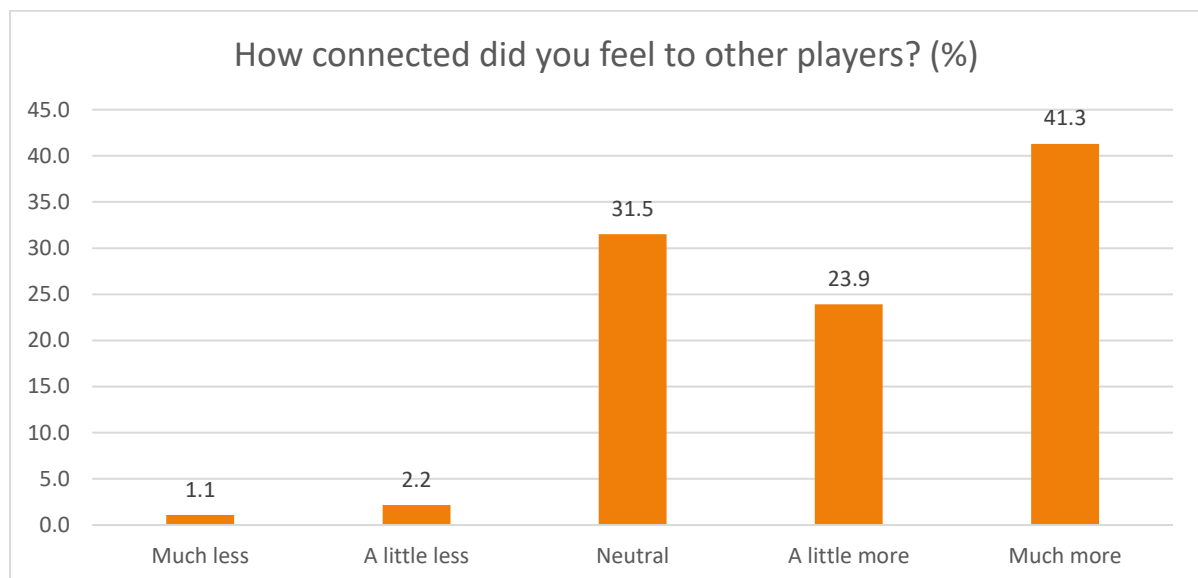


Figure 26: How connected did you feel to other players?

Feeling connected responses are broken down by day number and game in the table below to seek to determine whether there is any evident pattern of increase or decrease in reported connection over the course of the week.

Table 31: Pupils' reporting of sense of connection to other players, presented for specific games.

Day	much less	A little less	Neutral Connection	A little more connected	Much more connected
Day 1 Sushi Go	0.00	0.00	0.38	0.29	0.31
Day 2 Kingdomino	0.00	0.10	0.29	0.33	0.29
Day 3 Splendor	0.04	0.00	0.24	0.12	0.60
Day 4 TtR London	0.00	0.00	0.35	0.18	0.47

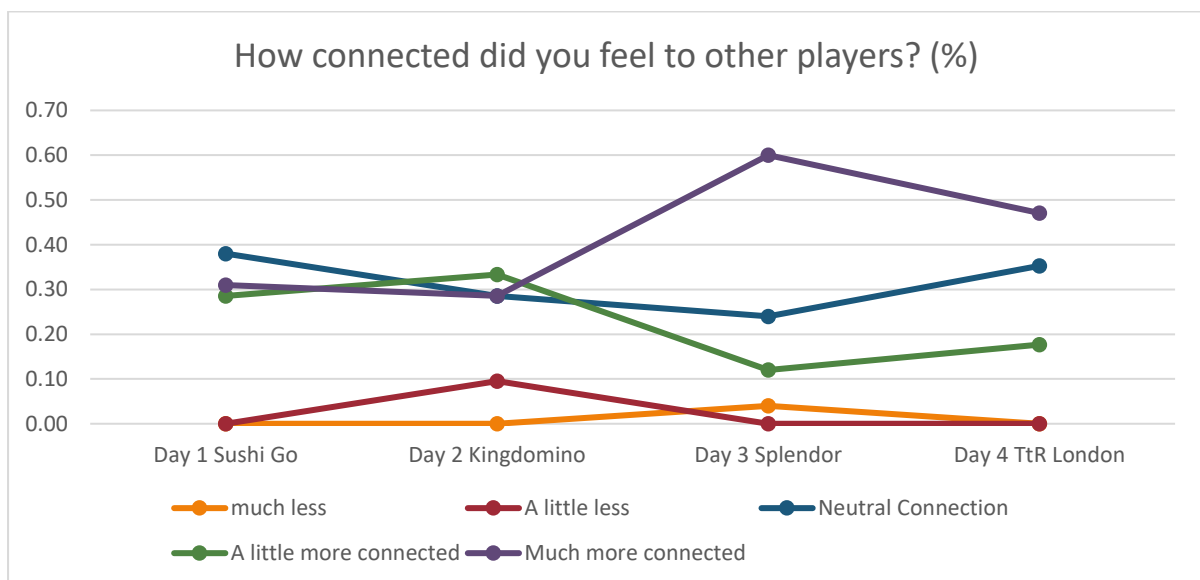


Figure 27: Graph showing reported feelings of connection to other players for specific games

On day one, 60% of pupils reported feeling more connected. One day two this increased to 62%. On day three, 72% reported feeling more connected, with a drop back to 65% on day four.

It is difficult to separate within this data pupil response to a specific game and the way it plays, from their response to a specific game encounter with peers, from the impact of developing relationships over time. How do each of these factors contribute to an increasing sense of connection? Reported feelings of *much more connected* doubled on day 3 playing Splendor as compared to day 2 playing Kingdomino. Is this a response to the game, or to the metagame? Which is causal, which is effect? Or are they mutually causal and effected? Data for Marvel Splendor and the original version of Splendor

are combined here. A number of boys in the group responded very positively to the Marvel theming, a number of girls gravitated together and to Rebekah as a mentor, choosing to play the original version based on a gem collecting theme. Did both groups hence feel strengthened connection, but for different reasons?

Further discussion of findings and themes

A Monopoly on Childhood Board Game play?

Monopoly holds a ubiquitous place within our game playing culture. This game was cited by 30% of baseline respondents as being the game they had played most recently, with 41% of pupils citing it as their favourite game too. There is no underestimating its cultural importance and its significance for this group of pupils. Pupils do not only play the original version of the game, they cited several other variations, including Deadpool, Fortnite, Mario – each one carrying branding linked to popular film and video game franchises.

Monopoly offers clear potential for cognitive and skill development; navigating its game mechanics requires players to practice numeracy, literacy, oracy, negotiation, estimation of value, planning, tactics, strategy and managing winning and losing.

As a game, Monopoly has a single route to victory. Player agency is directed toward buying more, charging others more and accumulating wealth at the direct expense of all other players. One player wins by slowly forcing the other players into poverty and destitution. While the journey may have all kinds of intriguing twists and turns, ups and down, the destination is always good news for the one and bad news for the many. That is the game – its why it's called Monopoly.

At the time of writing, Monopoly ranks 24,842nd in the BGG rank of best games (Accessed 22/08/2023). Only five games lie below it (War, Bingo, Candy Land, Chutes and Ladders and Tic-Tac-Toe).

Portability and Playing Times – UNO and Monopoly Deal

UNO was the second most frequently cited game in responses for favourite and most recently played games. The proportion of pupils naming it in each category was identical (18.7%)

It might be difficult, if one were playing games regularly, to find a group of players to commit to the time involved to play Monopoly. This might explain why greater numbers of pupils cite it as a favourite than as most recently played. In sharp contrast, UNO has a simplicity, speed, and portability that Monopoly lacks.

Emerging from this research and from our later work, beyond the scope of this study, we would suggest that Monopoly Deal offers a good opportunity for pupil enjoyment of many of the elements of Monopoly but packaged in play style more akin to UNO. This card version of the game has players collecting sets of cards for victory but has a game end condition that finishes the game for all players

at the same time. While luck plays its part, there is a decent amount of tactical decision making involved too.

Post-project, post-16 mentors continued to share games in tutor-time with younger pupils. The mentors requested that I introduce them to more fast card games that could be played in a 15-to-20-minute window. Games like Zuuli (Priscott, 2021), The Mind (Warsch, 2018) and Rhino Hero (Frisco & Strumf, 2011) have since been added to that portfolio beyond the end of this project and Sleeping Queens with pupils at the younger end of the age spectrum.

Learning to Play

Watching experienced players playing a game consistently had the highest incidence of being named as the favoured way to learn across ages and pupil groups. Our chosen teaching method was to directly teach games through the experience of play. What I observed over the course of the project was that, particularly in the central hall and in the library, pupils would come to watch games and then request to play. It is how we gained one of our post-16 mentors – he watched the mentors play, then requested to play, then requested to join the programme of mentor training.

While teaching games experientially clearly has impact (as is shown in our post-game data) the potential power of playing games in public, under the eye of peers, may have agency for schools wishing to introduce and increase the phenomena of tabletop game play. It may be that watching first, provides some relative safety – a buffer, a place of anonymity from which to decide whether to commit further – to a fully immersive, experiential learning experience. And this should not be strange to us as teachers. Modelling is a key part of our pedagogy alongside instruction and usually ahead of pupil practice. It seems unlikely to us that watching alone would provide sufficient competence for novices to be able to play all the games covered here, but for games like Cockroach Poker it should be possible.

The relative lack of appeal of video tutorials continues to be an element of this research which surprises us. The importance of EdTech grows ever stronger in this digital age. Use of mobile phone, access to YouTube and Twitch abound. And yet this group of pupils say they would have chosen any other offered method ahead of a video tutorial. Have we overestimated the appeal of this way of learning in general, or is specificity confined to this current case study? Could it be that, in the wake of COVID, lockdown and virtual lessons, this data-collection captured an element of video fatigue among these pupils?

Boys and Reading

When asked about their preferred method for learning games, responses by gender were broadly matched for *telling*, *watching*, and *playing*. Beyond this preference parity for experiential and guided approaches, a greater proportion of boys selected reading the rules (35.3%) than did girls (29.2%). How might we seek to explain this? Is the greater openness to reading here because of the instrumental nature of the subject matter at hand? Is it that it is technical and usefully goal-directed? The proportion of boys who would opt to watch a video tutorial (20.5%) was almost twice that for girls (10.4%) but still falls some way below the option of reading the rules.

Feeling Connected: SEND Pupils

Data Set One (Baseline data) showed pupils with SEND as being less likely to have played a game *recently* than their non-SEND peers. Responses revealed similar levels as peers of feeling *much more connected* following game play. Considering our data reveals pupils with SEND are less likely to be playing games at home than are their non-SEND peers, then this might imply a marginal *feeling connected* gain to be made through the opportunity or encouragement to participate in tabletop game play at school. A lack at home might be compensated for through in-school play. Games learned and enjoyed at school may even find themselves ported back home – assisted or not through intentional home-school working.

Feeling Connected Across Data Sets and Age Groupings

Some differences were observed in feeling connected data for different age groupings of pupils. No pupils in the age 15-18 group reported feeling less connected, while between 3% and 5% of pupils aged 10-12 reported feeling less connected.

Returns at the highest possible response moved inversely against age category, with 41.3% of the youngest players (10-11 years old) feeling much more connected against 34.9% for players aged 11-13 and 30.2% for players aged 16-18.

When considering the sum of a little more and much more connected, this trend reverses. In all cases, around two thirds of pupils reported feeling more connected to other players.

Table 32: Whole project connection to other players data, by age grouping

How connected do you feel to other players?			
	Year 6 to 7 Summer School (n=126)	Year 7 & 8 (n=83)	KS4 & 5 (n=43)
Much less	1.1	0	0
A little less	2.2	4.8	0.0
Neutral	31.5	26.5	27.9
A little More	23.9	33.7	41.9
Much More	41.3	34.9	30.2

The aggregated data across all project phases and year groups places more than two thirds of pupils (68%) reporting feeling more connected to peers with more than a third (37%) reporting feeling much more connected.

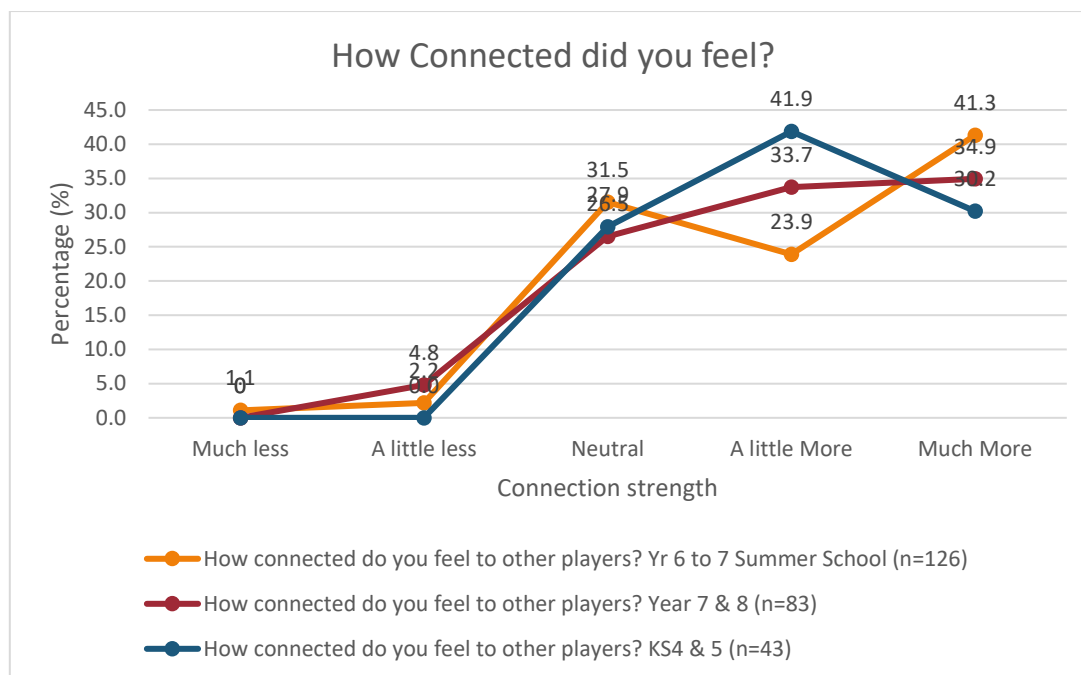


Figure 28: Graph showing pupils' self-reported connection to other players, by age grouping.

Desire to play again.

All groups reported strong overall desire to play again, with KS3 pupils and summer school pupils both responding in the 80th percentile range (8.36 and 8.4 respectively) and KS4 and KS5 in the 90th percentile range (9.06). The aggregated figure for all groups combined was 8.4 out of 10.

Competition and Cooperation

In investigations of the effects of cooperative and competitive games on behaviours of 4- and 5-year-old children, aggression was seen to increase in competitive games and decrease in cooperative ones. (Bay-Hinitz, Wilson, 2005). The authors define competitive games as being ones in which there are both winners and losers and being structured such as to promote “strong motivation to succeed as well as an interest in seeing one’s opponent fail” (Bay-Hinitz, 2005, p.435)

In this study, all games used were *competitive* games and yet I found no aggressive behaviour. Conflict was generally observed as absent, or mild, playful and friendly. An isolated exception was found in playing *Exploding Kittens* and this game gained individual treatment in an earlier section. Is it possible that carefully selected card and board games, introduced within ideas of collaborative-competitive play might negate some heightened conflict. Might there be a dynamic in which pupils’ positive experience of the game and the metagame, within a Magic Circle might incentivise them to play cooperatively on the realm of the metagame whilst competing at the level of the game. And in such an occurrence, has the metagame and the preservation of a well-played game have become

the more important social game? If it has, these pupils will comply to Nguyen's description of *striving players* for whom the intrinsic rewards of engaging in the game together outweigh the rewards offered by winning the game. This would be a cooperatively owned social phenomenon, an emerging community of play.

Further data collection possibilities: It would have been advantageous to return to the subject school to interview Board Game Mentors, pupils receiving board game intervention by mentors, and Summer School Students about their experiences of being introduced to new tabletop game play. Changes in school circumstances hindered this.

Possible Future Doctoral Research:

- *Shaping a model for seeding board game-based communities of play in secondary school contexts*
- *How using modern card and board games as a coaching tool can improve broad outcomes for pupils in alternative education.*
- *Modern card and board games: a neglected primary to secondary school transition tool*
- *A study of how (n=?) different schools are using modern card and board games to develop culture and improve outcomes*
- *How schools can use modern card and boardgames to foster multi-generational table play*
- *Board Games and Table Fellowship: an examination of how physical games can bring people closer together.*
- *Can compatibly themed card and board games contribute to curriculum-based learning?*
- *Can the impact of specific Eurogame mechanics on metacognition and executive function be measured?*

Conclusion

In this study of pupils in a non-selective coastal secondary school existing experiences of playing card and board games revealed notable differences between pupil groups. One in five pupils reported not having played a card or board game within the last year or ever in memory. This increased to one in four for boys and for pupils eligible for free school meals. One in ten boys reported not recalling ever having played a card or board game. This was twice the reported rate for girls. Pupils receiving SEND support were found to be the group least likely to have played a card or board game recently (within the last month). Pupils facing economic disadvantage were found to have an increased likelihood of limited physical access to games at home.

Based on my experience with this cohort of adolescent pupils, I conclude that a thoughtfully constructed modern card and board game strategy, implemented within a Secondary School context, offers clear opportunities to enhance feelings of happiness and social cohesion between peers. Such a strategy is also suggestive of benefits for pupils transitioning from Primary to Secondary phase education, a period with well-documented additional challenges for children.

The economically disadvantaged, boys and pupils in receipt of SEND support all reported lower instances of card and board game play at home. These groups in particular stand to benefit from carefully supported school-based board game initiatives.

Within the body of games played at home, Monopoly and UNO predominated. These games were most frequent cited as personal favourites and as the games most recently played. This group of early adolescents named games such as Snakes and Ladders and Snap as more favoured and recently played than classic abstract games such as Chess, Draughts and Playing Cards.

Our research demonstrates that the growing modern hobby game market has left this group of pupils largely untouched. The Eurogame school of game design offers a rich selection of thematically attractive games from which to enrich table-based community play for these pupils. The selection of games used within our study proved to be well received, eliciting a strong desire to play again.

When pupils were subsequently exposed to carefully curated opportunities to learn and play modern card and board games the very great majority reported playing to have been a happy experience. For two thirds of pupils this was accompanied by a feeling of closer connection to peers.

In a group of pupils transitioning from Primary to Secondary School, more than 40% reported feeling *much more connected* to their new peers following game play.

My conclusion is that a carefully designed and well curated, peer-led introduction of this genre of games to school social times has potential to offer a socially beneficial alternative for young people. Such experiences may serve to balance trends of deepening online immersion and *virtual-digital* social connection which do not always lead to greater happiness and wellbeing.

Pupils across the cohort reported a strong desire to play the new games again – recording a mean desire of 8.4/10.

I acknowledge that this is a modest study, a first sweep in many respects. Based on our findings, however, gathering around a table to manipulate physical pieces of cardboard, wood and plastic, constrained by the parameters and rules of a game, may still have something to offer for us and for our children and young people. It seems there may still be fun and improved social connection to be enjoyed, away from the penetrating blue light and the forced firing of our neurons we experience in front of a screen.

I observe that young people have fun and feel more connected when playing card and board games, when introduced to the right games in the right way. Our findings lead us to assert that these games have a beneficial place within the social spaces of our secondary schools and the wider social experiences of the young people in our care.

The pressures on school leaders are immense. Pressure on the curriculum is no less intense. We are fools if we cannot see the way that pressure trickles down to our pupils. Might gathering around a table for play help to alleviate some of that whilst, in tandem, supporting wellbeing, developing social cohesion, and developing resilience in the face of challenge? I believe it just might. And I assert that our young people need that.

“Amidst all that pressure, do we have the resource and inclination to make space for a little fun, together, gathered around a table? And if we were to prioritise that; if we as school leaders were to pull up a chair and take a seat at the table, even for a few minutes, just what might that communicate within our culture about what is really, truly of enduring value in life?”

So whispered the Grasshopper to the Ant.

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Appendices

Appendix One

Thematic decisions including Decolonising the Curriculum

Throughout the project, choices to include or exclude games have been made based on their game mechanics, player count, complexity and likely duration. It has been our desire to include games whose mechanics promote a range of types of learning, whether social, communication, literacy (through reading cards), numeracy (through conversions, working out numerical values, adding scores), accessing specific curriculum knowledge.

Thematic elements of games have also been held to be important. Games containing troubling content, potentially inappropriate for our target age group have been excluded, as have games that might seem to trivialise or trade on significant events in history that were a cause of pain and loss to various groups. In addition, games which seem to offer accurate educational content but do so in error have been excluded.

Within the first category an example might be *Dead of Winter– a Crossroads Game* (Glimour, Vega, 2014) in which players attempt to work together to survive a zombie apocalypse but make decisions about whether to share or hoard food and which non-player character to help or, conversely, to hand over to the zombies. While the game offers themes worthy of exploration with older pupil players, the immersive nature of the gameplay leaves it feeling inappropriate for our purposes here.

Archipelago (Boelinger, 2012) thematically places players as Renaissance European explorers occupying a pacific archipelago, trading with and subduing natives as they go. The casual treatment in gamified form of the subjugation of another people group seems to us inappropriate for educational use as a game intended for fun and social cohesion (our primary aims). It may be that an argument could be made as to the valid use of the game with older, more experienced pupil gamers as a vehicle for an immersive, experiential introduction to thinking about the decolonising of the school curriculum and as a precursor to a deeper ethical discussion of these themes. *Freedom, the Underground Railroad* (Brian Mayer, 2012) centres on the themes of slavery but casts players in a cooperative role as abolitionists working together to free slaves from plantations and ultimately, abolish slavery. Again, this title involves the gamification of a troubling theme – but in contrast to *Archipelago* points player agency in the direction of contributing to release from subjugation rather than toward initiating it.

In the third category, *Manitoba* (Conzadori, Pranzo, 2018) casts players as Cree leaders competing to be Chieftain. Culturally insensitive box art carries an image of a totem pole – a feature of indigenous

culture on the west coast – not present in Manitoba. This carelessness in the treatment of indigenous geography and culture when creating a game thematically centred on that culture seems to us to be contrary to the principles of good educational curriculum – other than if being employed for the purpose of exemplifying and discussing cultural insensitivity in games.

Many more games could be added, but these provide some exemplification of some of our thinking about choices of games for school.

Appendix Two

When Games Fail – Magic Circle in a Pupil Referral Unit

There have been games that failed. There have been games which felt like flying a plane, straining hard at the controls in a sustained effort to keep it in the air. They did not all stay airborne.

What are the conditions that have placed pressure on games?

There have been times when pupils have proved unable to play. For the game to be played well together, all – or at least the very great majority – need to be committed to the game. And that wider game, the metagame, requires a commitment to each other, to the Circle – and to the magic of that Circle. I have observed that one distracted young player can quickly begin to place strain on the game and on the integrity of the Circle.

The source of that distraction might be internal or external. Repeated waves of covid-19 have given rise to occasions when a pupil joining me for board game intervention has felt unwell. A parent is unwell with COVID, they too feel unwell (or at least they report they do) but school have decided the pupil is well enough to remain on site. This internal distraction repeatedly tugs at the pupil, calling them outside of the circle. The child begins to engage in a monologue, reciting internalised lines about unfairness and about their own feelings. I wonder whether this is excuse making – a line worth pursuing to get them out of school; whether perhaps it is concern for the wellbeing of a loved one for whom they feel some responsibility or whether, indeed they genuinely feel unwell. They don't look or seem unwell.

Eventually they get up from their chair and head for the door to talk to the staff member who holds the key to their staying or going. The circle is physically broken – but it had already experienced existential trauma prior to that crystalising event. My young fellow player is no longer in the game. Their presence in this world within a world was always tenuous on this occasion. I feel sadness for them and for the game and I feel disappointed that I have been unable to provide adequate help to my young friend to take continued shelter in the temporary world of the game.

If there are just two of us as players, the game can close and there is no wider impact. Other than perhaps the question of whether my credibility is in subtle ways eroded. Perhaps too, that of the game we have been playing and the value it might be seen to offer this pupil and others like him.

When there are other pupil players at the table with us the damage feels more serious. I see frustration and disappointment in other faces at the table – the magic of the circle has been broken for them too. Can it be repaired, I wonder? I believe it can. Trust needs supporting and a good game, a game well played is needed to diminish the memory of this one. Will the experience increase the

resolve of our young players to hold to the magic, or will faith wane, weakening belief that the magic is real? Only time will tell.

The other pupils wish to play on. They have cards in hands, pieces on the board, goals and strategies in play. We agree a contingency to allow us to continue. Falteringly we persist and, as we do, faces begin to relax, and smiles begin to return.

But then so does our unsettled player – in and out of the door. Slumped down into a chair and then back out. A staff member follows, and conversation ensues, the pupil's voice is raised. And it's enough for another player whose own fight to remain regulated falters as they too leave their seat and exit. Disruption, disappointment, and frustration have become too heavy for the fragile magic of the circle to hold, and it collapses under the weight. I call time on our game and begin to pack away the pieces.

It was getting towards the end of the time allotted to our game, so I visit the school office and debrief. And we agree a plan for playing again next week.

Appendix three

Shaping and Refining the Project and the research –Fun and Social Connection

As I began to entertain thoughts of overlaying an in-school project with a research project, my mind went to work on what it was that I wanted to learn. Eventually I determined that it was about social, emotional, and cognitive experiences of playing games and, arising from these, what experiential benefits wider adoption of games into school life might offer our young people. I wanted to understand to what extent playing card and board games brought social benefits to the young people I was serving. Along with this was the key idea of whether the experience was fun and, if it were, whether pupils might begin to incorporate table-based gameplay within the sphere of their own cultural capital.

I was also interested in measuring how effective different methods of learning to play were – reading rules, watching an online tutorial video, learning by playing, being taught by an experienced player. I felt this question to be both of interest and potentially of application to the classroom and our wider pedagogy, and therefore of an additional, instrumental utility. I was intrigued by what the mastery arc might look like for a pupil learning a game. As they played once, twice, three times how might they self-report their confidence in understanding the basic rules of play and, more nuanced, their sense of what made for a winning strategy. This too I considered to have some possible application to our existing model for recording and categorising assessment outcomes.

Each of these strands can still be seen in some measure in the survey data collected either at baseline or post-game, or both. I would like to have taken each one in turn, utilise this early data and press into it more creatively.

Having Fun

In my survey data I chose to use “enjoyable experience” as a proxy for fun. If I were now to repeat this research, I would simply ask whether the experience was fun. I suspect that as I was setting out, I may have prejudged that *fun* was too high a bar to expect when seeking the views of a *plugged in*, console emersed, *digital generation* about their encounter with board games. In retrospect, I have been astonished at the strength of positive responses to the games we had introduced. I wish now that I had not pulled my punches, that I hadn’t diluted what I really wanted to ask: “Did you have fun playing this game together?”

A sense of Connection

Early on in my reading I had come across a 2006 Ohio State University study (Reinhard, Guillory, 2018) published by website Armchair Dragoons on the motivation factors influencing existing hobby game players.

The research took the form of an online survey with 3,550 respondents of an average age of 30 – 50 years. While this appears at first sight to offer little carry-over to my school age cohort, 83.5% of respondents identified their relationship with hobby games (the survey scope covers both digital and analogue games) as beginning prior to the age of 16 – hence having potential implications for pupils in our target groups.

Respondents were grouped based on their favourite gaming category: Fantasy RPG (n=841), Miniature War (n=658), Board War (n=484), Board Euro (n=428); Computer Console (n=128).

Respondents were asked about a number of motivational factors. The one of particular interest to me was *Catalyst for Socialising*. 67% of Eurogamers cited Catalyst for Socializing as a motivational factor for play (second highest group) compared to a far lower 25% of Computer, Console Gamers. The researchers discussed the attraction of solitary play to the digital gamer but what tugged at me was the idea that two thirds of responding Eurogamers viewed their hobby as providing them with valued social contact. I wondered to what extent this offered insight into a key outcome of playing Eurogames that might benefit others, namely our not-yet-Eurogaming young people.

It is worth noting, for the purposes of further possible research, that the highest respondent group for citing socialising was Fantasy Role-playing gamers at 73%.

Post-lockdown, the theme of connection grew in importance to me in this project. With the onset of *lockdown*, we as an educational institution shifted to a digital and telephone connection with pupils and families and concerns about isolation grew. As on-site teaching returned, it did so behind masks, in geographic and year *group bubbles* and mediated always through the precautions of distance, handwashing, alcohol gel and disinfectant spray.

My concerns about social dislocation and loneliness persisted.

Appendix Four

An Important Early Lesson

Late autumn term 2020, just prior to the onset and spread of COVID Kent variant Delta I was teaching a bottom set year 7 Maths class. The class was packed full of children who were, to varying degrees, Maths phobic and who struggled with peer relationships and self-regulation.

I was tentatively experimenting with games-based approaches to making Maths accessible for this class. When we studied probability, we drew coloured game tokens out of draw bags and theorised on what token was most likely to be drawn next. We used manipulatives, studying the faces of dice to establish there was 1 face in 6 which carried a given digit and therefore a 1 in 6 chance of rolling any given number. We rolled dice over and over and recorded tally marks of the results to create frequency distributions and evaluate our theory.

At this time, it came to my attention that Reiner Knizia's little Maths based game Dragon Master (Knizia, 2004) had become available as a free Print n Play game. I had used the game with individual students with some success. I believed I could adapt Dragon Master to help teach basic substitution, so I decided to try it with my class. I printed, laminated, cut and assembled. I created rules summaries and player aids. I taught the rules from the front of class, and I modelled game play with a pupil, displayed to the class via a visualiser. This was great.

"I'm a genius", I thought to myself.

I arranged pupils at desks sat 90 degrees to each other, as is demanded by the way the game has players sharing ownership of played cards but scoring either rows or columns. I handed out a copy of the game to each pair. We went through player aids one more time and then we began.

It was an unmitigated disaster.

At multiple tables pupils asked for help, cards began to find their way from the table to the floor and the noise level in the room rose quickly above the contained and controlled quiet I had, over many years of teaching, grown accustomed to. It felt like the least successful class I had taught since an occasion during my training year almost three decades earlier, in which a troubled student in my year 8 class had orchestrated a ceremonial throwing of Bibles out of the window of the RE mobile classroom. I was aware of a dejected hopelessness beginning to creep its way through my psyche.

I pulled myself together, and at the end of the period, marshalled pupils behind their desks and dismissed them for the weekend. One boy came over to my desk as the others drifted out,

"That was fun Sir. I think I get it now. Can we play that again?"

I smiled and thanked him.

“Yes” I said, “but perhaps you could help me to teach it, one person at a time.”

And for the next couple of weeks, as pupils completed the main body of work set for the class, this pupil (conscientious, and always the first to finish) would remind one of his peers of the rules and they would play a game. One taught one and then two taught two and so on until a decent number of pupils were able to play Dragon Master. I am not sure that Dr Knizia, former Maths Professor, would be that proud of my achievement. But something of an achievement it was, and it provided a lesson that proved invaluable in shaping the design of what was to follow.

Appendix Five

Three Early Players

The three pupils referenced here had a profound impact on the formative stages of this project. Without them, there probably would be no project. Their stories here are used with their permission, but they remain anonymous.

My experiences with board games at home and my growing immersion in the wider world of hobby games set me wondering whether they might offer a relationship building, de-escalation tool that could be of service to some of the struggling pupils I was encountering at school. And so, I began to cautiously explore.

Player One.

As Vice Principal I would spend regular time making 'climate walks' and so would encounter or receive calls to attend pupils for whom things had gone wrong.

One such pupil was a Looked After Child with whom I had no pre-existing relationship. At times this pupil became dysregulated and in our early encounters, her anger and attachment difficulties presented a situation in which I could find no way in to assist her in moving towards increased calm and self-regulation. All I could do was let it burn its way out.

Eventually, I made a point of trying to build some tentative trust during periods of greater personal equilibrium for this pupil. As part of a personalised timetable, they had a couple of periods a week in which she was withdrawn from PE. I decided to enquire as to whether in one such period she would like to play a game. I chose Kingdomino, an accessible tile laying game for two to four players which my own children had enjoyed and in which players attempt to build contiguous areas of similar tiles to score points. We played, and my new play partner enjoyed the game.

It turned out a successful bridge towards early trust had been made. Now, when things became difficult for this young person and when I was available to attend, I might suggest we played a game and talk it out. The game became a safe place – a sphere of *thinky-play* to pull at and distract the mind, while the bio-chemical storm blew itself out. This pupil talked about their enjoyment of games at the institution they knew as home. Our shared games played into this existing experience and consequently she brought with her into our times an existing culture for play and a fascination for what other games I had that I could bring to the table. Sometimes we played in the SENDCo's office, sometimes in the central heart (a multi-purpose food hall). On several occasions passing members of staff would stop and enquire what we were doing. On these occasions our interested observers were invited to play and my suggestion to this pupil was that she taught the rules – which she did, slightly

clumsily, but we got there. One such teacher in turn took Kingdomino and began to use it as a Restorative Justice tool.

When I eventually established a games library at the school this pupil took great pleasure assisting me by opening each game, pushing new cardboard pieces from the sheets of punchboard that held them, smiling as they browsed through crisp new superhero cards in Marvel Splendor and flicked through the pages of the rule book for 7 Wonders.

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Player Two

Another pupil who frequently found themselves unable to remain in class but who would then stay outside the class, disrupting learning and refusing to be relocated to a more appropriate setting learned that they could make their way across the playground and wait at my office door. I would be called, and we would begin a game of Patchwork Express, Lost Cities or Dragon Master together. The pupil demonstrated a sharp mind for Mathematics and as we traded moves, I would begin to gently push into the circumstances of what had unfolded in the classroom. The pupil was free to tell their story as they experienced it – or as they wanted me to see it. The game was not the solution to their difficulties – it simply offered a mediated opportunity.

Yet over time the game did take on a developing importance. As I learned to better read the face of my young games partner, I became acquainted with the micro expressions that betrayed the inner experience of a wrong move made. The countenance fell almost imperceptibly – but it was there. I would watch as the mind went to work intently scanning between cards in hand and the game state on the table between us. Eventually light would come to the eyes, a card would be played, and the previous mistake would be redeemed. A faint smile would follow. And then I would go to work.

“You made a wrong move earlier, didn’t you? How did you feel about that?”

“And yet, you didn’t quit. You didn’t flip the table. Instead, you went to work finding the move you could make to get you back in the game.”

“Why doesn’t it work that way in the classroom?”

“You know, the classroom is quite a lot like a game – with its pieces and its rules of play. You seem to feel that if you make a wrong move there the game is over, you feel bad and flip the table.

In reality, you are just one well played next move away from redeeming the misplayed card and getting back in the game.”

“Shall we talk about what that might look like in practice?”

And from there the games we played became a working model of classroom mechanics and relationships as we worked together on this young person’s self-regulation.

There were underlying causes for this child’s dysregulation. Some of those we had the opportunity to talk about as trust strengthened. Ultimately though this young person proved unable to sustain a place in mainstream education (or the school proved unable to sustain their place?) and they moved to an alternative curriculum provision while an Education Health Care Plan was sought, and a more suitable place of education identified.

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Player Three

A third pupil who played a formative role in the period which gave birth to this research was a boy, tall for his age and struggling with social relationships with peers. He had clearly accessed little online education during lockdown and early subject diagnostic assessments proved challenging. An older sibling had struggled to hold their mainstream place and moved to Alternative Curriculum prior to an EHC being completed but ultimately moving to Ed at home.

I was able to establish a decent rapport with this pupil early on. I gave support by allowing my office to be a safe withdrawal location when things were beginning to go wrong in the classroom. We would debrief and attempt to plan for better choices in the future. The pupil became interested in the collection of games on my shelf. He shared that his family did not play games together. His Dad had a games console, but he wasn’t usually allowed to play on it. The boy asked whether we could play a game.

“Which one?”, I asked.

“That one with the Japanese writing and the Panda” he replied.

His eye had fallen on Takenoko.

I told him that he needed to finish his science assessment and once he had done that I would talk to the principal and see if we could arrange something.

The pupil, holding his pencil in grubby hands, reluctantly pushed it through the motions of a few more scribbled answers. Later I talked to the Principal, and we arranged a Friday afternoon game during his PSHE lesson – he could bring a friend.

That Friday, as I taught Takenoko, and we began to play I was astounded by just how fast and sharp this young man's apprehension of rules and application of tactics were. He showed his contract cards to his friend (not strictly within the rules but I let it go in the name of a game well played (de Koven, 2016) and the two of them almost instantly began to collaborate in laying out game board tiles that would advantage them and, conversely, disadvantage me. They smiled, they laughed, they thought and chatted and acted tactically together. They had fun. And this pupil who was failing every formal test and struggling to remain within class without disruption and angry outburst demonstrated that, hidden beneath, was a charming young man with a razor-sharp mind.

Things for this young man continued to deteriorate. An EHCP application began. He grew increasingly uncompliant and rude towards staff. Yet, when things went wrong, when his red mist fell and his dysregulation increased, I remained able to ask him to go wait by my office door and he remained able to comply with that request. We shared further games: Takenoko and Dragon Master and he continued to exhibit thoughtful skill. But eventually his behaviour towards peers became such that an Alternative Curriculum place was identified. He never got there, like his older sibling before him he was withdrawn from mainstream education at parental request and became educated at home.

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Afterward – Hello again, Player Two

Sometime after the end of this research project I found myself teaching games across several Alternative Curriculum sites.

One afternoon as I was beginning to unpack my game bag, a face appeared at the door, beaming. It was player number 2. Now in Year 9 he was not yet in receipt of an EHCP and had had a failed placement in another local Secondary school. Unable to return to his original PRU site, he was here for two weeks before an attempted move to what would be his third Secondary School in three years.

I invited him to play. We pulled out a couple of games he knew, along with one or two that were fresh to him. Men at Work (Modl, 2019), a manual dexterity stacking game, was played for the first time and was greatly enjoyed.

We met and played several times over his period of stay. The sessions seemed to be helpful.

When the time came for this pupil to start at his new school, the Deputy Head at the PRU put in a call and floated the possibility of the new school's pastoral lead facilitating a one-hour weekly meeting for me to support reintegration to mainstream via the use of games. This was agreed, and for ten weeks we met, and we played, and we talked. Our games table was situated outside the Pastoral lead's office and at the beginning and end of the session he would check in with me, and with the pupil. Praise would be given, and formative relationship began to strengthen. And when the time came, I withdrew.

Player 2 completed year 9 and has begun studying his GCSEs. His journey hasn't been without the odd hiccup, but he seems settled. And he appears happy.

It isn't just about the games. It is about everything else that goes along with them.

Games are cultural artefacts for entering into together and being enjoyed. They aren't magic.

Well, perhaps just a little bit magical.

It's an old kind of magic, handed down from one generation to the next, the wisdom of ages.