

**An Exploratory Study of the Impact of a Meaningful,
Mastery Project Based Learning Curriculum Structure
Based on Self-Determination Theory and Agentic
Engagement on Motivation, Engagement and
Outcomes in a SEND Secondary School in England**

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Thesis: Doctor in Education (EdD)

I, Matthew Silver confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

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Abstract

This study looks to address the challenges of engagement in learning for those with additional needs in the UK in the 21st century. In doing so, the model's aim is to improve access to roles of social value and address the 6% employment rate through better educational outcomes and future opportunities. The meaningful, mastery project-based learning (MMPBL) curriculum model was designed to best facilitate the psychological needs of Ryan and Deci (2000) Self Determination Theory (SDT) and enhance engagement, enhancing student agency. It was tested on Key Stage 4 students (n51) in a secondary special education needs or disability (SEND) school. They chose one of six MMPBL projects and dedicated 350hours towards 'mastery' of their strengths.

The mixed-method methodology sought to explore what impact, if any, the MMPBL would have compared to the previous 'typical' delivery of the national curriculum. Secondary data was drawn from typical academic outcomes and stakeholder voice through focus groups and surveys, using coded analysis of the presence of motivational components and observations of engagement. As an exploratory piece of research, the study was also left open to spontaneous data.

The results showed an increase in the presence of competence, relatedness and autonomy, but also built conceptual and applied learning into education. The model led to a positive spiral in outcomes, including engagement (behaviourally- 83% reduction in negative behaviour incidents and +4.16% attendance), improved academic outcomes (cognitively- increasing 0.4 qualifications per student and quality, 0.5 in level), improving autonomy in transition choices (those who went on to subject specific college courses increased by 32% and 2 students gained employment). Stakeholders highlighted a positive impact on culture, perceptions (including identity), development and connecting networks locally and globally (entrepreneurially supporting 29 causes). The research will benefit practitioners, policy makers and academic research as it is the first whole curriculum based on SDT and agentic engagement in SEND. Future studies look to explore if sustainable projects can be built into post-19 social entrepreneurship in SEND.

Impact Statement

‘Pedagogical, even andragogical, educational methods are no longer fully sufficient in preparing learners for thriving in the workplace, and a more self-directed and self-determined approach is needed, one in which the learner reflects upon what is learned and how it is learned and in which educators teach learners how to teach themselves’ (Blaschke, 2012, p. 57).

This exploratory study has displayed a curriculum framework purposefully designed to increase motivation and engagement, thus promoting learner agency. The Gallup Youth Survey (2004) reflects their more recent Gallup Workplace Survey around engagement (2020), with half of teenagers bored in education and 22% being interested. Dangling the carrot of test scores is leading to rampant boredom as awareness of just what else is out there expands (Jason, 2017). The shift in engagement in this study is illustrated with positive impact across all standard measures of ‘success’ in education. The students have become self-determined to learn and progress on their own unique pathway. Although this is the first whole curriculum based on self-determination theory (Deci and Ryan, 2000) it is not limited to just being based on motivation nor its impact solely within special educational needs settings.

The curriculum framework and delivery have contributed to better meeting learners’ psychological needs of autonomy, competence and relatedness. Meeting these needs, particularly in a time of rapid decline in mental health, often magnified in the challenges faced by students with additional needs, is a beacon of hope for where education as a whole can take a significant step in addressing multiple issues. Application of learners’ concentrated time spent further mastering their knowledge, skills and behaviours, has allowed them not only to learn, but also seek to develop themselves and potentially their future opportunities. It demonstrates a model that accommodates self-directed learning (Knowles, 1975) and learner self-direction (Brockett & Hiemstra, 2012). The Meaningful Mastery Project Based Learning seeks to demonstrate how education can pull the learner instead of pushing at great expense.

Additionally, contributing to an autonomously selected area of greater good is now essential for the human population to remain sustainable. These young people have

taken responsibility for themselves and others and found a sense of purpose and self-worth, better equipped for employment and life. The potential is beyond this impact statement, but that the students are becoming social entrepreneurs (outside of this study) and now taking this on to applied socially responsible digital business design is just the very start.

The study shows that the theoretical reasoning may underpin the transformation education requires for a broad systemic change is shifting the values of education and all those that are part of it that can wake up humankind, empower us to develop, and show up purposefully throughout our lives. On a personal level, I hope that the journey continues to expand each 'individual's beliefs of what means they are capable of utilizing when the self acts as an agent' (Chang, Adams, & Little, 2017, p.285).

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Reflective Statement

Personal and professional interest as an education practitioner

The strands of my personal, professional and academic growth have been intertwined and continue to be so even upon completion of my EdD. I have been a part of a voluntary charity group that provides respite for children with additional needs for 25 years. My first trip with the group was at the age of 9 and I have led this for the past 12 years. No doubt my interaction with children with additional needs that began as a child acted as an origin for personal and professional perspective and growth. However, my further education has opened my mind to human evolution, learning, and development that means I no longer seek conclusive judgement outside of absolute truths.

I was not intending to have a career in education and it was only having brain surgery on a tumour in my left temporal lobe at 20 years old that awoke me to search inwardly for my own being's purpose. Learning so much about myself and others along the way, I found my calling to be education and I entered it 2009. The experiences of my own challenges have always been humbled by the character of the young people with whom I am fortunate enough to have always had a connection. They model a determined approach to their challenges. This removed many egoic fears and creates a real sense of meaning to my actions in their development.

That I experience such meaning built my sense of self and led me to ensure that young people I work with have a sense of worth and purpose to their learning so they too can look back and see it as meaningful. Despite being rated 'outstanding' school, change was needed at the school where I was teaching at the time and have now come back to lead.

The conclusion of my Masters in Special and Inclusive Education showed the potential for significant increases in efficiencies, academic, social and emotional development. However, the proposal was not engaged with by the previous leadership. It was this and having my second surgery ten years later that motivated me into action and leadership. Stepping into a deputy head position in a school for those with Severe Learning Difficulties in 2015 broadened and deepened my experience of need. In 2017 I became, as I am now, Headteacher of a SEND High School in North West London.

It is categorized as a state school setting for those with Moderate Learning Difficulties. It has a memorandum of understanding with two other SEND schools in the borough. We lead on the strategic vision of training for SEND within the borough and this network goes far beyond its borders, including an eight-school collaboration that looks to develop and moderate assessment in 'life after levels' and innovative leadership.

The EdD programme and my learning

Along with directing a leadership consultancy company, experience externally allowed me quickly to begin to implement a vision and structure I had formed (but continue to develop with stakeholders) for education in SEND in particular. The first module of my thesis was Foundations of Professionalism. Perhaps not connecting the dots at the time to my research ideas, looking back at the end of the first year it started the on-going process of breaking down who I am and why I am researching, whilst also setting standards as a public figure. Establishing my identity and what drives me forward was an important start to this journey. The module also made me conscious of needing to remain open minded to varying opinions and studies, yet neutral as a researcher. Looking back, Integral theory had begun to be practised in my approach, just not against the framework in which I now operate. I continue to seek how positive findings can continue to be embeded in education to increase the expectation to change in a system that restricts adaptation to societal changes, in this case in terms of technology. It raised my awareness of contributing factors such as my professional status and stature, which, since leading successful change I have found very valuable points of reference in practice. As a researcher and a leader, I seek to reduce status so that others can grow into it, increasing the motivation of others and the sustainability of the approach in the culture of the school.

Feedback on my writing began to build towards a great improvement over time. Boundaries and structure were vital pieces of feedback and helped me address writing my proposals for Methods of Enquiry (MoE) 1 and 2. I delved into the findings that justified the importance of social and emotional development in the classroom and how far back this trail leads, which certainly supported my self-belief. The literature review argued that a classroom based social and emotional assessment was the key in the role of awareness, professional knowledge and change. Both papers also

highlighted the need to bring other specialists on board when designing such an assessment and to refine and define which components are to be included.

Much like the first module, the doctorate has meant finding greater depth, whether this is in my own epistemological stance and how this is seen in my terminology and methodology or through one's professional persona. Becoming open to the strengths of opposing theories made this difficult to rationalise and take a stance at times. MoE2 looked to establish a set of (intertwined) components that form social and emotional intelligence and can be addressed in the classroom setting, yet its implementation was restricted by others' status. This suppression has driven me to be far more autonomous, whilst aligned, as a leader. The structure of social and emotional development in its complexity pushed me to start considering non-linear theories of change, whilst highlighting the need for visual frameworks. The difficulty I had enacting change, enlightened me to the need for professionals' other lines of development, beyond cognitive intelligence.

The philosophical approach taken in the Re-Thinking Education module raised many questions based on the three variables (institution, research, practice) and where I fit within the three and the three fit within me. It has challenged common assumptions and I have a great respect for it doing so. Inspiration from the module led me into many fields of research, reflected by the feedback in both modules of being too broad. This is when I began to seek components that could build a visual conceptual framework, but also keep my writing aligned and my evidence reinforced. This is what led me to justify mixed methods approaches, ensuring both stances on research could be satisfied and stakeholders in the institution can also be convinced with statistics or individual's perspectives. Whilst you can create your own or shared ideal, there will always be acceptance, negotiation or differences. This allowed me to recognize what I can and can't control, instead seeking to influence others leading me to explore behavioural and cultural change. Understanding that vision itself is an ideal that needs to have a common denominator has enabled the large scale and rapid change that this study investigates. This learning increased my consciousness and ability to meet others at their level of development, personally and professionally.

The field of this thesis is Positive Psychology, and in particular Self-Determination Theory (SDT). I discovered the field whilst researching growth of social and emotional

intelligence and autonomy of young people of the charity residential trip for my institution focused study for my doctorate. The overall findings showed that through being away and having autonomy each young person began to flourish. The commitment of the group meant that whilst prior development can inhibit this, with psychological safety, belief in yourself promoted by others and planting the seed of curiosity to grow can see huge benefits. Creating this environment for others gives me the greatest fulfilment as a teacher, leader and coach.

The impact of SDT in SEND is the focus on my thesis, but much of theory has dual application to leadership. The theory runs through both leadership and learning, whilst addressing the emerging engagement and mental health issues on both staff and students alike. It is now bound to the culture and vision statement of the school; *'to build the intrinsic motivation and character required to empower students to achieve academically and carve pathways into students' communities that they truly flourish in'*.

We continually look to refine the school's approach and share it, consider its culture, environment, learners (including staff), content and aligned autonomy so each stakeholder can facilitate independence, physiological and psychological need satisfaction and therefore wellbeing, development and a fulfilled life.

Feedback over the course has largely been supportive and supported my development, although at times, too direct. I was put off completing my IFS and only with the support of the course lead, Dr Maria Kambouri, did I submit it. Tied to having a break due to changing of roles and having a son, regaining confidence in writing up my thesis has been a personal learning journey of self-determination and support from my tutor, Tamjid Mujtaba. Their support has echoed the approach I have taken with my students, and it is their spirit that has enabled me to 'never give up' as one young man has branded in my thinking. I have consistently sought to use their feedback and apply to this thesis, ever seeking writing mastery. I am most grateful.

Conclusion and my professional development and knowledge

The breadth and then more specific depth of knowledge and application of the long term studying the EdD requires has allowed me to develop and share my practice, but

also provide status to access these roles. It has also led to lecturing on leadership, special needs and curriculum design across Europe and at the Institute of Education, University of East London and currently design courses and lecture on a Leadership in Education Master's and am a Director of an MBA with the National College of Education. Teaching others academic writing has further developed my confidence and my ability in my writing and research, open to new paradigms I am yet to explore. My writing has more structure and therefore greater clarity to the reader, improving my editorial skills as I mark others' work, although there is still more to learn. The interest in the curriculum and leadership has led to five book offers by various publishers.

The ranges of roles and my drive to grow means I continue to collaborate with and facilitate change makers in and out of education, no matter their position. Curiosity continues to lead me to grow as a practitioner, a system change maker, and now, a leader with a conscious mind on the rapidly evolving future. I believe in emerging leaders being the second wave of a movement, thus wish them to have the confidence to join, share and grow the vision and belief in SEND.

Professionalism, social and emotional intelligence, positive psychology and developmental theory are all linked to students as much as staff. Dual application of SDT has been prevalent as it addresses global human need. That development attunes the sensing of these needs, has added the next step to my career once the thesis has been completed. I have begun to work with coaching practitioners who deliver leadership development through developmental theory, whilst also having physiological tools to measure emotional regulation. This is the culmination of many fields of study and meets the ambition of bringing a more rounded education experience, so our young people are more readied to find fulfilment in the 21st century. My commitment to this is why I am vice chair of the National Association of Pastoral Care in Education.

The EdD has developed in me aspects of my life that I never envisaged when starting it. It has enabled me consciously to integrate all domains of research and life, leaving me fulfilled, removing the ceilings of system change that existed early in my career.

Chapter 1- Introduction

This study explores perceptions of the stakeholders in a moderate learning difficulties (MLD) secondary school in Key Stage 4 (aged 14-16) and examines their perceptions of their learning experiences (outside of core subjects) before and after the curriculum change. It also examines the perceptions of teaching staff and parents, feeding back on these areas and the impact that these changes to the curriculum have had and potentially may have on the young person's education, academic outcomes and social behaviour during school and how this relates to their future prospects beyond school.

The first chapter of the thesis introduces the significance, purpose and aims of the research in relation to addressing the challenges faced by learners in this study's context and their learning journey beyond it. The chapter then provides the rationale for the study, which forms the basis of the research questions. It concludes by setting out the structure for this thesis.

1.1 Living in England with SEND in the 21st Century

This paper uses the definition of SEND as a 'child or young person has SEND if they have a learning difficulty or disability which calls for special educational provision to be made for him or her' (DfE, 2015, p12). The research is set against a consistent national and local pattern of young people with SEND who are consistently not making expected rates of progress in academic outcomes and/or typical biological and cognitive development (DfE, 2019).

Life beyond school is now living in a knowledge-based society, requiring individuals to continually learn independently, then access and apply their knowledge and skills to social communities and/or employment (Liu et al., 2007). Both knowledge and behaviour (learning and social) are common barriers to accessing the community and employment and this is frequently seen in the national statistics when students finish school, particularly in the destinations data. Currently, 5.7% of adults with learning disabilities aged 18-64 are employed in the UK (DfE, 2018). The low rate of employment can often negatively impact on the young person's expectation of themselves and the purpose of school, whilst also increasing the 19-25 age group

pressure on provisions and high needs funding. In 2017-18 the UK government spent £1.9 billion (7.7%) of the £25 billion education budget on SEND education (DfE, 2016).

Such pressures have a ripple effect on education and on the economy, as adult social care funding is spent on parents being carers, parental mental health issues, family breakdown and similar costs associated with the impact of restrictive social and employment opportunities for young people and adults with SEND (Disabled Children's Partnership, 2018). The failure to address both the progress and prospects of these young peoples' needs at the earliest stage risks both the short and long term physical and mental health of a child. It leads to more interventions and hospital admissions, equating to a cost of £1.9 billion in 2016 (Disabled Children's Partnership, 2018).

The focus in SEND currently is on engaging students and is seen as essential to their learning during and beyond their education years (Rochford, 2016). It has been argued that the root of engagement issues is linked to additional needs, and whilst not disputing this, this study believes that the traditional English secondary curriculum model, the framework for the delivery of it and design of the school day are considered lacking in how it seeks to enhance progress and subsequently life options. The evidence for this has already been laid out above, yet little action has been taken.

How learners are better readied in the school environment to combat the ever-changing challenges faced in the 21st century deserves further investigation (Deci and Ryan, 1985, 2000; Skinner et al., 2009). Despite government policies (Gatsby, 2018) seeking to ready SEND students for employment, there are clearly gaps in their education offer when the majority of young people with SEND do not access the workforce in England (Powell, 2020). The variables as to why this is the case are explored in the literature review and the study seeks to explore how the application of the theory can potentially enhance the learning offer and therefore long-term prospects for young people with SEND.

1.2 Challenges to Motivation, Engagement and Outcomes in Education for those with SEND

The current government's SEND code of practice (DfE, 2015) sets out duties, policies and procedures relating to Part 3 of the Children and Families Act (2014) and

associated regulations in England. It requires schools to individualise learning so as to provide outcomes in relation to their EHCP that enable students to:

- *Achieve their best*
- *Become confident individuals*
- *Live fulfilling lives*
- *Make a successful transition into adulthood, whether into employment, further or higher education or training*

A number of reasons including developmental delay and mental health issues link to experiences constraining social acceptance or readiness to engage in learning. The gaps in progress being made can lead to unregulated emotions being expressed through negative and anti-social/learning behaviour, often leading to cyclical negative behaviour patterns and potentially dis-engagement (e.g. Carter et al., 2005; Leyser and Kirk, 2004). The Rochford Review (2016) investigated engagement in SEND education and remains the leading guidance in measuring it, with the seven aspects of engagement (anticipation, responsiveness, curiosity, investigation, discovery, persistence, and initiation), noting here that these are indicators of learning behaviours, not what encourages it and missing significant links to engagement theory (see section 2.1.4). Whilst the report and research suggest children with additional needs experience reduced engagement with learning and with peers, little in the report exists to guide schools as to how to understand and improve engagement and other theories that mediates it. Iovannone et al., (2003) stated that 'engagement is the single best predictor of successful learning in SEND' so a better understanding of its' own theory and how it interrelates with other theories in learning is required if education is going to adapt and engage each student as an agent on their learning journey.

The overall tendency to focus on outcomes in schooling leads to a teaching approach of control. In SEND, typical outcome measures such as grades tend to have less value as students do not typically meet the thresholds for mainstream education's next steps, reducing the purpose in their education and increasing dis-engagement. Instead of meeting the psychological needs of learners to fuel engagement, this approach is typically perceived as challenging in SEND education as the belief is that students' needs constrain self-initiated behaviour, social relationships and/or their ability to maintain belonging which can then inhibit motivation by peer influence. This means control remains the approach, students relationships are built with largely with adults

who can facilitate relationships and provide external rewards that are in place to promote social and learning behaviour. As behaviour is identified as a common inhibitor to learning in SEND settings, autonomy to engage in learning approaches that are collaborative or exploratory are often avoided (Carter et al., 2005; Leyser and Kirk, 2004). So despite research into addressing the suppression of needs within the learning context, a controlled approach in the learning environment is still typically taken to reduce anxiety and behavioural incidents.

This contradicts the SEND code of practice's (2015) requirements for student voice, that suggests their education offer should consider enhancing young people to engage and empower them through more autonomous learning to allow them to focus on their aims in life (Niemiec and Ryan, 2009). Therefore, the learning orientation is not just on engaging for educational outcomes, but on:

1. Pro-social behaviour
2. Perspectives on life
3. Fulfilment
4. Other long-term consequences and opportunities

They mirror the outcomes of the SEND code of practice (White et al., 2010; McIntyre, Kraemer, Blacher and Simmerman, 2004; Baumeister et al., 2003; Gresham, 1997). They are a range of learning orientations that require a more sophisticated theoretical framework if educators are to enhance the curriculum framework that structures the learning progress. Research into the underlying motivations of education and how it relates to engagement will be further investigated in section 2.2 of this study.

The overall purpose of the study is to design and trial a learning offer that considers theoretical frameworks behind the components of engagement and motivational drivers. By trialling this at a secondary SEND school the research aims to:

- Investigate the requirements from the relevant policies that need to be accounted for.
- Investigate how the school's curriculum was currently preparing its learners for social roles and employment beyond school.

- Explore the motivational and engagement constructs that could underpin the curriculum framework and offer to the students.
- Ensure that the curriculum includes the requirements of knowledge, skills and behaviours for living a fulfilling life in the 21st century.
- Measure the impact through analysis of the secondary data that the school produces for its annual outcomes report and the perceptions of key stakeholders as to their experience of the curriculum trial.
- Recommend whether the redesigned curriculum should be sustained after the first year of trialling and if so, how else it could be improved.

This thesis raises questions as to how the system and content may be adjusted and tentatively trial the design of a new curriculum framework for subjects outside of core subjects such as English, maths, and science. This thesis looks to theoretical models of intrinsic motivation to address issues around engagement, behaviour and the development of the self as an agent of one's own learning. It seeks students to see the autonomous options of study to empower them whilst becoming more accountable for their own choices through giving them the ownership over their own decisions.

1.3 Rationale for Study

The current context, policy and research raised three central questions that require further exploration in the literature review:

1. A better understanding of human psychological needs in order to motivate a learner to engage in a SEND learning environment?
2. How can a curriculum structure, in the context of this study, be designed to facilitate motivating and engaging students in a curriculum framework that promotes them as an agent in their learning so they can strive towards achievements and life-long learning?
3. Can the conditions of delivery improve students' outcomes and opportunities for next steps on their learning journey?

This study hypothesises that if changes to a portion of the curriculum offer could be designed to better meet basic needs there may be an increase in students' motivation to engage in developing academically and pro-socially across all areas of the

curriculum as they integrate external outcomes to better support their own learning journey. If such a model could demonstrate significant impact, would it be a transferable model to potentially influence national practice and policy?

The aim was to remain considerate of meeting statutory government policy, so this study used lesson time and subject outside of the core subjects seen as English, maths, science, information communication technology (ICT), personal, social, health education (PSHE) and physical education (PE). The researcher looks to remain mindful of the degree of impact could be attributed to the change considering the variable of each student, teacher, subject or other influencing factors, recognising that it is not just the structure but also the delivery.

Concern for the students' true sense of agency and therefore their motivation and engagement towards seeking qualifications and employment, alongside a review of the literature and existing data motivated a redesigning of the school's curriculum structure and relating exploratory research questions found at the end of chapter 2.

1.4 Thesis Structure

Chapter 1 introduces the current position on SEND in England through key policies and statistics influencing education, the purpose, significance and rationale for the study. Chapter 2 is an analytical account of the key literature, considering the motivational frameworks interrelating to student engagement through curriculum design for learning outside of core subjects. It introduces the conceptual framework of the Meaningful Mastery Project Based Learning (MMPBL) component of the proposed curriculum and research questions. Chapter 3 considers the methodology and methods applied in the research. Chapter 4 reports the data analysis, and Chapter 5 discusses the findings and revises the original conceptual framework. Chapter 6 is a conclusion of the overall summary of the study and makes recommendations for future research, which include the limitations of the study and how they may be addressed.

Chapter 2- Literature Review

Part 1

Introduction

The current context, policy and data around SEND education in England in chapter 1 raised some key issues that the literature review will explore;

- What does the current national curriculum model in England look like and what are the drivers to follow it?
- What are the potential gaps in content and needs of the learners?
- What human needs must be met so students are ready for learning and could they be considered to motivate a learner to engage in a SEND learning environment?
- How can we best facilitate meeting motivational needs in a structure that enables engagement in learning to be maintained during and beyond school, when facing the challenges of life-long learning and life in the 21st century?

2.1 The Current Curriculum Model in This Study's Setting and in England

The next section of this thesis seeks to examine a number of curriculum models, beginning with the school's existing national curriculum in England and how it compares to other models that pre-determine the subject content to be learned and is driven by externally moderated recall assessments as the English national curriculum.

The National Curriculum was introduced by the Education Reform Act (1988). It meant that all students in a state school became required to study a common knowledge base. The move to standardise the curriculum was based on the assertion that the curriculum content was responsible for an attainment gap rather than the culture of the learners' communities (Whitty, 2010). Forty years on, the debate continues between the politicians that oversee the DfE, education professionals, experts and the media, each playing a role in ongoing marginal reform of the curriculum content. The London School of Economics, Department of Social Policy Professor Anne West recently said 'the current system is fragmented and opaque, raising major concerns regarding

children's educational opportunities, school autonomy [through academisation] and use of public funds' (Labour Party, 2018).

The existing model in the school in which this study is based, is seen as a given body of knowledge and transmission teaching of prescribed, hierarchical content earning the label of a 'factory model' that is in line with the industrial era (Ryan and Lynch, 2003). The underlying perspective is based on a view that (pre-determined) knowledge is instrumental, but as a result not intrinsically valued: it is a means to an end rather than an end in itself.

More vocational curricula based on technical instrumentalist theory is orientated on the end goal of employability. The approach is designed to equip learners with competencies and skills currently assumed to be essential in the global economy. Both are pre-determined content, and both apply the learning through a structure that can restrict motivation and engagement unless the learner aligns with the same orientation.

Social realists seek an integration of the curriculum approaches above, critiquing them in that they neglect the underlying theory of knowledge as well as their underlying decisions about curriculum content and their motivational orientations. For them, both neo-conservative traditionalism and constructivism are unsatisfactory (see, for example, Moore and Young, 2001; Moore, 2013). Yet Manyukhina and Wyse (2019) see social realists' view of "powerful knowledge" failing to consider essential aspects of critical realism, including the conceptualisation of structure and agency as two fundamental components of social reality, despite both playing a key role in determining individual and social outcomes. Instead, they put forward the critical realist stance that acknowledges both agency (individual persons) and structure (contexts) as interrelated, yet these are again separate when trying to understand the learning process (Mercer, 2011).

The critical realist approach is adopted in this study given the rapid rate of change in the economy and lifestyle, and their impact on the need for ongoing learning (Manyukhina and Wyse, 2019). The capacity to self-learn competencies and skills should be taking priority across education and therefore this must come through

students becoming agents of their own learning. In a SEND setting, with little promise of further academic study and vocational opportunities, the student often fails to align with the orientation of knowledge or vocational based curricular leading to amotivation and disengagement (Wehmeyer and Shrogen, 2016). Even when ambitions for the students are high, the aims must orientate around the students capacity to self-learn and direct the agency and therefore maintain the motivation to continue, becoming self-directed learners if they are to catch up, let alone succeed.

Gao (2010) indicates that structure and agency both contribute to pupils' selection learning strategies. Mercer's (2011) meta-review cites a host of studies suggesting that a sense of agency and the structure to facilitate this agency can actively shape the learning experience. Such an experience is an essential pre-requisites if there is to be effective design of a curriculum that promotes self-learning. This brings into question the concept of learner agency and how the structure of the curriculum can benefit it.

Learner Agency

The global vision of education no longer seeks just knowledge or skills, but also on what citizens in the future should be like and how they can continue to learn and develop to counter the complexity of the 21st century (see the UNESCO 2014 Report and the UN post-2015 Education and Development Framework). Despite such advances, curriculum orientations rarely consider students with additional needs as agents of their own learning and therefore the curriculum structures that lay behind their learning experience do not seek to facilitate this. Agency is commonly defined as individuals' will and capacity to act (Gao, 2010). In social theory, the concept of agency figures prominently in the debates about the relationship between structure and agency. Even with the polarities of opinion as to weight of each component, Archer (2007) sees them as two distinct but constantly interacting strata. Structure and agency are accorded causal efficacy, i.e. the capacity to exert causal effects on the surrounding world (Archer, 2007), seen by Bandura (2006) as agents. Agents require both motivation (agency) and engagement (agentic engagement) (Reeve and Shin, 2020). If we seek to address the complexities of the 21st century as well as our learners, they must be agents of their own learning (long beyond school) and the

structure they learn in must best host motivation and engagement for the journey to both begin and continue. This is the aim for this studies curriculum structure.

More recent educational theory has begun to more frequently consider the role of students as agents. Studies focusing on learner identity, autonomy, and behaviour has begun to reveal how agency can play a central role to re-engaging and maintaining longer term learning (Toohey and Norton, 2003; Ushioda, 2007; Gao, 2010). Linking it to a host of conditions influenced by curriculum design and implementation, these components require further consideration in this study. Liu et al. (2007) reinforces long held beliefs (Dewey, Vygotsky, Piaget, and Steiner) as far back as the 1967 Plowden Report, by arguing that curriculum design needs to consider adapting its structure to a more student-centred approach rather than the traditional teacher-centred approach, and to a large extent policy control, so that students do not just have the sense of agency, but that they can apply it. Real and explicit opportunities for learners to apply their agency and therefore take control of their learning must be provided and critically, recognised by the learner.

With a structure that hosts such agents, they become more interested in their learning as they have ownership over it and their own growth (Mercer, 2011). This can lead to continuing to adapt and to flourish in rapidly changing conditions of work and living in the 21st century. Studies of such an approach have shown that want for autonomy-need satisfaction can be experienced when subjected to a sense of agency in an autonomous facilitated learning environment. This can be a reliable and even causal predictor of student's conceptual learning and increased intrinsic motivation, shifting a teacher's role from 'authority' to 'facilitator' within a clear structure and with better outcomes (Deci et al., 1981; Reeve, 2009; Jang, 2008; Kusrkar et al., 2013; Vansteenkiste et al., 2004; Vansteenkiste et al., 2005). The results of such an approach have been shown to be critical for task absorption (Kowal and Fortier, 1999), well-being (Burton et al., 2006; Walls and Little, 2005; Liu, Hau, and Zheng, 2019), and creativity (de Jesus et al., 2013). The motivation coming from an intrinsic orientation also comes with various behavioural benefits as it relates positively to challenge seeking (Vansteenkiste et al., 2018), persistence (Deci, Koestner, and Ryan, 1991), and performance (Cerasoli, Nicklin, and Ford, 2014). As was outlined through the mental health statistics in section 1.4, this approach has the potential to

address long term problems that are commonly present in the culture of future societal expectations, particularly for those with SEND (Niemiec and Ryan, 2009). The relevant skills to acquire and take responsibility for the cognitive ability is not a central orientation of education design despite the evidence that a deficiency of them leads to decreased growth and wellbeing (Niemiec and Ryan, 2009). This centralising of students and ensuring their voice as agents is heard mirrors the DfE's approach to SEND education, but rarely goes beyond lip service in school practice (Sellman, 2009). The student's voice therefore remains key in both design and data in this study.

These 'affordances' aligns with critical realism, capturing the mutual causality of structure and agency. According to Archer (2003), the enabling or constraints of structure can only manifest itself in relation to agential actions and intentions, for "constraints require something to constrain, and enablements something to enable" (p. 4). This is where learner agency and its links to how motivation and engagement interrelate can be enhanced within a curriculum structure that is conscious of both as it is designed. The next sections of this chapter explain this relationship and how they can be consciously considered in curriculum design.

2.1.1 Review of Engagement and Motivational Theories in the context of the History of SEND Education in England

Although theories of learning have existed and influenced learning as far back as Plato and Aristotle, SEND education has only existed in England since becoming mandatory through the 1918 Education Act. The original aims of residential education for those with physical and mental disabilities favoured a medical approach based on conditioning behaviour under the view that young people with SEND had to be corrected, focusing only on what could be observed externally. The 1944 Education Act that brought about the first special schools, requiring a medical diagnosis to attend, adopting the Behaviourist psychology theories, with Skinner's (1938) behaviourist paradigm prominent and less focus on self-regulated behaviour. Manyukhina and Wyse (2019) saw that this can create another constraint through attachment to the system that trains them, creating barriers to transition and learning outside of education. Some students were also deemed 'uneducable' until the 1970 Education (handicapped children) Act removed the category.

When the Warnock Report was released in 1978, SEND education and statements were emerging towards inclusive settings challenging the medical approach with a more social view. The approach was still largely based on behaviour over learning until the 1981 Education Act stated that children should be taught in mainstream schools whenever possible, meaning that the concept of students with SEND accessing mainstream curriculums began. Bandura's (1997) Social Learning Theory (SLT), linked to Vygotsky's (1978) Social Constructivist Learning Paradigm, brought the cognitive, internal behaviour to light and grew the understanding of various developmental needs tied to delay in learning and social development. Bandura's (1997) original work in SLT, went on to identify that whilst the learner can intentionally influence their life circumstances and their functioning in it, altering the environment in which they do it allows for a greater capacity for change towards a better life (Bandura, 2002, 2006). In a school setting, this is the student determining and influencing their own pathway for learning according to their own self-efficacy and goal orientations. This brings to light the interlinking role of both the learner and their environment, and how it relates to engagement and motivation but in many ways challenges the recent historical culture of SEND education.

In consideration of this, this study proposes that considering the long-term complexity of living in the 21st century, students should be supported to be an agent of their own learning, someone who can intentionally influence their own pathway.

Motivation is defined as 'any force that energises and directs behaviour' (Reeve, 2009a). Where as engagement, in a school context, can be defined as active involvement in a learning activity (Wellborn, 1991). Skinner's et al, (2008) self-system model of motivational development portrays how the relationship between our needs and engagement interrelate, and how both interrelate with the context and the outcomes.

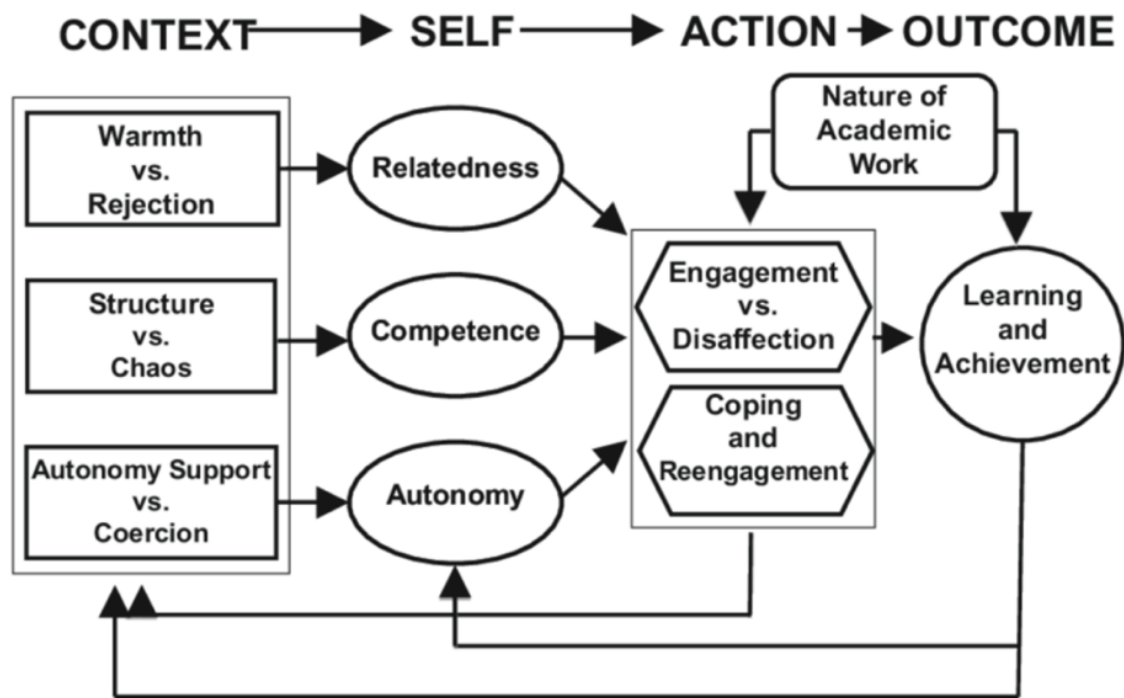


Figure 2.1.c The self-system model of motivational development (Skinner et al, 2008)

To be clear, the relationship is not motivation equals engagement and then outcomes, but that they are interrelated. Whilst engagement can be considered as an expression of intrinsic motivation and therefore informed by motivation’s psychological drivers (Deci & Ryan, 1985, 2000; Skinner, et al., 1993), there is a mirror relationship between them. The level of engagement in a task can enhance or reduce the motivation to continue in the same way that more motivation can lead to greater engagement. Both are ignitions and/or fuel for the other. However, both are needed to promote lifelong learning. Students must be both aware of the motivations and direction of motivation, as well as how to manage learning and their self-regulation so that they see the capacity of themselves to exercise agency and become self-directed learners. This is particularly prevalent in SEND as the learning delay often requires longer study as they transition to adults in a complex world.

Brown (2009, p. 580) finds a direct link between agency and students’ capacity for autonomous learning, concluding that: “to effectively manage learning and regulate emotional responses, learners must be aware of their own agency and must believe themselves capable of exercising that agency”.

Supporting the approach taken in this study is the dissection of this relationship by Reeve and Shin (2020). They raise that their own work on teacher intervention is not based on focusing on the agentic engagement directly, but on 'supporting students' motivational satisfaction during the delivery of their instruction' (p.158). Bandura (2006) himself refers to the context being key and therefore the structural design of the curriculum plays a major role, as do the stakeholders within it. This is why the next stage of this study will first investigate the motivational theoretical framework of Self-Determination Theory (SDT) as this study is based on its need-based perspective. It will then review the surrounding research and the critical challenges raised against its application, particularly its impact on education and more specifically, SEND engagement in England, before going on to explore how certain theories of engagement interrelate with it.

2.1.2 Self Determination Theory (SDT)

Self Determination Theory is founded on the pioneering work of Murray (1938) and his components of autonomy and achievements. Harlow (1953) and White (1959) built on them to propose the concept of intrinsic motivation, largely as opposition to Skinner's (1953) 'operant theory' and Hull's (1943) 'drive theory'. They challenged the concept that all voluntary behaviours were not for the sake of operational functioning and that the consequences could be spontaneous rewards within the body (feelings and thoughts). This work underpinned Deci's work in 1971 the basis of which was a measure of 'free choice'. In applied research this free choice is often measured by the interest participants show in optimally challenging activities (Grolnick and Ryan, 1989). Katz and Assor (2007) found choice can be motivating if it is not too complex, relevant to the interests and goals of the learner. In a school setting this has links with the commonly used term 'differentiation'. The need components that facilitate interest and challenge are important to consider in this study's methodology and data collected.

Deci and Ryan (2000) built on their thirty years of work to propose SDT. The theory suggests that the perception of SDT's needs are to be considered the foundation for the strongest driver of learning: intrinsic motivation which is enhanced through the increase in each individual's perception of their:

1. Competence- the need that draws curiosity and the drive to master the environments knowledge and skills;
2. Autonomy- the need to feel you can make choices and feeling effective in doing so, drawing out better self-regulation;
3. Relatedness- the need to belong or have interest in something.

Deci and Ryan (2000) make it clear that this is not an exhaustive list of needs but are particularly important (globally) for optimal performance.

Other benefits and theories can relate to each component. For example, competence has clear links with confidence, optimism, self-efficacy and control (Bandura, 1989; Carver, Sottron, and Scheier, 2000; Maisto, Carey, and Bradizza, 1999; Rotter, 1966). Deci and Ryan (2000) state that results of tasks being driven by intrinsic motivation shows an increase in engagement, wellbeing, performance, creativity, critical thinking and problem solving, developing better conceptual understanding and memory. Yet when the need is not facilitated commonly leads to decreased functioning and amotivation.

Early controversy led to challenge Deci's (1971) original findings from the behaviourist field it contradicted. Observations were made that it wasn't an intrinsic versus extrinsic motivators, but instead investigated the degree to which an individual's behaviour was driven through intrinsic or extrinsic motivators (Calder and Staw, 1974). Deci went on to describe that both have a role in motivation, but that extrinsic motivation contradicts intrinsic motivation. His view followed up the challenge with further studies to ensure its rigour (Ryan, Mims, and Koestner, 1983).

More recently, cultural differences were raised, which considering the context of this study, were worthy of consideration (Chao and Tseng, 2002). The challenge was based on cultural values being more collectivist in Eastern culture than the individualised West. The same pattern was suggested in teaching styles, with less autonomy in Eastern practice (Quoss and Zhao, 1995). Ryan (1991) and others (Chirkov et al., 2003; Vansteenkiste, et al., 2005) argued back by focusing on the concept of autonomy not being about removing links to others and culture, as this would be the inverse of relatedness, but the inner belief in one's own behaviour. This

means it is the individual's choice as to how they embrace their culture's values in comparison to the perception that it meets their psychological needs. The study will look to remain aware that the process of identity and actions are embedded in socio-cultural backgrounds and patterns of need may be influenced according to the individual (Cote and Levine, 2014).

When looking to critique SDT now, there is very little to directly challenge it. This could be that it is a relatively new theory, but Deci and Ryan (2016) put forward that the criticism found has actively been directly addressed and seemingly disproved.

Cameron and Pierce (1994) conducted their own meta-analysis of the theory and claimed that extrinsic reward undermining intrinsic motivation was a myth. There were many errors identified in the study, including inappropriate procedures in the methodology, so Deci, Koestner, and Ryan (1999) performed a meta-analysis of 128 experiments that highlighted them and disproved the challenge. They structured the study around the three components of psychological needs to provide a test of the sub-theory cognitive evaluation theory based on the role of competence, relatedness and autonomy and found further evidence that raises education to be cautious in using external reward. It showed that using external reward reduces motivation, performance and wellbeing of learners. However, it is important to emphasise that the related component is key in this. Deci, Koestner, and Ryan (1999) recognize that if the task is not interesting, external rewards do not significantly impact intrinsic motivation or satisfactions, so dull tasks may require rewards but are unlikely to be sustainable. With content of the national curriculum being decided by external agencies, many components of education may not be perceived as relevant or meaningful to each individual. Therefore, attention to what is meaningful to a student is essential if learning environments are to facilitate intrinsic motivation.

2.1.3 SDT in Education

The three psychological needs of SDT in an educational context are typically perceived as:

1. Competence (for example, academic, practical, social, and emotional intelligence)

2. Autonomy (choice in what environment, peers, context, subject, medium, values, outcomes that learning takes place in)
3. Relatedness (the perspectives of the individual as to the value of the purpose of attending education experiences, and their sense of belonging)

Type of Motivation		Extrinsic motivation				Intrinsic motivation
Type of Regulation	External regulation	Introjected regulation	Identified regulation	Integrated regulation	Intrinsic regulation	
Motivational force	Commands, rewards, punishments	Guilt, shame, ego-involvement	Personal significance and value, relevance	Harmony and coherence with other values, commitments	Interest, enjoyment, curiosity	
Internalization	Lack of internalisation	Partial	Full	Fullest	Not required	
Perceived self-relevance	Low	Medium	High	Very high	-	

Figure 2.1.3.a An illustration of Ryan and Deci (2000) Self Determination Theory and the scale of the Facilitation of Intrinsic Motivation, Social Development, and Wellbeing.

Figure 2.1.3.a shows the continuum of the origin of motivators that drive human behaviour. The theory suggests that the more the three needs are met, the more the behaviour is driven by intrinsic motivation (the furthest to the right on the continuum), the regulation is autonomous, and tasks are selected from interest and enjoyment (Ryan and Deci, 2017).

The sub-theories of SDT (Deci and Ryan, 2000) contribute to a further understanding of this, one of which is Organismic Integration Theory (OIT). It is based on the pattern of behavioural regulation and how this can move from controlled (if external) to autonomous (if internalized) and reflected in behavioural engagement. In relation to education this is why learners choose to engage in school work or not. If it is their choice, their goal and they get to engage in how the learning happens, they are internally driven.

Vallerand and colleagues (Vallerand et al., 1992; Carbonneau, Vallerand, and Lafrenière, 2012; Guay et al., 2013) further divide the types of intrinsic orientation of goals into three dimensions:

- Intrinsic motivation to know
- Intrinsic motivation to accomplish
- Intrinsic motivation to experience stimulation

In a secondary SEND school context, the first could directly link to exploration and life-long learning as we continue to discover along life's pathway, the second could be the pleasure in accomplishing progress or potentially qualifications, and the third could be enjoyment, excitement or sensory pleasure, particularly relevant to SEND settings.

Moving to the centre of Figure 2.1.3.a is extrinsic motivation. Versions of the four types of extrinsic regulation occur when engaging in a task to reach an end goal which is different from the activity (Deci and Ryan, 2012; Deci and Ryan, 2017).

- Identified regulation; an autonomous form of motivation where behaviours have been valued, accepted and have personal worth
- Introjected regulation; an internalised type of motivation formed by individuals own pressures and standards of self-worth, often to prevent guilt or shame
- External regulation; adopting behaviours to gain an externally controlled reward or evade punishment

The final part to the left of Figure 2.1.3.a is amotivation. This means the individual cannot see a reason to behave in a certain way and has no motivation to do so (Deci and Ryan, 2016; Ryan and Deci, 2017).

In a typical English SEND school setting the different forms of behaviour can be typified by examples in Figure 2.2.a. The continuum suggests that behaviour is regulated by the social or learning environment as well as the individual's engagement and how they satisfy SDT's needs.

Studies discussed below demonstrate that when education looks to consciously meet the three basic needs, they support the conditions for intrinsic motivation and as a

result a student is more likely to flourish autonomously and develop their capabilities. This not only promotes efficacy in the school setting, but there is a clear link from the continuum to causality orientations, life and learning goals (Ryan and Deci, 2017). Stancliffe et al. (2000) and Nota et al. (2007) found that there was a significant positive correlation between examination grades and levels of self-determination. The autonomous orientation comes from satisfaction of basic needs and this relates to where learners' life goals may lie, with some having intrinsic aspirations such as personal development and generativity (Vansteenkiste, Simons, Lens, Sheldon, and Deci, 2004). Those with externally controlled orientations who have the competence and relatedness but lack the autonomy may be influenced by external regulation and rewards and may have extrinsic and ego related aspirations such as fame and wealth, but they are rigid in their functioning and inhibited wellbeing. Impersonal orientations come from all three needs not being met, leading to reduced functioning, illness and amotivation (Kasser and Ryan, 1996). This model deserves serious consideration when considering the long-term orientation of education, and more specifically when designing the agency and structure to consciously create the conditions to meet these basic needs. There is no empirical evidence that a teacher's external pressure leads to a sustained habit of learning, as when the teacher is removed, so too is the motivation (Vansteenkiste et al., 2018). This does not build towards life-long learning, but instead to poor outcomes from emotional disaffection (e.g., Van der Kaap-Deeder et al., 2016), dropout (Pelletier et al., 2001) and ill-being (Stenling et al., 2017). There has been a growing body of evidence from education for some time that the current pressures, controls within the curriculum and performance reward culture of the typical education establishment in England is outdated and bears little meaning to those with additional needs, despite attempts to look at progress over score (Byrne, 1994; Leckie and Goldstein, 2019). So what can be built into a curriculum to make learning more meaningful to students with SEND?

SDT and Meaning

Martela & Ryan (2015) see that something is meaningful if it meets all three of SDT's needs with benevolence:

Competence: effective in helping others

Relatedness: one feels more connected to others

Autonomous: Volitional and autonomous pro-social acts

Seligman and Csikszentmihalyi (2000) expand on the competence point of effectively helping others is heavily embedded in the field of positive psychology, the same field in which SDT is based, is built on three areas:

- (1) positive experience, encompassing positive emotions and subjective well-being*
- (2) positive traits, encompassing character strengths and virtues, and*
- (3) positive institutions, encompassing civic virtues and good citizenship (p.9).*

Diener's (2009) critique of the field of positive psychology found that the third pillar has been the least investigated, particularly around moral qualities that build towards positive communities, something that ties closely to the SEND code of practice's (2014) outcomes. An education model that relates to this pillar could add to both learning and positive life choices, addressing the deficiencies in long term opportunities for those with SEND as identified in section 1.4. Additionally, it also addresses the common perception that school is purely about academic outcomes, instead creating meaningful outcomes based on autonomously supporting others and their development, spotlighting their character strengths. Focusing learning around a community issue autonomously selected by the learner(s) and the outcome contributing to impact on the issue, can enhance the perception of self-worth. It comes from knowing that they mean something to someone else and can give support, when stereotypically, they usually receive it.

In Positive Psychology, Seligman (2002) defines meaning to consist of:

'knowing what your highest strengths are, and then using them to belong to and serve something you believe is larger than the self' (p. 250).

Seligman (2002) says that meaning has two central functions. The first is the bedrock foundation to support reasoning and therefore resilience; essential for lifelong learning and growth. The second is a sense of direction as to what is important to oneself and guides them towards internal goal orientation. The recent criticism of Positive Psychology (Wong and Roy, 2018) is that it is perhaps, too positive and needs to take a dialectical approach to all human experiences. This will be kept in mind in the design of this study, seeking to capture the shadow of the experience also, yet still seeing

challenge as the opportunity for growth. The evidence suggests that by creating meaningful outcomes that link to SDT's causality orientations and lifelong goals as discussed increased motivation may serve both functions and others. Hypothetically, students seeing that using their strengths to support others may lead to improved self-worth, particularly with regular reflection and appreciation. Wehmeyer and Shrogen (2016) have focused more specifically on the impact of Self Determination in a SEND setting for some time, finding:

'Clearly, efforts to promote community inclusion and quality of life need to include efforts to promote and support self-determination' (p.2)

Research has been conducted around the approaches above in SEND settings using an SDT standpoint (e.g. Shogren and Shaw, 2016) or an intervention being based on SDT (e.g. Tilles-Tirkkonen et al., 2018; Barrable and Arvanitis, 2019). This will now be explored in more depth.

SDT in SEND Education

When questioning that students with SEND may have different patterns of motivation due to their need and cognitive ability, Grolnick and Ryan (1990) found that the same patterns exist as those without a diagnosed need. Wehmeyer's (2017) work in casual agency addresses the relationship between the challenges of the social and ecological environment and decision making. He addresses this gap in the field and has studied this in SEND practice; in particular where self-regulation can be less stable. As many need diagnoses suggest, there is a delay in development. Wehmeyer (2016) explains that this can inhibit the individual's ability to shape and control their beliefs and the context, and distort the feedback loop in doing so, meaning a more negative need fulfilment. Wehmeyer (2016) explains that consequences of a less self-determined person can mean that they are:

'shaped more by extra-personal influences as they have low aspirations, struggle with problem solving and goal setting, and often feel hopeless' (p.18).

As has been illustrated in previous sections, this is the typical mindset and context for young people with SEND and the system's expectations for them. Developmentally,

the values of students may be different from each other and to that of the teacher, but if anything, the necessity to ensure SDT's psychological needs are being met is heightened (Wehmeyer and Shrogen, 2017). This re-emphasizes the need for the learning to be student led and learning to be individualised and facilitated. The limitations of the research are that the main focus of SDT in SEND has been based mainly on key transition aged students, is largely intervention based and is largely dated, therefore not considering significant changes of the 21st century. With a narrow field there is still a significant gap in SDT literature around SEND schools and adolescents, with a minimal number of evidenced-based practices. It is also important to note that most studies of SDT in relation to SEND students have been interventions, where this study would look to make it permanent through curriculum design. This study looks to explore this gap.

The largest challenge in SEND and to Rochford's report (2016) is not just engagement in learning, but the motivational approach and how the system frustrates or dissatisfies its learners (Cheon, et al, 2018). What this study has drawn from this section is that SEND learners motivation can be increased if:

- If each of SDT's needs are met, motivation to learn can be enhanced
- If all three SDT needs are met with benevolence, then meaning can be found to provide and guide motivation and engagement
- Promoting learning through autonomously selected community projects that are meaningful to the learner may provide more self-worth and community inclusion for learners

Reframing the learner's journey so that value and purpose can be found and with more motivation to learn and to better mediate engagement. Engagement can be considered as an expression of intrinsic motivation and therefore its relationship to SDT's psychological needs are key to this study in designing a curriculum structure that is orientated towards meeting them, deserving further investigation (Deci and Ryan, 1985, 2000; Skinner et al., 1993).

Brown (2009, p. 580) finds a direct link between agency and students' capacity for autonomous learning, concluding that: "to effectively manage learning and regulate

emotional responses, learners must be aware of their own agency and must believe themselves capable of exercising that agency". This requires engagement.

2.1.4 Engagement

For some time, research has indicated that more self-determined motivation was found to be associated with more engagement (Connell and Wellborn, 1991). Criticism of these older studies suggest that they did not examine the more sophisticated model of engagement as it was limited to considering only cognitive and behavioural engagement at the time. More recent studies have considered three components model of engagement in learning (Christenson, Reschly and Wylie, 2012);

1. Behavioural (how hard you work)
2. Cognitive (use of strategic and sophisticated learning strategies)
3. Emotional (how one feels when learning)

Cognitive engagement has a poor track record of predicting outcomes, behavioural engagement is often focused on as it is the most visible in the moment, though high effort and on-task attention is highly debated in its correlation to learning (Reeve and Shin, 2020). Behavioural engagement is the observable act of students 'doing' learning, referring to participation (including attendance), effort and pro-learning behaviour (non-disruptive) (Fredricks, et al 2004). Whilst emotional engagement does correlate highly with high motivation and engagement, it does not do well as an independent variable, so it is suggested that emotional engagement may be a facilitator rather than a solo variable of engagement itself (King and Gaerlan, 2014; Reeve, 2013).

However, Reeves and Shin (2020) identified a fourth component, agentic engagement (action and behaviour). A key relationship has emerged from the model in that Reeve and Cheon (2019) found that it is not just motivation that is influenced by autonomy, but intrinsic aims and student engagement, in particular, their agentic engagement in relation to perceived autonomy support. Motivational interventions have provided more autonomy support (Wehmeyer and Shrogen, 2017), but respectively when autonomy provides agentic engagement it awakens the student's inner motivation and they have the agency to seek the autonomy support and alter their own behaviours

and environment. Reeves and Shin's (2020) functional definition of agentic engagement is 'a student-initiated pathway'. He sets out that that the agentic engagement can ignite a student's motivation to learn by allowing the student to proactively contribute to the instructional flow of their learning and create a more motivationally supportive learning environment (Matos, Reeve, Herrera and Claus, 2018; Reeve, 2013). This suggests that if a student is engaged, they can begin to self-determine their own learning journey (i.e. their own structure construction) and become agents of their own learning, something that the current national curriculum model high level of prescribed content in short amounts of time has little space for.

These four components mediate one's motivational needs with Reeve's (2012) showing that:

'changes in engagement produce changes in motivation, as students' behavioral, emotional, cognitive, and agentic engagements represent actions taken not only to learn but also to meet psychological needs' (p.149).

More recently, Cheon, Reeves and Song (2016) show the reverse in that by meeting one's motivational needs, engagement would increase and peer to peer relationships would be more pro-social. The interlinking role shown in Reeves and Shin's (2020) work puts motivation and engagement side by side. They put forward that interrelating the components of motivation and engagement using Skinner, Furrer, and Pitzer's (2014) self-system model (see Figure 2.1.c) of motivational development in this study could present a theoretical underpinning for curriculum design in relation to underpinning decisions around content, goals and structure.

Summary

Prior research in education has been limited by being largely motivation-based interventions and limited in its application in SEND settings or separate engagement interventions, often based in the classroom. This study looks at both the motivation and engagement and its relationship on a broader scale across stakeholders, the student and the structure of the academic work and outcomes on a system level through curriculum design. Collectively motivational and engagement theory could be considered as a foundation for curriculum design as they consider who and how

curriculum content, goals and structure can be designed to begin and sustain learning and development.

The hypothesis reached is that by creating a curriculum structure that puts the student as the central agent of their learning, including their content and goals, could better satisfy SDT's needs whilst hosting greater agentic engagement, forming a reciprocal causation, leading to an enhanced learning of content, need satisfaction and tangible outcomes as a result.

2.1.5 The exploration of curricular frameworks

What is a curriculum?

The etymological origin of the word 'curriculum' has Latin routes relating to the verb 'currere' (i.e. Running) referring to a track or course. In an educational context where learning is the focus, it is considered a structure for learning (Taba, 1962). The existing curriculum with this studies setting was limited in its vocational pathway to college (14% of students in 2017/18 went on to a vocational qualifications), let alone employment. The rationale for the curriculum review was heavily linked to Walker's (2003) central components of curriculum design:

1. Goals
2. Content
3. Structure

In this section of the study, the overall goal of this review was to seek curricula that are orientated towards meeting SDT's psychological needs and in doing so promote the interrelated sense of agency to design goals and contents that engages themselves towards the next steps of their more meaningful learning journey.

What Pressures are on the Curriculum Orientation and Design in England?

It is considered that the core knowledge 'success' of students commonly relates to judgements of a school provision, increasing pressure on the leadership of schools to meet the 'above average' quota. The pressure is high considering only half of

England's provisions can be above average. As a result, there is strong evidence to suggest that the measures of success through examinations, requiring knowledge recall and measuring only IQ, has narrowed learning models in the UK (Ofsted, 2019). Equal pressure can come from parents, knowing that core qualifications are an essential step to their child's further study and access to jobs. The result of core standards rising since 2010 has led to test success leading to 'making the curriculum more challenging to students by increasing the frequency of tighter controls in terms of the assessment framework and curriculum knowledge' (Winter, 2014, p.1).

Ryan and Brown (2005) looked at both aspects of the focus on outcomes, claiming that it can lead to positive (changes in instruction) and negative (teaching to the test) change reinforcement. They found that teaching to the test resulted in less conceptual learning, with extrinsic pressures on students and teachers alike to get the pass. Yet more autonomous conditions evidenced higher levels of conceptual learning and enjoyment (Ryan and Brown, 2005). Despite this, schools typically still lean towards Skinner's (1953) behaviourist model, that is not developing individual's self-regulation but driving behaviour with external consequences, restricting the development of self-agency (Papies and Aarts, 2011).

Young people's self-expectations can be influenced by their grades and are driven (as are schools) to achieve them in externally orientated high stakes testing from extrinsic drivers such as parents or other institutions' requirements. It is not necessarily the test, but the stakes attached to them that come with high pressure, the resulting anxiety and mental health issues and unintended long-term consequences that are common across the English education system (Emler et al., 2019; Nichols and Berliner, 2007). For some time, the culture of 'below average' has been reinforced by a narrow testing culture in schools, leading to low self-worth (Byrne, 1994). Bringing in the national curriculum has seemingly not solved the ever-increasing attainment gap that exists between different backgrounds and capabilities (Winter, 2014). For those experiencing the education system with an additional need, it is common for those who have a learning delay (diagnosed or from other influences) to not make the average (DfE, 2018a). Young people with learning delay can become acutely aware of it through test results at many ages or school destinations, so disengage, believing that they will not

get the relevant qualifications and frequently questioning the purpose of their education (Wehmeyer and Shrogen, 2017).

A 'typical' secondary national curriculum (DfE, 2014) in UK maintained schools is commonly built around three components of each of its subject areas: the knowledge, skills and understanding. Though subjects and their content will always remain a debate, curriculum content in England has typically been formed from pre-determined knowledge bases, with little influence from what is required at the time (White, 2014). The step into 21st century digital age provides a resource of information that is greater in size and access than has ever existed through micro electronic devices (Sheninger, 2019). This is not to say that core knowledge and skills are not important to process, analyse and articulate this information, but the quantity of information and the vast potential of its blended application now available puts new skills in the spotlight if each individual is to process new information and if schools are to create productive citizens and support ever changing economies (Gatsby, 2018; Fullan, 2001). Trilling and Fadel (2009) found that students were leaving school without what Fullan, Quinn and McEachen (2017) calls the '6C's of the 21st century' needed for success in the digital era; Collaboration, Critical Thinking, Citizenship, Communication, Character Education and Creativity.

What has yet to be considered is the potential shadow cast on other intelligences (e.g. social and emotional intelligence) outside of our academic, largely cognitive focused curriculum. Despite lip service to holistic development or other intelligences, the general perception is that little change in the content of the current curriculum is yet to occur despite many studies showing the benefit of pro-social behaviour in the classroom and its impact on academic progress (Lindsey and Creswell, 2014). Although the inclusion of personal development in the new Ofsted framework (2019) may influence this, there is no requirement for impact measures whilst the students are at school as it is deemed that it cannot be seen until later on in life. The closest to measurable data in the SEND setting, where social and emotional delay is most prominent, are the short- and long-term targets in the EHC plans, but again, little accountability means the target outcome is not always accurate, met or ambitious (Robinson, Moore and Hooley, 2018). Even then, this is considered 'catch up' development, not mastery, despite it being an asset to the 21st century employer

(Fullan, Quinn and McEachen 2017; Drago-Severson and Blum-DeStefano, 2019). What appears to be missing is the interrelatedness of other lines of development on our learner's cognitive development.

Manyukhina and Wyse (2019) reviewed what and how learning was occurring across four countries national curriculums (including England's). They identified how an underexplored link exists between learner agency and curriculum structure and how this varies according to their goal orientation. Commonly the English National Curriculum is driven by 'core' knowledge stance, that became prominent in the 2010 white paper (DfE, 2010). The standardisation of knowledge content and schools' overall raises concerns for many reasons that are not necessarily relevant to this study, but may be in broader implementation. This view reinforces that the orientation of objective subject knowledge through transmission learning to be the purpose of schools (Moore and Young, 2001; Young 2013). This raises the question as to whether other curriculum models focused more on the student, their needs (in particular their learning difficulties) and what can be learnt from them. The next part of this chapter looks to review established and researched curriculum models.

2.1.6 Exploring Curriculum Models

The next part of this study will review the presence and type of engagement and motivation theory in existing established curriculum structures, content, goals and their social environments and what can be learnt. Whilst it looked to be SEND specific, very few established frameworks exist that suit the needs of the learners in this study as in England the national curriculum is still expected to be delivered if students are functioning at the required point of development. Therefore, whilst the review goes outside of mainstream education in England whilst remaining aware that it would have to clearly align with a large proportion of it.

International Baccalaureate (IB)

The International Baccalaureate (IB) is an internationally used curriculum in over 2,000 schools internationally and theoretically student-centered, the focus remains predominantly academic intelligence focused and designed for typical developing students. When discussing Sleeter's (2009) work on individualising learning it is only based on cultural difference, not that of the learners needs. Gardner-McTaggart (2018)

critiques the model for being driven towards middle class success and not an equitable curriculum restricting more diverse learners, as well as critique for inattention to 'social class' (Bittencourt, 2020). It is tailored to engagement in general, not re-engagement and is not designed as a SEND based curriculum.

The IB Motivational theory is based on identity (Rennigner, 2009). Yet it also cites that its approach is taken from Dweck (2006) based on the learning environment and one's goals can form beliefs around one's intelligence, based on a fixed or growth mindset. This approach is limited to referencing SDT only in goal setting, not its role in creating a fertile learning environment (IB, 2012). Whilst relatedness appears in other sections of the curriculum, for example, making learning self-relevant and the teacher-student relationship, the curriculum is not built around the framework and therefore only touches upon its presence. The IB also suggests motivation to be culturally dependent, not as SDT has evidenced.

The English Baccalaureate

The English Baccalaureate bares many resemblances to the International version is being introduced in England, with the DfE aiming for 75% of schools delivering this by 2022. It is still based on achieving GCSE's but with more depth, with the goal being seven in:

- English language and literature
- maths
- the sciences
- geography or history
- a language

Whilst more depth may be considered, its introduction has led to more expressive and vocational subjects and qualifications being cut (Bleazby, 2015). Course work has also been removed and this, in a SEND setting, puts greater restrictions on what has been learnt and what can be repeated and tested, creating an even greater focus on academic learning and moving away from the creative subjects that demands of the 21st century require more of (Neumann, Gewirtz, Maguire. and Towers, 2020). Whilst the approach of reporting progress is, in theory, beneficial to those in SEND, how an

employer perceives this without the qualification is sceptical. The orientation contradicts motivational and engagement theory in that it remains extrinsic, based on competitive performance (including league tables) whether it be progress or qualifications and we cannot expect students with delayed learning to flourish in this system.

Project Based Learning

Whilst mainly outside of the UK, research of SDT in education has frequently put forward the case of Project Based Learning (PBL) as opposed to traditional transmission teaching (e.g. Wang et al., 2011). Studies claim that PBL better facilitates autonomy and relatedness through the collaborative learning and students taking responsibility for assessing their competence across rubrics they have designed and goals they have set (Thomas, 2000; Reeve, 2012). The studies show an increased perception of SDT's needs being met that lead to motivation for learning and the mastery discussed above (Blanchard and Vallerand, 1996; Vallerand and Reid, 1984; Whitehead and Corbin, 1991). Key skills that link to EHC plan such a problem solving, independent learning, knowledge application, communication and social development are found to improve in this model (Tan et al, 2000; Chua, Tan and Liu, 2016; Chang and Wang, 2009). This connects with Vallerand and Losier (1999) who see social factors, such as the project-based classroom climate to have a significant impact on learners' and teachers' thoughts, feelings, and behaviours, therefore overall wellbeing.

The project-based learning (PBL) model is currently well evidenced and embedded in education in some countries, such as Singapore (Wang et al., 2011). Borja (2004) claims that Singapore has been doing more than any other country to advance 21st century skills through project work. The model is compulsory to all learners and based on students selecting their own project and working in small groups to complete it and present their findings, report, product or performance. The PBL teacher's role is to facilitate their students' learning. Overall, the findings have shown a positive impact on students' basic psychological needs than typical lessons, related to enjoyment and metacognition, yet it is worth noting that this is for only a few sessions a week, not a whole curriculum (Liu et al., 2007).

Building on their earlier study, Wang's et al. (2011) study looked to understand the motivation underpinning the PBL system, theorising that need satisfaction promotes enjoyment, engagement and self-regulation. Enjoyment was a key measure as it is seen as an indication of intrinsic motivation attributed to more autonomous work, positive teacher and peer feedback and associated value to their task over outcome (Csikszentmihalyi and Nakamura, 1989; Deci and Ryan, 1985; Harter, 1978). In such studies where the needs of SDT have been met there has been positive impact on engagement, qualifications, as well as metacognition, collaboration and communication. Yet there are potential pitfalls, a concept based on a Deci, Koestner and Ryan (1999) study that highlighted the negative impact of deadlines and competition. However, if the deadline is perceived as arousing students' interest through showcasing their project, then more feedback and enjoyment occur. The findings suggest it to be beneficial to focus on the process rather than the outcome, so the design of each stage of the journey must be purposefully planned, reflected upon and progress celebrated to enhance SDT.

Considering the strong motivators and engagement evidenced above, evolving the PBL model for long term purposes could address key issues addressed in section 1.10. If any of these projects were deemed to be sustainable, it could potentially lead to roles of social value or employment beyond school age (though not . A limitation of the curriculum frameworks discussed in this section is that they have each been designed for typically developing students and therefore limit the personalisation required for individual needs within SEND setting and therefore raising the issue of time constraints on teachers and students alike.

Exploring SDT Curriculum Models in a SEND Context

As has been written about in the previous section, a limited number of experimental field studies have explored the consequences for building a curriculum instead of an intervention based on SDT and engagement theory, and none have been designed specifically for SEND settings. Both will be explored here.

Stancliffe (2000), Wehmeyer et al., (1996), and Wehmeyer and Meltzer (1995) found that self-determination for those with SEND is found to be lower but does not link this to a lack of capacity but that they have fewer opportunities for choice in their lives

(Stancliffe and Wehmeyer, 1995; Stancliffe, 2001; Stancliffe, Abery and Smith, 2000). Wehmeyer and Schwartz (1998) and Abery and Ticha (2012) reinforce this, showing there are significantly fewer opportunities in SEND settings to learn, practise, and refine personal capacities that contextually meet SDT needs in the setting, suggesting that the issue may be with opportunity more than capacity. This may be linked to current findings in SEND education in England, typically continue to look to implement the typical national curriculum, exerting external control of subjects, content and academic 'success' orientations. This structure does little to put the student as the agent of their journey, so failure against national curriculum progress standards leaves students lacking in self-efficacy, reducing motivation and often engaging less in learning (Shogren and Shaw, 2016; Wehmeyer, 2011).

This study feels it needs to respond to the typical perception that autonomous motivation and perception of competence is lower for a SEND student than a student without additional needs, which when researched was shown not to be the case (Wehmeyer, 2011). Students' autonomy perception correlated with their level of wellbeing for those with emotional needs and ASD more so than those with learning difficulties, yet few across the many needs present in this studies setting see an internal end goal to their learning journey as they do not meet 'the standard' for autonomous choices in further education (18% of leavers in 2016 got to choose an vocational course at college). This evidence suggests that the goals of SEND education, whether learning or behaviour related, could benefit from prioritising the student as the agent of their own learning, enhancing components of SDT within clear structures to enrich engagement (Wehmeyer, Shogren, Little and Lopez, 2017; Reeve and Shin, 2020).

The findings above are based on students and interventions, but Ryan and Lynch (2003) looked at the presence of SDT in the overall school system. They suggest that instead of external 'threat' from their stakeholders to improve, an approach to enhance motivation and engagement would work by actively empowering learners, students, staff and parents to identify barriers and drive change towards solutions in order to overcome them from within and to be inclusively included. The results suggest there is little study on the theoretical underpinnings of a whole curriculum structure that could benefit motivation and engagement of SEND learners, and their outcomes.

Reconsidering the Future of the SEND Curriculum

There is a clear evidence that the typical schooling structure offering the national curriculum in England is limiting a sense of agency and ambition, as the delays in learning limit the chance for success in societies 'valued' qualifications. The experience and outcome negatively impact on quality of outcomes and life for those with SEND, including self-worth and community/societal inclusion. The statistics suggest they can be unmotivated to remain engaged in progress without the relevant qualifications or self-belief and awareness to seek alternative opportunities (Robinson, Moore and Hooley, 2018). This is illustrated in the employment rates of SEND students (DfE, 2018b). This challenges the orientation and relevance of the English national curriculum in SEND. In the short term, how will SDT's needs and engagement be best facilitated if there is no link to the individual's 'success' and later life (Wehmeyer, 2016)? How are students who can identify their 'gaps', whether that is through grading or being in a 'special school', going to find purpose in their learning and value themselves (Wehmeyer, 2016)? In the long term, what are their prospects to live a meaningful and fulfilling life in the 21st century when the current system is providing a pathway to continually damning outcome and life statistics? It seems that limited answers can be found in the current model, justifying this study to investigate if another curriculum model could better suit SEND schools.

Summary

The evidence in the literature review provides a justified reason for a shift of purpose in line with the school's vision of 'carving pathways' seeking to finding more agency in students determining their future and their journey towards it. This shift requires the curriculum re-design, with its framework integrating a number of triggers to increase motivation, and its impact analysed against the psychological needs of SDT, as well as learners engagement, with tangible school measures of academic outcomes and pro-social behaviour to evidence its impact as well as next steps for the students who are transitioning from Key Stage 4.

Deci and Ryan (2000) summarise by stating that the success of an 'introduction of a new curriculum on students' motivation is determined by the functional significance or meaning of these events with respect to these three basic needs' (p. 270). To design

a different curriculum model in line with the needs of SEND students in England it must start with facilitating the two key components required to be an agent of learning, their motivation and engagement (Deci and Ryan, 1985, 2000; Skinner and Belmont, 1993; Reeve and Shin, 2020).

Reviewing the literature suggests a PBL approach based on SDT could address aspects of engagement and readying students for living and learning in the 21st Century in an English SEND setting. A curriculum built around motivational and engagement theory has not yet been explored in SEND in the UK (Becker, Smith, and Ciao, 2006; Kranzler, Hoffman, Parks, and Gillham, 2014). Its purpose would be not just to engage learners, but to design a model that potentially creates lifelong learners and employment opportunities, yet this study does not have the scope to look at the longer-term impact beyond transition to their next setting. The orientation of the design being built on the three psychological needs of SDT and four components of engagement in order to increase learner agency make this model unique in the context of a SEND setting in England.

The design of a SEND curriculum needs to consider how it can meet the needs of SDT yet still meet the requirements of the national curriculum. The next stage of this study is to propose a pilot curriculum structure built on motivation and engagement to seek optimal conditions to promote learning and the process for its design and implementation.

Part 2 Theoretical Framework

2.2.1 Design of the Meaningful Mastery Project Based Learning (MMPBL) Curriculum for a Secondary SEND School in England

Purpose

As has already been covered in this study, the purpose for a curriculum redesign was to:

1. Address demotivation and disengagement in learning SEND using SDT theory
2. Design a curriculum structure that is orientated towards sustained engagement in learning for better outcomes (academic and vocational) and promote self-agency of life-long learning, inclusion and fulfilment

As has been shown in section 2.1.2, demotivation and disengagement in learning in SEND education is common and the challenges faced in and out of school can often overshadow the need to focus on curriculum learning. To overcome this, a PBL model could support students having the agency to direct their learning and have ownership over it both in the present and in their future (Zhao, 2018). To build this agency a focus on the motivation and engagement of the content, goals and structure of the curriculum requires each to be considered in relation to SDT's needs and Reeve & Tseng's (2011) engagement model and the pre-existing findings in both fields. The downside of this is that a curriculum framework is broad and therefore attributable results will be less specific. However, the broad brush of the design will also look to consider a broad exploration of the experience and outcomes of the learners.

Having found limited results of overall curriculum structures operating on this orientation in SEND, this review concludes an innovative curriculum design should be piloted. To address this, the study looks to consider Walker's (2003) three key planning components: purpose, content and structure of learning. This was the same model we used to explore existing curriculum models. How these components can be designed uses the thorough study of curriculum design (Visscher-Voerman and Gustafson, 2004). They distinguished a guide built on four paradigms: the instrumental paradigm, the communicative paradigm, the artistic paradigm, and the pragmatic paradigm. These paradigms were used to varying degrees according to the context, component and the stage. The design process largely took a pragmatic approach (Visscher-Voerman and Gustafson, 2004), designing with theory in mind but in the context of the setting. The MMPBL model is a theoretical framework (Figure 2.2.a) based on Skinner's et al's (2008) self-system model of motivational development that has been designed can enhance a student's context, self, action and outcomes. The multiple components and their respective theories provide an orientation for a whole curriculum rather than an intervention. It also provides a key model for teacher training so that they can understand their own role in the delivery.

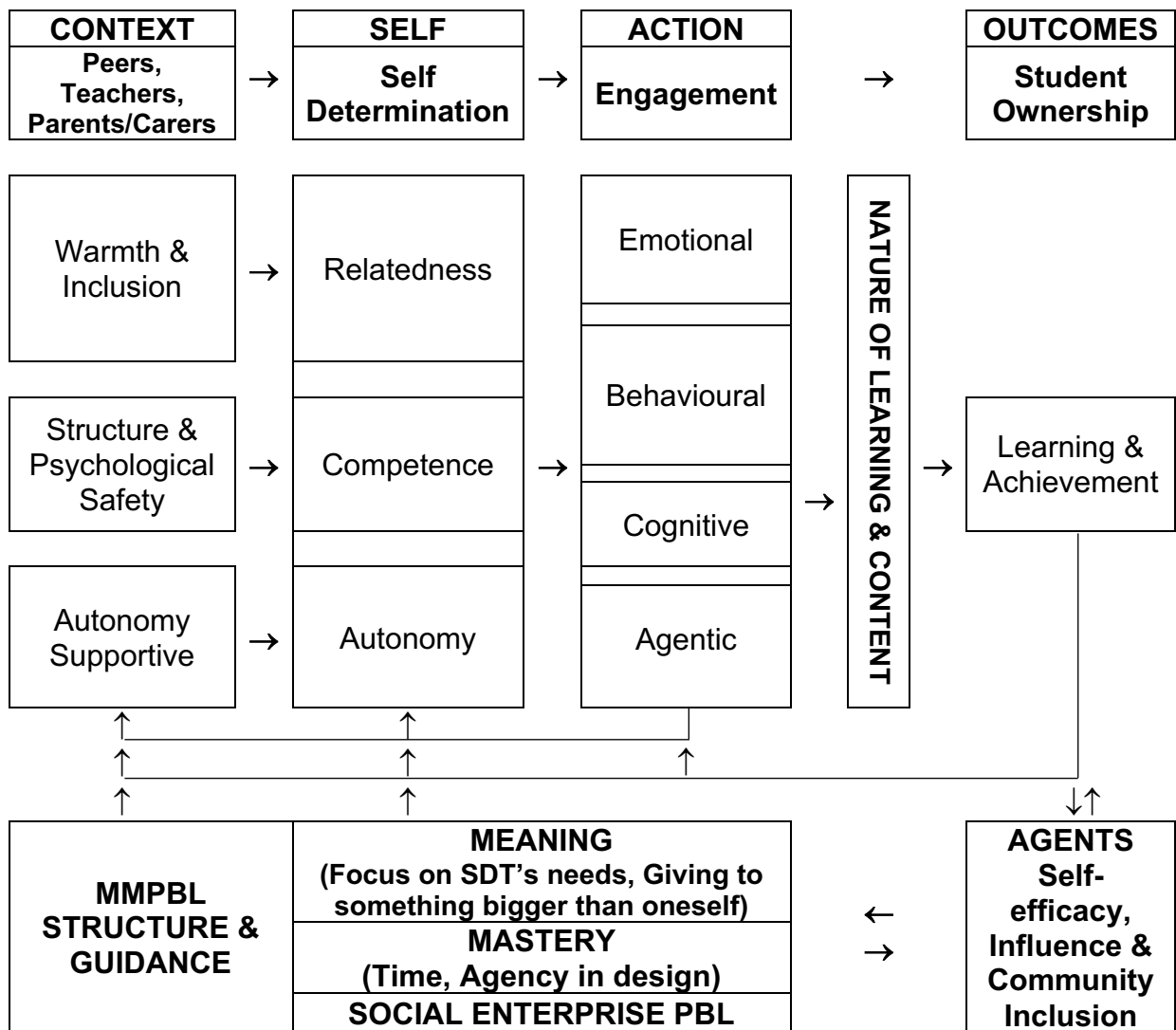


Figure 2.2.a. The self-system model of motivational development, enhanced through the MMPBL Curriculum Model (Adapted from Skinner et al, 2008).

The relationship of each component of Figure 2.2.a is interrelated, hence the arrows that return from the right to the left of the model. The first column sets out the context. Whilst much has been discussed already around the curriculum in SEND, the warmth, structure and autonomy that the teacher, parents and peers provide make up the context that may, to varying degrees, influence student's readiness to engage, but so too does their individual need, hence adding this to context variables. The second column, based on students' 'self' remains constructed by the satisfaction of SDT's needs in order to mediate engagement (the third column) meeting their own perceived goals of success (Reeve and Shin, 2020). Both the context and the self-provide the varying motivation to re-engage, maintain or enhance the learner to stay engaged in order in making progress towards learning and achievement. Much like a spiral, the

more the learners have ownership over their outcomes, the more achieving them supports the context, self and action towards a positive spiral to continue, and vice-versa. However, the delivery of the content- also influenced by the curriculum goals and structure and how the student perceives it- can also influence one's motivation and engagement towards progress, and teacher delivery of MMPBL is for future research (Reeve and Shin, 2020). The three components of Meaning, Mastery and Social Enterprise Project Based Learning, designed to enhance motivation and engagement will be explained in greater depth below.

2.2.2 Adjusting PBL to Enhance SDT and Engagement in SEND

An OECD report (Hughson and Wood, 2020) identified significant challenges to successful curriculum redesign, the key being one being that the gap between the intent of the curriculum and learning outcome can be too wide, suggesting that careful planning and alignment is critically important for effective implementation of reforms. For this reason, the research led to addressing the purpose behind SEND education and therefore clarifying the intent and the learning outcome that means adjusting existing models' content, goals and structure subject to the needs of the learners within the setting of this study so that they can find agency (see the bottom right-hand box in Figure 2.2a).

Content

Due to the wide array of disabilities or needs that are found within a SEND school, the students have what, is often described as a 'spikey' profile of ability, meaning that in relation to competence, they can be stronger in some subjects or areas of a subject yet find other areas more challenging. There are also generalised correlations between subjects of preference against the need of the students; therefore, they have subjects in which they relate to their learning far more than others due to sensory, social and/or self-regulatory needs. Linking this to the student as an agent of their learning and SDT, providing autonomy can be part of an individualised learning pathway so each student has a choice as to what subjects they focus on.

This is not to say that core subjects in the curriculum (literacy, numeracy, science, PSHE, Physical Education) should not be considered, yet at this stage of piloting the

re-design, it was decided that the students will have more agency as to what they study as they enter Key Stage 4 (age 14-16) as to pursue the subject they are interested in and/or have a strength in for the year.

There are six projects that provide the autonomy for the students (some supported by their parents) to choose to engage with; Art and Design, Design and Technology, Food Technology, Life Skills, Performing Arts and Sports Leadership. These subjects were chosen due to the specialist nature of the staff delivering them and a survey looking at students' initial interest in them. Whilst each project has a central subject focus, the 'embedded subjects' that are included (but not essential in a SEND setting) will be integrated into the learning. The remaining National Curriculum subjects naturally align with different community foci; for example, humanities being used to research a relatable local environment or modern foreign languages with the context of communicating with a global community link.

Following close analysis of the students' abilities and capabilities as an inside researcher, it was felt by subject that the vocational qualifications such as the BTech, Arts, and Sports leaders awards could be achieved (enhancing the learners perception competence) if additional time was given beyond the existing two hours a week. The pre-prescribed content was estimated to take 120hours of study by the students in alignment with their need and goals (Biddle's et al., 2003). The level of qualification targeted would be subject to a teacher's analysis of each individual that has selected their project and the students would also have a sense of agency in what level of the qualification they wish to study. Prior to this study, the subjects that the projects are formed from offered no formal qualification, so theoretically the changes should see significant impact on the number of academic outcomes. Whilst the qualification provided the central thread, the projects also composed of components of mastery, meaning and social enterprise PBL.

Structure, Goals and Content- The Mastery Component

To enhance this ownership of choice, Biddle's et al. (2003) work on mastery goals revealed that students engage in and acquire more creative and effective problem-solving skills than students focusing on performance, as it leads students to rely on

familiar knowledge and strategies. However, in this study, mastery was focused on time as a variable.

As Zhao (2018) found, not all learners are capable of acquiring knowledge and skills at the same pace, which is particularly relevant in a SEND setting. Mastery time can address this by allowing for additional time to go at each learner's pace and go deeper or broader into the subject area, spending more time refining the knowledge and skills attached to it (Worthen, Van Dusen, and Sailor, 1994). As said above, due to the needs of the students, the demand of a vocational qualification requires additional time. If students chose only one project, they can be given approximately 350 hours per academic year as opposed to 36 hours they would have spent on each one of the six in the previous model for delivery. The greater commitment to such time frames again demands greater cognitive engagement to being more conscious of the ownership over their decision, though parents were encouraged to discuss and support the choice openly at annual review meetings. That the teacher and student have more time than the qualification dictates (approximately 120 hours) were designed to provide more autonomy for both, allowing lessons to flow with the energy of the room or for a student to have more agentic engagement and independent study time generating more ownership over their own interests. Using structural prompts, this will allow more time for teachers to plan alongside students providing agentic engagement even within the qualification specification. The same applies to time for metacognition, with time for reflection with the student's peers and teachers, potentially enhancing relationships, positively supporting agentic engagement (Reeve and Shin, 2020).

Competence, one of the needs of SDT, seeks mastery in subjects to which they relate to. By focusing on one project subject, it is proposed that this may increase the perception of the learner self-efficacy by demonstrating what they are capable of by engaging cognitively (skills and knowledge) behaviourally and experiencing positive emotional engagement when achieving in the related environment. This could be further enhanced by mastering niche skills within their interest and achieving self-set goals in the area whilst integrating the external goals of the school. Given the time to achieve vocational qualification goals that have not been an option before could also add self-worth, make learning more meaningful and learners to integrate their project as it may provide a step towards more agency in the next step in education or

employment. Kroger and Marcia (2011) found that when learning is designed towards career choices that integrate with the learners' interests, aspirations and values then the experience becomes more integrated, along with the engagement in goals and behaviours required to reach it. If such synergy is found, the learner may choose to actively internalise the context's values and behaviours so that they become their own, improving their self-regulation and pro-social behaviour, which in turn increases positive engagement (Ryan and Deci, 2017). These three measures will be built into the methodology.

The projects were designed to be delivered as the first session of the morning to support the motivation to attend school as it is their chosen subject (not ruling out core subjects as a driver) and potentially improve the emotional engagement and as a result the attendance figures of the students, which increases engagement in learning (Maxwell, 2016). Following the first two hours of the day being spent on the projects, a wellbeing lesson and then core subject lessons will be delivered. It is worth noting that some year 11 students will miss a project session every other week due to college transition.

Martela & Ryan (2015) see that when something is meaningful if it meets all three of SDT's needs with benevolence:

Competence: effective in helping others

Relatedness: one feels more connected to others

Autonomous: Volitional and autonomous pro-social acts

As part of the school's vision, carving pathways means opening more meaningful opportunities to students, giving back to something greater than themselves (Seligman, 2002). Considering employment challenges that face SEND students beyond school, the model provides a timely structure and was also built on a social-enterprise framework, but due to the timeframe of this study, the impact beyond school years is not considered in this study. The long-term vision is to provide students with long term opportunities to build networks that mean they are included in their community, find meaningful learning and roles, potentially in employment, creating their own independent social-enterprises or roles of social value. At the time of writing

this is coming to fruition through Pathways Education. What can be measured in this study is the real meaningful experiences, networks and opportunities established whilst still learning through this model could make the goal more relatable to students.

Stages 1-5 on the cycle in figure 2.2.b below are around real-world problems, research and innovation. Explicitly addressing real world issues and the causes behind them in the learner’s local and global communities shifts the focus beyond the classroom and promotes conceptual learning as students are experiencing the real impact of their applied learning, potentially better meeting each need of SDT and allowing the student to actively engage in their learning (Ryan and Brown, 2005; Reeve and Shin, 2020).

One might counter such educational initiatives around local communities already exist in curriculum subjects such as Citizenship and PSHE, yet these are lessons based in the context of the classroom, restricted in time, and students with additional needs often struggle to conceptualise their learning and transfer their skills to address them in reality.

‘The degree to which an activity is seen as meaningful may reflect the degree to which engagement in that activity permits one to put into action one’s talents and skills toward valued ends, and exercise mastery over one’s own environment’

(Bundick, 2011, p.58)

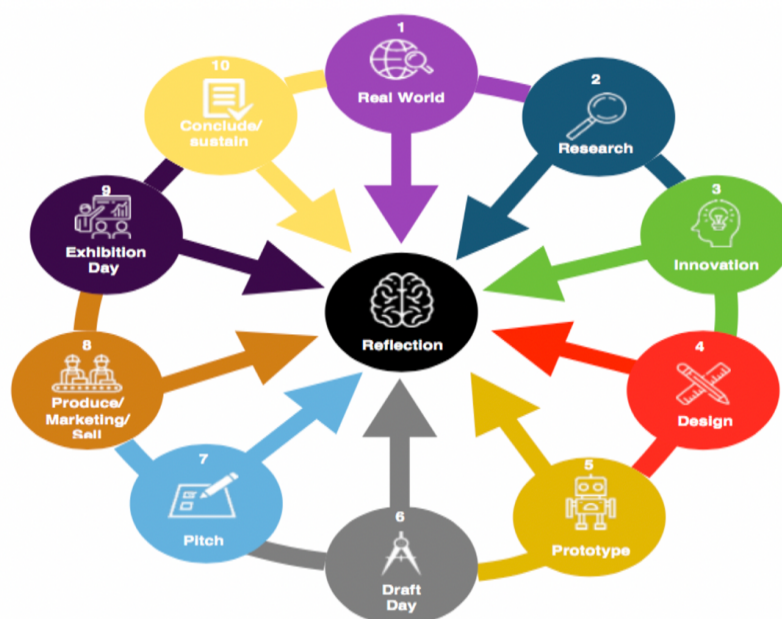


Figure 2.2.b Social Enterprise Model to support Local and Global Communities

Stage 1 of the cycle in Figure 2.2.b supports competence, relatedness and autonomy, thus creating meaningful learning content that was built agentically with students along the way. Students are encouraged to collaboratively select a real-world issue, using the UN top 17 sustainable developmental goals (un.org, 2015) as a guide, that relates to a different element of their communities per academic term; the school, the local, and the global community. The teacher can facilitate simulating the issue firsthand and preferably where it is happening locally to support the conceptual understanding of it and increase the reality of the influence it has on the student project team and their communities. The pitch (stage 7) focuses on oracy to encourage students to represent themselves and their team in bidding for funding and resources to support the project.

Students seeing that using their strengths to support others may lead to improved self-worth, particularly with regular reflection and appreciation. This can then be extrinsically reinforced through a higher qualification in the chosen project, celebration (including part 6 and 9 of the project cycle), inclusion and gratitude from those communities supported and reflected on by the individual enhancing metacognition (Sale, 2020). To increase meaning and keep students stimulated as to the direction of their project, reflection, gratitude, appreciation and self-compassion will each take place weekly, all key components of positive psychology, are key to looking back and seeing something or someone as meaningful and value their own contribution. This also aligns with the need for metacognition (Perry, Lundie and Golder, 2019), so students have the time to reflect on what it is they are learning. To promote this (including marketing) each term will involve a draft day (stage 6 in figure 2.2.b) to encourage oracy and gather feedback on their prototype/solution and an exhibition day (stage 9 in figure 2.2.b) to present their outcomes and to evaluate the projects sustainability. Both of these days will allow peers and parents to see students' work, increasing the value of the learning journey through recognition. To make this more integrated, weekly reflection diaries will be kept (see the central stage 'reflection' in figure 2.2.b) to support both metacognition (the center of the model) and self-worth of each stage of the cycle.

The 'sustainable' component (see stage 10 in figure 2.2.b) of the curriculum is the intentionally built into the offer to potentially address the employment gap for adults

with additional needs, though will not be investigated in this study. In the long term the meaningful experiences whilst at school seeks to grow networks that potentially evolves into providing opportunities for ongoing roles of work experience, social inclusion, enterprise and employment beyond school. This would be a key measure in the longitudinal success of this curriculum model and be in line with both EHCPs and the Gatsby framework but in this study cannot be measured due to time restrictions. Both involve transition and it is clear that long term planning is another opportunity for students to be involved in autonomous decision making, potentially providing them with greater agency (Shogren et al., 2007).

2.2.3 Curriculum Change Process

The OECD (2018 p.3) identify three barriers to curriculum reform:

- a) issues emerging as a result of the structure of the education system,
- b) issues related to preparedness and
- c) issues related to achieving “buy in”

Motivating and engaging stakeholders with SDT and engagement theories as has been discussed above, were applied in this process also and allowed Walker’s (1971) communicative approach to be used in the curriculum design. To seek buy in, each stakeholders values and belief around reform were given a platform to be heard (e.g., focus groups, parents’ evenings, staff meetings). Training for staff to explain the key theories and best practice in relation to them also took place over the first year. Applying the same barriers to this study, there was a conscious design to overcome them at a school level of curriculum change but being mindful on national requirements. That the curriculum change was co-designed as a structure through the termly plan, provided a metaphorical ‘house’ for each teacher to be prepared and to understand the purpose and then being given a week offsite to draft their how they would decorate their ‘room’ for the project they were leading on (each had a week off to research, select appropriate qualifications and design their specialist area content and assessment criteria), before coming back to receive feedback from peers to model buy in. This continued throughout the final two terms before the change, preparing teachers through collaborative group meetings that were facilitated by the researcher and motivating them to be part of the change, rather than resisting it (Haney, et al., 2002; Roehrig & Kruse, 2005). Whilst this was a significant investment in resources:

“The success of curriculum reform and its implementation depends on whether teachers willingly participate in and are valued and acknowledged in the process. Teachers’ understanding of any curriculum innovation is also indispensable in contributing to or impeding long-term success”

(Wang, 2008, p. 10)

Time for Teachers

Teachers planned within a co-established and coherently agreed on termly planning framework that triggered key open questions relating to SDT theory, increasing autonomy for student agency and the relatedness of planning in their subject of passion and relating to their area of expertise. This includes students’ evaluation of the plans. Even then, the design of the planning framework encourages teachers to collaborate and facilitate students to lead on key components of their own learning; for example, what local or global issue was to be focused on and what qualification level they would seek.

2.2.4 Research Questions

In response to the issues raised in Chapter 1, the literature review has explored current context, policy and research. It has proposed that psychological human needs could increase motivation to engage learners, and a curriculum model that could increase them being met.

Professional concern for the students’ self-worth and therefore their ambition towards qualifications and employment, alongside a review of the literature and existing data motivated a redesign of the school’s curriculum. The study looks to test the effectiveness of the model.

Such a plan for learning is often reflected in concrete and standardised curriculum materials. What goals and content are worth teaching, because of their relevance for students and society, is a core curriculum question (Tyler, 1949). But learner agency asks new questions of curriculum design. Answers to this question include views on the heritage of the past and the aspirations for the future (Williamson, 2013). However, according to Stenhouse (1975), what is essential for curriculum study is not only

discourse about what needs to be taught and learned, but also (and primarily) developing an understanding of the relationship between curriculum as intention and as reality. This is why student voice, living in the present of their experience of the curriculum and life is necessary to the study, for it is their reality and only they perceive their private motivational needs. If this curriculum design is successful, it will be illustrated in the students' qualifications and readiness for next steps in education, but also in a satisfaction in their needs and increased engagement in their learning.

Research question 1 was formed to address the gaps identified in section 1.8 by investigating the MMPBL model theorised in section 2.2. The study uses quantitative data to measure impact, if any, on engagement in learning, behaviour and school outcomes data of the control year and following the first year of the curriculum being run. Research question 2 is built from section 2.1. The research data will be drawn from relevant stakeholders. This will allow for individualised opinion through qualitative data in accordance with section 1.5. The patterns of all data sets will be compared. Research question 3 is built from section 2.1. As an exploratory study, there will also be spontaneous data that cannot be planned for but may inform the level of impact and this is research question 4.

Research Question 1

What impact, if any, did the MMPBL curriculum model have on Key Stage 4 SEND student outcome data compared to the data from school's previous secondary model?

Research Question 2

What impact, if any, did the MMPBL curriculum model have on students' perception of their motivation to engage in learning, through the lens of SDT's needs in comparison to the previous secondary model?

Research Question 3

Did the MMPBL curriculum model have any effect on students' engagement in learning according to students' teachers and parents' observations? If so, how?

Research Question 4

Does the study present any unexpected findings that were not hypothesised?

Chapter 3 - Research Methodology

3.1 Introduction

This chapter critically sets out the research design and methodology. It explores how the epistemological and ontological approaches align with the research methodology which informs the methods, order of data collection and how it is analysed. It looks to remain critical of the validity, reliability and generalizability of the design, as well as the limitations of the data and my own position, and the ethical points that emerged and required consideration.

The central research explores school data and key-stakeholders' perspectives on the design and implementation of a Meaningful, Mastery Project Based Learning (MMPBL) model, based on Self- Determination Theory and engagement theory as part of a new curriculum.

3.2 Study Context

The study is a stand-alone exploration of the implementation of an innovative research based PBL model in a three-form entry secondary SEND school in outer-London, England. The school's 171 students have varying needs (see table 3.2) and are in Key Stages 3 to 5 (age 11 to 19). This study focuses on Key Stage 4 (51 students) as this is the only key stage that has access to the full mastery approach of 400hours towards a vocational and quantitative outcome. However, the changes are school wide, and this provides scope for additional longitudinal studies.

2018/19 Focus Group Sample		
Participant Categories n = 51	N	%
Year 10 Students	24	47
Year 11 Students	27	53
Gender		
Female	11	22
Male	40	78
Primary Needs		
ASD	17	33
MLD	15	29
SLD	4	8
SEMH	6	12
SLCN	8	16
Other	1	2

Table 3.2 To show the MMPBL and Biographic of Key Stage 4 Academic Year 2018/19

The schools' vision is to 'build just, collaborative and accessible communities, carving pathways into them'. Its approach is grounded in its values of positivity, wellbeing and empowerment. As discussed in section 2.1, the existing curriculum provided low-level qualifications in literacy, numeracy and science, an offer that is not reflective of the vision. The design of curriculum for this study comes from the clear statistics (6% of those with learning disabilities plans gain employment (The Centre for Social Justice, 2020) with a clear need to add vocational qualifications to better support potential pathways of further study or employment, in turn leading to additional value given to core subjects also required to pursue that path and of the overall experience of learning itself. However, what has been proposed is that the theoretical application of self-determination theory, through delivering learning around a meaningful focus chosen by the student, could see an increase in student's self-worth and their connections with their community, potentially enhancing their short and long-term opportunities to learn and achieve on a number of fronts.

3.3 Research Design

The research design is built around the conceptual framework of the MMPBL model (section 2.2) and the theory it is built upon (Miles and Huberman, 1994). Despite its critique by positivists, taking a pragmatic approach (Rescher, 2000) due to the anticipated impact allowed quantitative and qualitative data to emerge that is valued 'in the field' (Manicas, 1987). The pragmatic approach also aligns with the values assigned to meaning and mastery, and this is true of my own alignment towards them from both experience and research (Cherryholmes, 1992), recognising that goals can change over time and development. That the researchers position as a head is one of power challenges Mertens' (2014) challenge that external influence will over-rule the values of the researcher, although the model is designed to still meet the requirements of some policy.

The approach of PBL itself also has alignment with the history of a pragmatic approach, with both emerging from Dewey's works. It rejects traditional dualism (Robson, 2011) and realises that different perspectives can require different data to buy into its validity (or lack of). This is why I use a mixed methods design (further explanation below), seeking to integrate data and stakeholders' views in order to remain considerate not just of the study, but also the leadership of the school and each

of its stakeholders. The broad socio-cultural setting which has been illustrated in Chapter 1 makes this preferable practice.

The conceptual framework suggests the MMPBL model may increase the students' perception of SDT's competence, autonomy and relatedness and as a result, better mediate the four components of engagement, and collectively impact the school outcome data. It presumes that learners become more intrinsically engaged in learning that is both meaningful and built towards mastery. These components have not been recorded in an on-going curriculum in a SEND setting (as opposed to an intervention) meaning that this study is largely exploratory, again justifying a mixed methods design. In relation to research question 1, quantitative school outcomes data and the first student focus group before the change provide a baseline against the previous model. This includes academic qualifications, behaviour, attendance, destinations data and employment opportunities. It will also provide impact markers for community projects. For the remaining research questions, the student focus group at the start and end of the first year of implementing MMPBL seeks to provide rich data of the user experience; so too do the surveys of teachers, parents and outside observers. Ensuring each stakeholder has a voice is a critical component to the conceptual framework. The design looks to increase intrinsic motivation, so valuing each voice by providing 'ideal speech situations' (Habermas, 1984) which gives it meaning and increases relatedness. This aligns with the school's value of 'empowerment' and the SEND code of practice's (2015) requirements. This pragmatic approach seeks truth from the perspective of each individual, recognising a range of experiences and values will shape it (Morgan, 2014).

3.4 Epistemological and Ontological Position

There has been no study on PBL curriculums underpinned by SDT in SEND in England. Therefore, the research design is exploratory seeking to explore the relationship between the key components of the MMPBL curriculum based and their impact on school outcome data and subjective points of view of the experience of the stakeholders shared in the focus groups and surveys. In using an explanatory mixed methods approach (Wisdom and Creswell, 2013; Creswell, Plano Clark, et al, 2003) both qualitative and quantitative data is collected, with the latter sourced from typical school quantitative outcome data of the control (academic year 2017/18) and following

year (2018/19). This seeks to meet the values of both a reductionist and an interpretivist, mirrored in the diverse values of the multiple stakeholders in this study. To a reductionist, quantitative findings are considered to be trustworthy and honest in order to maintain integrity in order to in order best support accuracy that is required to further develop best practice. Qualitative data's role is to provide a deeper and more detailed picture of the outcomes in relation to academic theory that it may be argued quantitative data lacks (Creswell, 2009). However, I am aware of the central challenges to interpretivism (Robson, 2011) with its subjective nature and therefore the capacity for bias from the researcher. The same criticism is levelled as the study is real world practice (Robson, 2011) conducted as an inside researcher. This position suits an interpretivist ontology believing that we cannot separate ourselves from what we know and that '*reality is socially constructed*' (Mertens, 2014, p.12). Such analysis can provide rich, detailed findings that address the purpose of study, but does not restrict spontaneous and useful perspectives emerging (Cohen et al., 2007, p.461).

Episteme is known as a 'theory of knowledge embedded in the theoretical perspective (e.g. SDT) and thereby in the methodology' (Crotty 1998). The study uses a phenomenological epistemological framework to facilitate the exploratory research, recognising my own values as part of the findings of real experiences (Denscombe, 2010). Phenomenology holds that any attempt to understand social reality has to be grounded in people's experiences of that social reality and that this is where the value lies. Qualitative research is a '*means for exploring the meaning individuals or groups ascribe to a social or human problem*' (Creswell 2009, p4). This aligns with the students having a voice and a sense of agency over their own learning journey.

3.5 Research Methodology

The purpose of the present study is to examine the students' perceptions of their motivation and engagement using SDT theory as a construct to explore whether perceived amounts of motivation and engagement played a part in their learning and outcomes across the time frame that represents a shift away from a traditional secondary model of learning to the MMPBL model.

Undertaking this research, I have consent from the Governors to run this study, before applying and receiving consent to upgrade to write my thesis and gained ethical

approval from UCL, IOE. This allows me to gather secondary data, quantitatively sourced from the school's outcomes report. Change on this scale means that I look to the key stakeholders: children, teachers, parents and community participants for valid data (Malouf and Schiller, 1995). The qualitative data has been collected before and during the academic year of the launch of the new curriculum. This reflects typical best practice according to Head Teacher standards, looking to gather stakeholders' perceptions of the MMPBL approach, what is useful and how it could be improved. The combination again backs a mixed methods approach. The scale of the change and capacity of the study means that finer details may not be addressed but recognised in further study.

I look to follow Morse's (2006, p.81) qualitative research safeguards to encourage valid data collected when carrying out my research:

- Recognizing the progressive nature of enquiry
- Constantly evaluating the quality of data
- Sampling for scope and variation
- Investigator sensitivity

If these issues are consistently addressed then the findings become credible and contribute to its trustworthiness in analysing the group's effective practice (Morse, 2006). I look to remain reflective on these points whilst proposing and carrying out the methodology.

Mixed Methods

To ensure that variables have the opportunity to be identified and discussed, this will be a mixed methods study, a common method in this field to provide a rounded view of the impact by triangulating the data (Creswell, 2009; Haggis, 2008). The mixed-methods approach focuses on opinions, perceptions, feelings, impressions distinct to each participant (Briggs et al., 2012). The approach sees that objective quantitative data can be explained by the qualitative data (Noble and Heale, 2019) to gauge the model's impact.

Quantitative Data

The qualitative data is being collected to answer research question one, but also to inform the other research questions. Robson (2011) suggested 'soft' quantification can support reasoning, thus making quantitative trends of MMPBL impact on school data to see if there is any significant impact on them (e.g. attendance (Douglas & Alemanne, 2007), behaviour, qualifications and destinations data). This data is available from annual school outcomes reports, so will provide comparable data from the previous curriculum and following the introduction of MMPBL.

Qualifications are an overall marker of performance that are underpinned by positive motivation and engagement (Reeve and Shin, 2020). They are also a valuable marker to all stakeholders in this study and will be included to compare the impact of both MMPBL project qualifications and core subjects.

The quality of behavioural engagement is referred to by Cooper (2014) as seen in both participation and conduct, so the school's attendance and behaviour data are respective markers of the quality of engagement. Attendance is a crude measure of engagement that suggests only participation rather than the quality of such participation (Douglas & Alemanne, 2007). However Douglas (2008) found it to be a key to student success and it is a visible measure so will be included in this study.

Negative behaviour incidents data (including exclusions) are captured throughout the whole school day and tracked over the year. With this being an exploratory study, the relationship suggests in school pro-social behavioural data is predictive of positive engagement (Finn and Rock, 1997; Nguyen, Cannata and Miller, 2016). Again, finer measurements are required in the longer term, but in this study comparison between pre and post change behaviour data for the sample of students involved will be compared and explored further through the qualitative data.

Qualitative Data

It must be reiterated that the key stakeholder's perspective/voice remains central to this research and collecting it is to respond to research question two, three and four, although question two will also be informed by the quantitative data also. Roulstone and Lindsey (2010) state that:

‘Any attempt to understand how best to configure services and to evaluate their impact must consider the perspectives of the people in receipt of those services’ (p.3)

However, there could be questions around the validity of subjective opinion being about the moment as opposed to their overall domain (Schwarz and Strack, 1999).

As Campbell (1981) noted:

‘The use of these measures is based on the assumption that all the countless experiences people go through from day to day add to... that these feelings [generated from a moment/short time frame] remain relatively constant over extended periods, and that people describe them with candour and accuracy’ (p.23).

This statement raises some key points out of the need for awareness of potential assumptions of the data we collected in this study. Conscious that although it has been supported (Watts, 2006), deeming successful changes to be instantly ‘crystallised’ is less valid. If the findings are to be considered valid, longer-term development in future years will strengthen any findings of impact on typical school outcome data (Cilliers, 1998). As

The broader socio-cultural challenge that underpins this real-world study aligns with the research design that has an exploratory nature of taking education forward into the 21st Century by learning through others’ challenges (Robson, 2011). I seek to explore if there are any similar patterns between the quantitative data and the stakeholders’ opinions, and any explanation as to why. Deeper investigation of the statistics is sought, with a focus on what the learners and their facilitators perceive as supportive or inhibitive of their learning experience of MMPBL in generating their own drive to learn. This is why both quantitative outcome data and qualitative semi-structured focus groups will provide rich data that gives individual insight from those experiencing life at this age and in education whilst providing an overall picture (Cohen et al., 2007).

Curriculum Design Process and Implementation

The design of a new curriculum began in October 2017 during my first year of headship, although I had taught at the school for five years from 2010 to 2015. Support for this study is through the typical school budget; no additional funding has been received or added to project subject budgets. The framework of the MMPBL curriculum

is designed based on the proposed theoretical framework in Chapter 2 and had been proposed at interview for the role.

It is built and consistently re-evaluated with key stakeholders and overseen by the school's Governors and external school improvement partner, both receiving half-termly reports. In the initial stages a voluntary group design the blank planning structure that asks key questions around what they perceive as a high-quality learning offer in the Autumn term of 2017. Through sharing with staff at staff meetings the structure is adjusted using the feedback obtained. Project teachers and core subject leads then have a week off timetable to seek appropriate qualifications and develop their project offer and then come back to present it to the staff for constructive criticism. In the case of this study it was the first time five of the six project teachers would be delivering qualifications to such levels. The draft and final curriculum structure is then shared at termly parents' evenings and Governor meetings, having been agreed upon in May 2018.

The design adjusts the timings of the school's lesson length being shortened from 60minutes to 40minutes in core subject and wellbeing lessons and 120minutes for project lessons. Additionally, strength audits will be completed to ensure that teaching and learning support staff are teaching subjects that align with their strengths and resources in their classrooms. This is with the intention to increase relatedness and autonomy by being involved in choices with the headteacher as much as possible. As a result staff mobility decreases with a purposeful aim of ownership of their learning environment and deeper relationships with the students. The addition of draft and exhibition days to each term, as part of the project cycle, looks to further reinforce this and the quality of work through external feedback from parents and visiting professionals. Each change means that it is not just the students' experiences that will be altered but also the staff. Such variables are considered in the results and discussion section.

Student Participant Sample Selection

In consideration of the setting and participant group I have followed Cohen's (1990) guidance, being conscious of capacity when considering the recruitment of another

school due to the scale of redesigning and implementing a new curriculum and pedagogy.

Biographic of Each Focus Group Participant				
Participant N= 19	Project Choice	Gender	Need	Year 10 (Age 14/15) or 11 (Age 15/16)
1A	Art	F	MLD	11
2A		F	MLD	11
3A		M	ASD	11
4A		M	ASD	11
1DT	Design Technology (DT)	M	ADHD	10
2DT		M	MLD	10
3DT		M	ADHD	10
4DT		M	MLD	10
1FT	Food Technology (FT)	F	MLD	10
2FT		F	MLD	11
3FT		M	MLD	10
1PA	Performing Arts (PA)	F	MLD	11
2PA		F	SLCN	11
3PA		M	ASD	11
4PA		M	ASD	11
1SL	Sports Leader (SL)	M	MLD	10
2SL		M	ASD	10
3SL		M	ASD	10
4SL		M	ASD	10

Table 3.5.a to show the biographic participant MMPBL choice and biographic

In order to draw as accurate a data picture as possible, participants' biographic are illustrated in Table 3.5.a. However, questions remain over variables such as students' age, cognitive level, curriculum breadth, prior dis-engagement, external influences and their capacity to remain engaged over a longer period of time. As discussed in the context of the study above, participants and their interaction in the environment over the project have many interwoven variables that can make outcomes unpredictable (Rogers, 1951; Robson, 2011). However, in line with the SEND Code of Practice (2015), I remain mindful that it is these variables which mean the child may look at the experience from a different, but valuable perspective from the other stakeholders and my own. Using other stakeholders' sources (staff and parents) looks for valuable insight into the wider experience.

The various samples (according to types of data collection below) are based on students in Key Stage 4 (aged 14-16) as they have the choice as to which project they will undertake for the year. Key Stage 3 (aged 11-14) rotates between the subjects each half term to provide a taster of which subject they wish to choose. Data collection is not comparable as their interest in the project at the time of collection will influence their answers but will be part of future studies. For the focus group, students are randomly selected to represent each project group (see table 3.5.a below).

3.6 Data Collection and Analysis

Quantitative Outcome Data

Firstly, the study collects and analyses impact data of quantitative academic outcomes, comparing MMPBL with the setting's previous typical secondary curriculum model. This is based on typical school outcomes data being analysed to see if there is any significant impact (e.g. qualifications, attendance, behaviour and destinations data). Such data contributes to addressing research question one.

Although MMPBL did not exist in the school before this study, five of the six projects are taught subjects with one or two lessons given to each per week. With the current curriculum mode, the amount of time against the needs of the students prevents any qualifications being achieved. The design of the MMPBL aims for a qualification for each project at varying levels according to an individual's profile. The analysis of such data is a totalling task to compare each year of academic data in subjects outside of core subjects.

The second data set attached to MMPBL is the number of issues or causes their projects support and the impact their project has. This data will include the number of people reached and the money raised (if any) by the project. This data provides an illustration of social agency but has no previous data to provide comparison against.

Despite not being a direct focus of this study, core subject outcomes provide a secondary data source to see if there is any generalised impact with the implementation of the MMPBL and other curriculum subjects. It is hypothesised that more meaningful project qualifications provide rationalization to the students for the need for core subjects, for example to meet the requirements to access the college

course related to their outcomes. A limitation to this is that analysis does not include progress within the year as this will only have been possible from September 2018 as the previous assessment system in place is not robust, as recognized by the head and school consultant. As a result, only year 11 qualification data are comparable. In regard to comparison to the control however, the individual needs of each student means recognising a number of variables are always going to be present yet may shed light on a potential area for future research in subjects held as central to the English education system.

The school's data comparison is to see if there are any emerging trends or significant differences. In addition to behaviour, attendance and outcomes data, destination data is also collected annually to track the next steps for students. How many students went on to a college course that they chose and is related to their vocational aspirations or a course that is designed for learning catch up.

The lack of longitudinal data is a limitation to comparison. The validity of such data is strengthened with completion of courses and successful employment.

Qualitative Student Perspectives - Focus Groups

A primary source of data for response to research question two will be the collation of student perspectives through focus groups. Wilkinson, 2004, describes a focus group as;

“a way of collecting qualitative data, which—essentially— involves engaging a small number of people in an informal group discussion (or discussions), ‘focused’ around a particular topic or set of issues” (p. 177).

In the context of this study this method of collecting qualitative data allows for a number of perspectives to be shared together. This supports an opportunity for participants to discuss the MMPBL and school experience as a whole, sharing their perceptions and opinions as a supportive peer group both before the change of curriculum and at the end of the first academic year, meaning two separate collection points (Krueger and Casey, 2000).

The frequent opportunity to do this reflects Jeřábek's (2011) review on Lazarsfeld and Merton, that face-to-face interactions can capture people's responses during real time,

triangulation of data themes allowing strategically focused interview prompts based on themes generated in these interactions or built from pre-established themes (Jonsen and Jehn, 2014).

Particular detail is given to accommodate the context of the study. Morgan (2014) and Vaughn et al. (1996) suggest the time is usually between 1 and 2 hours, but when our learners' concentration is typical of those with learning difficulties the time limit means aiming for no more than 30 minutes. Although Baumgartner, Strong, and Hensley (2002) suggest a sample of between 6 and 12 participants, to support concentration and time, the focus group took Krueger's (1994) endorsement of very small focus groups, known as "mini-focus groups" (p. 17), meaning 3 to 4 randomly selected participants make up each group. Although there are six project groups, the sixth group, life-skills, had students with more complex needs than the typical cohort and significant speech and language communication difficulties. The required level of articulation of the experience for analysis is not possible with these students, however alternative exploration through means such as observation is a point for future study. This means the study follows Krueger (1994) and Morgan's (2014) suggestion of three to six different focus groups being adequate to reach data saturation.

The theoretical template is based around five main themes drawn from SDT and MMPBL:

1. Competence
2. Autonomy
3. Relatedness
4. Meaning (when all three needs are met with benevolence)
5. Mastery (time)

The perceptions of each are sought through ten open questions that are designed to represent each of these and structure the conversation (See Appendix 3.5.3).

The questions are semi-structured to ask open-ended questions, allowing for expansion and explanation and looking to subtly address each of the five components and their influence as hypothesised in the literature review. It looks to discuss what needs the student feel are met and the factors that facilitate this. It also looks to highlight any external variables that may have shifted answers or to see if MMPBL

could take central responsibility for changes in the individual and collective data. Again, questions and their wording are designed with the consideration of need in mind.

A pilot test of the focus group questions has been run in order to test the research tool, the procedures and to refine and modify the open questions (Yin, 2009). The questions were modified depending on their success when piloted with a group of students who are leaving the school that year, meeting a similar biographic but one that would not influence the findings. The same is done for the teacher and parent surveys below, but outside of the school. This allows checking of accessibility both in the content and in the mode of collection. I have adjusted the design to paper copies for the parents due to the poor take up of digital emails in day-to-day school practice.

A baseline of each data source is taken prior to the changes in the summer term 2018 and then at the end of the first year of project across the academic year 2018-19. I look for comparative data collection points to support the 'in the moment' response to provide more accurate responses.

The first data collection in June 2018 is a control when students are using the typical, existing secondary model of education, and then June 2019. June is selected as the comparable data collection points as this allowed for data to be collected using the previous curriculum and timetable (time committed) and is the month students move on from the school and next steps will have been agreed. The questions are given to participants beforehand so they may reflect on them. Each method of collection will be delivered using clear terms/images suitable for the audience's field competency so as to ensure accuracy whilst not deterring participants. Similar and contrasting perceptions between key stakeholders are sought; useful for when theory is being developed as to why change may or may not occur (Wellington, 2000; Morse, 1991).

Two audio recording devices are used in 10-20minute, face-to-face, semi-structured interviews collecting qualitative data on designated days two weeks after the final stage of quantitative data processing (Robson, 2011). The questions are short and concise to maintain clarity (Robson, 2011). The semi-structured question format allows for open questioning when discussing the student's experience. This allows the pre-

planned questions to be a guidance structure, so each interviewee can respond open endedly. Additional questions can be asked when the participant brings up influential factors. They are not guided to specific factors. I remain conscious of reflexivity during the interview in order to remain credible (Bourdieu, 1992). Between the start and the end of each interview some questions may need to be adapted as I remain conscious of the need to constantly evaluate students' accessibility to the questions and therefore the quality of data (Morse, 2006). The intention is to avoid undue influence; however this recognises that this issue will not be entirely overcome. In assessing the validity of the data, Sing and Hall's (2009) question is used: [Am I] 'successful in encouraging the children's ownership of the discussion?' (p.20).

Each focus group is fully transcribed so that opinions can be thematically analysed, familiarised and compared in more detail (Silverman, 2006). Accurate transcriptions, including utterances, are used to see what semantic information could be drawn from them in context (Bauer, 2000; Silverman, 2006). Agreeing with Bourdieu's (1993, p.58) 'classification struggles,' I am aware that the researcher's perspective and previously discussed pressures on interviewees can influence opinions given. I considered this during the actual focus group so that clarity of answer remains clear and remaining conscious of Wuest's (2000) 'emergent fit'. Therefore, when the results are transcribed, I look to maintain investigator sensitivity of reflexivity (Silverman, 2006). Interpretative Phenomenological Analysis does not search for objective truth but accepts re-interpreted data (Hefferon and Gil-Rodriguez, 2011). I look to present the qualitative results that are relevant to the research questions, whilst portraying the overall experience from as neutral a perspective as possible. This study cannot completely resolve each one of the discrepancies or remove the variables put forward but remains conscious of them when writing up and interpreting the results. As the study is exploratory, these are issues that may be further considered in future studies.

The data produced from the focus groups and surveys will allow analysis using the template method (Langdrige, 2007). Although a relatively new method, it still provides academic rigour and the production of depth to each category and is a way of thematically analysing data (Miles, 1994). Using NVivo and a largely deductive approach, the first step consists of assigning data to the categories. Being mindful of King's (2012) advice to keep the numbers of categories focused; in this study they are

based on SDT's three needs as well as meaningful and mastery codes, referred to in a positive or negative light. Data that is considered unrelated, irrelevant or duplicated is omitted. It is then filtered into opinions based on the theoretical template divided into the two collection points, before and after the introduction of MMPBL to allow for comparison. The assignment of the nodes allows opinions to be filtered, compared, and explored.

Through coding the perspective onto a template of nodes made up of the five MMPBL's components: competence, autonomy and relatedness, as well as mastery and what one sees as meaningful, analysis of the patterns of change can occur. Increases or decreases in the frequency of positive and negative discussions linked to these components can be related to the associated motivation. Following deductive analysis and simple counts, the trends demonstrate the validity of a theoretical model that has hypothesised the increase of key components of the design to have a positive impact.

Teacher/ Parent Observations and Perspectives

In response to research question three, in relation to stages of change, observations of students' engagement from other key stakeholders will also be sought; useful for when theory is being developed as to whether and why engagement levels may or may not occur (Wellington, 2000; Morse, 1991). To further illuminate students' opinions, teacher's perspectives are collated by an open question survey. Recognising that they know their students and their own delivery better than I do and are therefore in a strong position to confirm or counter claims of impact (Schwarz and Bless, 1992; Roulstone and Lindsey, 2010), participants and their interaction in the environment over a year have many interwoven variables that may make outcomes unpredictable.

Following the focus group and data analysis, a purposeful sample of the seven project teachers who taught the students are selected as representatives to give their perspective of the MMPBL model and quantitative impact. The questions are designed to shed light on how theory was effective (if at all), as well as methods of practice or uncontrollable influences. The survey also allows an external perception of the validity of students' perspectives. The perspectives of the experience itself allow for an in-depth search for key influencing factors that could support the theoretical

understanding behind the student results (Erhart et al., 2009). The surveys are given out digitally via Google Forms to allow teachers time to complete them.

The same reasoning has led to a survey of the parents and carers of the students in the study. To be considerate of parents not being educationalists, the questions are broader but still based on engagement (Reeves and Shin, 2020). The teacher and parent surveys are analysed in the same way as the focus group. This data provides a secondary justification, facilitating comparison between each project group's own experience (student's and teachers'), in relation to numerous experience variables (e.g. perceived value of the meaningful outcomes). Such comparison presents suggestions for best practice, areas for improvement (e.g. subjects, aims, and lead teachers' style).

Spontaneous Data

The school is supported and monitored by a number of external consultants and visitors, such as the school improvement partner and Ofsted (although this cannot be planned for). Whilst they are not in the school daily, their observations are neutral and take an overview of the school's journey from pre-MMPBL, during it and follow up for key data feedback each year. This study looks to include critical commentary where relevant to the key themes.

3.7 Limitations

As this is a small scale study there are several limitations that have been acknowledged throughout the design, implementation, data collection and analysis. Fundamentally, the study sample may be considered small due to the time and resource restrictions; and I acknowledge that this paper only represents a one setting sample, and therefore may not be considered as representing each SEND setting or complete continuum of student need.

The study also remains aware of Strauss and Corbin's (1998) approach of the constant comparison analysis that includes nonverbal communication such as proxemic, chronemic, paralinguistic and kinesic (Gorden, 1980). However, due to the scale of this study, analysing such data is unable to be facilitated as there is not the time required to go into such depth.

This methodology looks to evidence any longevity of impact, but due to deadline constraints, the first year of implementation is the maximum time permitted for data collection. Furthermore, there is not longitudinal data for comparable outcomes that may give insight to engagement or MMPBL may link to employment and long-term wellbeing.

3.8 Challenges to Validity, Reliability and Generalizability of Design

The quality of the data is reviewed to assess its validity, reliability and generalizability.

Challenges to validity

When considering real change, time periods have to be considered. I am conscious that although it has been supported, deeming successful change to be instantly 'crystallised' is less valid (Watts, 2006). However, considering the scale of the study, comparable data can only be collected for the pilot year of the change to the curriculum.

In terms of cognitive barriers, it could be argued that the needs of the children may skew the results, with the perception or recall of the experience with issues around expectations, working, short- and long-term memory. Lawford, Volavka and Eiser (2001) question whether low functioning children are able to reflect and report on change in a meaningful way, and the difficulties of using a measure that covers such a wide range of individual needs. However, as discussed in the methodology the child's voice, as agents of their learning, despite potential restrictions, should still remain central, but be supported by key stakeholders and quantitative data that illustrate them (DoE, 2014). Whilst aware that self-reported measures should be used with caution, Kuncel, Credé, and Thomas (2005) suggest they represent an individual's perspective.

3.9 Role and Limitations as Researcher

From the start of this research, I acknowledge my position as an inside researcher which gives me knowledge of the organisation's fabric that makes the student

experience (Robson, 2011) and remain conscious of my position within the organisation (Kincheloe, 1991).

3.10 Triangulation

The mixed methods data is gathered to provide additional credibility and validity to the research and remove biases, often used when understanding human behaviour (Noble and Heale, 2019). Whilst recognising that a true point is unlikely to be found due to individual reality, I look for a sense of direction, whilst seeking data that contradicts it and the theory seen in the awareness of spontaneous data in phase 4 (Denscombe, 2010; Creswell, 2009).

3.11 Ethical Issues

Having gained consent from the school governors and the UCL IOE's ethics board, I inform and seek consent of all participants and ensure their (and parents) consent for current and future use of the data. Remaining considerate of the needs and age of the students at the start of the program (14 and 15 years of age and then crossing into the 16-year-old bracket during the study) the Mental Capacity Act (2005) is consulted when designing the study and is further explained in the ethics application. For parents and carers, a letter and consent form are sent home and re-shared with students when they attend the parents evening in the summer term before the curriculum launches. Each type of data collected is given a separate check box for consent and to ensure anonymisation. This is delivered in both a verbal and written format that is accessible, considerate of specific needs and informative of the research's aims without leading answers. I inform the stakeholders of their anonymity and the option to be removed from the study at any time and further I remind students during focus groups. By following the Data Protection Act (1998), I look to keep physical and digital data appropriately secure, encrypting the work on a password protected device following GDPR protocol and storing physical data in the school safe. The same can be said when collecting data, with secure surveys digitally shared where possible. Data is presented with coded names to maintain anonymity and only being kept for six months after publishing. This will remain throughout the project and write up (using pseudonyms), again removing identity-leading points and not informing others as to which colleagues are taking part.

When collecting data in a neutral location (in a meeting room not associated with frequent stakeholder use) I am mindful of my position and re-state that the opinions have no ramifications associated with my role. I adopt the appropriate communication tool required to meet the individual needs of any students that require it, in line with the school's approach. Questions are delivered with language and visuals that are clear. Time is given for processing and the use of terms suitable for the audience's field competency so not to put colleagues off and to ensure accurate data is collected. Speaking in front of others in the focus group or directly to the head in stakeholder interviews may draw anxiety or cause embarrassment; so passing (with a symbol card available) on a question or the opting out option will be reinforced before and after each round. If questions are not understood, the use of visual symbols that represent the words and concepts will be available using Proloquo symbol software. I also offer an external, trained, researcher to collect the data for those that are not comfortable with this and will prefer the questions to be asked by someone else.

Feedback to students, teachers and parents is provided upon the completion of study through assemblies, staff meetings and parents evenings respectively.

Chapter 4- Results

Introduction

The data presented was collected and analysed accurately to address the research questions. Data that was deemed irrelevant, not directly relating to the research questions or duplicated other data were removed.

This chapter looks to provide insight of the quantitative data (comparing the pre-change 2017/18 cohort data and the 2018/19 post-change cohort) to address the research questions investigating the MMPBL curriculum model compared to the UK secondary model. It will then discuss if there were any impact on psychological needs of learners with SEND presented in the results of the stakeholders' voice from the focus groups and surveys of their observations of the change they experienced. Finally, any long-term opportunities and spontaneous data will be presented.

The first phase was to present the quantitative data to provide an overview of the impact that was seen in physical outcomes. Phase 2 then provided the coded analysis of the students who participated in the focus group against the research questions, using NVivo and a largely deductive approach. The frequency of the five themes was generated from the components of the theoretical model that the design was based on. It then brings in the facilitators' (teachers and parents) opinions to investigate if the student perception is in line with their own. Data that was considered unrelated, irrelevant or duplicated was omitted. Phase 3 reviews the impact of destination data, as well as any employment or social roles that emerged from the curriculum. Phase 4 was to allow any spontaneous data to be added to verify or challenge the findings, particular from destination data and outside agencies.

4.1 Phase 1 Quantitative Outcomes Data

Research Question 1

What impact, if any, did the MMPBL curriculum model have on Key Stage 4 SEND school outcome data compared to the data from school's previous secondary model?

The quantitative data below indicates the impact of the introduction of MMPBL into the secondary SEND school offer in relation to research question 1 in the demographic context of Table 3.2. The data below was collected from the academic year before the

introduction of MMPBL (2017/18) and at the end of the first year of running the MMPBL (2019/20) from students in Key Stage 4, between 14 and 16 years old. It includes academic outcomes, behaviour, and attendance. Destination data will be presented in section 4.3.

4.1.1 MMPBL Academic Outcomes

As can be seen in Table 4.1.1.a, there were 48 high level (in context) qualifications that have been achieved because of the introduction of MMPBL in comparison with the previous curriculum offer that the six project subjects were a part of but offered no formal qualification. The average number of qualifications was below one per student as there were 8 (14%) students in 2018/19 who did not achieve higher level qualifications due to complexity of needs and 2 school refusers (this was behaviour before the academic year). 48 (86%) of the 51 students achieved ability appropriate qualifications, 3 students were not able to reach the qualification in the first year of studying the subject. This was a direct result of MMPBL design as the same teachers taught the same subjects previously, but with the time restrictions and/or disengagement could not achieve the same qualifications using the previous model.

Key Stage 4 MMPBL Academic Outcomes											
Examining Body		OCR			Edexcel			Trinity		Total Number of Qualifications Achieved	Average Number of MMPBL Qualifications Achieved Per Student
Qualification	Number of Students in the Key Stage	PE Entry Level 1	PE Entry Level 2	Food Technology BTEC Cooking Skills Level 1	Food Technology BTEC Cooking Skills Level 2	Design Technology BTEC Level 1	Design Technology BTEC Level 1 Extended Certificate	Art Explore Award Entry Level 3	Art Bronze Award Level 1		
Key Stage 4 2017/18	47	No qualifications were completed in these subjects before the launch of the MMPBL								0	0
Key Stage 4 2018/19	51	3	5	5	3	9	3	8	12	48	0.94

Table 4.1.1.a to show the comparative project subject qualifications data for traditional curriculum offer from the previous academic year against the introduction of MMPBL.

Not only was the increase of qualifications significant as it was against a zero sum before; the standard of these qualifications is above the school's standard entry level qualifications that were achieved in core before the introduction of MMPBL. Students who could still have access to MMPBL the following year are likely to increase the

quantity by another qualification. Students who were in year 10 for this stage in the study will finish Key Stage 4 with 2 significant qualifications more than they would have following the previous model if they complete another project in the following year. There were two school refusers.

4.1.2 Influence on Core Academic Outcomes

Year 11 Core Subject Academic Outcomes															
Exam Board	English			Maths					Science			Total	Average Per Student (who sat exams)		
	AQA	Edexcel		AQA			Edexcel	AQA	AQA						
Academic Year	Step up to English		Functional Skills		Entry Level Maths			Functional Skills Maths	GCSE Maths	Science Single Award					
	Entry Level 1	Entry Level 2	Entry Level 3	Level 1	Level 2	Entry Level 1	Entry Level 2	Entry Level 3	Level 1	GCSE	Entry Level 1	Entry Level 2	Entry Level 3		
2017/2018	3	13	2			6	14	7			8	8	7	68	2.5 (27)
2018/2019	8	3	6	4	1	4	9	8	1	1	3	11	2	61	2.9 (21)
Score Per Level	1	2	3	4	5	1	2	3	4	6	1	2	3	Total Score	Average Quality Score of Qualifications
2017/2018	3	26	6			6	28	21			8	16	21	135	5 (27)
2018/2019	8	6	18	16	5	4	18		4	6	3	22	6	116	5.5 (21)

Table 4.1.2.a to show the comparative core subject qualifications data for traditional curriculum offer from the previous academic year against the introduction of MMPBL.

Although the Core subjects cannot claim to be solely influenced by introducing MMPBL as they are separate subjects, the analysis of the positive data is still worthy of investigation. In core subjects, only year 11 data have been analysed as this is the only time exams are sat. One student was a school refuser and five had not made the required development to sit an exam due to cognitive needs.

As was put forward in the literature review and research questions, a related impact of MMPBL on core subjects could be possible (English, Maths and Science). This could be due to increased engagement in the MMPBL increasing students' sense of purpose to learning and integrating core subject qualifications as a goal required to support further study in their relevant field. There was a 0.4 increase in the number of

core qualifications achieved per student compared to the previous year, from 2.5 to 2.9, each qualification also increased in quality by 0.5 and almost every student achieved one in each subject on average.

Summary

Whilst there are many variables, the data suggests there may be potential links between the motivation to learn and greater engagement leading to the quality of qualification improving. This may be to pursue a MMPBL subject to a higher level in school or college, or reasoning that to access an autonomous choice of college courses would require higher core qualifications and therefore be more motivated in both MMPBL and core subject learning for an additional year. However, such a hypothesis requires students' opinions in the qualitative data (section 4.2) below to explore if there was any link and potentially further study and employment and was this demonstrated in the next set of data.

4.1.3. Destinations Data

Having considered the academic outcomes, the destination data was the next data source to explore. Essentially, this could be considered the most important data considering the school's vision is to 'carve pathways' towards employment and roles of social value.

Year 11 Destination Data 2017/2018 Post Introduction			
Students	Destination	Course	Project or Core Related
Student A	Harrow College	E3 Vocational studies	Non-related
Student B	Harrow College	E2 vocational studies	Non-related
Student C	Harrow College	E3 Vocational Studies	Non-related
Student D	Harrow College	E3 Vocational Studies	Non-related
Student E	Harrow College	E3 Vocational Study	Non-related
Student F	Harrow College	Level 1 Child Care/Health and Social Care	Non-related
Student G	Capel manor College	E3 Horticulture / landscaping	Non-related
Student H	Harrow College	E3 Vocational Studies	Non-related
Student I	Harrow College	E 3 Vocational Studies	Non-related
Student J	Harrow College	Level 1 Art	Project
Student K	Harrow College	Entry 3 Vocational studies	Non-related
Total Number of Students Transitioning Out of the School year			11
Total Number of Students Pursuing a Level 1 Course of Above			2 (18%)
Total Number of Students Pursuing a Course related to MMPBL			1 (9%)
Total Number of Students Pursuing a Course related to Core			0
Total Number of Students Pursuing a Course related to neither			10
Total Number of Students staying on to the 6 th Form			17

Table 4.3.a to show destinations of Year 11 cohort of 2017/18 leavers moving onto further education

Year 11 Destination Data 2018/2019 Post Introduction			
Students	Destination	Course	Project or Core Related
Student A	Harrow College	GCSE Science English	Core
Student B	Harrow College	Vocational Study Entry Level 2	Non-related
Student C	Harrow College	Vocational Study Entry Level 2	Non-related
Student D	Harrow College	Vocational Study Entry Level 2	Non-related
Student E	Harrow College	Vocational Study Entry Level 2	Non-related
Student F	Harrow College	Level 1 Child Care/Health and Social Care	Non-related
Student G	Uxbridge College	L1 BTEC IT (Game Design) or L2 Gaming Design	Project
Student H	Harrow College	Vocational Study Entry Level 2	Non-related
Student I	Harrow College	Vocational Study Entry Level 2	Non-related
Student J	Harrow College	Level 1 Art	Project
Student K	Stanmore College	L1 Art, Design and Media	Project
Student L	Uxbridge College	Entry 3 Vocational Studies Course	Project
Student M	Uxbridge College	Level 1 Drama/Media	Project
Student N	West Herts College	Level 1 Drama/Media	Project
Total Number of Students Transitioning Out of the School			14
Total Number of Students Pursuing a Level 1 Course of Above			7 (50%)
Total Number of Students Pursuing a Course related to MMPBL			6 (42%)
Total Number of Students Pursuing a Course related to Core			1 (7%)
Total Number of Students Pursuing a Course related to neither			6 (43%)
Total Number of Students staying on to the 6 th Form			13

Table 4.1.3.b to show destinations of Year 11 cohort of 2018/19 leavers moving onto further education

Academic Year	17/18	18/19	Difference
Pre and post start of the Deeper Learning, Deeper Living Curriculum	Pre-Change	Post-Change	
Total Number of Students Transitioning Out of the School year	11	14	
Total Number of Students Pursuing a Level 1 Course of Above	2 (18%)	7 (50%)	+5 (32%)
Total Number of Students Pursuing a Course related to MMPBL	1 (9%)	6 (42%)	+5 (33%)
Total Number of Students Pursuing a Course related to Core Subjects	0	1 (7%)	+1 (7%)
Total Number of Students Pursuing a Course related to neither	10 (91%)	6 (43%)	-4 (-48%)
Total Number of Students staying on to the 6 th Form	16	13	

Table 4.3.c A summary to show destinations of Year 11 cohort of 2018/19 leavers moving onto further education compared to the 2017/18 cohort.

The school collects annual destination data to illustrate the success in the education experience that the school has provided and the autonomy of further education that is available to those leaving the school. Whilst the individual learners are subject to other variables outside of the curriculum change, particularly their unique needs, the data presents a pattern to suggest that MMPBL and the qualifications improvement it provided have increased student choice. To compensate for the change in cohort size, the statistics in the data are reported in percentages, but the true number can be seen in the relevant tables. Before the project change, only 18% went on to a level 1 course at college, whereas post curriculum change, this increased to 50% of students, an increase of 32%. In 2017/18 9% of the students transitioning out of the school went directly on to a college course that related to the project subjects (subjects outside of core), whereas following the participation in projects, an increase of 42% was seen. This suggests that the increased mastery of subjects in and outside of core, increased qualifications (as shown above). Subsequently, the grades positively correlated with an increase in opportunities for autonomy to study at a higher level in subjects to which students related.

The subjects chosen at college increased from 9% in non-MMPBL related subjects, to 42% following the change. This suggests the projects were meaningful enough to the

students that they sought to continue their mastery. The increase in the qualifications gained provided more choice in specific courses of study, showing a decrease of 43% of students who went on to more generic courses.

Interestingly, one (7%) student went on to study a core related course at college following the curriculum change. 1PA put forward some reasoning for this

'I think core subjects improved because we know at the beginning of the year, they presented what exactly we're going to be doing, for this year, what qualification we're working towards and before that it was just a bunch of English work just thrown at us'.

4.1.4 Social and Employment Data

One employment opportunity was created directly from MMPBL. A student was given a one-year casting agent's contract from their own application, related to their performing arts project. There was a positive impact on destination data across all of the markers. A limitation of this study is that the time restrictions prevent seeing the long-term impact of the destinations of employment and if they were attributed to MMPBL or held any correlation to the change.

4.1.5 MMPBL Community Impact Data

Key Stage 4 Community Impact Data From the Meaningful Mastery Projects 2018/19		
Autumn Term 2018	Spring Term 2019	Summer Term 2019
Shaftesbury Community	Local Communities	Global Communities
<ol style="list-style-type: none"> 1. Student led Production of Buggy Malone 2. Prop design for the production 3. Dinner for the Buggy cast 4. KS3 Sports Coaching 5. Staff Wellbeing breakfast 6. School Mural 7. Shaftesbury Community Cookbook 8. Christmas Market 9. Makaton presentation 10. Animal Therapy 11. Governors dinner 12. Shaftesbury Starbucks 	<ol style="list-style-type: none"> 1. Coaching at Alexandra Primary School 2. Harrow Parents Forum (Design of Cedars accessibility playground) 3. Volunteering at Care home 4. Changing Minds Art Exhibition <p>Fundraising for:</p> <ol style="list-style-type: none"> 5. Macmillan Cancer 6. Harrow Mencap 7. Baby Bank 8. Ali's Dream 9. Pets Therapy 10. Centre point 11. Firm Foundation 	<ol style="list-style-type: none"> 1. Mzuzu Government SEND Department 2. Photo Montage through a Recycling Project for Mzuzu school 3. International WE Day Speeches on raising awareness of challenges of SEND and Mental Health 4. Project Based Learning Model launched in three other schools across Europe <p>Fundraising for:</p> <ol style="list-style-type: none"> 5. UNICEF Soccer Aid 6. WWF
Totals		
29 Community Causes Supported		
Approximately 2723 people directly reached		
Total Fundraised: £1385		

Table 4.1.5.a to show the impact that the MMPBL had on school, local and global communities over the academic year 2018/19.

Table 4.1.5.a represents the impact data for each term as the projects focus rotation of the school, local and global community. This was the first time that this data was available to collect as the previous curriculum model did not create opportunities for community support. It is important to acknowledge that the approximate 2723 people reached are subjective as was based on each teacher's estimation of the number of people the project reached in each event. The financial total was tangible and tracked by the school business manager when distributed to the 29 community causes that

the students had selected and designed projects to support them. The data above was also only the relevant data for this study from Key Stage 4, despite the rest of the school supporting other causes. This data does two things. Firstly, it shows that students with additional needs can give back to their communities when their learning facilitates this. The second is more subjective and requires the perspective of the students and teachers as to how meaningful the contribution is to them in scale, personal fulfilment and if their learning being based around contributing to something greater than themselves supported their motivation and engagement or not. This will be further explored in the qualitative data in section 4.2 to see if it correlates with the opinions of the learners.

4.1.6 Behaviour

Key Stage 4 Behaviour Data					
Term	Summer 2018 Pre-Digital Sims Behaviour System	Autumn 2018 Sims (Baseline measure)	Spring 2019 Sims	Summer 2019 Sims	Overall Percentage change (Autumn 2018 to Summer 2019)
Behaviour Incidents	39	191	78	33	158
Percentage compared to highest term	-80%	100%	-59%	-83%	-83%
Exclusions					
Academic Year	Internal Day Exclusions		External Day Exclusions		
2017/18	13		0		
2018/19	0		0		

Table 4.1.6.a to show the comparative Key Stage 4 behaviour data for the duration of the study

The negative behaviour incidents are entered into the system by staff following the school's behaviour monitoring system. Negative behaviour can be considered as verbal or physical incidents classified as reportable in line with the school's policy;

'any incident that may require additional support in order to ensure the incident is managed effectively. It is an incident where student behaviour may be causing danger to themselves, other children, adults, or property' (p.9)

The study cannot consider comparison data against the previous academic year's data to be valid as a different behaviour monitoring system was in place and there were many gaps in data as it was not digital. However, within the 2018/19 year, the

behaviour statistics using the digital SIMS behaviour system suggests that the introduction of the Meaningful Mastery Project Based Learning has potentially influenced a positive impact on pro-social behaviour and a more positive learning environment. The significant 83% reduction in negative behaviour incidences reported across the school compared with Autumn 2018 term in comparison to Summer 2019 supports this. The exclusion data shows the decline of major behaviour incidents to zero following the introduction of MMPBL. This will be further explored in the qualitative data below (section 4.2) to see if MMPBL was a contributing factor.

4.1.7. Attendance Data

Key Stage 4 Attendance Data		
<i>Academic Year</i>	<i>Attendance</i>	<i>Comparatively between the academic years</i>
2017/18	83.52%	-4.16%
2018/19	87.68%	+4.16%

Table 4.1.7.a to show the comparative Key Stage 4 attendance data for the duration of the study

The data from table 4.1.7.a shows that there was 4.16% increase in attendance following the introduction of MMPBL. Whilst there are clearly many variables that can influence attendance, as an exploratory study this will be further explored in the qualitative data below (section 4.3) to see if MMPBL was a contributing factor to the positive change, increasing the opportunity for learners to engage in learning.

Summary

Overall, the quantitative results directly attributed 48 high level (in context) qualifications as a direct result of the introduction of MMPBL. The community impact data as a result of the MMPBL showed 29 community causes were supported, with 2773 community members supported and £1385 raised to support the charities amongst them. The value that the community impact is held in by students will be investigated later in this study.

Although at this point in the study it cannot be said whether the positive impact on school outcome statistics were influenced by MMPBL, it is a positive outcome that deserves further investigation using the qualitative data.

4.2 Phase 2 Focus Group Data and Analysis

Research Question 2

What impact, if any, did the MMPBL curriculum model have on students' perception of their motivation to engage in learning, through the lens of SDT's needs in comparison to the previous secondary model?

Results in the quantitative data in section 4.1 presented positive impact in each of the measures. It does suggest that the impact indicators deserve further investigation using qualitative data. This section reviews the focus group data from the 19 students who participated in sharing their experience of the changes to their learning offer in relation to the five components of the MMPBL. Table 4.2a provides context of the students that participated in the focus groups.

MMPBL's design was based around SDT's needs and the interrelated four types of engagement. They were built into two components (and their opposition) that theoretically underpin the approach to its design to increase motivation and engagement in learning:

1. Meaningful Project Based Learning (meaningless)
2. Mastery (shallow)

MMPBL and Biographic of Each Focus Group Participant				
Participant N= 19	Project Choice	Gender	Need	Year 10 (Age 14/15) or 11 (Age 15/16)
1A	Art	F	MLD	11
2A		F	MLD	11
3A		M	ASD	11
4A		M	ASD	11
1DT	Design Technology (DT)	M	ADHD	10
2DT		M	MLD	10
3DT		M	ADHD	10
4DT		M	MLD	10
1FT	Food Technology (FT)	F	MLD	10
2FT		F	MLD	11
3FT		M	MLD	10
1PA	Performing Arts (PA)	F	MLD	11
2PA		F	SLCN	11
3PA		M	ASD	11
4PA		M	ASD	11
1SL	Sports Leader (SL)	M	MLD	10
2SL		M	ASD	10
3SL		M	ASD	10
4SL		M	ASD	10

Table 4.2.a to show participant MMPBL choice and biographic

In response to research question 2, exploring each of these components provides a template to:

- a. Identify whether quantitative themes of the component's presence emerged from the focus groups from before MMPBL was introduced against the end of the study.
- b. Compare the themes against the quantitative school data in section 4.1.
- c. Explore if the relative perceptions of participants provide context to understand what influence, if any, the MMPBL had on school quantitative in section 4.1.

The first three coding categories were built into Nodes on NVivo from the three SDT needs (and their opposites) and the remaining two based on mastery and meaning. The second phase divided them into positive (the components) and the negative (the opposition) categories, as well as data collected before the introduction of MMPBL and at the end of the first year of implementation. The assignment of the nodes allowed opinions to be filtered, compared, and explored. Outside of the directly relatable components, in line with the spontaneous data section 4.4, Barber (2011), encourages open exploration of the data also, as 'it is these grey areas which ultimately allow us

to refine our theoretical frameworks' (p.198). This meant seeking contradiction to the theory, exceptions and comments from outside of the study.

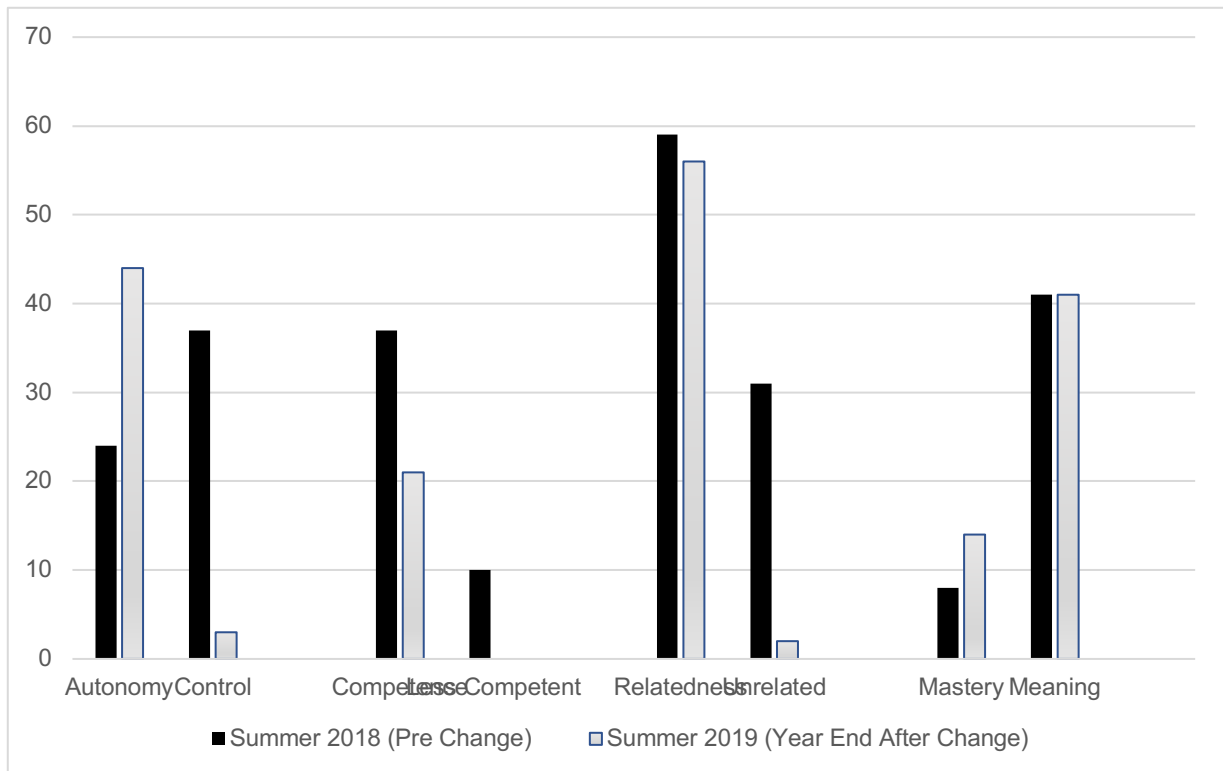
Quantitative Reference Results of Student Focus Groups Qualitative Data

The key piece of overall feedback that came from the Summer 2019 focus groups was, when asked, every participant said that they would remain with the MMPBL model rather than return to the previous secondary model. The quantitative school data in 4.1 supports this.

Key Components of MMPBL Theory and Their Inhibitors	Student Focus Group Summer 2018 (FGS18) (Pre-change)	Student Focus Group Summer 2019 (FGS19) (After change)	Difference
Autonomy	24	44	+20
Control	37	3	-34
Competence	37	21	-16
Less Competent	10	0	-10
Relatedness	59	56	-3
Unrelated	31	2	-29
Mastery	8	14	+6
Meaning	41	41	0
Meaningless	2	1	-1

Table 4.2.1.b to Show the Presence of Key Components of MMPBL Theory Pre and Post Implementation according to Students in the School in Focus Groups

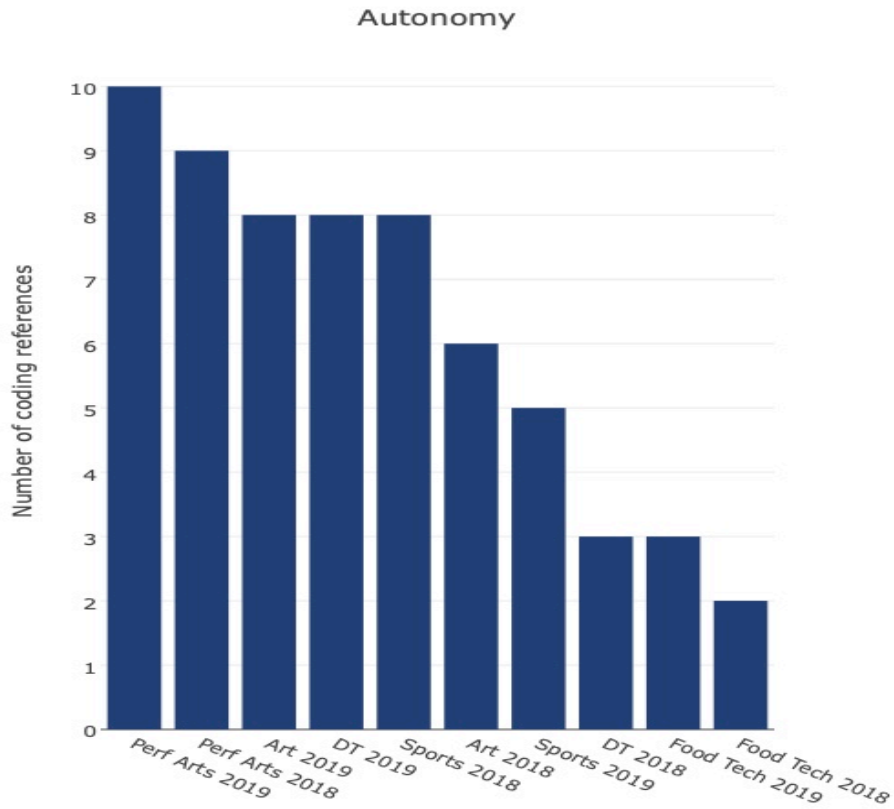
This section is related to the components identified in section 2.2; autonomy, competence, relatedness, mastery and meaning and how their presence interacted with engagement. Each components data present in table 4.2.b and graph 4.2.c below, will now be analysed and explored to see if it provides any reasoning behind the positive impact of MMPBL on the school outcome data.



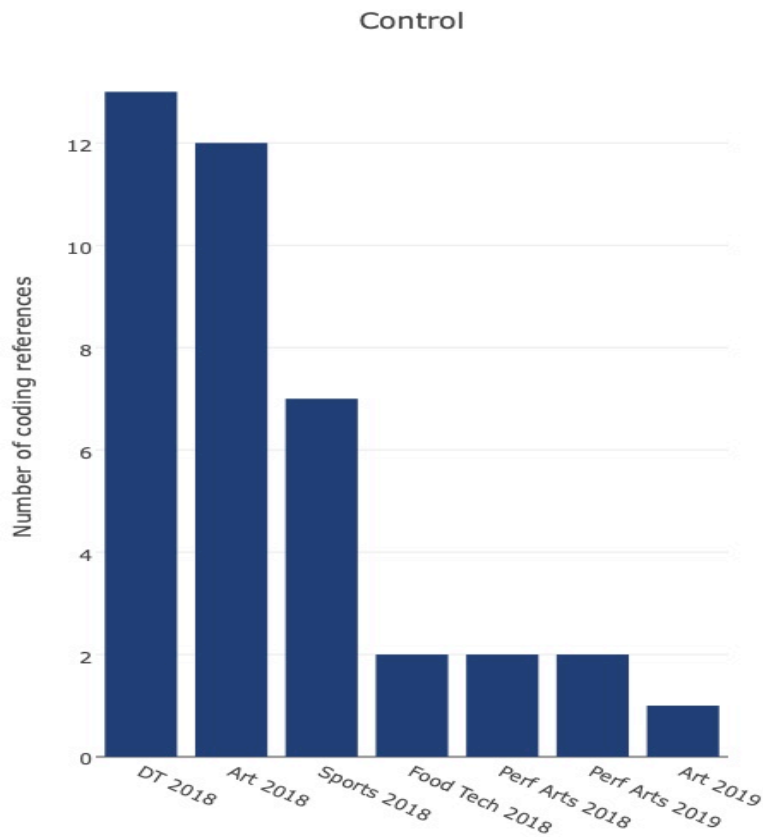
Graph 4.2.c A graph to Show the Presence of Key Components of MMPBL Theory Pre and Post Implementation according to Students in the School in Focus Groups

4.2.1 Autonomy

Table 4.2.1.b and Graph 4.2.1.c below show the overall quantitative presence of the components. The presence of autonomy increased by 20 references within their focus groups, from 24 to 44 between the focus group interviews before the MMPBL began (Summer 2018) and at the end of the year (Summer 2019). This was the largest range of change across the components and suggests MMPBL increased students' sense of autonomy and reduced the sense of control. In the focus groups in Summer 2018 (FGS18) 37 references to control were made as opposed to 3 across FGS19, a 34-reference decrease. What had provided autonomy and how control had been exerted was discussed in every focus group.



Graph 4.2.1.c A graph to Show the number of autonomy references Pre (2018) and Post (2019) Implementation of MMPBL according to Student Focus Groups



Graph 4.2.1.d A graph to Show the number of control references Pre (2018) and Post (2019) Implementation of MMPBL according to Student Focus Groups

Overall, looking at the number of references raised in graph 4.2.1.c, it is clear that there was more autonomy present in the perspectives of the students in 2019 compared with 2018, apart from the sports group which decreased by 3 references. The relevant inverse is found in the control model, with the number of control references decreasing in all groups, apart from performing arts, in which it remained level (2). DT, Food Tech and Sports had no control references in FGS19.

Before the changes FGS18 students referenced control and extrinsic motivation in relation to attending school. 4A said *'I can feel like I have to go there because I'm being told to'* and 3A supported this, reasoning *'my parents want me to get better at things'*. 3DT stated *'if I can decide if I want to go to school, I wouldn't be in right now'*. When asked who decides on coming to school, 4A answered *'The government'* though saw their need to *'because you're going to need to learn these things if you want to become an average citizen'*. However, some students referenced themselves as decision makers, wanting to come to school (2DT). 3F felt like he had some choice; *'my mum asked me if I prefer the [current] school or go into mainstream... then I said, "I'm going to this school because this school is friendlier than other mainstream schools"'*. Though 3A referred to his mother making his choices around his future *'I don't think she wants me to go to sixth form anymore'*.

When questioned about choices in school during FGS18, SP2 felt the autonomy was dependent on the teacher *'It depends on the teacher, if the teachers are a bit strict, you'll probably only get a few but if it's an open lesson you can get a lot'*. 3DT supported this feeling that the behavioural and agentic engagement was limited as *'some teachers are very strict'*. 3SP said teachers said, *'Here's the worksheet, shut up and do your work' that's really it for about an hour'*. SP1 felt *'I think every student in school has not much choice'*.

In FGS18, 3A sought more agentic engagement *'Maybe there could be options too. I'm like, "Hey, would you like to do this first and then this? Or that first and then that?'*. 4DT supported this *'I feel like in our lessons, that we should have the choices on what should be-- like, what we want to do in the lesson. I'm not saying, oh we have choosing*

time every lesson, but I just want a say in what we can do in the lessons'. He, like others, justified his opinion with wanting to 'be more independent'.

Reflecting back on the motivation and engagement in the curriculum before MMPBL, 4PA said *'I did not enjoy it; it was not fun. I felt very bored, I didn't know what I was doing, I thought that I had to be there',* going on to explain *'it is not choice oriented as well because I felt like I was just put there, with a bunch of kids who didn't want to learn or just wasn't interested in what the lesson was about'.*

Like the reference statistics suggest, the autonomy and control balance appeared to have shifted following the introduction of MMPBL. Despite there only being 3 references to control in FGS19, 1FT noted that agency can still vary according to the teacher *'Sometimes she says we can choose, but normally she's the one that decides what we're cooking'* though 3FT said *'You can make what cake that you want'.* This suggests that despite the use of MMPBL, the pedagogy and individual teacher still play a part in the students' sense of agency. 4A supported more agency in teaching being present *'having a teacher as wonderful as X just motivates us to... not only try new things, but to keep doing our own style'* adding *'I'm happy not being pressured into trying something new or different'.* Relating to the mastery through time, 4A also noted autonomy in *'the pace I learn at'.* The increase of 20 references to autonomous motivation and engagement in FGS19, almost doubling its presence in FGS18, was reinforced by some strong statements that covered a broad range of contexts for autonomy and agentic engagement.

Subject choice was evident across FGS19, DT3 related it to meaning also, *'I feel like this year has been important than last year because this year you get to do your favourite subjects that mean something to you'.* The weight of this decision was also noted by 2PA *'That's a big choice because that's what you're going to learn'.*

Subject choice related to qualification choice. 1DT said *'You get to do what you like doing and with that qualification you get in school, you can take it outside of school with you'.* Even within subject qualifications, agentic engagement was provided around the level and time, with the PA group *'we got to choose whether we wanted to do the gold one or the silver one, right? We all chose the silver one because we didn't have*

as much time and we wanted to do more things that we enjoyed doing, like doing more performances and stuff instead of doing all written work about our course'. This point raised the learning experience, with DT 2 furthering it; 'You could build what you want'. Furthering this, PA2 supported autonomy specifically supporting creativity 'I feel like it gives you the space to be creative and do what you want'.

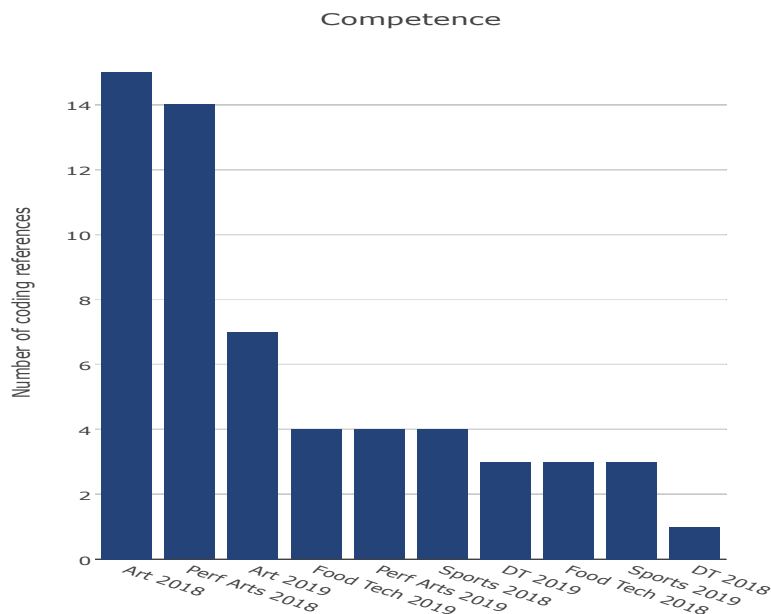
3SP referenced autonomy through the agentic engagement found in teacher delivery when talking about planning their own coaching sessions *'We've got to choose what we want to do before we go to the primary school'. 3A reinforced self-learning and even mastery saying, 'some things I intend to get better at, I'll tend to be self-taught'. They also noted that MMPBL has provided him with the skills to provide more engaged with others 'I don't think I would be as accepting of other people's views and opinions if I didn't go to art class, because I was very-- I was a bit opinionated'. This was supported by 3PA, 'I'm learning how to figure things out by myself and not asking for help too often. I try to do it first then asking for help'. 3PA related to this and the reduction in negative behaviour statistics referencing improved self-regulation; 'When you upset someone, the teachers said, "You have to say sorry to him." But over time, we had to learn and do this stuff on our own, to apologize on our own'.*

System autonomy enabled by MMPBL was also touched on by F3, *'I feel that this school's getting more like a secondary school because we go to different classes by ourselves'. PA1 detailed the running of the day being more autonomous; 'they brought in a new way of teaching because our timetables were catered to what we wanted or wanted to do'. The structure of the day is something that played a bigger part than may have been expected and will be raised in the discussion.*

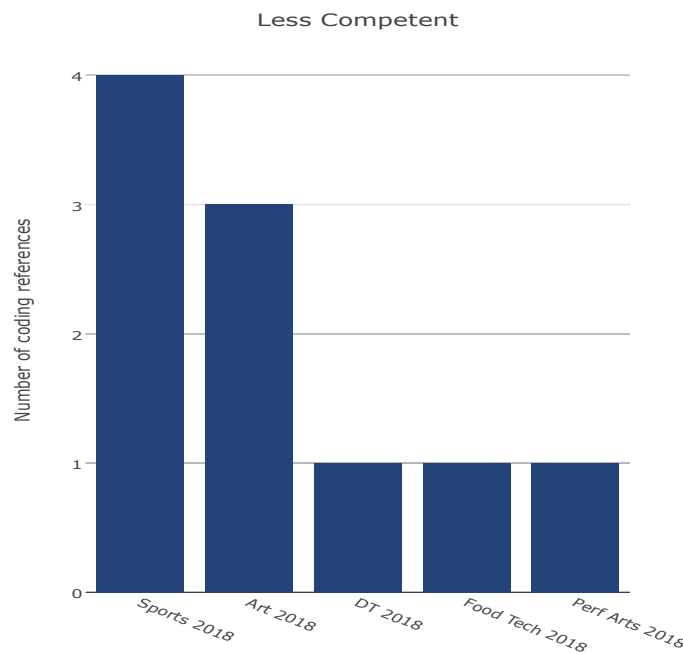
Overall wellbeing, related to autonomy, also emerged from 1PA *'I think we enjoy school more because we get to do what we enjoy'. 4PA felt 'the passion... like I was a little more free than the years before. It was like out of my chains'. 2PA spoke of the group dynamics 'I feel more free because I'm with people that I care about and I'm friendly towards with and with a friendly group'.*

4.2.2 Competence

Despite the competence levels being represented with increased qualifications data in section 4.1, the overall frequency of competency references in the focus groups reduced by 16 over the study, however no comments regarding ‘less competence’ were raised at the end of the study, suggesting at least a more neutralised opinion (see graph 4.2.2.c).



Graph 4.2.2.e A graph to Show the number of Competence references Pre (2018) and Post (2019) Implementation of MMPBL according to Student Focus Groups



Graph 4.2.2.f A graph to Show the number of Less Competent references Pre (2018) and Post (2019) Implementation of MMPBL according to Student Focus Groups

The 'less competent' references in FGS18 were across a range of variables:

Learning difficulties; *'when it comes to Math, I can forget a whole subject just within a week or a month of learning it or I just forget it the day after I've learned it' (2A), 'sometimes I forget all the numbers' (4S); 'it takes a long time' (1FT); and recall 'I don't know. It's so hard to' (4DT).*

Parental expectations; *'The thing is my parents want me to get better at things and they just want what's best for me. But they partly do get a little bit worried of what will happen if I can't get all things done' (3A).*

Peer-perception; *'Sometimes, people call me dumb for no reason when I don't know something. In maths, for example, if I don't know something, people call me dumb and I just don't like it, I just don't feel like it' (S1).*

The range of perspectives highlight that the perception of their competency concerns is complex, multifaceted and largely formed from external opinion (context), but that MMPBL may be benefitting a number of them if it can be considered accountable for removing the negative references. To investigate if they are, this study can further assess into what the perceived competences the students gained and how they engaged cognitively.

As can be seen in graph 4.2.2.e students in the art and performing arts referenced varied competences in the FGS18 15 and 14 times, respectively. This was significantly above the maximum of 4 for every other group across all focus groups, apart from art (7) in their FGS19. There is little correlation with the less-competent references in the FGS18, with sport referencing 4 times, with only a maximum range of 3 to the rest, all of which were in FGS18.

Whilst there were some sweeping statements; *'I think all the subjects we learn, it helps us and improve our skills in it' (1A),* the range of perceived competences focused on by students was relatively narrow in FGS18, with academic cognition focused largely on core subjects such as English and Maths, with only 6 references to subjects related to the projects. Money handling was the most commonly referenced competence (8).

3A saw this as *'you learn maths so just so you could do taxes in the future'*. By FGS19, the project subject related competences references tripled to 18. Which subjects' students began associating with their future seemed to have broadened, perhaps relating to the introduction of the 6C's of the 21st Century; *'collaboration, communication, critical thinking, creativity, character and citizenship'* (1FT in FGS18).

The link between the perception of competence in one subject and transference into other subjects and skills was also found. 1PA went on to say *'I feel I'm getting better at science. Like I'm confident and speaking up more'*. 3PA, following the same training, shared that what is improving is *'my social skills. I'm getting better at talking to people, but I still believe I can make progress'* and *'I'm talking to people that [I] wouldn't usually now because that's important'*.

4.2.3 Relatedness

The most frequently discussed component of the theory was relatedness, with 59 and 56 relevant points, respectively. Despite there being marginal (-3) reduction in relatedness, the unrelated areas of learning at the end of the projects reduced by 29, to just 2 in FGS19. 1DT summarised this in FGS19; *'I feel like this year has been important than last year because this year you get to do your favourite subjects that mean something to you'*.

Previously, in the FGS18, some students had seen the importance but lacked the engagement; *'I know it can be important but sometimes I can feel I get told so many times it just feels boring hearing that again'* (4A) or *'I wouldn't say too much that relates to some things I want to do in future'* (2A).

Regarding school as a whole, in FGS18 1A stated *'[school] it's just one of those things where you have to do it'*. There were some balanced thoughts on the same matter: *'The things we learn in school are definitely important, but I feel like some things are more important than others'*

Behaviour was also raised in FGS18. 4S reflected on his own challenges;

'lessons are good but then after lunch and that, lessons are getting bad. Your behaviour starts to change, you feel like you're not your normal self, you start to behave in bad ways and it affects how you're doing things'.

1A said *'I can really see problems are the students themselves but that's more of them being a problem, not really the school problem. Like how immature they can be and despite them literally being 14 and 15 [years of age]'* and 1PA shared this concern; *'the environment in general. It's just not good'*. Despite concerns over other peers, the focus of relatedness for many students supported the positive influence of peers such as *'I feel like I've made a lot more friends here'* (2A), saw 24 peer references (21% of all in this area) featuring across all stages of the study. However, it was clear that projects were not picked based on friendships; *'we picked not just because there's a friend that picked that subject so I'm going to go and join them too. No, it's not like that. We all knew what we wanted to do'* (3PA).

The focus groups before the change focused on the ever-present core subjects being discussed ascribing to different levels of motivation and engagement. There appeared a shift in this across the study. In FGS18 2S referred to disengagement saying *'I do not like English because it just doesn't interest me sometimes'*, 1S felt *'We only ever do comprehension work and it's the most boring thing ever'* and *'don't really like maths most of the time'*, 3FT had lost interest *'I used to like math, but then in the lesson, it gets a bit boring'*.

Despite the lack of relating to learning, 18 (31%) of the FGS18 relatedness references were linked to the recognised need for qualifications, college and employment later in life. 3A said *'As much as at times it feels for me it can get in the way of things I'd want to do, I still have to learn those things because it's for my own good and it will help me later in the future'*.

Following the introduction of MMPBL, in the 2019 focus group 2PA said *'As a result, it made lessons much more enjoyable and more reason to go to school every day'*. Links to qualifications, college and careers became more established with 7 references.

2A, like fifteen others (29%) saw a direct connection between MMPBL and their career;

'with art, I do hope I can one day use it to have a career in doing animations or making games small or big. These are the two things I've wanted to do for the longest time'.

1PA was less conclusive but MMPBL asked them to question;

'what are you going to be doing in the future. It gives us more clarification of- like what I was talking about- like our talents, and what we would like to be doing and how we could interpret that into the future as a job'.

1A countered their own point above that had been made the year before:

'I honestly feel like [the change] it's been very important. I mean, I've learned about so many things about arts and mathematics, English, that I feel like every second that I thought I wasted previously is now very valuable to me.

There were no opposing quotes to this in FGS19. The associated meaning behind the learning will be further explored in the meaning section below.

4.2.4 Time for Mastery

Mastery and time were terms that had not been frequently referred to in the school before MMPBL and this was reflected as the lowest referenced area. Mastery in the context of time spent improving, is a component of competence and engagement, so the two are closely linked. The decrease in competence references may also be compensated by the increase (+6) in the presence of discussion around Mastery references in focus groups of Summer 2019 (FGS19).

Despite the relatively low frequency, the time factor was held in high regard. 3DT recognised it in FGS19; *'[last year] you have less than half an hour to build something, you don't have time. This year you have like two hours to build what you want and that's a good time'.* The design and theoretical component of Mastery allowed for 350hours of study in the chosen project. Like meaning, it has a strong link with SDT's needs.

Beginning with relatedness in relation to time, the concept was that the student's interest in the subject must be high if they are committing 350hours. 1DT expressed this *'you get to do your favourite subjects for two hours'.* When originally proposed to stakeholders, questions were raised as to whether this could be sustained. There were no changes in project groups across the year and 2FT confirmed a further year's study

'I'm doing Food Tech next year', as did all of the year 10 students in Design Technology.

The recognition of the MMPBL fostering self-engagement over a greater time period was seen by 1PA *'Now, we start to work our way up to that level itself so when we go into college, they can help you in the future as well'* and *'Yes, you can find out new ways to push yourself all the time'*. That the journey to mastery will continue was also emphasised by 3PA *'I learned more of what I can do... It inspires me to get more experience out of school as well'* extending this into college *'I want to study more, especially film studies and media, theatre plays, film studies'*. Following his acceptance to study art at college, 4A explained *'I do feel like I have a lot of knowledge on art and I got much bigger passion for it. I'm glad that I do from the project time because I honestly want to pursue art as a career choice'*.

With more time to complete work to a higher quality, as well as the increase in qualifications in section 4.1, those who may have perceived themselves as less-competent may have also changed perspective and therefore their engagement in relation to having more time. 1PA gave an example, *'we took speeches in the beginning. I was like, "No, I don't want to do that... -but now, I'm getting used to talking to a bigger group of people in assembly or something. I'm probably more confident into doing that'*.

4.2.5 Meaningful Learning

The final component of the design and theory was the meaningful purpose of the MMPBL. Meaning, according to Martela and Ryan (2016), is present when all three needs are met with benevolence. Seligman's (2002) perceives this to be found when using your highest strengths to belong and serving something larger than yourself. The impact on the school, local and global communities through the social enterprise component was demonstrated in section 4.1.3. The study sought examples that demonstrated students giving back and its impact on their sense of agency.

Within the school and home lives, giving back was already present for some students; *'I also help with assembly, setting up the computer in the morning and stuff to make it ready for him so he won't have to go to the room to get all the equipment and plug it*

in. (4DT). *'I feel like I try to help people with lessons I both learned from home, school or just anywhere in general'* (4A). Explaining it in relation to emotional engagement, 4DT said *'You feel good about yourself because your brain is telling you to help that person because if you help them, then it's less hard for them and they can go and do other stuff as well'*.

Following the change, 2A identified that the MMPBL model provided positive choices to take part in meaningful opportunities (meeting all three needs) that increased self-efficacy and peer approval:

'It just makes me feel like I have so much more purpose and just helping people makes me happy because that's life and that leads to making myself proud and making them proud as well'.

The relatedness to others, having the competence to help others and the agentic engagement fuelling the sense of autonomy provided in the choice (leading to positive behaviour) saw emotional engagement fuelled by the pride.

The meeting of needs and subsequent engagement remained with what had been learnt in school being applied in school; *'Anon and I were helping out some schoolmates'* and *'definitely educating others on how to say, do something simple as designing their character'* (A4).

However, the addition of collaboration in *'Making props for Bugsy'* allowed projects to facilitate clear peer to peer support in the school production and actively celebrate it;

'Just the rush I felt when the production light ended and we were all jumping with joy, throwing our hats around... There's no other feeling like that to be honest. It was amazing. Definitely do it again.' (1PA)

Celebration of meaningful experiences also occurred through the addition of Exhibition Day at the end of each term and this appeared meaningful to students;

'I think it was for the exhibition day of this year... I made a cake with my classmates, we felt like giving back something to my class... because all of these people have helped me in very tough times' (2DT).

The perception of the students, statistically, saw the references remain equal with 35 in both the first and last focus groups. Though the qualitative data presented some examples of giving back beyond their immediate home and school environment.

The DT students related with their peers linked their projects in the local community; *'we found out from Anon that there were not enough special needs playgrounds for people in our area and [the area] have spaces where we can build a playground for people who do have disabilities and people who do use wheelchairs'* (2DT).

The global projects were raised by the sports group. They recognised the issues of others in the world;

'some people in Africa and other parts of this country, they don't have water, they don't have food, they don't have medicines to cure really severe problems' (3S)

They responded by *'planning on doing a whole school challenge where everybody comes out, enjoys themselves, people bring one pound for Soccer Aid'* and reflected that *'helping people is good, and it can also help you as well'* (1S)

The contribution to home had not been considered in the design but was clear when FT4 explained;

'I've found, well, I've recently got a talent that is probably cooking. I've found a new talent for cooking. Because my mum hasn't been that well for the last few months and obviously, she hasn't made food for me and my sister'.

Following one high profile speaking part at Wembley Arena around this student's mental health he explained that *'I like speaking up to help other people'*. 4PA reflected on what doing something meaningful had meant to him;

'I feel like I'm getting a head start from here as well because I'm already in contact with a lot of people already. I'm currently screenwriting play with a TV company. I recently had the WE Organization come in and try and ask me to be a Young Ambassador for Team London. I have been at their workshop as well'.

This highlighted the meaning behind the message being shared by the students and what they were capable of, as well as the expanding network that the students were creating for both themselves and for the school as a whole. This level of impact had not been considered in the design.

The link between the meaningful component and agentic engagement was summarised by 2PA *'It felt like you didn't just learn, but you used what you learnt'* and that they saw beyond themselves *'if you don't do anything it will still get worse'*.

Summary

There was data emerging from the focus groups that showed the presence of each of the theoretical components being present in the MMPBL study. The extent to which the frequency altered following the introduction of MMPBL varied according to each component, but overall there was a positive increase and richer qualitative data. The results also added different points to consider in the refining of the model. What was said in reference to the components and the varying weight they hold in associated impact will be explored in Chapter 5.

These findings were from the students' perspective, the views of other stakeholders now need to be explored to see if they align and if there is stakeholder agreement on the use of the MMPBL curriculum model.

4.3 Phase 3 Research Question 3

Did the MMPBL curriculum model have any effect on students' engagement in learning according to students' teachers and parents' observations? If so, how?

4.3.1 Teacher Survey Results

Whilst clearly interrelated, the dominant components of engagement observed from this study's theory and emerging results were used to form the template for analysing the teacher survey (Shin and Reeve, 2012). The Project teachers (T) completed the survey after the first year of study.

Cognitive Engagement

Two themes emerged from the responses, academic achievement and self-development to enable more competence '*were all incredibly successful in developing competencies across the board*' (T4). Although knowledge was mentioned, the application of it and the skills required dominated staff feedback.

Students' cognitive engagement was observed as they become more '*skilled with certain tasks*' (T1). Applying '*transferable skills through doing cross-curricular projects with other subjects such as maths*' (T4). Skills included '*critical appraisal, presentation skills*' (T2), '*life skills*' (T4), '*applying the 6C's in their learning*' (T2) and '*meet the tight*

deadline' (T2). Subject specific skills were also acknowledged; *'development of their hand and eye coordination'* (T5). Mastery of these skills came as *'they have focused on just one area and in such a depth that their confidence in these skills [grew]'* (T2). Cognitive engagement grew to the point that they became agenticallly engaged as *'leaders'* of learning for others (T7). This led to broader impact that is in line with the vision of the school. As Teacher 2 outlined MMPBL:

'has had a tremendous impact on the students' self-confidence, also gaining a skill which means that they now have activities to do at home as pastimes, and possibly diversify and build upon in the future, as well bringing them something to do alongside a family member'

T1 agreed observed cognitive engagement as *'Students have transferred their skills from the project into other areas of their life, across subjects and into their life outside of school as well'*.

Agentic Engagement

The choice of project feature clearly engaged students agenticallly *'They have been able to pick a project which interests them'* (T7), was discussed by every teacher. Furthering this, *'the majority of the curriculum was student-led as the students choose their targets based on what was appropriate for their next steps for lessons, units'* (T1). Within the subject *'Students have been able to choose areas of interest in art in which to develop their skills'* (T2). *'They also developed their autonomy as they strived towards independent learning through increased levels of confidence'* (T6).

Teachers recognised an increase in allowing agenticallly engagement *'they developed their independence during rehearsals. At first led by me, then leading each other (within project group), to then sharing and leading others'* (T5). The same could be said about assessment. Teachers supported learners to *'establish their own motivating factors or 'why'. This created a clearly defined set of student led success criteria from which they could more accurately judge their own learning'* (T3).

MMMPBL gave signs of agentic engagement, providing *'greater ownership of what they wanted to do and how'* (T3). How this was done was demonstrated by a number

of examples. Engagement correlated with some of the explicit stages of the project cycle, with exhibition day celebrating the autonomous social entrepreneurship desired:

'the Winter exhibition day they were given the general project of creating a market stall and it was down to them how to work together as a group, what they were going to create and how they were going to present it' (T4)

Agency's role in the school's long-term vision was raised by T5, saying *'the students were offered the choice in pursuing technical and business roles that their time would always limit in the previous curriculum. Students are willing to spend many days and even weeks on the same theme of work'*. T5 summarised that *'It was the empowerment of their choice that really drove their success'*.

The decrease in the frequency of unrelated comments by learners in the previous section was reasoned by T6 in that *'they are not guided to a place that they may resist due to a lack of interest'* (T6).

T2 noted a change in the teacher-student relationship *'they felt like authentic stakeholders in a collaborative process which had a degree of professional equanimity between staff and students'*. More time meant *'getting to know them and their parents on a deeper level'* (T2).

Cognitive Engagement

Teachers perceived an increase in cognitive engagement supported by the commonality of interest, with students picking subjects they wish to study. This was not just in school, MMPBL had an impact beyond the project as students *'transferred their skills from the project into other areas of their life, across subjects and into their life outside of school as well'* (T1).

Cognitive and emotional engagement was seen when *'they had the ability to function as an effective team member by communicating appropriately'* (T6). This led to skills to *'collaborate with other projects enabling a holistic skill share where students are aware of what they've learned and how it can be put to good use'* (T3). Teacher 3 also observed the longevity of the model:

'Students are now recognizing the skills they have now learned have applications which can form an essential part of their own long-term learning pathway beyond school and into adult life'

The conditions of the project also enhanced relatedness as the time allowance allowed more opportunities to enrich the learning. For example, students in the art project were *'offered experiences of being in an art studio with professional artists and having access to equipment unavailable in school'* (T2).

T7 suggested some of the reasoning for cognitive and behaviour engagement changes shown in section 4.1 to be around relatedness and identity that supported belonging:

'making the curriculum student led and giving the opportunity for students to make their own choices was an important behaviour management tool and would get the buy in from the students increasing engagement, teamwork and through buying tracksuits of the students' choice creating a bond and unity' (T7).

T4 felt that the social skills developed in their project also impacted on other areas of learning with:

'the ability to work with other people in their core group regardless of whether they were 'friends'... they could build up strong relationships with their tutor team and would then be able to talk through problems with them'.

The same behavioural change was observed peer to peer when students *'collaborate with other projects enabling holistic skills [to be] shared'* (T3). Teachers saw the agentic collaboration in Bugsy Malone as the students did above, *'Students who undertook this work did so at their own request due to their specific interest in the project and wishing to support others around school as part of the schools termly [community] focus'* (T3).

Behavioural Engagement

Some individuals showed that MMPBL *'drastically improved his attendance and punctuality'* to the point where *'he started to become the first one in the classroom'* (T5).

'There was a student who prior to this academic year struggled with attendance and behaviour. Despite there still being some issues, the student really connected with the project and has gained confidence and recognition of his success' (T5).

MMPBL's role impact on negative behaviour meant that it was *'almost non-existent during project time'* (T7).

Mastery

The components of Mastery time was a major influence on all teachers and their observations on engagement:

'Having time to focus in such depth and being able to visit the exhibition and meet the organiser in person meant it had a lasting impact on the students. The evidence is that many students took their families to see the exhibition in their own time' (T2).

T4 affirmed that *'Students have made connections between themselves and their learning as a result of the mastery'*. The impact was beyond just the subject as *'this allowed them to overcome obstacles in other subject areas and a resilience to try again'*.

T5 made reference to the flexibility that the mastery time allowed

'They had two hours per week. Typically, on a Friday morning between 9-11 where they could work on what they wanted to make. This is where the flexibility in the PB curriculum allows this in comparison to a more rigid framework of a mainstream approach'.

They reinforced that this was not wasted time, instead it *'increased productivity throughout the other four days of the week knowing that they would have their 'own time' come Friday. It was some time that they all looked forwards to with excitement'*.

Again, behaviour change was touched on, *'I think this could be due to a calmer approach to learning in project lessons, developing patience to see project work through to completion'* (T2). They saw *'the need to work hard to overcome challenges'* (T2).

Observations that *'their confidence has grown'* (T1) by almost all teachers provided further reasoning for why the school outcome data took a positive shift.

Meaningful

Meaningful project based learning hosted a number of approaches the teachers took. T7 shared their work around metacognition, that *'the coaching sessions progressively improved as the students' competence improved and this ensured a huge growth in confidence as they became aware of this'*. T5 supported this, witnessing *'through clear and measurable success, and reflection on it, students over time gain confidence in learning new skills and finding direction that they want to pursue'* (T5).

The community projects grew agency through a sense of unity in the groups. T2 shared how *'the homelessness project was introduced very early in the project, and its collaborative aspect brought the students together as a group'*. That it played a part in both intrinsic and extrinsic motivators showed how one can complement the other *'The arts award qualification suits the project-based learning model, as it encourages the learning of the role of art within the community'*. T3 discussed the impact of both motivators, seeing positive emotional response *'the causes they supported allowed them to showcase their learning as well as the emotional pride in themselves'*.

Students are now recognizing the skills they have now learned have applications which can form an essential part of their own long-term learning pathway beyond school and into adult life (T3). T6 said they had *'observed the motivation the learners had to do well knowing there was an outcome to their work, that their input was meaningful'*.

That the meaningful projects were community-based saw networks (see section 4.3) begin to be formed beyond the school gates. T2 spoke about how they had *'made contacts with the centre manager of the local shopping centre'*.

Impact on Teachers and their Practice

The survey and spontaneous positive data on wellbeing, attendance and turnover in Section 4.4 suggested that MMPBL better met teachers' needs and therefore facilitated their growth too. *'MMPBL has had a positive impact on me and my own practice... With trust being put into me to create the project curriculum it has allowed*

me to teach with more freedom and be less restrictive' (T7). 'It has moved me away from being a traditional more prescriptive teacher and allowed me to create a curriculum based on the needs and wants of the learner' (T7).

Teachers' additional planning time set aside time for collaboration saw T2 refer to a sense of peer belonging as *'I have been able to build more meaningful relationships with other Project team staff members, as we have spent more time together, such as collaborating on the Christmas themed stall'*. Teachers became more resilient, reflecting *'if things don't quite work out but reflective enough to learn from these mistakes to progress moving forward' (T7)*. This collaboration spread into other subjects as *'it allows a cross curricular approach' (T4)*.

Whilst no specific pedagogy was designed to be taught, an organic version began to emerge as teachers' own practice had to change in order to deliver the projects. T4 shared that *'it was initially daunting, but equally exciting to rewrite a curriculum based on a subject that I have centred much of my academic and personal interests around'*. They found *'a greater allowance in creative teaching' (T1)* and more engagement as a result. *'I found that my focus shifted more to building my planning around student led learning'*, with T5 feeling *'able to create bespoke learning for each student which meets their needs and stretches and challenges them'*. T6 had more experience as *'PBL is a framework I have over 15 years of experience teaching and is a framework that I align with completely'* and so contributed to leading practice. Whilst another sought *'More experienced practitioner led CPD at the start of the process' (T3)*. This provides a rationale for building a shared pedagogy. Despite heavy investment in planning time, transition should be carefully considered *'It's been a rollercoaster ride transitioning from an old system to MMPBL' (T1)*. This suggests that the impact of the operation changes and leadership to facilitate it are worth further discussion in chapter 5.

Recommendations for the MMPBL model

All seven teachers were firmly behind keeping the model *'I would now not only keep the model; I would expand its principles beyond the six projects and into all areas of the curriculum' (T3)*. *'The projects enable students not only to find pathways for future*

learning and employment, but also to find an area of study that they enjoy' (T5) and 'what will ultimately, bring them the most satisfaction' (T6).

Feedback to improve the model was varied. *'Although it is good to be challenged to find ways to include other parts of the curriculum, it can spoil the natural flow of a project' (T2).* T3 also made some practical points:

'I would possibly look at timetabling sessions off site, and to give each student their own digital means of writing/ recording information. This would make the evidence capturing more seamless and authentic. This could be more engaging for parents'.

T7 made similar suggestions *'to remain as current and developmental as possible,'* though T6 said *'I don't know that I would change anything'.*

Summary

The teachers affirmed the previous two sections of results, that the MMPBL better met the needs of the learners but also enhanced the pride and motivation of the teachers.

This could be seen in the summary by T3:

'I have seen students in [anon] project successfully take on challenges which earn the respect of Royalty and have led to direct actions on their own next steps for learning. Students have subsequently found the confidence to go into college to undertake continued study in [their subject]. One student even now has an artist's agent!

That they could see pathways for their students on to college and employment suggests an increased meaning to their own input. The ambition drove their own. Some individuals showed dramatic shifts in engagement *'in one case for a student who was not necessarily sure would even attend one session of college' (T1)* ended up attending full-time. This went beyond education also as *'students were able to connect what they learnt with real world employability skills (6Cs) which also increased student self-motivation' (T2).* T7 confirmed this *'I am a huge advocate for the MMPBL model to remain as I believe it gives all stakeholders of the school a purpose in what we are all trying to achieve'.* The study now goes on to explore such purpose from other stakeholders.

4.3.2 Parent Survey Results

At the end of the 2017/18 academic year, a survey was sent out to parents and carers (P/C) to gather their feedback on the MMPBL change. There were four questions on the MMPBL curriculum and the responses were reviewed. From the 51 students, 11 parents/carers responded (P/C1-11).

How do you think the use of Meaningful Mastery Projects in year 10 and 11 has been helpful to your child's education?

P/C1 gave a positive general summary; *'Pupil's work [this year] was amazing, showed a journey in their learning that was a pleasure to see'*. P/C3 reinforced this, saying MMPBL is *'Inspirational – confident students, who are all clearly happy and positive about learning. So exciting to see what is possible!'*.

P/C6 commented on the staff *'The projects were excellent and seemed to be organised by experts'*. P/C4 added peers to this *'The project area was right for my child; the class was made up of supportive peers and the course lead was exceptional'*. P/C5 added to the parents/carers; *'The project work's exceptional success has been due to parent involvement in ensuring it was the right course and the course lead's real abilities to teach the course and ensure the children were getting the most out of it. Thank you'*.

Other parents left shorter responses that alluded to engagement:

- *Focus – allow time to focus (P/C1)*
- *Develop interest (P/C9)*
- *Engagement with teachers and other students (P/C4)*

P/C3 also alluded to relatedness and cognitive engagement;

'It has helped focus their skills that they are good at. As well as improving on them, it has helped them focus on tasks which are interesting to them so makes them want to be in the classroom'.

P/C8 compared the past curriculum and the introduction of MMPBL;

'Despite the challenges in getting up and running, it has been the more successful year at the school after two very bad years and one moderate year. This past year has seen my child blossom, show real interest in school, form real friendships and learn to love working for the first time. The course lead has

been amazing and very proactive in making the project work stimulating and then show casing it'.

P/C11's feedback was based on the behaviour;

'In a class where interests of student are the same and also they are calmer with each other and help each other, giving each other ideas on how to do things'.

How have you seen your child make choices in school this year?

The responses to this section, on the whole, suggested more agency for the students. P/C7 said that the MMPBL *'supports the students in developing their skills and giving them the ownership of making important decisions in life'.*

P/C9's response was based on the process of the decision making;

'When it was introduced, it took several discussions with project leads to determine which project was right for my child on top of attending the parent meetings designed to give information on the new curriculum'.

Analysing this, how autonomous the student was in the original decision of what project to study was less clear;

'Information [for the parent] was minimal and my child cannot be relied on to fully understand or relay information'.

The weight of stakeholders making the decisions and the balance of voices is something that requires further discussion.

P/C2 alluded to autonomy, saying that decision-making was *'Much better. Love the pathways approach, harnessing the skills rather than forcing the children to sit in curriculum [subjects that are] not their passion. Much more focus on learning. P/C8 saw the link between the next steps in their young person's life, as MMPBL; 'Helps prepare him for the future, and more focussed on what he wants to do as a career'.*

Summary

Overall, the parent and carer feedback surveys were positive and covered each of the components. The lack of constructive criticism from question two and four in some ways was positive but did not provide thinking points to refine the model.

4.4 Phase 4 Does the study present any unexpected findings that we're not hypothesised?

As an exploratory study, research question 4 asked if the MMPBL Curriculum Model would have an impact on any areas that were not hypothesised. Spontaneous data was collected to provide perspective on the MMPBL from those outside of the school or for significant changes that were related to the curriculum, relating to research. This data will now be presented.

Ofsted visited two weeks into the Autumn term 2019/2020, following the first year of the projects running and observed the levels of motivation and linked them to meaning:

'Pupils are enthusiastic about the daily project lessons. They are thoroughly motivated by work that enables them to help different communities. Projects include coaching sports at a local primary school and making equipment for a new playground for children with special educational needs and/or disabilities. These projects help them develop important skills for work and their future lives'

Inspectors also picked up on the engagement of students:

'Pupils choose which project lessons they attend. Their willingness to join in these lessons and to learn new skills is impressive. The projects are selected and agreed by staff and pupils together. Staff told us that pupils' behaviour and attitudes to learning are even more positive since the new curriculum and project learning have been introduced'.

External colleagues also left positive feedback after inset day, feeling that there was: *'positivity and engagement from both staff and students' and the MMPBL were: 'Inspirational! This is a proactive visionary model for education provision which can be used across the nation. A starting point for SEND provision!'*

The work was also written about in a number of journals and articles in school-based publications (Every Child Journal, 2019) and by international social action charity WE (WE Stories of Social Change). These publications and the 67 external colleagues visited in the first year to see the MMPBL in action and workshops suggested that the approach was being considered nationally.

4.5 Summary

This chapter presented Phase 1 quantitative school data, Phase 2 the student focus groups, Phase 3 the teacher and parent/carer feedback, and Phase 4 spontaneous data from external sources.

The findings will now be discussed in relation to existing literature of Chapter 2 in discussion of findings in Chapter 5, seeking to identifying what had positive and negative impact on the students learning and raised some areas to consider in refining the model to ensure every learner is working towards academic achievement, agency and their future destinations.

Chapter 5 Discussion of Findings

Introduction and Presentation of Themes

The themes for discussion in this chapter are focused on the theory and design of the MMPBL model (see Figure 5.1.a), the data across Phase's 1 to 4 in Chapter 4 based around them and aligned with the four research questions based on implementing it.

In Phase 1 of the results chapter, the academic data suggests evidence of the curriculum change's direct impact on qualification quantity and quality in MMPBL subjects, and in the case of any broader impact, core subjects. Phase 2's focus groups provided a space for the students to speak about their own experiences and express their opinions about the introduction of MMPBL and their perceptions of the motivation and engagement. The teacher and parent/carer surveys in Phase 3 looked to explore the impact of the study and showed emerging trends in engagement from the first two phases that link with the results from those first two phases. Phase 4 discusses the spontaneous data that was relevant to the study. The study looked across each of these phases as to how it could be improved if the model is to be maintained into the following academic year and if it were to be implemented in other settings. In Phase 5, the four phases were considered collaboratively to review the themes that emerged around the model and discuss whether they correlated with the hypothesis developed from the theoretical model drawn together from the literature review.

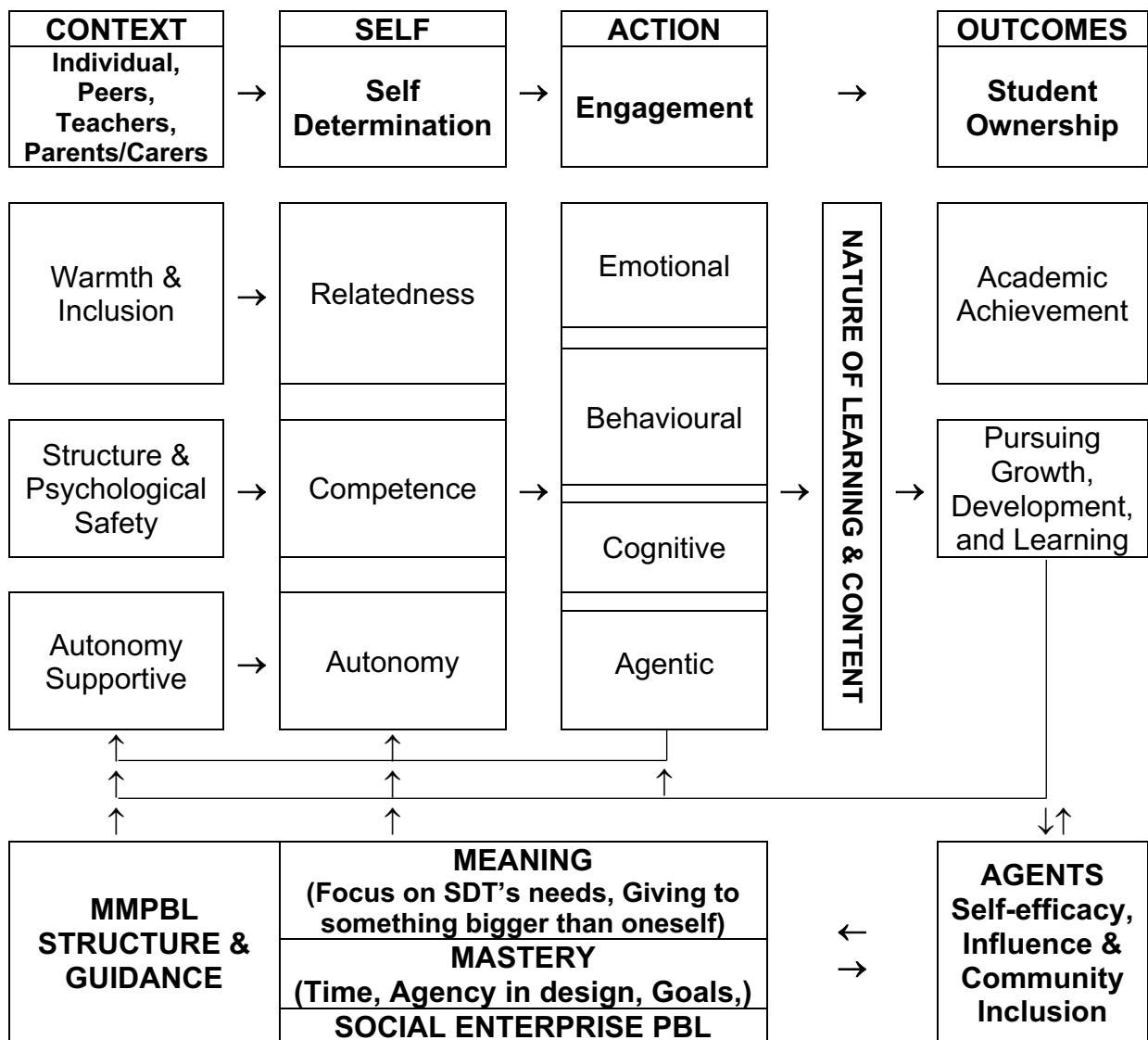


Figure 5.1.a The MMPBL theoretical framework for the model of learner agency (Adapted from Skinner et al, 2008)

In relation to figure 5.1.a, the sections of 'self' (SDT's needs) and 'action' (engagement) and how they were influenced by the variables of Meaning (meeting SDT's needs by giving to something bigger than oneself) and Mastery (in this study through time and agency- though goals emerged as another component to consider) were delivered through design and content of social enterprise project based learning influenced outcomes. The outcomes in this study were based on school outcome data (qualifications, attendance, behaviour and future destinations), whilst overall the outcome the model seeks is for young people who are agents over their own life, learning and to apply social agents of their community, in which they are included in to benefit their development. It the school outcomes that this chapter now begins with.

5.1 Research question 1

What impact, if any, did the MMPBL curriculum model have on Key Stage 4 SEND student outcome data compared to the data from the school's previous secondary model?

5.1.1 Quantitative school data

The context of the students who participated was a 4:1 ratio of male to female, with a relatively similar number of Year 10 (24) and Year 11 (27) students. Whilst the prominent needs were ASD (17) and MLD (15), there was representation from a range of needs such as SLD (4), SEMH (6) and SCLN (8). When it comes to taking into consideration the application of the model in other settings, the needs of other cohorts' may vary, raising the point of having the individual in the context box of the model.

As could be seen in the project quantitative results (relating to the achievement in the outcomes column in Figure 5.1.a) following the first year of running MMPBL, 48 qualifications were gained by the students. That no qualification in the project subjects had been gained previously, suggests that this was a potentially positive impact of the MMPBL model. It is important to note that the continuity of teaching staff was largely the same both pre and post curriculum change, so the variables were found in the structure and content of the curriculum.

Although a lesser focus of this study, core subject qualifications per student also improved in quantity by 0.4 compared to the previous year, moving from a mean of 2.5 to 2.9. This shows almost every student finishing key stage 4 did so with core qualifications. The quality also increased by 0.5 on average using this study's grading system. To further validate the change, a GCSE and 6 Level 1 and 2 functional skills qualifications were achieved, surpassing the entry level ceiling of qualification levels that was the previous norm. These changes suggest an increase of academic attainment as an outcome of increased motivation and engagement (Stancliffe et al., 2000; Nota et al., 2007; Reeve and Shin, 2020). Considering the performance it could be inferred a positive response to the MMPBL model and grounds the response to research question 2 (see Section 5.2) and the engagement observation of teachers and parents (see Section 5.3).

The increasing numbers of qualifications also suggests that students had an increased motive to integrate core subjects into their own goals. This could be linked to their ambition of achieving in their project whilst at school or the need for the core levels to be at entry level 3 in order to apply for specific courses in college or employment. There were numerous mentions of this in focus group data. Although not specifically related, to achieve these grades cognitive engagement through the development of creative and effective problem-solving skills appear to have been reinforced by working on a mastery approach (Elkind, 1979).

The success of implementing MMPBL was reflected in the destinations data in section 4.1. With the increase from 18% of students leaving the school applying for subject specific courses using the previous curriculum model to 50% using MMPBL in its first year was another key statistic that advocates maintaining the model. Although a second year was not built into the study, this statistic supports that the quantity and quality of qualifications is set to increase again as year 10 students enter a second year of using the model. In line with this, 80% of the key stage 4 leavers found level 1 college courses linked to their MMPBL subjects. Leavers' choice to their next step of education increased by 32% in the first year of using the MMPBL curriculum and 62% in the second year, is the pinnacle impact data of this study, aligning with the vision of the school. This data suggests that learners found meaning in their learning through increasing the frequency that all three of SDT's needs are met (Martela and Ryan, 2015), and that they have the motivation to remain engaged in further learning.

Whilst it could be argued that such focus is 'narrowing the curriculum', the project subjects provide relatedness, depth to the learning, more autonomy and the time required to complete the qualification support for which was discussed by teachers in Section 4.2 and by the response of the students in 4.3. The potential changes in the learning behaviour to support this increase of outcomes are discussed next.

Attendance and Behaviour

As discussed in section 3.5, an increase in behavioural engagement can be demonstrated through an increase in attendance and reduction in negative behaviour incidents (Cooper, 2014; Douglas & Alemanne, 2007; Biddle et al., 2003). Student 2PA illustrated this saying '*as a result, it made lessons much more enjoyable and more*

reason to go to school every day'. School attendance increased by 4.16%, up to 87.68% with more time in school benefiting learning across all subjects, suggesting a rise in engagement (Maxwell, 2016).

The positive relationship between MMPBL and behavioural engagement was also supported by the 83% reduction in negative behaviour incidents and no temporary or permanent exclusions over the academic year. This is in stark comparison to the data from the school's previous model and national statistic of 6.44% of students with EHCPs being excluded, respectively (DfE, 2019). This reinforces Reeve's (2012) work that suggests removing the low-risk, controlled approach to teaching common in SEND is beneficial to motivation and therefore engagement. As an inside researcher and a Head Teacher, this observation seems clear and the context has been enhanced as result, justifying the interdependent relationship of each column of Figure 5.1.a. Some specific students who had previously attended school, but were lesson absconders, engaged in positive new behaviours to learning. This reinforces Iovanne's et al. (2003) findings that show 'engagement is the best predictor of successful learning in SEN'.

The behaviour data suggests that the curriculum is taking advantage of the period for adolescent development of self-regulation (Geldhof and Little, 2011) readying them for functioning in adult society (Luna and Sweeney, 2004). Research suggests that with more autonomy comes more self-accountability, providing more self-agency (Papies, et al., 2009). A true sense of self-agency is found when the behaviour is successfully repeated. The new curriculum builds opportunities for this and reinforcement through metacognition into the school day and culture (section 5.4.6) and indicates that self-regulation is both benefiting and enhancing the learning experience through the outcomes observed (Papies and Aarts, 2010). It is not to assume that this will override other external challenges or that such functioning is going to guarantee long-term impact on identity and future choices. However, fostering meaning and mastery, as the curriculum explicitly sets out to do, encourages more conscious self-direction towards satisfying our psychological needs and therefore promotes self-learning and development into adulthood (Vansteenkiste, et al., 2010; Hill, et al., 2013).

Maintaining this model would mean that those in Year 10 of this study will have had access to two years of MMPBL by the end of Key Stage 4. Continuing the trend of the outcome data suggests that students leave school with two additional higher-level qualifications compared to the previous model. Students will therefore be leaving with potentially five qualifications, a significant increase when compared to the previous models 3 qualifications available. Findings further indicate changes in perceptions of core subject teachers were also altered by MMPBL. Draft and Exhibition provided a celebration and sharing of students best learning and gave every stakeholder the opportunity to provide constructive feedback. Additionally, these occasions provided a platform that gave practitioners an insight into students' strengths and interests. As a result, core teachers' have realigned their ambitions for the students; for example the ICT department has brought in a new qualification for the next academic year and the science department is introducing a double entry award. These changes are included as they are a further consequence of the change that would have an impact on the obtainable qualifications for young people and increase the potential to seven qualifications for future years. Such results advocate for the model to be maintained in this school setting and suggest the model is a step forward towards addressing the attainment gap (Sobel, 2018).

The increase in qualifications is in line with the hypothesised impact of applying Deci and Ryan's (2000) Self Determination Theory and Reeve and Tsang's (2011) model of engagement. With positive trends across all of the quantitative data, suggesting an increase in motivation to engage in learning, and likewise when engaged, creating a positive spiral towards achievement and self-agency. The evidence of the learning outcomes suggests that the 350 hours in their chosen subject was also utilised effectively by participants. However, as an exploratory study, the specificity of the triggers of each component that led to this is less evident and further study will be required to identify this. As an example, without the qualifications being awarded in the time frame of the interviews (they arrived in the summer afterwards), it raises a question as to how great a role the extrinsic reward of a qualification was. Despite the positive trend in statistics, the model and its delivery must be further investigated if it is to be better understood and remain evolving so as to continuously improve these statistics. This is reviewed in section 5.7 so as to further explore the variables. Whether the weighting of each component was different according to individual students, the

qualifications and or project choice is evaluated in Section 5.3. To gain a more in-depth insight, the opinions of the students and stakeholders are also explored in the following sections, justifying a mixed methods approach to this research in order to provide a deeper understanding of the interdependencies of the MMPBL model and its stakeholders (Cresswell and Tashakkon, 2007).

5.2 Research Question 2

What impact, if any, did the MMPBL curriculum model have on students' perception of their motivation to engage in learning, through the lens of SDT's needs in comparison to the previous secondary model?

The students' perceptions of MMPBL as identified in the literature review and methodology are important factors. Likewise, the inclusion of parent, carer, and practitioner voice needs to be taken into consideration. Promoting student voice applies the theory that the model is based on and builds towards self-agency, whilst adhering to government guidelines for the national curriculum (DfE, 2014). In response to Lawford, Volavka and Eiser's (2001) suggestion that reflecting on and reporting change may be challenging for those with learning difficulties, the students in this research spoke openly and candidly, with accessibility of questions considered throughout. Overall, their answers were perhaps shorter than typically developing learners, but answers were given in a coherent manner and trends could be drawn from the transcriptions.

MMPBL's design was based around the theory of enhancing the frequency in which the students perceived SDT's basic needs (Deci and Ryan, 2000) were met and how this promoted engagement (Vansteenkiste et al., 2010). The relationship between those variables is interdependent, so the three needs were used as the filter and then engagement was recognised when it occurred.

1. Autonomy (control)
2. Competence (less competent)
3. Relatedness (unrelated)

And when all three needs were met with benevolence it is was considered:

4. Meaningful (meaningless)

Students opinion on the approach of Mastery (through time) and how this supported their existing motivation and engagement was also gained. The value of each component is now discussed.

5.2.1 Autonomy

The first and arguably the most important theme that was analysed was autonomy, along with its opposite, control. It is achieved when intrinsically orientated goals, perceived choices and inner endorsement of behaviours occur (Deci and Ryan, 1985a). As presented in section 4.2, the frequency with which it was discussed in the focus groups increased by 20 references and with it, control dropped by 34 references from pre- to post-curriculum change. This was the most dramatic change across each of the five components. The autonomy change in every project strongly influenced the extent to which each of the other components of MMPBL would be accessible as it is considered the 'catalyst' (Cheon, Reeve and Song, 2019). This was echoed in the graph 4.2 as the biggest scale of change, pre and post MMPBL implementation. Autonomy almost doubled in number of references made, whilst control had the biggest shift of any component, decreasing by 34 references. Control can inhibit all three needs of SDT being met and lead to inhibited functioning and decreased wellbeing Kasser and Ryan (1996). So as much as the promotion of references to autonomy was found, equally the reduction in the presence of control references is supportive to motivation and engagement. This suggests that students felt they had more perceived choice over what they wanted to learn and *'the pace I learn at', suggesting a link to Mastery time*. MMPBL provided the context, the framework to prompt it and the time for greater autonomy to be the catalyst to allow greater intrinsic motivation and engagement to occur.

As highlighted by White, et al (2010) the standardisation of knowledge is an issue both for teachers in delivery and student acquisition, as well as the economy receiving employees that have had an identical, narrow education that reduces independence and collaboration (Ryan and Lynch, 2003). Students stated that they are now consciously *'learning how to figure things out by myself'* and *'it gives you the space to be creative,'* which is encouraging in that the model exemplifies such key skills, which

has led to students expressing '*It was like [I was] out of my chains*'. This reinforces the restrictions of the English national curriculum and the previous school curriculum framework that was set out in the literature review (Ryan and Lynch, 2003; Liu et al., 2007).

Across the study, autonomy was the most identifiable change of the five components. The MMPBL curriculum design presented choice which enhanced the autonomous motivation and agentic engagement to students as to which project they can choose and commit 350 hours to. This meant that their agency and agentic engagement was very apparent from the start and had to be consciously considered by all stakeholders. One student's comment illustrated the weight of this decision; '*That's a big choice because that's what you're going to learn [for a year]*'. It was also present across the whole project cycle, with students deciding what real-world issue to address at stage one to whether they had designed a sustainable business at stage ten. Interestingly, despite the weight of the choice, no student sought to change their project group throughout the year. This suggests that they took ownership over their decision and did not take the decision lightly or were potentially unable to comprehend what it was they were committing to (though this would more likely have led to changes).

Applying subject knowledge and skills over the year to a meaningful issue chosen by themselves or their peers further enhanced their self-efficacy. This was often referred to as confidence throughout the qualitative data and was reinforced by achieving the highest qualification of their education to date.

5.2.2 Competence

White's (2010) interpretation of the narrow education system was certainly given voice in the initial focus group discussions, with core subject (DfE, 2010) competencies prioritised with 84% of the references. The MMPBL broadened what students valued as competence, articulating the change to the point that project subject references increased from 16% to 86% of all competence references over the course of the study (Niemic and Ryan, 2009).

The perception of competence satisfaction occurs whilst engaged in an activity (in relation to Ryan and Deci's, 2000, Cognitive Evaluation Theory), so may not have been so present in focus groups. This may explain why the number of competence references being reduced by 16 frequencies from the start to the end of the study was not in line with the pattern that had been predicted in the literature review. Students mentioned their context influenced by negative carer, peer and societal perceptions as reinforcing negative self-perception associated with learning difficulty labels (Williams et al., 2000). This data suggests that it may have been attributable to external factors beyond the school gates and beyond the reach of curriculum design. It could be argued that the lack of feedback from parents regarding competency may support this notion. Whilst it may be possible that the content of the subjects was too ambitious, and students felt less competent, students' self-perception of 'less competent' comments went from 10 to 0, correlating with the hypothesised positive shift that is about the process rather than the result. That no student from the focus groups finished referencing 'less competent' features of their learning experience reinforces this, yet more reflection on the weight of self-efficacy of the individual on their own capacity to learn may be beneficial to address external influence.

Carver, Sotton, and Scheier's (2000) study shows that gaining qualifications increases self-efficacy of learners' competence and confidence to engage cognitively in more sophisticated learning. Again, the timings of the focus group discussions were also before the qualifications were confirmed and the award ceremony took place, potentially restraining the impact of external affirmation, peer comparison and emotional engagement. As discussed above, the transference of other skills from one area of learning to another may explain the increase in qualifications gained in all subjects, as research in PBL shows that problem solving, knowledge application, and teamwork skills can improve; each associated with cognitive engagement (Tan, 2002; Chua, Tan, and Liu, 2016). So too may the increase in autonomy shown in section 5.2.1 as this is the catalyst for agentic engagement which is well evidenced in increasing skill development, students' learning and classroom performance (Reeve, 2013)

This is not dismissing the reality of some students' competence capacity (Wehmeyer, 2017) which clearly varies from student to student, hence the individual being added

to the context in Figure 5.1.a. As discussed in the previous paragraph, variable cognitive abilities do need consideration. With one student sharing that *'I can forget a whole subject just within a week or a month of learning it or I just forget it the day after I've learned it'*. This was raised as a concern by the transition lead, aware that whilst students achieved BTECs for example, attempting the level above in the same subject at college may be beyond some students' capabilities.

The model does provide what Wehmeyer and Schwartz's (1998) request; an opportunity to learn whilst meeting SDT's needs by allowing students to learn, practise, and refine personal capacities, despite this capacity remaining individualised. The variables that require consideration on an individual basis are too broad to investigate in this study but are worth consideration when implementing MMPBL with other students and will be a variable considered in the revised model.

Overall, the pattern suggests that students have some awareness that they are on a long learning journey, but that they are making self-perceived progress in a subject area that relates to them and their aspirations, as a result increasing their self-agency. Competence in other areas such as social interaction are also hosted in project groups and are discussed in the relatedness section below.

5.2.3 Relatedness

Relatedness, being connected to learning and those around you, was the most frequently referenced need (59 and 56, in the respective focus groups). In relation to goal contents theory, relatedness is a strong influence on the motivation and behavioural engagement in particular as students will put the effort into learning if it aligns with intrinsic interest and goals (Vansteenkiste, Lens and Deci, 2006). Despite the similarity in the number of references, as the competence data suggests, the previous curriculum encouraged students to weigh or relate their learning to core subjects (see Section 4.2).

The references to unrelated areas of learning at the end of the projects reduced by 29, to just 2 references. A student explained this statistical shift in relating to their

learning as *'I feel like this year has been more important than last year because this year you get to do your favourite subjects that mean something to you'*. This perspective was echoed by parents in their observations.

The data from the second focus group showed MMPBL to present learning on a number of fronts, including the connection to each other, to the content, to their communities and to the future, in a way that participants could envisage. Autonomy also seems to remove barriers to the learning of the what and the who which did not interest them or made the what 'had to be learnt' relevant to what they were interested in learning and connecting it to their future. Deci, Koestler, and Ryan (1999) found the same importance of relating to task, because without it, even with high extrinsic motivators (including external stakeholders) dull tasks are still not satisfying and have little impact on intrinsic motivation. By the end of the study, students began to identify links with core subject qualifications in order to pursue their project's subject at college or to apply for related employment, thereby increasing intrinsic motivation to commit to the learning they may not have had a year before, suggestive of integrating external drivers into their own intrinsic goal orientation.

This data supporting students relating and therefore engaging in learning with peers and teachers with common interests further substantiate the increase of influence these stakeholders have as a student gets older (Shea, Millea, and Deihl, 2013). Decisions for project choices not being based on friendship seem to be an influential factor in the 83% reduction of reported negative behaviour. As a result, teachers felt MMPBL inclusively provided them with more opportunities to build authentic, professional relationships with all learners and their families, as well as with colleagues, leading to collaboration. For example, when referring to exhibition day, P/C1 said it *'showed a journey in their learning that was a pleasure to see'*.

5.2.4 Mastery

This study's data agrees with Benita, Roth, and Deci (2014) in that considering mastery in context and goal orientation is essential. The design of MMPBL takes into account that the mastery component of this model, time, influences context,

motivation, engagement and goals (Elliot, 2005). Students' commitment to one subject indicated how MMPBL accommodates a context for relatedness and creates a more flexible delivery through providing autonomy for students to relate to their choices and set their own learning pace allowing individualised time spent on a certain competence (Vansteenkiste et al., 2010). Although it did increase by six references between the focus groups, this could in part explain why relatedness was the least frequently discussed component instead being classed within other components,

In relation to Section 5.3.4, the environmental context made up of resources and opportunities must also be considered in how the network (see Section 5.3.1) can improve the environment for mastery to occur (Mithuag, 1996a). Considering mastery as being beneficial for the development for all stakeholders, with staff being considered 'experts' by parents, the application of the MMPBL theory to other components of the school setting deserves exploration in the next section. Increasing the quality of the environment's role and the context's intent to develop mastery, through stakeholders' growth of one's self and their leadership of the system and operational change will be further discussed in section 5.4 below.

Academic and destination data suggests that mastery goals, as opposed to performance goals are typically external drivers in schools, enhanced internal and external outcomes (Vansteenkiste et al., 2010). One student reflected on mastery being a journey, saying *'I'm getting better at talking to people, but I still believe I can make progress'*. Some students began to gain some perspective on the importance of mastery and how it remains on-going (seen in section 4.4). PA1's comment resonated closely with intrinsic motivation, saying, *'Yes, you can find out new ways to push yourself all the time'*. This tied into a number of comments around proactive learning and pursuing this in their own area of interest. These heightened levels in mastery are increasing the perceived capacity of the learner (e.g. skills, interests and motivation) and is an emerging benefit of MMPBL (see Section 5.3). Essentially, these are illustrations of those who are becoming lifelong learners. With an autonomous time, managed and qualifications geared framework now in place, the majority of students can take the next autonomous step on their journey as illustrated by the destinations data. To students who have a learning delay, mastery goals are a way of setting a personalised vision that is sequential and a constructive 'learning pathway'. This

approach means that if progress can be maintained in the right environment, it could foster the self-determination of each individual to pursue their own mastery goals (Benita, Roth, and Deci (2014).

Time was an essential resource in facilitating mastery goals and context. When reviewing the model with stakeholders, informal discussions have been held regarding the number of projects that students could access in a year. This will be remaining considerate of other settings in the shareable model in section 5.6. For this study's setting, the teachers concluded that one project per year was correct for the allocated time available to this cohort of learners and the learners reinforced this with their feedback and in their outcomes. The evidence suggests how the MMPBL model is inclusive of students with additional needs.

Mastery in relation to goals also began to emerge, particularly from teacher observations, and this will be explored in relation to Goal Content Theory (Deci and Ryan, 2000) in Section 5.4.

That mastery has been sought by students is a strong comparison to the history of powerlessness and learned helplessness of those with SEND (Mithaug, 1996). Sharing their capacity to do so is essential in the dissemination of this study.

5.2.5 Meaning

Meaning was originally built into MMPBL to describe the experience of all three needs being met in an experience and to encourage students to give back to their local, global and school communities in relation to Cognitive Evaluation Theory (Deci and Ryan, 2000). This also addresses Diener's (2009) critique of the field of positive psychology in which SDT sits, seeking more '*positive institutions, encompassing civic virtues and good citizenship*' (p.9). It also linked to the outcomes of the SEND code of practice (2014) supporting not just students, but the culture of the school as a whole and the capacity of those with SEND to contribute and be included in society. As discussed in the literature review, Seligman's (2002) functions of meaning relate to the rationale for why it is you do something, in this case the reason to learn. Reviewing the themes for

what learning means to the learners, in relatedness the content changes from core subject goals to their own goals often extended beyond schooling when using MMPBL (Hidi and Renniger, 2006). Yet, the focus group statistics show no change in the frequency in which meaning is raised. Many of the comments around what was meaningful remained based on themselves and peers as opposed to their own satisfaction in support of the local and global communities. This suggests that the real-world issues are not necessarily explicitly meaningful to the students. Such a finding has led to looking at SDT in relation to child, adolescent and adult development, something not reviewed in the literature review, but touched upon in the pragmatic approach in the research design (section 3.3). What individuals see as meaningful or of value has many variables according to their own development, their identity and the context they are in (Chao and Tseng, 2002; Graves, 1970). This will be explored in relation to Goal Content Theory (Deci and Ryan, 2000) in Section 5.4.

The attraction of meaningful contribution is strongly correlated to agentic engagement (which occurred particularly frequently in section 4.2.1) as it means they decided to take action, in return providing learners to experience self-efficacy and gratitude from others, to differing extents according to the individual.

Despite an equal number of statistical reference, three students have taken on extra-curricular activities linked to their subject and one employment opportunity outside of the school was directly created from MMPBL (see section 4.4.1). The restrictions of the duration of the study and the lack of work experience opportunities present in the school minimised the options for longer term impact.

As students actively became a part of their local communities, displaying work in galleries and libraries, supporting food banks and designing accessible playgrounds, community members fed back on what they took from this:

'Inspirational! This is a proactive visionary model for education provision which can be used across the nation. A starting point for SEND provision!'

The maturation of the community as a whole actively moved forward both their preconceived perceptions as to the capacity of students with SEND and the perception of the student themselves:

'What I've been learning is to be more mature, more self-confident, like, when we were doing our presentation in our Art Centre, I was really scared, but then, when I got up on the stage, and I did it, and then when I got back down, I felt very proud for myself'.

This student now provides seminar training for the local authority on what it is like to live with Autism and mental health issues.

As designed, the internal orientations (consciously and unconsciously) of giving back were established, as was exposing learners to using higher-order, less rigid thinking in real-world conditions (Larson and Hansen, 2005).

2A gave an excellent example of supporting the hypothesis, that meaning would increase engagement in learning; *'It just makes me feel like I have so much more purpose and just helping people makes me happy because that's life' [and that leads to] 'making myself proud and making them proud as well'*. This is not to say that this was in every moment of learning and that there was one component that achieved this, but the varying responses indicated that many meaningful experiences were built in over time (see section 4.2.5).

This allowed students not to just learn around their strengths but have the agency to apply them across 29 community causes and gain positive feedback in tangible terms, such as money raised, and also in gratitude and celebration (Seligman, 2002). Student 2PA's comment summarised both the promotion of citizenship and conceptual learning (Ryan and Brown, 2005); *'It felt like you didn't just learn, but you used what you learnt,'* and their role in creating a positive school and society, *'if you don't do anything it will still get worse'*. Improved self-worth, particularly with regular reflection and appreciation, was then extrinsically reinforced through celebration, inclusion and the gratitude from some of the 2723 people in the communities supported. This impact is highlighted at events such as exhibition day and the public conference to ensure that doubts around the learner's capacity and inclusion from their stakeholders, as raised in section 4.2.1, were addressed.

The project cycle has metacognition at the centre. This provided both subtle and clear opportunities for students to reflect on what they have learnt, and the meaning behind it and its application. This allowed the learner to integrate their learning into practice and enhance cognitive capacities, engagement and motivation (Larson et al, 2014). It also allows opportunities for self-affirmation, increasing pro-social behaviour and self-efficacy (Cohen and Sherman, 2014). This related to impact that was not considered in the hypothesis; the presence of meaning in everyday learning building a culture of giving, that enhanced peer and staff relationships and therefore allowed for more autonomy and relatedness. As the analysis shows, the MMPBL context learning provides social nutrients and environmental supports, that allow for psychological safety to exist in which peers can feel secure enough to feel free from the concern about others' perception (Ryan, et al, 1994; Grolnick, 1997). The support for self-agency and the impact this has on one's value of education transfers ownership of one's journey, thus promoting intrinsically driven self-regulation, as can be seen by the behaviour and academic statistics (Hidi and Renninger, 2006). One of the features that makes MMPBL unique is that this is not a one standalone intervention in a SEND setting, it is an on-going curriculum, allowing the culture to be maintained and features of the explicit and implicit model to be continuously improved upon. The more frequent the exposure can be to meaningful experiences by meeting all three of SDT's needs within a positive experience can lead to that experience being sought after again; which enhances the interrelated spiral of motivation and engagement whilst contributing back to and therefore becoming included in society (Martela and Ryan, 2015).

Summary

Whilst acknowledging the lack of comparable data outside of one cohort, the trends around the three needs of SDT suggested that the MMPBL model increased the self-determination of learners, their engagement and their learning outcomes. The presence of mastery and meaning as key components of the design enhance facilitating the students' perceptions of those needs, whilst simultaneously addressing many misconceptions and societal expectations, including their own. The plateau of references to meaning highlight the need to consider developmental theory when

designing the process and content of the model and seek cross-sectional stages of development versus SDT needs for accurate orientations of meaning (see 5.4).

The results of this section suggests that curriculum design that is theoretically underpinned by SDT can facilitate more autonomous and intrinsically aligned experiences, encouraging students with SEND to have higher levels of engagement and an increased capacity to perform (Wehmeyer et al., 2016). Yet as an exploratory study, more research is needed to define which components lead to greater impact.

5.3 Research question 3

Did the MMPBL curriculum model have any effect on students' engagement in learning according to students' teachers and parents observations? If so, how?

As the introduction in Chapter 1 to the study shows, social inclusion is essential to those with SEND. This begins with their own peers, teachers and parents/carers. The design of the research and the curriculum sought to provide teachers, parents and carers to have their own agency, inviting them to be a part of the journey, as they make up the majority of the context.

Teachers

Agentic Engagement

All teachers recognised the impact of students having the choice (Katz and Assor, 2007) of projects and some rapidly built the approach into their projects and assessments, providing a range of illustrations and scope (section 4.3). This was in line with Reeve and Shin's (2020) findings that the relationship between the teacher and student became increasingly synchronised when teachers adopt a motivating style based on autonomy. In line with Deci, La Guardia, Moller, Schneiner and Ryan (2006), teachers saw that when they listened to the interests, goals and ambitions of the learners the learners embraced their intrinsic drive to grow and these teachers became more autonomy supportive finding '*a greater allowance in creative teaching*' (T1). Whilst recognising this an overview perspective, the results suggest a positive step towards agency for both teachers and students.

As much as pedagogy was not refined, having had the theory explained in preparation, one teacher took a spontaneous step forward to support Liu's et al (2007) approach to putting the student at the centre of the learning. They provided their project group with the autonomy to collectively decide on a level of qualification. They chose a lower qualification to increase the ease of access (increasing perceived competence), more relatable content and attached enjoyment (emotional engagement) of what they would study and how, promoting agentic engagement towards self-directed goals by focusing on the process over the outcome (Deci, Koestner and Ryan, 1999). This is an example of a teacher moving towards a facilitatory role (Reeve and Shin, 2020). However the variance of autonomy in each class suggests teachers, with many variables in mind, were at different points across the spectrum fluctuating between autonomy and control. The competence and collaboration level of this student group was high; *'I feel more free because I'm with people that I care about and I'm friendly towards'*. Naturally, not every teacher will have supported the same level of autonomy to each class, whether that was based on their own perspective of control or personal viewpoint about the capacity of the individual learners. This raises a clear next step as to further teacher training in line with Reeve and Shin (2020) around such pedagogy. In relation to this, some project groups agentic engagement was promoted as teachers began encouraging learners to begin setting their own short and long-term goals. Teachers reflected that the addition of mastery goals led to resilience and better supporting the students self-determination and engagement to achieve them in relation to Goal Orientation Theory as will be discussed in section 5.4 (Deci and Ryan, 2000).

The limitation of agentic opportunities of project subjects and resources is raised by one teacher's feedback, proposing project subjects should be according to the learner's interests. Whilst MMPBL is designed to take into consideration its learners' interests, this has to be balanced by the resources and expertise of the school and its community at said point to deliver to a mastery level. An example of this is an additional project of Digital Business that has been added to the third year of project choices following the new cohorts' student voice.

Cognitive, Behavioural and Emotional Engagement

Teachers again saw that the choice of subject saw an increase in each of the other forms of engagement too (Katz and Assor, 2007). Teachers also saw the mastery time as beneficial to all components of engagement (Worthen, Van Dusen, and Sailor, 1994), with T2 summarising:

'Having time to focus in such depth and being able to visit the exhibition and meet the organiser in person meant it had a lasting impact on the students. The evidence is that many students took their families to see the exhibition in their own time'.

Teacher's reflected that students did not take this time lightly and whilst being able to provide more autonomy within lessons to increase engagement, the students took their qualifications very seriously, seeing adjustments in learning behaviours, developing cognitive capacity, and found great pride in achieving them. There was no references to the projects being at the start of the day being a key factor in this which means it is a point for further research.

Further observations of problem solving and the transference of skills required to do so, the joy when students achieved this and that a positive spiral of pro-social, pro-learning behaviours emerged as a result were reported. Teachers noted that there were other competences beyond academic development, particularly the self-development of social skills that also facilitated the components of engagement, behaviour in particular, as summarised here. With one student reflecting *'I'm getting better at talking to people, but I still believe I can make progress'*. This was reflected by the behaviour and attendance statistics that supported the behavioural engagement theory and recognising the change. Teachers found ways to further support this with inter-project collaboration:

'[When we] collaborate with other projects enabling a holistic skill share where students are aware of what they've learned and how it can be put to good use'
(T3)

The community projects were frequently mentioned by teachers for supporting collaboration, having a common purpose to bring others together. Which will be further discussed in this in the next section.

The PBL Social Enterprise Model

Having not explicitly studied the role of the PBL Social Enterprise model, the teachers' opinion of this model for planning and delivery of content came across as valuable illustration. Though less obvious in the student results, agency to address local and global issues were more meaningful to the teachers, who, in line with development, particularly enjoyed giving back to something bigger than themselves. This was a finding that indicated the role of developmental frameworks in shedding more light on what was achieved by MMPBL (see section 4.3).

With metacognition seen as the central component to the social enterprise PBL design (Perry, Lundie and Golder, 2019), students were prompted to reflect and consider the meaning of their learning. Teacher's feedback with students on the explicit use of metacognition in learning, particularly during draft and exhibition day which potentially prompted the learner to integrate their learning into practice.. *'Students were given a range of feedback opportunities including, verbal, written, peer to peer and wider audiences'* (T6). They were also more subtle in other ways *'their conversations with visitors and their presentation at the summer presentation day'* (T4). This is an approach that the educational framework praises as high impact and low cost which will be fed into the pedagogical design to emerge from the study (EEF, 2018).

The success of the PBL project cycle in providing the structure and motivational prompts within the projects means that the quality of each stage of the cycle can now be re-designed and transferred into researching the development of post-19 curriculum design provision. Using the same framework consistently from year 7 seems to build mastery in itself, which could be applied to self-run businesses to build on a similar theoretical model and continuing sustainable projects identified in part 10 of the project cycle.

The pitch for funding was hosted in school and teachers noted the opportunity to focus on oracy development, particularly with external stakeholders visiting for Draft Day and Exhibition Day. This allowed visitors to recognise the capabilities of the learners and celebrate it, whilst simultaneously building a network and reputation across other settings. The pitch was an essential part of this stage and T7 saw it as:

'The highlight of the year [was] pitching their enterprise model in which all pupils confidently delivered the presentation and calmly responded to questioning from the heads whilst under pressure'.

This demonstrates the purposeful association with the pitch for both oracy rehearsal and self-efficacy in the confidence of the delivery.

External Network

Teacher observation also showed how external networks (results in 4.1) supported learners engagement. Externally, teachers consistently reflected on how mastery permitted more meaningful trips out and areas of interest becoming hobbies outside of the school, in areas such as theatre and sports. Students were beginning to live their identity and prove their worth to the communities that they serve. As an example, the sports group took great pride in going back to their former school to coach younger students and received positive praise and recognition from those to whom they had prior attachments. This supports Seligman's (2002) definition of meaning to consist of:

'knowing what your highest strengths are, and then using them to belong to and serve something you believe is larger than the self' (p. 250).

As students had the agency to take part in their community, they displayed work in galleries and libraries, supported food banks and the design of accessible playgrounds. Community members feedback supported this:

'positivity and engagement from both staff and students' and the MMPBL were inspirational! This is a proactive visionary model for education provision which can be used across the nation. A starting point for SEND provision!'

It wasn't just students that expanded their networks. Teachers reflected on how meaningful network development was to them, reviewing relationships with students, parents and colleagues, whilst improving the communities' network.

'I have been able to build more meaningful relationships with my project students, due to spending so much time together and getting to know them and their parents on a deeper level' (T2).

Parents

The role of the parent or carer was made explicit in the context section of Model 5.1.a in relation to their impact on warmth and inclusion, structure and psychological safety, and autonomy supportive. The link was discussed in section 2.1.6, Ryan and Lynch (2003) highlighted the external 'threat' to motivation from external stakeholders driving extrinsic motives to improve. This was seen in the pre-change to MMPBL focus group data when student 3A said;

'The thing is my parents want me to get better at things and they just want what's best for me. But they partly do get a little bit worried of what will happen if I can't get all things done'.

Following the change, one teacher acknowledged that more time meant '*getting to know... their parents on a deeper level*' (T2). This was enhanced by exhibition days with over 70% of parents attending each one, allowing them not just to see their students work and but have it presented to them. The SEND conference at the end of the year was the highlight of such an opportunity as almost all parents/carers were represented. The feedback from parents and carers was very positive '*Pupil's work [this year] was amazing, showed a journey in their learning that was a pleasure to see*' (P/C1).

How this influenced parents/carers in relation to the context setting was not explored, although could be in future studies. What was observed in the feedback was references to four areas of engagement; Competence:

Other parents left shorter responses but did observe changes to their young person's cognitive and emotional engagement: '*Develop interest (P/C9)*', '*focus on tasks which are interesting to them so makes them want to be in the classroom*' (P/C3). P/C11's feedback was orientated to behavioural engagement but showed an aspect of agentic engagement through help;

'In a class where interests of student are the same and also they are calmer with each other and help each other, giving each other ideas on how to do things'.

P/C8 compared the past curriculum and the introduction of MMPBL;

This past year has seen my child blossom, show real interest in school, form real friendships and learn to love working for the first time. The course lead has

been amazing and very proactive in making the project work stimulating and then show casing it'.

How have you seen your child make choices in school this year?

One parent summarised the impact of the choice of project having an impact over the ownership over the outcome, seeing that it *'supports the students in developing their skills and giving them the ownership of making important decisions in life'* (PIC7). Whilst only 11 parents participated in the survey, many more less formal versions of feedback were given, supporting the change to the MMPBL curriculum model.

Summary

In conclusion, through the above discussion and exploration of the data obtained in relation to the students', teachers' and parents' perspective, it can be summarised that the model generated positive feedback on the components context, self, action and outcomes (see figure 5.1.a) with positive observations of students' engagement in their learning and steps into further education.

5.4. Research Question 4

Does the study present any unexpected findings that were not hypothesised?

Staffs' broader perspective meant that they reported they were more passionate and therefore willing to pursue avenues for themselves, the team development and their network (Wehmeyer, 2017). Teacher 2 reflected:

'I have been able to build more meaningful relationships with other Project team staff members, as we have spent more time together'

'I have made contacts with the centre manager of the local shopping centre, who will include us in future ventures as they arise, as well as professionals at Camden Arts Centre, which means I now have access to resources, private viewings and talks by practising artists. I have been able to take more opportunities'

Whilst networking outside of the school was intended to support students' external opportunities, an increase in awareness by external agencies as to the school's mission and vision encouraged philanthropic contributions to an amount of over £250,000 coming into the school in various forms of sponsorship. The increase in income has led to re-investment in resources. The length of the study has limited the potential impact on inclusive social and employment roles that the MMPBL model may have had. However, considering the increase in subject related courses in their next step to college and the development of next stages being, the increased network is set to enhance opportunities in the future.

System and operational change coupled with insight into developmental growth and Integral theory emerged from the theory underpinning the MMPBL curriculum and played more into the context component of the theoretical framework than had been hypothesised. Whilst the results data does not illustrate these next discussion points, the inside researcher role allowed insight into the changes and highlights areas for further study. The first observation suggests that by sharing the theory and seeing its success, it was adopted into the culture of the school and has positively impacted on school leadership.

Culture Change

Collaboratively establishing and sharing 'carving pathways' as the vision of the school, created a uniting common denominator across all stakeholders. The vision is proactively carving pathways into an employment network and creating roles of social value and opportunities as opposed to waiting for them to arise.

The results have benefitted from a collective buy in from every stakeholder in the school, as each individual sought to facilitate our students' success, even students sought ways to support their peers. It takes away much of the competition, removing ego and instead focuses on a collective mastery that increases motivation (Standage, Duda, Pensgaard, 2005). With qualifications, attendance, behaviour and engagement in learning, all improving and being supported across all stakeholders, there is emerging evidence to suggest that MMPBL supported a cultural shift beyond its initial

intended remit. It began many positive self-determined innovations. That they emerged organically suggests the level of intrinsic motivation across the school and its communities; and with the environment meeting the needs, the vision was clear enough to create greater aligned autonomy.

The shared vision with staff provided insight into leadership, individually and as a team. This has partly come from a great deal of reading about meaning over the course of study, but also through greater sense making of the purpose underlying our decisions. Meaning has different levels at different stages of our development. The section below demonstrates how this is both understood and has become practised by the individual, community, system and culture, something the study had not intended.

Operational Change

The timetable was originally redesigned to facilitate the MMPBL curriculum. However, it was also considerate of supporting learning and behaviour and its impact reflected in section 4.1. The core lessons were shortened to 40 minutes rather than the previous five times one-hour long lessons before. This facilitated more time for the projects and for them to be flexibly scheduled, as well as facilitating more lessons in the rest of the day. The decrease in lesson time was based on concentration levels being shorter for the students with cognitive delay. All this may have contributed to increased engagement in core lessons, yet the consistent engagement in two-hour long project lessons was interesting and dichotomous to the thinking.

The longer project lessons meant that Key Stage 4 students were static in their classroom in the morning and likewise Key Stage 3 students were static in the afternoon. With fewer students on the corridors between core lessons, transitions were less stimulating. This was the same at lunch times as they became split, so fewer students were in the playground at once. In the longer term, the consistency of the teacher they had for their project also meant a stronger pastoral support base and an opportunity for the teacher to use this time flexibly as per the classes' needs.

This also afforded time for the introduction of a wellbeing section of the curriculum so that each student could have individualised focus on their EHCP targets and adjust to the context to be in a warm and inclusive state and ready to learn.

A further unhypothesised impact was on staffing. LSA's were given agency to share their skill sets with the subjects they aligned to. Some had degrees in MMPBL subjects, or were actors and coffee shop managers previously, whilst others ran wellbeing lessons (e.g. martial arts and yoga instructors). The opportunity to passionately apply their own strengths certainly enriched the breadth and depth of the curriculum, better meeting individuals' needs. This exceeds the Education Endowment Foundation (2018) published guidance on the frequently debated cost-benefit of LSAs and best practice for utilising them. Four LSAs have gone on to become teachers themselves since the launch of MMPBL.

Furthermore, with LSA's and therapists running wellbeing sessions, students were afforded time to self-regulate and the planning and collaboration time for teachers was doubled. This meant that key stage and subject area planning could happen in school hours, allowing leaders to be with staff and facilitate the management of change and the adaptation period collectively, whilst also sharing best practice and collaboration between projects. This certainly had an impact on the staff wellbeing results, however unfortunately, this data was ineligible for this study as its use had not applied for its.

This also saw teachers develop high performing teams, as the staff pooled their resources and became a collective energy towards the vision. One example of this was the performing arts project where students directed the whole school performance. The actors came from across the Key Stages, the props and artistic work was designed by the Art and DT projects, the interval food by the food tech project and the front of house by the life skills project. The students took ownership of the production and very publicly demonstrated what they were capable of as a collective whole. One student's description leans towards a meaningful state of flow:

'Just the rush I felt when the production light ended and we were all jumping with joy, throwing our hats around... There's no other feeling like that to be honest. It was amazing. Definitely do it again.' (1PA)

The teacher's feedback:

‘Students who undertook this work did so at their own request due to their specific interest in the project and wishing to support others around school as part of the schools termly focus model’

And how they came to see the long-term application of their learning:

‘Students are now recognizing the skills they have now learned have applications which can form an essential part of their own long-term learning pathway beyond school and into adult life’.

Developmental Growth

SDT was partly grounded upon the work of developmental theorists. The optimal challenge aspect of intrinsic motivation links to Piaget’s (1952) suggestion that humans gravitate to optimal situations. The impact of where an individual is developmentally impacts on how SDT needs are best met was not considered in the literature review and therefore not considered as a metric. It will in future studies.

Many see the age of adolescence as the key to lifelong maturation. Although development happens throughout childhood, the autonomy (or not) provided at this age gives the opportunity for adolescents to begin to assign value to their future selves, and consequently into adulthood. Whilst mastery goals were discussed in section 2.1.4, they were not included in the study as they were seen more as a teaching approach rather than a curriculum goal. However, following the change, reflection brings mastery goals to light in that what Ames (1992) refers to as success goals (called achievement/qualifications) in model 5.1.a are no longer sufficient if we are to be ready a whole learner as self-efficacy is dependent upon performance. Mastery goals are when an individual improves, develops or achieves a sense of Mastery based on intrapersonal standards. This began a search for longer term maps of adult development.

Wehmeyer (2017) explains that the need to conform and belong is the typical preference in adolescence, but with intentional support for planning and evaluation, choice becomes more independent and considered (Soenens, et al. 2007). Yet these tasks can often be conditioned by the traditional academic goals, whilst aimed to be

considerate of the future, the extrinsic version of success is adhered to. Expectations are commonly projected from parents' own experiences of growing up and individualised goal setting based around qualifications and career (Nurmi, 1991). The societal pattern of individualised success is demonstrated in an American study sampling college student entering UCLA. It demonstrates a large-scale change in human behaviour. In 1967 a study of students entering college prioritised creating a meaningful philosophy (85%), whereas financial success was 41%. The meaningful philosophy in 2013 dropped to (46%) whereas financial success is now 82% (Eagan, Lozano, Hurtado, and Case, 2013). To reverse this pattern, complex solutions are required if they are to find value in the consequences of social acts, interpersonal problems and means-end thinking (Rubin and Krasnor, 1986). As decision making develops, so does the identity of the young adolescent, with perspectives on cultural norms, personal beliefs, perceptions of self-capacity being more self-determined and closely aligning to the level of mastery across more than the academic version. Morals, values and emotional development required to empathise with others and find system balanced decisions is required, which means applying their learning. This supports the 'meaning' component of the curriculum, experiencing the application of their learning but also begins to bring to light developmental theory.

Adolescence is a crucial time to shape identity, so despite learners not necessarily holding acts of social good as the most meaningful experience at the time, experiencing them at all can only be beneficial to shaping their long-term identity and life experience. La Guardia (2009:92) summarises this, saying *'identities are adopted in the service of... basic psychological needs'* as well as avoiding those to which there is a threat. La Guardia and Ryan (2002) raised the same developmental point that had been drawn from the MMPBL model, in that there is more work to be done across education in learning about values development, increasing their maturity to supporting others with more sophistication, seeing the process of the journey as opposed to competitive 'success'. This led the study to consider Integral Theory and its quadrants, lines, levels and stages and types of development.

Integral Theory/ Further School Developments

As Section 5.4 summarised, what learners want to know, accomplish and be stimulated varies at different stages in maturation. As well as providing a broader map for mastery goal setting, the curiosity of a number of developmental theorists led the research to look into integral education, integral theory, and then developmental leadership. Whilst acknowledging this was not part of the study and cannot be fully explored at this point it is highly relevant, and will remain a pillar of future study for it adds new dimensions to curriculum design and understanding each stakeholder.

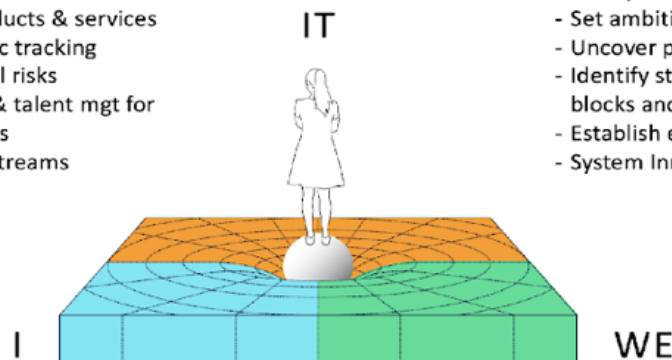
Despite similarities with pastoral care, transformative and holistic education theories (Steiner, 1965; Dewey, 1975 and Mezirow, 1978), integral education has been underplayed in the various mediums of mainstream academia (Esbjörn-Hargens, Reams and Gunnlaugson, 2010). The complexity of needs of the students in this study meant that designing the curriculum had to take many variables from many stakeholders into account, rapidly developing the school's ability to handle personalisation for the students both in and out of the classroom. The diversity of stakeholders is expanding with globalisation and therefore this theory becomes more relevant and applicable. What that success looks like in the 21st century has long been debated (Abowitz, 2008; Brighthouse and Mcpherson, 2015; Dungy, 2012; Shapiro, 2005). However, regardless of the outcome, the meeting of SDT's needs and to better host engagement appear key in relation to data in schools and the workplace as discussed in chapter 2 (Gallup Youth Survey, 2004; Gallup Workplace Survey, 2020). To achieve mastery goal orientation, it has to be facilitated autonomously, positively experienced and reflected on, if we want students to live meaningfully, they need to find a sense of purpose and therefore intrinsic fulfilment. Studies show that identity development and agency are linked to purpose and meaning making in society as to give you must act (Markus and Nurius, 1986). But what is needed is a map.

SCHOOL PERFORMANCE

- Drive engagement & outcomes
- Develop offer, products & services
- Build holistic metric tracking
- Control operational risks
- Run performance & talent mgt for sustainable systems
- Increase revenue streams

SYSTEM LEADERSHIP

- Clarify vision
- Set ambition
- Uncover purpose
- Identify strategic building blocks and strategy
- Establish effective governance
- System Innovation



PERSONAL PERFORMANCE

- Improve quality of thinking
- Develop boundless energy
- Increase resilience and well-being
- Understand human development to ready others for learning
- Understand behaviours

PEOPLE LEADERSHIP

- Drive culture transformation
- Develop community values
- Build sustainable leadership teams
- Create intrinsic drive
- Build collaborative networks, (inc. outside of education)

Figure 5.4.b. The 4-D, Enlightened Leadership Model in Education (Silver 2020, Adapted from Watkins, 2014)

The results of adopting the leadership framework (which are in the process of being studied independently) appeared to be very positive. Staff Wellbeing came out in the 1st percentile using the National Health and Safety Executive's Indicator (2019) survey (carried out across public sectors) and related to this, staff absence reduced by 47%. The school has been using tools to allow the senior leadership team to reflect on the tangible measures of their internal lines of development. These measures are to be shared and will soon be adopted into the school's student population, enabling physiological data to map objective emotional intelligence and quantitatively demonstrate its impact on cognitive ability. Data on the internal lines of development that is as consistent as the standardised testing model, will allow the case for a more rounded education system to be explicit. The external lines of development include connection and the maturity of the network development. Empowering stakeholders to be agents of change through addressing meaningful community issues and experiencing them first hand provided examples of development occurring as students' perceptions shifted. A longitudinal study of pre- and post-MMPBL will be a next stage of research as will be discussed in Section 6.

5.5 Theoretical model and framework for recommendations

Theoretical models seek to interlink sets of concepts to define or explain a phenomenon, with research looking to evidence how plausible the relationship is (Silverman, 2013; Strauss and Corbin, 1994). This is why Figure 5.1.a interlinks the evidence in this and other studies related to context, SDT, engagement, and how the MMPBL curriculum looks to enhance them.

The model in Figure 5.1.a offers a renewed framing (based on Skinner et al, 2008) for education to better understand MMPBL the drivers behind learner agency and its link to outcomes beyond academic achievements, that are owned by students with a greater sense of self-efficacy, influence and community inclusion. It provides a framework for a curriculum model (structure, goals and content) designed by an in the field researcher that considers SDT and engagement, as opposed to the existing psychological interventions that feature in the field. The individual has also been added to the context to be more inclusive and considerate of additional developmental needs; the model further considers motivations for learning.

Chapter 6 is the concluding summary of the key findings of this study and making recommendations for future research, policy and practice.

Chapter 6 Conclusion

6.1 Introduction

The concluding chapter is a summary of the findings in relation to each research question. It then moves on to my own reflections on the study, the recommendations to the theory and concepts that have come from it. It then demonstrates how I look to disseminate the study's contribution to national and international research and practice. I then look to reflect on my choices of literature and methodology, and then the limitations of the study. Finally, the thesis is summed up in a brief conclusion.

The research explores the impact of a new curriculum design on secondary SEND students in Key Stage 4, based on the theory of best facilitating the psychological needs of Self Determination Theory (Deci and Ryan, 2000), through meaningful, mastery project-based learning (MMPBL). The argument made is that by increasing the needs being met, motivation behind learning would become more intrinsic and therefore self-determined. It seeks to improve students' opportunities when facing the challenges of accessing life-long learning, roles of social value and the 6% employment rate for SEND in the 21st century.

6.2 Research aims

The introduction to this study investigated the national picture for SEND and how it reflects against the school setting. The design of the curriculum looked to consider how in its delivery could it continue to meet the requirements of statutory guidelines of policy, Ofsted (2019) and Gatsby (2018), looking at how it could engage students in learning and better prepare students for social roles and employment beyond school. This was in line with the school's vision of 'carving pathways' into living a fulfilled life in the 21st century.

The aim was to address negative spirals of learning motivation and engagement and limited opportunities for students that were occurring using the previous model. Curricular ties to the motivational and engagement constructs that underpin it are explored in the literature review to purposefully design an offer that facilitates an increased engagement in learning. To test its success, the methodology sought a mixed methods approach to measure the impact of focus groups, school outcomes data and stakeholder input. From the findings the study looks first to see if the model increases students' perceptions of SDT's needs being met, observations of their engagement and subsequent outcomes quantitatively and qualitatively, with the student remaining at the centre of this. Following the discussion of the findings, a review as to how else it may be improved and disseminated took place.

6.3 Summary of discussion/answers to research questions

The study looks to explore if a move away from the traditional secondary model would have any impact on typical school outcome data and whether it would be significant enough to have subsequent impact on the autonomy for students' next steps of their education. If so, did the students' perspectives provide insight into how the SDT's psychological needs were best met in the MMPBL curriculum? Also do the components of meaning and mastery enhance them being met whilst in the school setting? As an exploratory piece of research, the study is left open to spontaneous data that is not hypothesised (Robson, 2011).

The summaries relate to the research questions. School outcomes data, the students' perspectives on the change to MMPBL are templated on to SDT needs enhanced by meaningful and mastery learning. Conclusions from the analysis of the data that arose are shared.

6.3.1 Research Question 1

What impact, if any, did the MMPBL curriculum model have on Key Stage 4 SEND student outcome data compared to the data from school's previous secondary model?

The impact on school data was clear. Subjects that previously would not have had academic outcomes at the end of the year in the previous model, produced some of the highest levels of qualifications in the school (e.g. BTEC) and an additional 48 qualifications were gained. Mastery provided the additional time that all stakeholders felt was necessary and no doubt played an essential part in students being able to achieve the qualification. Yet although less time was provided in core subjects, students evidenced further impact on the quality of qualifications even further (e.g. GCSE). Coupled with an 83% decrease in negative behaviour incidents and a 4.16% increase in attendance, the data suggests that students now see a purpose to the learning. Whether this was framed in short or long-term meaning (both were discussed), students' reasoning behind why they were learning appears to have shifted to a more integrated extrinsic or intrinsic driver (see Table 2.2.1).

If the study had remained a typical comparison of academic outcomes being the priority, then the shift in data could suggest that considering MMPBL across all education should now be trialled, particularly in SEND settings. Yet the argument that more time was the key reason and that facilitating this would require narrowing of the curriculum, could dismiss this (Ofsted, 2019). Yet the study of outcomes took measurement of depths of motivation into consideration. This meant that what else was contained within the project, whether other subjects (e.g. cross-curricular literacy) or meaningful drivers that played a part in making learning more relatable to students arose more in the qualitative data. This justified the mixed method approach. Relatable components were essential, as the same subjects were still being delivered in the traditional model, yet the initial engagement wasn't there. The difference is highlighted particularly in core subjects, when the qualification was still there to achieve but the purpose behind doing so did not motivate them. The change was at a deeper individual and cultural level and the rest of the research questions began to explore that.

The change to academic outcomes, the central focus of England's education system, gives weight to further study in other settings. This is even heavier in settings where accessing learning is the first hurdle. In such settings the works of Rochford (2016) and Carpenter et al., (2015) are held aloft. Their prominent notion is that engagement is the liberation of intrinsic motivation. Yet this model clearly justifies that the theory to provide a template for what leads to such liberation and more accurately illustrates where it can be found and how it can be nurtured.

6.3.2 Research Question 2

What impact, if any, did the MMPBL curriculum model have on students' perception of their motivation to engage in learning, through the lens of SDT's needs in comparison to the previous secondary model?

With the surface changes in research question 1 showing significant impact, the rest of the study sought to understand which components of the MMPBL were analysed to have changed most and what impact that change had. It became clear that the five components of the model interrelated, with the increase in one benefitting the other.

It was hypothesised that students' perception of their competence would increase over time as they improved in their subject, and the qualification outcomes were reinforced by individual and project group success, as well as the teacher survey. Whilst the references to competence decreased in the second round of focus groups, feedback had eliminated references to learners perceiving themselves as less competent. This suggests that autonomy of selecting the project and the issues and solutions within them was a key component to increasing self-perception and self-confidence, whilst realising there is much to learn on a journey to mastery. The qualitative feedback backed the reasoning for why qualifications increased in core subjects, seeking to gain them in order to utilise their self-selected projects outcome and that skills had become transferable. Entry Level 3 in English and Maths is required to access such courses. The link was demonstrated in the choice of destinations, with project related courses increasing by 32%, to 50% of leavers as a result of MMPBL.

Findings show that when the delivery removes the unrelatable content, which can be supported by the student being given the autonomy to choose their subject, then intrinsic motivation increased. This shows increases in engagement, pro-social and learning behaviour, each of which is enhanced when given the time to master it. The mastery for one's own benefit can integrate the extrinsic outcomes to learners' internal goal orientation. MMPBL is creating more self-determined learners, willing to explore and be creative in problem solving, but also to be resilient in seeing projects through, applying them and reflecting on the impact they had. This shows development along lines outside of, and yet enhancing, the cognitive focus of the traditional model. That this is done collaboratively with peers and teachers in lessons and celebrated more broadly with parents strengthens both the social and emotional development and the maturity of one's values and ego. This suggests that they are more ready for life in the 21st century and with further evidencing tools now identified, this can start to be evidenced.

6.3.3 Research Question 3

Did the MMPBL curriculum model have any effect on students' engagement in learning according to students' teachers and parents' observations? If so, how?

In conclusion, through the above discussion and exploration of the data obtained in relation to the students', teachers' and parents' perspective, it can be summarised that the model generated positive feedback on the component's context, self, action and outcomes (see figure 5.1.a) with positive observations of students' engagement in their learning and steps into further education.

The two main points for further development was more specific teacher training in relation to the theory and PBL pedagogy and how parents can be trained along similar lines but less formally, both to enhance the context, process and goals of learning and development.

6.3.4 Research Question 4

Does the study present any unexpected findings that were not hypothesised?

Much research is focused on improving the surface change of learning, yet what is clear is that when vertical development is considered, the depth of the learner across multiple lines of development increases the capacity of the learner to create connection, impact and enhance their network. The increase in network justifies the meaningful projects from a position additional to that the original purpose of social impact, which is also seen. More time and autonomy for staff saw this expand their own engagement with the schools' network and create more opportunities for students to learn in their communities. As teachers expressed, there became a real desire to apply the competence and students wanted to take themselves further towards mastery than meaning. The behaviour data and learning outcomes, as well as focus group findings, suggested self-regulation and, with it, self-development. This is a model to host development in a number of learning settings, with social and emotional development being translated into behaviour for learning and interrelatedness between stakeholders clear across all data sets.

Culture change can also be attributed to operational change and integrated developmental growth into the learning and leadership of the school. The use of Integral Theory emerged from the design, implementation and analysis of the study. Each area enhances the MMPBL offer as can be seen in section 5.4.

If this can occur with those with complex needs, then as the model is based on human needs and development, there is no reason why this cannot be applied at the highest level of education.

6.4 Summary reflection on the study and its implications

The traditional secondary curriculum model showed low engagement, resulting in limited outcomes. Much like most SEND schools in the UK, the curriculum offer looks to combat this. Reeves (2012) observes the link between motivation and engagement, saying that:

‘as students’ behavioural, emotional, cognitive, and agentic engagements represent actions taken not only to learn but also to meet psychological needs’ (p.149).

Understanding the underlying motivations of learners and how they could be facilitated are essential to design optimal engagement. Ryan and Deci’s (2000) Self Determination Theory was clear in what these psychological needs were. Wehmeyer’s (2017) comprehensive study of SDT, heavily featuring SEND, agrees with this study in that the three basic psychological needs are to be considered the foundation for intrinsic motivation, the strongest driver of learning and what lies behind true engagement:

1. Competence- the need that draws curiosity and the drive to master the environment’s knowledge and skills
2. Autonomy- the need to feel you can make choices and feeling effective in doing so, drawing out better self-regulation
3. Relatedness- the need to belong or have interest in something

Other enhancers of intrinsic motivators were also added, with meaning and mastery identified to support a socially nourishing environment and in setting short and long-term internal goals (Wong and Roy, 2018). The causal agency of goals is to:

“plot and navigate a chosen course through the uncertainties and challenges of the social and ecological environments... continuously interpreting and evaluating actions and their consequences” (Little et al., 2002, p. 390).

This ties into the ‘carving pathways’ vision of the school, and its values, empowering individuals to self-regulate, orientate their end goal and navigate the adversity of life, proving to themselves that they have the capacity and self-determination to achieve it. With each personal or community reflection, celebration and evaluation of steps towards progress, a greater sense of self, sense of social value and self-determination is embedded and carried into adult development. The same can be said about the behaviour goals. In section 5.2.1 the discussion around a sense of self-agency being found when autonomous choices are made with clear benefits as a consequence. The curriculum and system change builds opportunities for this into the school day and the culture is challenging each learner to be accountable and that self-regulation is beneficial, thus enhancing it (Paies and Aarts, 2010).

The impact on the tangible school outcomes and destination data reinforces MMPBL but also illustrates the internal development of the learners and psychological needs being met. The tools used to measure the quantitative outcomes of the study were external development measures. The qualitative data brings more internal depth and ensures that the students and stakeholders were heard. The design of the model has learnt from them and is very much in line with the ontological approach of the study. It is also in line with Ofsted (2019) and Gatsby Foundation (2019) guidelines raised in section 1.6 and 1.7. This was reflected in the Ofsted report completed two weeks into the second academic year of running it as the school achieved ‘outstanding’.

With the current focus of education in the UK being largely cognitive, what the study demonstrates is that tapping into the developmental areas beneath it reaps rich rewards in engaged cognition, whilst also allowing other key strengths needed to apply it to be built upon. This is certainly reflected in the teacher feedback, with application of knowledge and skills being the focal point. The appreciation of diversity for such strengths is growing in leadership theory (Shevlin and Rose, 2017). The teamwork from each project group enhanced the interpersonal skills supporting the ability of learners to integrate into new teams and relationships beyond education. The measurement of the 6C’s as discussed in section 2.1, though not part of this study,

became a project in itself from younger students. They developed their own rubric for 6C's and the whole school has adopted them.

The study created an environment that allowed the orientation to start to move away from the narrow goals of education that leave many as 'below average'. Discovered after the study was completed, tools that have since been found in the corporate space suggest that there are ways to broaden outcomes, including measuring tools for self-determination itself and internal development. This will be discussed in section 6.7.

The impact on staff engagement is also extremely promising. The autonomy that the cultural and operational change provide and the increased time commitment, fuels their intrinsic motivation to teach and build strong relationships with families and the community. So too does stepping out and into the community, strengthened by whole school celebrations of meaningful outcomes and the mastery of their learners' work benefits both teacher and learner. Three times within the year they share with those who mean the most to the learners and receive personalised, face-to-face feedback. At the same time, they share their success with the community. That every student spoke live on stage at the SEND conference is consistently referred back to by all stakeholders, including other schools who have begun to follow suit.

The revised framework identifies how MMPBL creates environmental supports that enhance its social nutrients, ensuring a psychologically safe and enriching learning culture is in place. Key intrapersonal and interpersonal points were placed against SDT's needs and enhancers of meaning and mastery, looking to integrate them into the learning experience. The scale recognises that each experience will fall (individually) between intrinsic to extrinsic motivation, or amotivation. The perception of each component identifies external (no control) and internal (developmental stages) variables that need to be considered for optimal motivation and learning to occur. The lines of development provide a broader set of outcomes for education at all levels and settings that seek to develop their true capacity to perform and be fulfilled.

6.5 Recommendations

The study has demonstrated a way to address key gaps identified in SEND learners' life choices both in school and in later life by designing the curriculum model based on

theory that maximises student engagement and builds on the individual strengths of their spikey profiles. The move towards interior goals of mastery and meaning has shown positive impact for both the learner and the stakeholders and their communities.

Environments that adopt MMPBL should:

- Focus the design on the process, not the outcome.
- Focus on Mastery over performance goals.
- Be given the choice to commit time to master a meaningful goal and host autonomy and agentic engagement.
- Commit the components of the model into school culture.
- Consciously design the social nutrients and environmental supports for both students and other stakeholders.
- Trust. Self-agency readies learners to be accountable.
- Build metrics for cross comparison of the lines of developmental and the individual. This provides more accurate diagnosis and measures your education and leadership offer, and where a student's motivation and meaning are coming from at their stage.
- Take the original template from a 2-D model of education (filling the cup) to a 3-D model (growing the cup) using the interrelated lines of development that relate to each of the three components.
- Remove the unrelatable content from curricula in order to increase engagement
- Meaningful learning hosts a greater sense of self-worth and builds multi-dimensional networks
- Consider the consequences of these findings on cost-benefit learning, life pathways and financial interventions that the system need not supply.

6.6 Contribution of learning to national and international research

This is a pragmatic study that is in tandem with the traditional English national curriculum through subject specificity, within reason. It is responsive to not just motivation, engagement and the academic success of learning, but also seeks development of learners' identity and connection with others, locally and globally. The model provides a positive spiral of consequences in education and further agency in education opportunities. It also illustrates that further education and employment could benefit from adopting the similar theory and belief if we are truly to see students with and without additional needs flourish.

As both objective and subjective data illustrate, despite learning delay and other typical factors for inhibiting engagement (identified in section 1.2), the range of positive improvement provides clear evidence that the consideration of internal drivers can build self-determined learners if the context is in line. This required the structure (particularly time) and content (MMPBL) to change, which saw a positive shift in outcomes. Although subjective, the views of stakeholders reinforce theory that the model provided impact on well-being, confidence, optimism, self-efficacy, resilience and more agency over their futures (Bandura, 1989; Carver, Sutton, and Scheier, 2000; Maisto, Carey, and Bradizza, 1999). Such characteristics increase key skills such as creativity, critical thinking and problem solving, developing better conceptual understanding and memory needed for the 21st Century (Ryan and Deci, 2000). Whilst recognising that individualising learning is complex, particularly in those with complex needs: the more self-determined one is, the less the facilitator has to make the learning unique as the student increases the ownership of directing their own learning.

The data suggests that a learning environment that facilitates the psychological needs of stakeholders being met more frequently allows learners engagement to flourish, but also facilitates intertwined progress along other lines of development. Overall, MMPBL increased the learners perceptions of competence, relatedness and autonomy, but also built purpose and conceptual learning and development into education. Whilst not considered at the time of original design, this could be mapped as outcomes across other lines of development that continue into adulthood. This is shifting the direction of education into a whole new paradigm. Learning has typically been around horizontal development, fitting the most in, however vertical development is about expanding the container itself (Petrie, 2011). As well as cognition, internal lines of emotion, maturity and value development are illustrated in discrete forms in the results section 4.2. The development of external lines is demonstrated in behaviour, connection, and impact between learners and their communities, with both benefiting where explicit, particularly in the community data.

The model shows that learning and development can occur whilst staying within the parameters of Government and Ofsted guidelines. Whilst different from a typical mainstream curriculum, flexibility within the system is still possible and typical external

pressures for status prosper from focusing on internal growth. This sets a challenge to education, knowing that if this can be achieved with complex learners, then the goal posts of education can be shifted. The theory that it is based on, along with that which has emerged during the study, puts forward a new way for schools to consider their offer for education in the 21st Century.

6.7 Reflection on literature choices and methodology

Given this was an exploratory study, from an inside researcher position I was not seeking an objective 'truth' or looking to prove assumptions, but rather to facilitate the right to empower the learner and those who support them. This meant that I sought to understand their individual perceived reality and whether it correlated with tangible impact. This meant adopting a theoretical approach that supports advocacy and participation.

The introduction and literature review illustrate the context for the study and the real-world variables present in the national and local setting of the study. These range from an individual's need to far broader social, cultural, and economic factors. The literature review quickly draws on SDT (Ryan and Deci, 2000) as it is an integrated motivational theory that gives place to both intrinsic and extrinsic motivators that already exist in education. That Reeve's work, most recently his work on agentic engagement (e.g. Reeves and Shin, 2000) meant that motivation and engagement dovetailed through the theoretical design. However, cross-referencing it against typical curriculum models provided components that could be checked against was more challenging, as it was quite atypical for the theory to underpin the curriculum model. Its application in SEND interventions (Wehmeyer, 2017) provides a solid platform to take it forward into a whole curriculum approach, which feeds into the setting's culture.

A mixed-methods research design used to provide deep insight through a number of focus groups with students, ensures it is not momentary perspectives (Roulstone and Lindsey, 2010), but also the voice of the teachers and stakeholders through surveys (Creswell, 2009). Using the 'soft' quantitative school data as well is a purposeful design feature (Robson, 2011), so to bring together first- and third-person perspective,

for an integrated alignment of the findings, with wider value to those using it (Yin, 2009).

Whilst qualitative data provides insight from the perception of each individual, tangible measuring tools of what is beneath the surface in terms of physiological, emotional, value and ego development is something that would provide tangible outcomes alongside formal academic testing. The Self-Determination survey would also be added to future studies, as would social, emotional and resilience surveys, more closely aligned to meaning and mastery (Seligman, 2002) providing a quantitative measure. From the students' perspective, confidence, optimism and self-efficacy around learning are also grown by the MMPBL model, yet metrics outside of the typical school measures are often unused in school settings as they are less valued by the education system. The same can be said of values and ego measures, despite the behaviour data and the meaningful data below, which suggest there is some evidence for maturity. At the start of the study I was not aware that accessible metrics existed.

6.8 Limitations of study and suggestions for further research

The duration of the study means that, whilst capturing a critical point in a dramatic change to the school, it is only a snapshot (Fullan, 2007). This also means there is not longitudinal data as of yet. This influences the short-term impact, restricting factual totals of qualifications that would likely be gained by the year 10 students who would have access to a second year of MMPBL. The timeline also means that the impact of achieving the qualification and the opportunity to reflect on success are missed.

A sample size limited by only one school adopting the model at the same time restricted the validity of the data (Cohen, Manion and Morrison 1997). Many individual and external variables, such as the leadership (section 5.4.6), needs and culture were present, yet the capacity of the study limits the investigation into them. As the theory is based on universal human needs, the findings are significant enough to justify applying the model to other settings. Future study of those settings that are already piloting the model could support this.

Further Research

Longer term data will continue to be analysed by the school and a longitudinal follow up paper would be appropriate to remove criticism of a 'one off' and to explore success in later life and impact on the broader community. It would also allow new measurement tools identified above to refine each component's impact.

Although not formally recognised in the study, being an inside researcher has allowed me to see the longevity of the impact and the key statistics continue to rise and will continue to be shown in longitudinal studies (Cilliers, 1998). This would include the knock-on impact on social roles and employment destinations of the alumni, and the secondary impact on mental health and costs both to education and to adult services (Murray et al, 2013).

There is also the potential for further investigation into pedagogical theory. This is not an area that was focused on in the study and the teachers were not given a set model in delivery beyond the theory. A teaching and learning policy has emerged from the study. The developmental element also arose in pedagogical form. Staff recognised the need to understand their own and students' stage of development and how they think in order to deliver meaning at the appropriate level (Kellough and Kellough, 2008). Best practice was shared explicitly and discretely. This is comparable to pre-existing research based on pedagogy of PBL and best practice for promoting SDT within the classroom (e.g. Deci and Ryan, 1995; Wang et al., 2011; Shea, Millea, and Deihl, 2013). With evidence of team development and team-to-team collaboration on certain projects demonstrated the impact of peer-to-peer learning and student leadership, this will be the next developmental stage in the curriculum's evolution. It will investigate team-based learning for those with SEND as well as its advantages in a digital context.

6.9 Dissemination

Sharing the approach to learning has already occurred within multiple organisations:

- 3 European schools are piloting MMPBL through an Erasmus project
- Harrow's Annual SEND Conference (2019)
- The Optimus National Conference on SEND and Curriculum Development (2019)
- WE Charity for Social Action (2019)

- The National Association of Pastoral Care's Annual Conference (2019)
- IPen- The International Positive Education Network International Conference (2020)

Findings have been published in:

- Every Child Journal (2019)
- NASEN's Support for Learning (2020)

The study is set to be spoken about at:

- The European Conference on Positive Psychology (2020)
- UCL Institute of Education's ISEC Conference (2020)

Next steps for dissemination include:

- Dissemination of the articles through the Journal of Pastoral Care in Education and Stanford Social Innovation Review
- Building the curriculum model into two schools to build best practice

6.10 Conclusion

This research has contributed to recognising that individualised learning, coupled with belief can allow students with SEND to flourish if their community better meets their psychological needs of competence, autonomy and relatedness. The study shows that the MMPBL model shows enhanced self-determination coupled with performance across a broader number of lines of human development when compared with the traditional curriculum model. With adjustments, even greater accuracy in identifying intrinsic motivational triggers can meet learners' needs and how this can impact on each line of development, adding value to growth outside of the narrow metrics that currently dominate the belief of what education performance is. Orientating learners to live a life that supports their communities is guiding them towards a more fulfilling life and to addressing the wicked problems our world faces.

The evidence shows that the more self-determined a learner is, the less the facilitator has to make the learning unique as the student increases their capacity to shape the direction of their lifelong journey. This showed better self-regulation and development,

seeking to collaborate with peers and other projects that provide outcomes that are meaningful to them at that stage in life. This study provides new insight from the learners as to how they are increasing their presence and value in the communities that support them. This will also be improved with further research into pedagogy, with teachers having to become facilitators and networkers to best host the student's needs.

It is critical that students find roles of social value and communities to be a part of and employed within. As highlighted by the statistics in the introduction, the national picture suggests that the current SEND educational offer is not changing this and the long-term impact on the young people and the systems which support them is destructive. The MMPBL provided students rounded growth, building on their strengths to create opportunities that they may otherwise not have had. The study shows that students' qualifications from the MMPBL allows clear opportunities into related, subject specific courses, rather than generic offers, and their core qualifications now meet the required threshold. This also promotes the engagement (benefiting motivation) and quality of core outcomes. This puts students one step closer to employment through vocational qualifications. Students' own mastery can directly address the employment gap for adults with SEND, as one job came directly as a result of the model. The school's next steps will be to take the sustainable projects that emerged from the MMPBL and to test post-19 social entrepreneurship.

By increasing the chances of social roles and employment and by creating roles that otherwise would not exist, MMPBL is positioned as a future curriculum model to be promoted in education; so too must the voice of the young people with SEND which is greatly underrepresented, for they have much to give.

If we wish for learners to live meaningfully, creating a context that learners can find a sense of purpose and therefore intrinsic fulfilment, meaningful goal orientation relevant to the stage of development must be present in learning. To do so means facilitating supportive, secure environments which provide, that provides the social nutrients through an experience that models and nurtures a more conscious awareness of themselves and others. These features allow basic psychological needs to be met so that learners can engage, develop and thrive (Ryan and Deci, 2017). If they are

restricted, the ability to transcend developmentally is unlikely as the previous stage remains incomplete. The results from the MMPBL data suggested that increasing agency in SEND (and education in England in general) saw students feel secure enough to free themselves to show concern for others and emergence into their socialised mind (Kegan, 1982). The state of our planet requires our education system to respond and develop a more conscious and caring society.

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Glossary

ADHD	Attention Deficit Hyperactivity Disorder
ASD	Autistic Spectrum Disorder
DfE	Department for Education
EHCP	Education, Health and Care Plan
FSM	Free School Meals
MLD	Moderate Learning Difficulties
MMPBL	Meaning Mastery Project Based Learning
PBL	Project Based Learning
PMLD	Profound and Multiple Learning Difficulties
SLD	Severe Learning Difficulties
SEND	Special Educational Needs and disabilities

Appendices

1. Consent Form for Research Project
2. Letter of Introduction to Focus Participants
3. Focus Group Questions
4. Teacher Survey Questions
5. Parent Survey Questions
6. Sample of Focus Group Answers
7. Sample of Teacher Survey
8. Sample of Parent Survey Questions

Appendix 1 Consent Form for Research Project

Consent form for XXX High School Research Participants (2019/20)
Project – An Exploration of Meaningful Mastery Project Work Learning
In a SEND Secondary School, Based On Self- Determination Theory.

Matt Silver- Research Doctoral Student
Tamjid Mujtaba (project supervisor)
Department of Curriculum, Pedagogy and Assessment, UCL Institute of
Education

PLEASE CIRCLE BELOW:

I have been given information about taking part in the project.

Yes No

I have had the chance to ask any questions about the study.

Yes No

I have had enough time to decide whether or not to take part.

Yes No

I understand that I don't have to take part.

Yes No

I understand that I can stop taking part in this study at any point
without giving a reason.

Yes No

I understand that if I decide to stop doing the study, it will not affect
my own or my child's current or future experiences at XXX High
School.

Yes No

I give permission for the researcher to access information about my stated needs in my EHCP.

✓ **Yes** **x No**

I agree for myself (and my child) to take part in this study.

✓ **Yes** **x No**

This study has been approved by the UCL Research Ethics Committee, project number: The information obtained will be treated as strictly confidential and handled in accordance with the provisions of the Data Protection Act 1998.

Your role with the school

_____ (Student/Parent/Teacher/Other)

Name of participant Date Signature

If you are a parent:

Name of your child Date Signature
(if applicable)

**PLEASE RETURN THIS FORM TO MATT SILVER AT
XXXXXX HIGH SCHOOL**

Admin only:

Name of person taking Date Signature
consent

Matt Silver

Researcher (to be Date Signature
contacted if there are any problems: [XXXXXXXX](#))

Appendix 2 Letter of Introduction to Focus Participants

Information Letter
Doctoral Student

Matt Silver- Research

Tamjid Mujtaba (Project supervisor)
Department of Curriculum, Pedagogy and Assessment, UCL Institute of Education

Dear Participant,

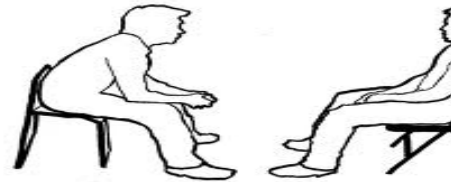
I am doing a research project at UCL IOE and would like to invite you to take part.

The school has created a new curriculum and are keen to investigate if the experience supports the young people's development. I am looking for **honest** feedback so that we can best support them; I am open to all feedback and am working as a researcher in this study, not as a Headteacher.

As a participant (whether you are a child, parent or carer) taking part in this research we will ask you to complete **4** short focus groups, one before September, one just after and one near the end of the first two projects, and one a month afterwards. They are tick box questions. You will be offered any support you need (reading and writing) when completing them in a private space.



After this the researcher may also ask to meet you take part in a short-recorded conversation with the researcher about your opinions. This will be a confidential conversation at a convenient time.



I want to be clear:

This is a **research** study. It is **NOT** a test.

You **do not have to take part** if you don't want to.

You **can stop at any time** without giving a reason.

Your real names and any personal information **will not be used** if this work is written up. The only additional information, that will also be anonymous, is what has been put on the charities application forms you have already completed.

Any questions?

If so please feel free to email me at:

ANON

Thank you it is very much appreciated.

Matt Silver



Appendix 3. Focus Group Questions

Standard introduction

1. Welcome 2. Overview of topic 3. Ground rules 4. First question

Questions: Mastery (Ma) Meaning (M), Competence (C), Autonomy (A), Relatedness (R)

1. Overall, what do you think of school? (enjoy, not enjoy, happy, unhappy)
2. **A** Who decides if you come to school? (How do you feel about that?)
3. **M** (link with previous question) Thinking about what you're learning in school, how important do you think it is? (Why?)
4. **M+Ma** What do you get from coming to school? (Why do you enjoy/not like school? Do they identify that learning is beneficial?)
5. **C** What subjects do you think you are good at? Why? Do you like these subjects? (does this link to longer term learning?)
6. **R** What is your most interesting lesson(s)? Why?
7. **R** Does it link to what you want to do when you leave school? How?
8. **C** What about school don't you like? (Subjects? They are not good at them? Or don't see the link- relatedness)

In class

9. **A** What choices can you make in school and in lessons? (content, type, application, outcomes?)
10. **C** What would you like to get better at? (Do you have the chance to?)
11. **A** How much choice do you think you have about what you learn?
12. **C/R** Do you think you learn about yourself at school?
13. **M** In School or out of school or both... How do you use what you learn to help others? How often? How does this make you feel?
14. **M+Ma** How does what you learn help others? (Does it make you want to learn more?)

Use appropriate conclusion Three Step Conclusion 1. Summarize with confirmation, 2. Review purpose and ask if anything has been missed, 3. Thanks

Appendix 4. Teacher Survey Questions – Phase 2

The 8 questions relate to the MMPBL Teachers of Key Stage 4 cohort of 2018/19 only. As has been seen in the ethics and consent form you have signed, you may request to remove your data at any time. Your opinions will remain confidential and are received by an inside researcher, not as a headteacher. Thank you for taking part in this survey.

1. How would you describe the competencies (the ability to do something successfully or efficiently) that have been gained by students in your project over the year? Did they recognise them?
2. What choices were students given that they may not have had in the traditional curriculum and what, if any, impact have they had?
3. What, if any, connections have you seen students make between themselves and their learning as a result of the Meaningful Mastery Project Based Learning model? Learning in other areas of the school can be considered.
4. To what extent, if any, did the meaningful (causes they supported) and mastery (350hours) components of the MMPBL model link to the students' behaviour, attendance and destinations, and the respective qualifications?
5. How has delivering the MMPBL model impacted on you as a teacher?
6. Would you keep the MMPBL project model, and why?
7. What would you change about the design?
8. Any other observations or comments?

Appendix 5. Parent Survey Questions

8/7/2019

Dear Parents and carers,

Following a year of change at XXX High School, we would like to invite you to share your valuable feedback to provide us with points to celebrate and consider moving forwards into next year. This feedback is important for the students, staff, leadership and the school as a whole, so I encourage you to share 'what went well' and 'even better if' and if possible, reasons and solutions to the issues you raise. Continue on a separate sheet if necessary.

1) How do you think the use of <u>Meaningful Mastery Projects</u> in year 10 and 11 has been helpful to your child's education? How and why?		
2) How do you think the use of <u>Meaningful Mastery Projects</u> in year 10 and 11 has not been helpful for your child's education? How and why?		
3) How have you seen your child make choices in school this year?		
4) Overall, would you keep the projects in year 10 and 11?		YES or NO
5) What changes do you think have been helped your child this year?		
6) What changes do you think have been unhelpful for your child this year?		
7) Can yourself and your child see the link between what they do in school and later on in life? YES or NO or NEEDS TO BE CLEARER		
8) Any other comments?		
Your name:	Signed:	Your child's name:

Appendix 6. Sample of Focus Group Answers

Line No.	Speaker	Talk
1	Interviewer	Overall what do you think of school?
2	1	I think school is cool. I like school. Don't mind it. I like learning, I like socialising. If you didn't go to school then it would be pretty boring to stay at home and wouldn't know anything and wouldn't get a job.
3	Interviewer	Thank you. 2?
4	2	School's good. It's nice to be around like different people, go to different Lessons. Its nice and you know the new thing that you did is good for all of us. Coz it's like a new change for us.
5	Interviewer	Why do you think it's good for you?
6	2	The change normally you know last year we did boring lessons it's good that we do something different like project is good.
7	Interviewer	Super. 3?
8	3	I enjoy going to school. I definitely think it's a safe place to learn, socialise and also this one in particular this year with projects. I think there is more reason to go to school now to do something that I enjoy doing. You know. Yeh.
9	Interviewer	4?
10	4	Ya I enjoy school a lot more especially with everything that we have been doing. Some lessons is something we like doing and not something that we are doing for the sake of it.
11	Interviewer	Who decides if you come to school?
12	1	The government?
13	Interviewer	Yep. Anyone else has say more?
14	3	Our parents and ourselves.
15	Interviewer	Would you all not choose to come to school? All the time?
16	3	Not all the time
17	Interviewer	Seem to have a lie in the morning. I think you kind of talked about what do you get from coming to school is there anything else you think you want to add that of what else you get from coming to school.

18	1	I feel with the new curriculum I can see what I want to do because last year I didn't really know what I wanted to do but now we are doing things we enjoy so like I have more idea like what I want to do when I leave school. Does that make sense?
19	Interviewer	How far down the path can you see 2?
20	1	I know that I want to go to college and do childcare and I want to do something that involves working with children but I don't know what yet there is a lot of things that involves children but I don't know what yet.
21	Interviewer	2 is there anything else you want to add?
22	2	It's nice being in a school but you know when the new curriculum came, at first I didn't think it was good at first but now it's really good.
23	Interviewer	What's changed your mind?
24	2	When we first told our parents about this like new project I was thinking it was going to well or not well but when I first did it was ok. But when we do it now It's good.
25	Interviewer	So what have you taken most from your project this term?
26	4	Just like doing our speeches and doing more coursework and stuff.
27	Interviewer	3 was there anything else you want to add what you get from school.
28	3	From school I think just like several things really, like I talk to people every day with my friends helps pretty much with social skills, also showing visitors round. It helps with making small talk and make me more comfortable with people I don't usually know or don't know at all and it's great that yeh.
29	Interviewer	For you 4?
30	4	Yeh the curriculum is more structured it shows the steps of like where you know path ways and careers and stuff for like the project that I have chosen has opened up a lot of opportunities for me.
31	Interviewer	Anything in particular do you want to explain any of those opportunities?
32	4	WE day is one of them that was a good experience
33	Interviewer	What did you do on WE Day?

34	4	I spoke at the SSE arena in front of how much people there about 3000 and that was a great experience.
35	Interviewer	I am going to ask you 3 questions in a row one at a time. First question to that is what subject do you think you are good at?
36	1	I think could it be one subject or multiple?
37	Interviewer	Yeh Yeh
38	1	I think I am good at Performing Arts because that's what I chose, English and I say I am getting better at Maths I don't think I am good at it but I am getting better.
39	Interviewer	What subject are you most interested in?
40	1	I'd say probably performing Art English cause I like talking, like writing and stuff.
41	Interviewer	Okay so they tie in together?
42	1	Yeh
43	Interviewer	And I think you touched in 2 but does link with what you want to do when you leave school?
44	1	I think so yeh. I feel like if I want to work with children I think I would like go like doing performing Art like helping kids do that and show something.
45	Interviewer	2 what are your most interesting lessons?
46	2	I like ICT now because remember you did in year 7 now I start like ICT more now, I like English, I like Science a bit more now and yeh.
47	Interviewer	Super. What subjects do you think you are good at?
48	2	I am getting a little bit better at Science a little bit, English and performing Arts.
49	Interviewer	Ok. And do they link into what you want to do when you leave school?
50	2	Yeh, I want to do like ICT stuff
51	Interviewer	What are you thinking of doing when you leave?
52	2	School like college in September.
53	Interviewer	Do you have a course in college?
54	2	They got me to do a course independent school leaving yeh
55	Interviewer	Which college is that?
56	2	Uxbridge College
57	Interviewer	A.M what subject are you most interested in?
58	3	Performing Arts, Maths and English and.
59	Interviewer	Which ones do you think you are good at?

60	3	I definitely think I am good at Maths now especially since to do Maths GCSE so
		definitely good at that. English I recently had to do a presentation so all were
		positive reviews it was about detectives and I put a lot of research into it, put a
		lot of time and made it very interesting according to the staff so I like doing
		that. Like doing presentations and performing arts. Yeh just working with whole
		whole group, just working on projects and it doesn't really feel like work for
		me, It just feels like you know it feels like fun kind of know each other is all you
		got to do.
61	Interviewer	Okay and does it link with what you want to do when you leave school?
62	3	A bit yeh I mean when I leave to go to college or studying media which I guess
		my performing Arts skills will help me in a way transfer to my media skills. Coz
		we have been studying about like practitioners I can probably transfer some of that. Yeah.
63	Interviewer	J.G-F What subjects do you think you are interested in?
64	4	Definitely Performing Arts I am not too keen on the rest coz I have been a bit
		sour with it as they thought I was not committed as much. But I would say
		Maths and English yeh.
65	Interviewer	Why do you think you were not committed to English and Maths?
66	4	I was going through a lot at the time it was a lot to handle and it was stopping
		me from being positive. Yeh.
67	Interviewer	So what's changed that around to you to be more interested?
68	4	I think just knowing that I have people who just gave me advise and get me
		back up and I just took that in and started.
69	Interviewer	So you started and got more interested in the subjects when you were ready to
		be interested.
70	4	Yeh.
71	Interviewer	Does those subjects link to what you want to do when you leave school?
72	4	Hmm yes especially for college as well.

73	Interviewer	What are you doing at College?
74	4	I have accepted a course level 1 Performing Arts at XXX College.
75	Interviewer	So what don't you like at school?
76	4	I think this is something that we can all answer got quite a lot.
77	1	Not like something I don't Maths is not my favourite.
78	Interviewer	Things that could be better?
79	1	Maths.
80	Interviewer	Why?
81	1	I just always just don't really like Maths kind of confused me is not that I am not good at it I just don't really like it. Does that make sense?
82	Interviewer	Is there anything else you don't like about school?
83	1	No
84	Interviewer	Just maths?
85	1	Yes
86	2	You know when you do your science work sometimes I get stuck on a questions.
87	Interviewer	In reading the questions or understanding the questions or?
88	2	Its understanding the questions.
89	Interviewer	Anything about school you don't like? 3?
90	3	I mean there are like there are obviously some stuff personally I don't like that's just my personal opinion but I think P.E would be my least favourite Subject coz of a group, coz of group kind of being hanging in the P.E lessons they are kind of disrupting and distracting and it kind of stops us form learning. It's a certain group of people. You know yeh that's what I don't like. It's kind of getting better now but the group is like still messing around, fooling around for example not really learning and it's distracting us for those who actually want to learn so I feel like P.E is my least favourite subject.
91	Interviewer	Is it the subject or is it because of the group?
92	3	It is mainly because of the group.
93	Interviewer	Ok. 4?
94	4	I would say the same as 3 but I don't know if it is both the subjects and the groups. But I feel like it's the group coz even though sometimes I mean for example when we had, when I had them for the Bussy Malone play it was

		different, they was listening, they was like focus and on like chat with
		everything we was doing. When we wasn't in that, when we had P.E it was the
		same thing talking over, shouting and everything and my head just can't take it.
		And it's the same thing when we have this and that and it's just the same thing.
		Even when like you mention it to the teacher even like anybody like how can
		you tell them in like a nice way as calmest way as possible that you are
		distracting everyone's learning coz It seems like every time you tell them and
		what common sense do you use that you don't like this and how can they take
		that in.
95	Interviewer	Is it that particular group
96	2	Yeh we have.
97	Interviewer	Moving into the work that you are doing in lessons, what choices do you think
		you get to make in lessons? Like when you are actually in lessons do you get
		choices around what you actually get to learn and what subjects do you feel
		you get choices in or get choices in?
98	1	It's more of the teacher's choice they know what we need to learn that make
		sense coz if we chose we would be like don't know. I think it's probably
		teachers choice they are more qualified of what we need to learn if that
		makes sense.
99	Interviewer	Okay yeh. Do you feel like you get any choices here?
100	2	I think the teachers want to know what level were are on first like what levels we are in English, Maths and Science.
101	Interviewer	Do you make choices about qualifications and that?
102	2	No.
103	Interviewer	Okay. 3 what choices do you think you get in lessons?
104	3	In choices I think I have a few choices in terms of like what hmmm....I was going
		to say about Performing Arts for a second hold on. Oh yeh recently we were
		talking about if we want to do the Silver Art's qualification or the Bronze Art

		award we were debating which one will be better for us personally we didn't
		want to overwork ourselves and we decided that the Bronze Art award is better
		because it gets its basically like same qualification in CV and its generally
		Impressive and you know if you did bronze last award you have more time to
		work for example the local community and you know if you done silver arts
		award we had to be doing a lot of work and so we do have choice in this school.
105	Interviewer	So you choice work to do with the local community?
106	1	We choose to do more like practical like actually doing thing experiencing
		things cause we thought like if we do this over then it's us doing the work and
		we gonna enjoy it. And that's not really why I choose Performing Arts just to
		like work.
107	Interviewer	So you got to choose like Performing Arts? You said you choose to do work in
		your local community? What have you chosen with the local community?
108	1	We gonna do like some workshops with the XXX group that came to
		watch Buggy Malone.
109	Interviewer	Did you choose that?
110	1	Yeh. So we gonna do like scenes and stuff we did from Buggy Malone teach
		them.
111	Interviewer	How do you think that will make you feel doing those workshops?
112	1	Excited.
113	Interviewer	How do you feel about delivering workshops back to XXX
114	4	Great you know, it's a matter of showing them what we used to do back then
		And is like sort of like showing them why I came to that school so they get to
		know about us.
115	Interviewer	Do you get make any other choices in school about what you learn or what you do?
116	4	Hmm..
117	Interviewer	What other choices do you get during the day?
118	4	I think it's more of the teacher choice but it's like teachers choice is sort of

		<p>something that you sort of like agree with as well so I don't really care if it is my</p> <p>either my choice or theirs. I don't want to choose coz I don't want to feel like I</p> <p>am pushing myself too hard. If they say I am here then that's cool. I would</p> <p>probably say that as well so.</p>
119	Interviewer	So anyone else think they have any choices during.
120	1	<p>I feel like talking about lessons but like in general in school like you choose your</p> <p>friends, you choose anything else that's not with lessons.</p>
121	Interviewer	When would do you wish you had more choices or something?
122	1	<p>No I think the teachers have the best choice like they know what they are</p> <p>doing. We have to trust them yeh.</p>
123	Interviewer	Ok. Does anyone think they want more choice then what they do?
124	3	No not really.
125	Interviewer	Okay. So do you think you learn about yourself at school?
126	1	<p>Yeh you learn like from what you learnt from Year 7 to now. We are different</p> <p>person now but I know a lot more things. I learn a lot about myself like what I</p> <p>want to do. When I was in year 7 I didn't have a clue what I was doing and like</p> <p>didn't know what kind of friends I would like and yeh.</p>
127	Interviewer	Ok. 2 for you? What do you think you learn about yourself at school?
128	2	<p>I feel I am more confidence growing up and getting more mature now like</p> <p>growing up and since I was in your class in year7 I didn't have that mature but</p> <p>now I think me coming in year 11 made me more like confident and more</p> <p>mature.</p>
129	Interviewer	3 what do you learn about in school?
130	3	<p>I mean like I would have to use the same point as 2 I think as I have</p> <p>become more confident as well because cause I remember back in year 7 I was</p> <p>shy talking to people and I have grown up. And I think with the project choices</p> <p>as well thats helped me know what I want to do for example when I leave to go</p> <p>to college what I really want to be working on as well I think that's good I still</p>

		have that choice.
131	Interviewer	Is the choice of where you are going next?
132	3	Yes, explore yourself as well.
133	Interviewer	Explore yourself can you go into that anymore or?
134	3	<p>Hmm.. just so you know just see what you might be doing I guess and project</p> <p>choices you know.If you are interested in that and if you are not interested in</p> <p>that then you can move on to another interest I think it's just general you</p> <p>know.</p>
135	Interviewer	1?
136	1	<p>I learnt that I need to since I was in year 7 I need to come out of my comfort</p> <p>zone and try new things cause I am scared to try new things and I like to stay in</p> <p>my own bubble that things that I know that will work now like. I think the</p> <p>project made me come out of my comfort zone cause I thought if I choose from</p> <p>that then i have to do things for other people awkward so yeh.</p>
137	Interviewer	<p>Okay have you figured out how to do that in front of people without being</p> <p>nervous.</p>
138	1	Yeh I just need to practice
139	Interviewer	What sort of skills?
140	1	<p>Just like practising in class, doing it in front of class and you just keep on doing</p> <p>it cause if you do it once you will not get it. You need to get used to it.</p>
141	Interviewer	4 what do you think you learn about yourself in school?
142	4	<p>I learnt a lot by myself so just knowing like help me as at first when I started it</p> <p>was like I was crazy, I was unsure about myself what was wrong with me. And</p> <p>now that I realise that and know what I know about myself and now I need to</p> <p>fix going through that I learn I have been a lot more mature and more</p> <p>respectful you know and being more open.</p>
143	Interviewer	Do you think the wellbeing sessions are helping you understand yourself any better?
144	1	Yes cause it's kind of nice like if you have had a busy morning then like after

		break you have then have wellbeing you can chill, talk and play games we play
		like UNO just like sociable games does that make sense? So just like chilled for
		a bit and then go to lessons I think If we didn't do that it would be too hectic
		with all the projects and everything it would be too much for us.
145	4	It's a bit of a gateway as well.
146	1	It will help your mental health cause if you just like that at all times not doing wellbeing lessons then we kind of loose it.
147	Interviewer	Excellent thank you for your answers. Okay so final question then what makes you want to learn, what is it that makes you want to learn?
148	1	I think like wanting to like have a job and like do things with your future and
		knowing that if you don't learn, or not get anything out of school then you
		might not be able to do that whatever you wanted to do.
149	Interviewer	For you 2.
150	2	Learning like new different things, like different kinds of subjects. I not done
		science before, I not done ICT before it's good to learn more different lessons.
151	3	What makes me want to learn? Cause I think it makes be a better person really
		obviously you have to learn to get where you want to go in life you know and I
		think like by going to school being with my project my group I know that every
		day it will get me there to where I want to go in life and yes its important.
152	Interviewer	4 what really makes you want to learn?
153	4	I think it's just like knowing what you can get out of learning like just learning
		simple thing can be a big thing. If you learn something really small such that
		you don't know until you have learnt it. The more you learn the more like
		higher like whatever it is you want to do that like better like opportunity at
		doing just by learning this bit and getting more talent and those skills you have
		already and just you know yeh.
154	Interviewer	So overall would you say we would stick with Project model or would you go to last year's model?

155	1	Project
156	3	Project
157	2	Project
158	4	Project
159	Interviewer	Why?
160	1	<p>Cause I feel it's just better coz I felt last year I only came to school coz I had to.</p> <p>Now coz I want to coz I know what I want to do. I get excited we are going to</p> <p>do and work towards these things. I felt like I was actually learning, I felt last</p> <p>year teachers were just teaching now I feel I am actually learning.</p>
161	Interviewer	2?
162	2	<p>Projects are more better than last year. Coz remember last year we had no</p> <p>projects, we had normal classes and we had like different kinds of break times</p> <p>in KS3 and KS4 and I think the new curriculum you know KS3 have their project</p> <p>in the afternoon and its good we have our Projects in the morning, Core groups</p> <p>and some of them have their Core groups in the morning and afternoon its</p> <p>good.</p>
163	Interviewer	3?
164	3	<p>The reason you want to learn in this school it is better prepares you more for</p> <p>life. I say outside the qualification really you are not really thrown into the job</p> <p>you have to choose. You have to choose what job you really want to do just</p> <p>based on your passion and I think that by Projects a lot of like younger students</p> <p>have the opportunity to explore or like find out what they want to do or what</p> <p>they are intrigued to do more so more early on so that is definitely important</p> <p>for like youth as well young people to know early on what they really want to</p> <p>do let them have a chance to explore that in a way that Projects I think that's</p> <p>really good.</p>
165	Interviewer	4?
166	4	<p>For the project is more of a structure build up in what you want to do and you</p> <p>have the right people to get you there and they can explain everything to you</p>

		and you can ask some questions what you want to do that's like relevant to you
		and the project they can help you like get there.
167	Interviewer	So like having the right subject teacher?
168	4	Yeh
169	Interviewer	Thank you very much.
170		

Appendix 7. Sample of Teacher Survey Questions

The 8 questions relate to the Key Stage 4 cohort of 2018/19 only. As has been seen in the ethics and consent form you have signed, you may request to remove your data at any time. Your opinions will remain confidential and are received by an inside researcher, not as a headteacher. Thank you for taking part in this survey.

1. How would you describe the competencies (the ability to do something successfully or efficiently) that have been gained by students in your project over the year? Did they recognise them?

The students all gained many new skills that demonstrated their competency within the arts. A clear example is how they developed their independence during rehearsals. At first led by me, then leading each other (within project group), to then sharing and leading others. The student's were all able to recognise and reflect on them during comprehensive evaluation sessions.

2. What choices were students given that they may not have had in the traditional curriculum and what, if any, impact have they had?

The student's were offered the choice in pursuing technical and business roles that there time would always limit in the previous curriculum. This was supported by them gaining knowledge on how the Arts world works, and so supporting them to realistically consider career directions. An example of this was taking actor head shots, and sharing processes on external agencies and finding agents. Students were also given the choice to master a specific arts based skill, that they could then pass on to others. It was through the empowerment of their choice that really drove their success.

3. What, if any, connections have you seen students make between themselves and their learning as a result of the Meaningful Mastery Project Based Learning model? Learning in other areas of the school can be considered.

I think during mastery, students are really able to connect with tasks and bring them to life more than in traditional lessons. Through clear and measurable success, students over time gain confidence in learning new skills and finding direction that they want to pursue. This then in turn motivates them across the school curriculum. For example to complete a level 1 subject specific course you require appropriate accreditation from core subjects.

4. To what extent, if any, did the meaningful (causes they supported) and mastery (400hours) components of the MMPBL model link to the students' behaviour, attendance and destinations, and the respective qualifications?

This was another area where choice played a role. All students worked on social issues that were of the most importance to them, by sharing this with other students they found new like minded individuals (staff or student) to have new discussion. There was a student who prior to this academic year struggled with

attendance and behaviour. Despite there still being some issues, the student really connected with the project and has he gained confidence and recognition of his success he was able to continue on at a Performing Arts course. . Another student who also saw an increase in his confidence was able to drastically improve his attendance and punctuality. He no longer needed his mum to support his short walk to school and he started to become the first one in the classroom.

5. How has delivering the MMPBL model impacted on you as a teacher?

It was initially daunting, but equally exciting to rewrite a curriculum based on a subject that I have centered much of my academic and personal interests around. I found that my focus shifted more on building my planning around student led learning that was realistic in its approach of building their arts skills. The model allows for students to be shown and taught in far greater depth, so the quality of work has been of a standard higher than I have witnessed previously at this school.

6. Would you keep the MMPBL project model, and why?

YES!!! The projects enable students not only to find pathways for future learning and employment, but also to find an area of study that they enjoy. To give them ways of accessing a life long hobby. A way of guiding them on what they can access in their local and national communities.

7. What would you change about the design?

I would possibly look at timetabling sessions off site, and to give each student their own digital means of writing/ recording information. This would make the evidence capturing more seamless and authentic. This could be more engaging for parents.

8. Any other observations or comments?

It was a real pleasure in seeing students gain skills, and demonstrate a love for learning. As a subject specialist, seeing other people enjoy a common interest individually and part of a group it is truly inspiring. I know these student's will always enjoy theatre, and if its a hobby or its given them vocational skills for their careers then my job is done.

Appendix 8. Sample of Parent Survey Questions

8/7/2019

Dear Parents and carers,

Following a year of change at XXX High School, we would like to invite you to share your valuable feedback to provide us with points to celebrate and consider moving forwards into next year. This feedback is important for the students, staff, leadership and the school as a whole, so I encourage you to share 'what went well' and 'even better if' and if possible, reasons and solutions to the issues you raise. Continue on a separate sheet if necessary.

<p>1) How do you think the use of <u>Meaningful Mastery Projects</u> in year 10 and 11 has been helpful to your child's education? How and why?</p> <p><i>It has helped focus on their skills that they are good at, as well as improving them. It has helped focus them on tasks which they are interesting to them so makes them want to be in the classroom.</i></p>		
<p>2) How do you think the use of <u>Meaningful Mastery Projects</u> in year 10 and 11 has not been helpful for your child's education? How and why?</p> <p>N/A</p>		
<p>3) How have you seen your child make choices in school this year?</p> <p><i>Their project choice has been key.</i></p>		
<p>4) Overall, would you keep the projects in year 10 and 11?</p>		<p>YES</p>
<p>5) What changes do you think have been helped your child this year?</p> <p><i>In a class where interest of the students are the same and so they are calmer with each other and help each other, giving each other ideas on how to do things.</i></p>		
<p>6) What changes do you think have been unhelpful for your child this year?</p> <p>N/A</p>		
<p>7) Can yourself and your child see the link between what they do in school and later on in life? YES or NO or NEEDS TO BE CLEARER</p>		
<p>8) Any other comments? <i>A clearer summary of the objectives and what qualifications they are going to get at the end at the end would be helpful to parents, especially if the child wants to move onto college, parents can tell colleges what possible qualifications they will get so they choose the right course afterwards.</i></p>		
<p>Your name: XXX</p>	<p>Signed: XXX</p>	<p>Your child's name: XXX</p>