Exploring meaningful support and communication between the home, student and secondary school to enhance educational engagement.

Submitted by

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ABSTRACT

This thesis examines how parent and student educational engagement can be enhanced through meaningful support and communication, focusing on how parent teacher meetings can be reengineered for a more inclusive approach. The research considers how parental academic socialisation enhances engagement, and how the development of student learning characteristics and attributes improve students' scholarly self-regulation. The research draws on previous studies by Suizzo and Soon (2006), Vickers, Minke and Anderson (2002) and the Structured Conversations Strategy by the DfCSF (2009). It considers key theory associated with engagement and student motivation including Hoover-Dempsey and Sandler (1997), Goodall (2017) and Grolnick, Ryan and Deci (1991).

The research conducted in two Catholic boys' secondary schools took place over two academic years with Key Stage Four students taking GCSE Computer Science. Focusing on the interactions of the participants from a sociological perspective, an action research approach using an exploratory three-phase mixed method design was used to: understand how existing practices engender educational engagement; develop intervention instruments; and evaluate the impact of the instruments on engagement. The methods of inquiry included questionnaires, individual and group interviews and audio recordings of the parent teacher meetings. The findings were presented as key themes to enable accessibility and extrapolate practical advice from the rich data generated.

The findings showed that parent teacher meetings were used as reporting exercises, offering a limited purview for educational engagement. Students were either absent or rendered absent by their ambiguous role. Staff training to conduct these meetings tended to be observations of other teachers, often perpetuating the traditional approach, its limitations and equivocal nature.

Following the use of the intervention instruments, most participants preferred the reengineered meeting format since it created a meaningful opportunity for formative feedback and action with increased collaboration, student ownership and voice. There were clear, measurable, and communally agreed outcomes to the meeting format. Teachers valued the structured training in active listening and coaching techniques. Students became more self-regulating, developing key learning characteristics and metacognitive techniques. Self-evaluation tools empowered students to develop reflective practices, including accurately identifying their strengths and areas for improvement in the subject. The audits, text messages and toolkits helped parents feel more engaged, educated and confident in discussing pedagogy and the curriculum, resulting in increased levels of home dialogue regarding learning. Online parent teacher meeting software introduced in response to COVID-19 was advantageous for standardising meeting times, reducing home-school cultural barriers and the burden of attending a face-to-face meeting.

The research is unique in recognising the meeting as part of a wider engagement strategy using a suite of approaches, many of which are original, to further communication and support. Whilst the inclusive nature of the meeting with adolescent students differs significantly from previous studies, its unique value lies in the review

and reporting of learning characteristics as part of formative feedback and action. The approach has the potential to be transformative for educators, having significantly impacted the researcher's own practice. Its ease of commutation, low cost and participant beneficence offers schools a viable strategy for developing educational engagement.

Key terms: Reengineered parent-teacher meeting format, student inclusive, support and communication, educational engagement, parental academic socialisation, student learning characteristics and attributes, self-regulation, formative feedback and action, action research and exploratory mixed methods.

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ABBREVIATIONS

AIHL	Active Involvement and home learning activities
BERA	British Educational Research Association
CAS	Computing at Schools
CES	Catholic Education Service
CORE	Connecting, Optimism, Respect and Empowerment
COVID-19	Coronavirus Disease 2019
CPD	Continuing Professional Development
DfE	Department for Education
EAGS	Expectation, Aspiration, Goal setting and providing Structure
EAL	English as an Additional Language
EEF	Education Endowment Foundation
FAQ	Frequently Asked Questions
GCSE	General Certificate in Secondary Education
GDPR	General Data Protection Regulations
HOD	Head of Department
ICT	Information Communications Technology
IT	Information Technology
INSET	Inservice Training Day
ITT	Initial Teacher Training
KS3	Key Stage Three
KS4	Key Stage Four
OECD	Organisation for Economic Cooperation and Development
Ofqual	The Office of Qualifications and Examinations Regulation
Ofsted	The Office for Standards in Education
PAS	Parental Academic Socialisation
PEPs	Pre-Examination Point Exams
PTM	Parent Teacher Meetings
QLA	Question Level Analysis
RAI	Relative Autonomy Index
RECM	Reflective, Enhancing, Communication and developing Metacognition
SEND	Special Educational Needs and Disabilities
SES	Social Economic Status
SIM	Student Inclusive Meeting
SIMS	Student Information Management System
SLCA	Student Learning Characteristics and Attributes
SMART	Specific, Measurable, Achievable, Realistic and Timely
SPSS	Statistical Package for the Social Sciences
VESPA	Vision, Effort, System, Practice and Attitude
Y10	Year 10
Y11	Year 11

CHAPTER 1: INTRODUCTION

I am interested in how schools as social institutions affect an individual's experiences of education. Using a sociological lens, the thesis explores the behaviours, relationships and communication (Mkandawire, 2008) between the home, student and school to support educational engagement, in particular, the transcultural educational tradition of parent teacher meetings (PTM). The research focuses on the importance of these relationships for learning but does not explicitly investigate the cognitive processes associated and the psychology of learning. Whilst parents, students and teachers are educated in the psychology of learning through the various intervention activities, the research remains focused on how relationships between the home, student and secondary school are critical to empower engagement for learning. It examines the value of the meeting for engendering parental academic socialisation, the development of student learning characteristics and formative action. It questions whether the current meeting structure is the best use of such an opportune and rare home-school communication and explores other engagement methods and a reengineered meeting that might provide a better way.

As a practitioner researcher, I have adopted a mixed method action research approach to critically review and improve engagement in two Catholic boy's secondary schools. Throughout the thesis, my values are declared and manifest to ensure the integrity of the work. I have a unique understanding of the culture and beliefs of both schools, which are closely attuned to my own, having worked as a senior leader and Computer Science teacher in both and attended one as a student. The traditional approach adopted by schools to communication with the home, especially the annual meeting, has always seemed to me as a missed opportunity for educational engagement, especially since

student voice is restricted or absent. Furthermore, schools often provide parents with day-to-day information or evaluative reports, but limited support is provided for parental academic socialisation. As a practicing teacher and an Assistant Headteacher with responsibility for teaching and learning, I was in the perfect position to enable the transformation of practice in this area. The thesis examines engagement of Computer Science students and their parents from the initial GCSE parent teacher meeting in Year 10, to their final teacher assessed grades (due to COVID-19 there were no public exams), in the summer of Year 11. COVID-19 had a significant impact on the research resulting in changes to the methodology, intervention instruments and the meeting itself. Whilst Covid-19 presented challenges, it also presented opportunities for engaging more closely with the data.

In Chapter 2, the literature review was used to examine the broad bodies of knowledge relating to student and parent educational engagement. This process was required to construct a clear rationale and context to orientate the research, whilst identifying good practice to aid the development of the intervention instruments. The literature reviewed provides a sound research base but does not represent 'best practice', since it lacks the context and culture of the schools involved in my study (Allen, 2022). Instead, the term 'good practice' has been used. To be considered good practice, research was required to have a positive impact on outcomes (Serrat, 2017), what the Educational Endowment Foundation might refer to as "best bets" (EEF, 2022). Adoption in further studies where a positive impact was noted, was also favoured. Cogent theories and models corresponding to the research questions were used to explore engagement through parental academic socialisation and student learning characteristics. Many of these theoretical models are interwoven, often sharing a level of mutualism in their outcomes

which forms the conceptual underpinning of the study. The difference between parental involvement and engagement is considered and the rationale for the research focus on the latter. Engagement barriers were reviewed, including the limitations posed by the antiquated, misinterpreted existing meeting structure and COVID-19. Seminal, alternative meeting styles were considered, including the Family Conference Model (Vickers, Minke and Anderson, 2002), combined research from student-led conference models and the techniques identified within the Structured Conversations Strategy (Department for children, schools and families (DfCSF), 2009). The importance of formative feedback in supporting the development of self-articulated goals is explored. Finally, a digest of the literature for the main research areas, extrapolating praxis for possible intervention approaches is discussed.

In Chapter 3, I explore the research intentions and the associated methodological approach which are predicated on my values. Since no research is truly value free (McNiff, 2012), this section establishes my interpretation of knowable truths and social reality. Using this epistemological analysis, a clear rationale for the method, context, research tools, validity and reliability evolve. The complexity associated with the exploratory mixed method three-phase approach requires careful explanation, ensuring a clear rationale for each research tool is provided.

No singular parental academic socialisation process or student characteristic will ensure effective, prolonged engagement (Goodall, 2017; Gutman and Schoon, 2013). Therefore, the Phase 2 intervention approach explained in Chapter 4 uses a tailored strategy to support, train, educate and develop engagement in parents and students. This chapter provides the justification for the tools employed, adopting good practice

examined in Chapter 2, focusing on improving areas identified from the original parent teacher meeting in Phase 1. The value and effectiveness of each tool is discussed within the chapter based on the Phase 3 data collected.

In Chapter 5, findings are explored as grouped themes rather than explicit research tool results. The succinct approach was aimed at synthesising the significant amount of data collected using mixed methods and providing a springboard for development by other practitioners, whilst addressing the three research questions:

1. To what extent do current parent teacher meetings engender student and parent educational engagement;
2. What good practice exists in developing student and parent educational engagement; and
3. To what extent does reengineering the meeting to an inclusive structure develop student and parent educational engagement.

Themes arising from the first phase investigation included: preparation and training; the structure and purpose of the meeting; participant role construction and collaboration; and engendering parent and student educational engagement. The effectiveness of the intervention approach in addressing these themes was examined using the Phase 3 data collection, which yielded positive results. Whilst the new format required greater investment by all participants and was possibly too scripted, participants preferred the reengineered format. The meeting feedback, the goals agreed, and their later review also attended to improved student outcomes.

Finally, in Chapter 6, the recommendations and conclusion provide the practical application of the research, utilising the good practice established (while being conscious of the limitations and scope), focusing on further study and its application to other contexts. The term Student Inclusive Meeting was used to emphasise the student's involvement and to make a clear distinction with the original event, as the approach becomes embedded the term is unnecessary and group subject meeting or subject meetings will suffice. Action research is a continuous process since it focuses on pragmatic, contextualised pedagogical and societal issues which are dynamic in nature (Tekin and Kotaman, 2013). Given the extraordinary circumstances of the original research, exploring outcomes on engagement in ordinary time, post COVID-19, will be a key aim of any future endeavours.

Although the enquiry focused on a particular GCSE subject, this was used as a vehicle for whole school application to influence my practice and that of the schools involved. The purpose of this thesis was to share research-informed professional knowledge on meaningful support and communication, accessible to other educators in a range of contexts, to reengineer parent teacher meetings to enhance student and parent educational engagement, not to obtain universal facts or develop theory. Conceptually, the knowledge is for what Schon (1995) refers to as the swampy lowlands, where research is practical, sometimes imperfect, and outcomes are accessible. Using mixed methods and action research has enabled such praxis, being contextual, critical and accepting of values.

CHAPTER 2: LITERATURE REVIEW

2.1 Student and parent educational engagement

2.1.1 Models of educational development

It is necessary to determine what is meant by education and who is responsible for its delivery. While the noun education is often associated with places of study this is not exclusive; learning is global rather than school based and the practice of teaching often encompasses parents, family members and the community. It is important to understand how education is understood in the schools in which the study takes place. On review of the mission statements for both participating schools, education is not referred to as a classroom pursuit but a learning-centred, holistic process in "the formation of the whole person: intellect, heart, will, character and soul" (School B: Inner City School, 2021) and "committed to education of the whole person and the development of young adults of competence, conscience and compassion" (School Y: Suburban School, 2021). This resonates with work by educational reformist John Dewey, who believed education to be a social, active process, in which two sets of ethical principles; one for life in school and others for life outside school cannot coexist and be effective (Hinchey and Dewey, 2019). Dewey envisaged schools as social institutions to promote social interactions, where teachers cultivate a propensity in students to inquire and desire knowledge (Talebi, 2015). Dewey believed cooperation between home and school was key in promoting all aspects of educational development (Novack, 2005), a belief that is deeply embedded within this research.

Epstein and Sanders (2002) claim that education consists of overlapping spheres of influence between family, school and community with students at the centre. Within this model, if relationships are positive and cohesive, students are more likely to receive the same message from all three aspects. Bourdieu refers to these interactions as the concept of 'field', which are relations between an individual and institutions mediated by different forms of capital, "a structured system of social relations at a micro and macro level" (Grenfell and James, 1998:6). As discussed later in this section, the relationships within the field can differ based on the habitus of certain individuals, which can lead to cultural reproduction (Hart, 2013). More recently, Goodall (2017) suggested a learning centred model of schooling with four interacting zones of influence being schools, community, parents and students. Within this model, all entities exist inside the scope of learning, rather than controlling it, and agency circulates freely amongst them through cooperation. During the COVID-19 pandemic, this was witnessed first-hand as learning took place outside the classroom, supported by a range of people including family members (Goodall, 2022). This model is of particular interest, as it recognises the agency of the student in the learning process.

The participating schools' mission statements denote education as a shared approach in the formation of the whole person, representing a shift from traditionalist perceptions of education to a more student and parent involved social reconstructive process. Education should not be exclusively school based but a shared process of partnership, congruence and collaboration, what Epstein and Sanders (2002) refer to as family-like schools and school-like families. The schools' mission statements and the models in this chapter provide a working

definition for education within the research and, the importance of its shared nature between home and school, parents, teachers and students.

The research and literature reviewed focus on the sociology of education to develop educational practice that is rooted in morality and social justice (Madan, 2010). As a social science study, the findings are determined by the social world that people create, their relationships and the constant change these undertake (Meighan and Harber, 2007). By understanding how traditional approaches have resulted in educational inequalities (Sadovnik and Coughlan, 2016), it is possible to consider alternatives that may offer better outcomes for students. Whilst various intervention activities were designed to educate parents, students and teachers on the psychology of cognitive processes for learning, the research remains focused on how the relationships between the home, student and secondary school empower engagement for learning.

2.1.2 Parental educational involvement and engagement

The educational policy of successive governments over the past 50 years has shown an increasing interest in home-school partnerships: initially, the Plowden Report (1967) recommended a programme of involvement parental activities including meetings with teachers, open days, reports and home visits (Chapter 4); the 1978 Warnock Report, suggested that parents be advised, encouraged and supported by schools to effectively help their child; similarly, the Excellence in Schools White Paper (1997), emphasised the importance of family learning and home-school contacts; the Every Child Matters Policy (2003) stressed the importance of involving parents with their child's education; and the Children's Plan, 2007, emphasised the important role parents have on young

people's outcomes, aspirations and values. The 2010, 2016 and 2022 White Papers refer to the need for parents to be provided with the necessary information to make educational decisions and support their child's learning. These later papers are more aligned to the neoliberalist perceptions of parents as educational consumers (Trowler, 2003; Simpson and Envy, 2015), being able to monitor and holds schools to account (Brien and Stelmach, 2009). Whilst reports and white papers provided ideals and goals for engagement, the Education Act (1996), mandated a legal obligation for parents to ensure that a student was educated to compulsory school age (Section 7) and schools/ local authorities had to ensure that pupils were to be educated in accordance with parents' wishes (Section 9). As part of this process, parents needed to be provided with advice and regularly communicated with (discussed later in the literature review) to make suitable, informed decisions.

In Roman Catholic schools, this relationship extends beyond mandatory legal responsibilities. Parents in Catholic schools are recognised in cannon law as the first and foremost educators of the child (Vatican, 2022) and therefore, "Parents who have the primary and inalienable right and duty to educate their children must enjoy true liberty in their choice of schools" (Gravissimum Educationis, Vatican II, 1965: Section 6 cited in Catholic Culture, 2022). Practically, this means that schools have a religious obligation to engage in educational partnership with parents (Catholic Education Service, 2022). The importance of the parent in the educational process is recognised by both the state and the Catholic Church but as to what is meant by involvement and engagement needs to be clearly defined.

Early models by Epstein and Dauber (1991), Hoover-Dempsey and Sandler (1997), Eccles and Harold (1996) and Kohl, Lengua and McMahon (2000) envisaged different types of primary involvement. These included volunteering, communicating with teachers and collaborating with the school community. Such activities are essential for ensuring the "mutuality, connectedness and congruence between families and schools" (Minke, Sheridan, Kim, Ryoo and Koziol, 2014:529) and measured through parent presence rather than student outcomes. Goodall (2013) suggests that many of these activities are instigated, controlled and take place in and around the school. They are important for establishing suitable opportunities for information exchange and encourage the parents to invest in the culture of the school. The actions associated with parental involvement provide the primary dimension in developing participation, establishing channels of communication and a shared culture. It can be a positive way for parents to express their support of the school (Baeck, 2010) but active participation in the school community does not necessarily mean their child is more likely to succeed. Jeynes (2007) meta-study analysis found no statistically significant impact on overall academic achievement through parental participation and attendance at school events if used without engagement. Parental engagement must be centred on student learning not the relationship between the parent and the school (Desforges and Abouchaar, 2003; Harris and Goodall, 2008).

2.1.3 Parental engagement

To determine an effective intervention design, I needed to understand the relationship between parental behaviours, actions and values, and student engagement and

outcomes. By doing so, I was able to establish a suitable conceptual framework to best support engagement.

Suizzo and Soon (2006) describe parental engagement as the way parents support and facilitate their children's education. Grolnick and Slowiaczek (1994) describe three parental engagement elements: behaviour, focusing on school involvement; cognitive and intellectual involvement, focused on providing stimulating activities and materials, and personal involvement, relating to the parent's interest in schooling. The three parental engagement elements are useful in denoting the active, influential role of the parent but the categories are too broad and overlap, for example, behaviour combines school and home-based parent activities (Kohl et al., 2000). The authors themselves refer to the influence personal involvement may have on the other two elements. Goodall's (2017) definition includes the concept of parental attitude, describing parental engagement as providing moral support, guidance and attitude to learning. However, Hoover-Dempsey, Walker, Sandler Whetsel, Green, Wilkins and Closson (2005) provide a more rounded explanation, including the importance of education in engagement describing it as parents' attitude, behaviours and activities related to the student's education.

There seems to be a general lack of consensus as to a definitive categorical list of parental engagement types, particularly for education. Fan and Chen's (2001) meta-analysis of 25 studies, identified four categories of parental engagement including parent-child communication, home supervision, educational aspirations for children and, school contact and participation. Similarly, Hill and Tyson's (2009) research, based on 50 empirical studies provided seven subcategories. Wilder (2014) synthesised the

results from nine meta-analysis including those referred to above, to produce 10 amplified characteristics associated with homework, communication with the school, parental style, educational expectations and aspirations. Day-to-day, operational processes from these meta-analyses such as homework assistance, reading with children and, parental attendance and participation at school activities will not be considered in the research, since they relate to involvement rather than engagement or are associated with primary age students. The focus for my research is the beliefs, behaviours, activities, and skills relating to the parental process of developing a child's active involvement, often encapsulated in the term parental academic socialisation, discussed later in the chapter.

Grolnick and Slowiaczek's (1994) research focused on three parental involvement elements discussed earlier in this section, the study found a moderate link between parent involvement and development of student inner motivational resources (self-regulation, perceived competence and control understanding). For mothers, parental behaviour was positively associated with perceived competence and control understanding, whilst intellectual/cognitive involvement was associated with perceived competence. These elements were also found to be uniquely indirectly associated with school grades. For fathers, behaviour predicted self-regulation and perceived competence and was also indirectly associated with school performance. This research demonstrates the importance of parental involvement on student motivational resources leading to achievement (albeit indirectly). Whilst useful for the development of the conceptual framework, since it uses the participant profile of parents, teachers and students as planned for in my own research, the study was conducted with a younger age range (11–14-year-olds), who may exhibit different behaviour and levels of

motivational resources. Furthermore, achievement was determined based on school grades rather than the development of non-cognitive skills.

Kohl et al. (2000) proposes a theoretical model based on three earlier frameworks, each differing in its scope and dimensions (Grolnik and Slowiaczek, 1994; Epstein, 1995; Eccles and Harold, 1996). The purpose was to capture the variation in parental involvement behaviours presented in the contrasting models. Six factors were decided on: parent teacher contact; parent involvement at school; quality of parent teacher relationships; teacher's perceptions of parent's value of education; parent involvement at home; and parent endorsement of school. Whilst these factors were useful for identifying relationships between parental involvement and demographic risk factors, the authors acknowledge that the involvement factors were causally related. For instance, parent involvement in school would be greater when there is improvement in parent teacher relationships. Furthermore, the study was conducted with primary school children, the equivalent to Key Stage 1; at this point the expected types of involvement are different from the context of my study at Key Stage 4.

Hoover-Dempsey and Sandler (1995, 1997), based on elementary and secondary education in the United States, developed six key stages as illustrated in Figure 2.1. The factors at Level 1, although categorised differently, are similar to Kohl et al. (2000).

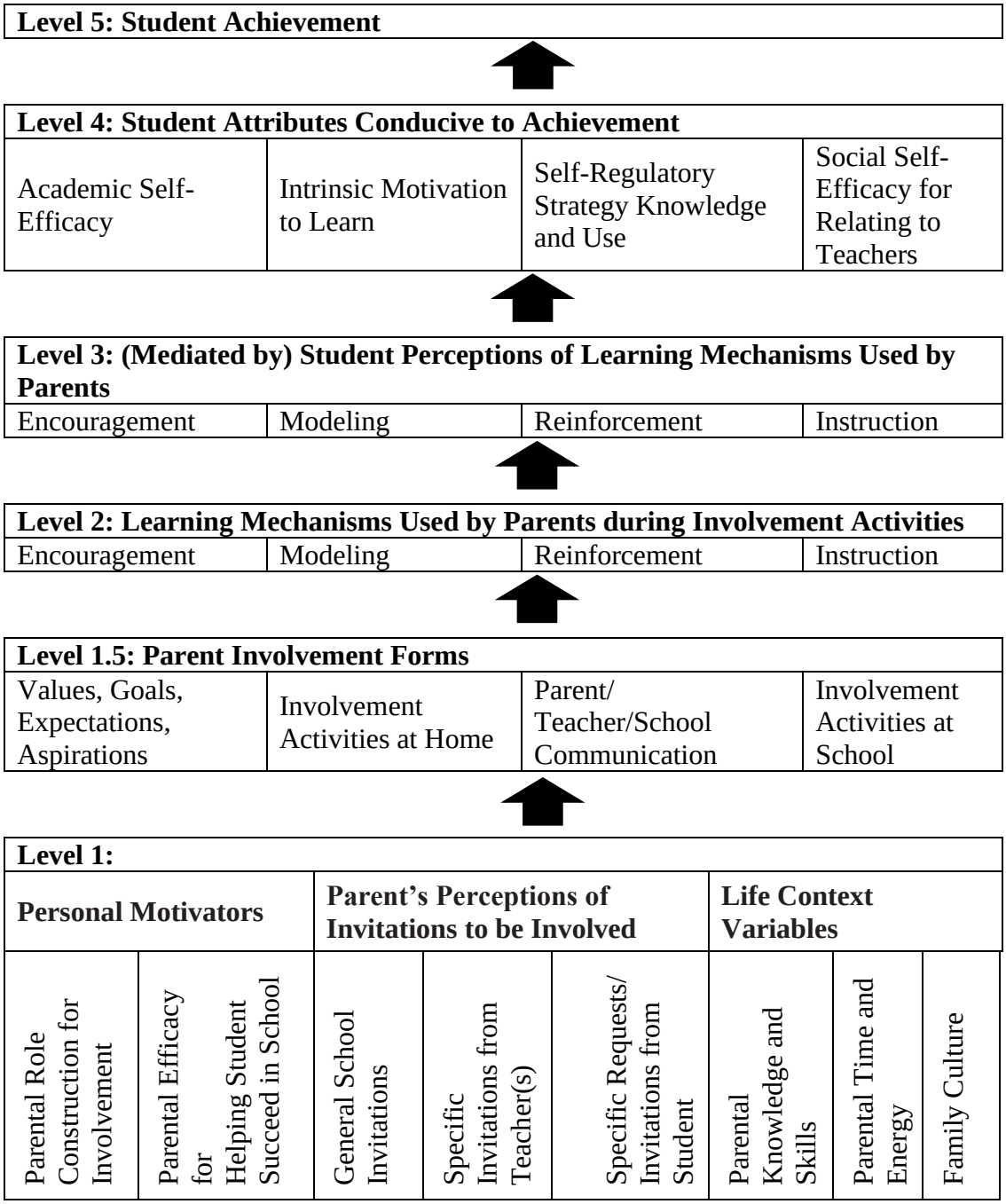

Figure 2.1. Hoover-Dempsey and Sandler (1997:1). Parent Involvement Model

At Level 1.5 the types of parent engagement/involvement are indicated, these are influenced by factors at Level 1, which either accelerate engagement or inhibit, acting as barriers (discussed later in this chapter). Level 2 focuses on specific parental actions which support student achievement, referred to as parental academic socialisation discussed within the next section. At Level 3 the student's perception of these

mechanisms determines their effectiveness. If effective, they will lead to the Level 4, student learning attributes of academic self-efficacy, intrinsic motivation to learn, self-regulatory strategy knowledge, and social self-efficacy for relating to teachers. All factors then culminate in the growth and development of student achievement. There are some limitations with this model. Level 1 fails to consider explicitly parental style and accountability. Level 2 and 3 provide terms that are quite broad and vary in significance and influence. Furthermore, academic self-efficacy and social self-efficacy for relating to teachers are closely correlated and could be combined. This model provided a layered construct of how parental involvement can lead to student achievement. Based on this, further exploration into engagement barriers, types of engagement/ involvement, parental academic socialisation and student learning characteristic was conducted and is discussed throughout this chapter.

Parental involvement is the dominant aspect in many of the previous models, whereas Goodall and Montgomery (2014) and Goodall (2017) focus on the importance of engagement, with a three-tiered model beginning with parental involvement in school through to parental engagement with learning. At each stage, parental agency increases and school agency decreases. Similarly, for Hoover-Dempsey and Sandler (1995), involvement is a precursor to engagement and engagement is child-centred rather than school-centred. As shown in Figure 2.2, based on Goodall and Montgomery (2014), PTM have a limited role as a method of involvement; this is likely accounting for its traditional format but fails to see the potential the event could have for parent and student educational engagement. Of particular importance to my research is the emphasis placed on home learning, ensuring education is a shared pursuit. Another feature, parental moral support and guidance, is an important precursor for student self-

regulation and autonomy, as discussed later in this chapter. Within the model agency undergoes a shift in terms of action and responsibility. When there is parental engagement with learning, there is greater agency on their behalf, while the school's agency decreases overall in relation to parental engagement with the student's learning, which should rightly reside with the parent.

1.Parental involvement with the school		
Reading in class	Volunteering in school	Parents evening
2.Parental involvement with schooling		
Helping with homework		Keeping track of coursework
3.Parental engagement with learning		
Moral support	Guidance	Attitude toward learning in the home

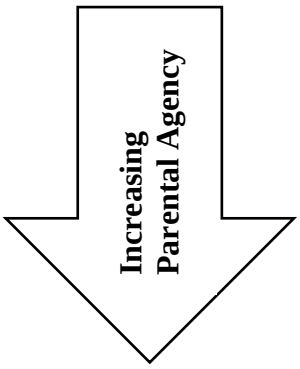

Figure 2.2. Adapted from Goodall and Montgomery (2014:13). Parent engagement: Involvement Continuum

My research uses the models covered in this section to conceptualise how parental engagement is linked to developing student learning and outcomes. It draws on Goodall and Montgomery's (2014) model (also referred to in Goodall, 2017), particularly parent behaviours and attitudes shown in Figure 2.2, Hoover-Dempsey and Sandler's (1995) layered construct leading to student achievement characteristics and parental involvement elements identified by Grolnick, Ryan and Deci (1991) that can support the student's inner motivational resources.

2.1.4 Parental Academic Socialisation (PAS)

All parental educational engagement and involvement practices are essentially behaviours, expectations and activities to influence student learning and academic

outcomes, which is referred to as parental academic socialisation (Yamamoto and Sonnenschein, 2016). PAS processes can start from a very young age whereby, "parents through their individual experiences, social and cultural characteristics, and behaviors, set the stage for their children's early academic experiences" (Taylor, Clayton and Rowley, 2004:174). The types of PAS processes change with the age of the student, starting very directed with homework assistance and reading support at primary school to more self-regulative during adolescence and secondary school. A distinguishing feature of PAS is that it requires broader engagement than school-centred learning, where parents need to be considered as educational partners (Suizzo, Jackson, Pahlke, McClain, Marroquin, Blondeau and Hong, 2016). The process is similar to socialisation, as it seeks to instil particular behaviours, attitudes and skills to prepare the child to be a part of society (Taylor et al., 2004) but focuses on making them independent and effective learners. There is no one action that results in immediate or prolonged achievement, rather a "complex, socially mediated process" (Walker, Shenker and Hoover-Dempsey, 2010:13).

The term PAS has not been universally adopted by all parent involvement models, for instance, Grolnick and Ryan (1989) refer to autonomy support, whereas Hoover-Dempsey and Sandler (1997) refer to active ingredients (encouragement, modelling, reinforcement and instruction) but the outcomes in most cases are the same, improved motivation and the development of key learning attributes. To provide greater uniformity when referring to parental educational engagement processes, they will be referred to as parental academic socialisation, abbreviated to PAS.

In the meta-synthesis completed by Wilder (2014), PAS alongside an authoritative parenting style, were found to have the most significant impact on achievement during middle-school (entering adolescents). PAS is characterised by the activities and practices of the parent such as: the provision of learning materials; modelling the importance of education and expectations; parental participation in intervention programmes; good communication and positive messages about schooling; and monitoring children's out of school activities (Taylor et al., 2004; Hill and Tyson, 2009; Suizzo et al., 2016). Certain parent behaviours and actions have a greater impact than others including: the parents' ability to impress the value of academic performance, which has a strong positive relation with achievement (Hill and Tyson, 2009); parental expectations, which are key in developing learning attributes as children are likely to harbour or emulate related beliefs (Wilder, 2014); and communication style, which encourages the child to reflect and to think critically about the causes and effects of their actions (Burleson, Delia and Applegate, 1992). From my own experience in a classroom setting, self-actualisation is a powerful tool developing resilience and grit; by examining the causes and consequences of their behaviour, students can modify it appropriately and better prepare for future instances (Taylor et al., 2004). Discussing learning strategies, making future plans and goal setting were found by Hill and Tyson (2009) to have the strongest correlations with student achievement. Desforges and Abouchaar's (2003) literature review on behalf of the Department for Education and Skills concluded that the most important factor was home involvement, especially the conversations parents have with their children. Similar findings have been shown by Epstein and Sanders (2002), Suizzo and Soon (2006), Fan and Chen (2001) and, Quigley, Mujis and Stringer (2018). Baeck (2010) when surveying 355 secondary school teachers on the importance of different parental tasks found that after attending

PTM, student-parent talk regarding school and learning was the next most important factor. The parents' interest (or family members) and the extent to which these are transmitted through interactions can potentially also provide valuable social capital for students (Hart, 2013).

PAS research aspects

Whilst the definitions and models in the previous sections provide a theoretical basis for determining parental engagement and its influence on student success, my review now focuses on their practical application. It is not possible to focus on all dimensions of PAS because there are too many elements to consider and it is unrealistic to believe my research could make a significant contribution to each in the limited timeframe available. PAS was therefore considered in relation to the educational engagement of Key Stage Four (KS4) students studying Computer Science. The focus was not solely associated with supporting PAS through the PTM but how the school overall could improve support and communication in the development of PAS, especially home learning activities and dialogue, goal setting and expectations. PAS can be more challenging with adolescents compared to primary school aged children, as they seek greater independence and autonomy, offering parents less invitations for engagement with their education (Edwards and Alfred, 2000; Hill and Tyson, 2009). Therefore, supporting parents to help scaffold their sons' growing autonomy and self-regulation was a key feature of the research and the design of the intervention instruments.

Suizzo and Soon's (2006) three categories were adopted due to their original application to parent engagement with late adolescent students. The first category represents responsiveness and emotional autonomy support, these are the practices associated with

parents' expression of pride, praise, encouragement and autonomy support. This category can effectively influence the child's perceived competence and internal locus of control, two key aspects of intrinsic motivation, discussed later in this chapter. The second category is active and direct involvement; this is the parents' direct participation in stimulating activities necessary for their child's education. The home learning environment has been shown to have a significant impact on student development particularly children's literacy and numeracy (Melhuish, 2016). Fostering a high-quality home learning environment is an effective method for improving children's academic attainment (Sammons, Toth, Sylva, Melhuish, Siraj and Taggart, 2015). The third category represents control and demanding hard work; this comprises of practices aimed at communicating expectations of high performance, competitiveness, and demandingness. This third characteristic is related to an authoritative parenting style and attributed with greater development of a child's internal locus of control, compared with permissive or authoritarian practices (McClun and Merrell, 1998). Whilst the research is designed to influence parenting style, I am aware of its limitations in changing such a significant, hard-wired aspect of parenting.

Contributing to the existing body of knowledge, I have created three targeted categories, using Suizzo and Soon's (2006) research and other aspects of the literature review. Suizzo and Soon's (2006) original research was conducted with university students, so adaptions were required to account for the context including home-school communication in the form of the PTM and the role of the parent.

- Reflective enhancing communication and developing metacognition (referred to as RECM based on responsiveness and emotional autonomy support)
    - Specific praise for task completion and success in learning.
    - Use parent teacher meetings to discuss progress with child and school.
    - Allow child to make significant decisions or consult and ask for their opinion.
    - Encourage independence, autonomy and self-regulation.
    - Regular discussions regarding learning at school and curriculum.
    - Improve communication with the school.

- Active involvement and home learning activities (referred to as AIHL and based on active and direct involvement)
    - Develop home learning activities linked to the curriculum.
    - Organise learning opportunities such as tutors, museums, exhibitions.
    - Review assessments, homework and classwork and support accordingly.
    - Explain difficult concepts to child or seek further support.
    - Spend time with child on creative projects and hobbies.

- Expectation, aspiration, goal setting and providing structure (referred to as EAGS based on control and demanding hard work):
    - Foster education and occupation aspirations (making future plans).
    - Reviewing and discussing assessments/grades with my child and use these to support learning at home and to set work orientated goals.
    - Provide a structured environment for the child with work and leisure times, encouraging them to plan the use of their time effectively.

- Discuss the importance of education and working hard.
- High expectations set for school grades, sports performance and other pursuits.

As discussed in later chapters, these categories were used to assess levels of PAS, and explore possible intervention instruments for their improvement. A key feature running through all three categories, significant for student self-regulation, was the importance of home learning conversations between parent and child.

2.1.5 Student Learning Characteristics and Attributes (SLCA)

According to the most recent White Paper (2022), disadvantaged students are less likely to achieve GCSE grades 4 or above in English and maths (45% versus 72% of all other pupils) and the expected standard of reading, writing and maths at KS2 (51% versus 71%). Narrowing or even closing the achievement gap between disadvantaged students and their counterparts is critical to improving social justice and equality, a process that can be aided through effective parental engagement (Goodall, 2017; Reay, 2018). The research aims to develop intervention instruments that support this process and the achievement of all but does not seek to directly impact student achievement summary measures such as grades and test results required for statistical comparisons. Even a direct correlation between student results and the research intervention would be questionable given the numerous extraneous variables impacting exam performance. This design choice, although not planned in response to COVID-19, was fortuitous given that teacher assessed grades were used instead of external examinations, making it difficult to compare data from previous years to the extent that Paragraph 221 of the

Ofsted (office of standards in education) School Inspection Handbook explicitly references their exclusion as an indicator of student outcomes (Ofsted, 2022). Instead, I seek to develop student educational engagement by improving a specific set of non-cognitive skills that support learning and motivation (see Figure 2.4), resulting in achievement grades and measure. This section explains the conceptual model for the engagement approach to embody the theoretical aspects and operationalise the research.

The teaching of virtues or qualities of certain behaviours is referred to as character education and is important for developing key aspects of attainment and engagement including motivation, self-control and coping skills (Department for Education DfE, 2019). The significance of character education is noted by its inclusion in the personal development section of the latest Ofsted Inspection Framework (2019).

There are multiple interpretations of character with no definitive list or consensus on possible outcomes (Lucas, 2019). The Center for Curriculum Redesign Character Framework (2015), identifies four dimensions: meta-learning, knowledge, skills, and character. The model is pragmatic and recognises the need for all four dimensions to provide a holistic approach to twenty-first education. The Jubilee Centre's Framework for Character Education (Jubilee Centre for Character and Virtues, 2017) focuses more widely on human flourishing than performance, referring to four types of virtues including intellectual virtues such as: autonomy and critical thinking; moral virtues such as compassion and respect; civic virtues such as citizenship; and service and performance virtues such as motivation and resilience. Only certain aspects of this model are relevant to the context of my research (meta-learning and skills domains, and intellectual virtues and performance virtues), the other characters are beyond its

operational scope, focusing more broadly on moral virtues and civic responsibility rather than educational engagement and learning. Furthermore, some character traits are taught informally and tacitly over years and would be difficult to improve and measure through a short-term intervention programme. Rather than reviewing global approaches, partial character-like frameworks are also valuable (Lucas, 2019) and more attuned to the specificity of my research.

Ellis and Tod (2018) developed a framework of behaviours for learning focusing specifically on those behaviours necessary for a person to learn effectively through engagement, access and participation. The authors suggest several learning behaviours specific to the classroom including motivation, organisation and dealing with difficulties in learning but are keen to impress that the list is not definitive and need sub-categorisation or attribution to be operational. Gutman and Schoon's (2013) literature review for the Education Endowment Foundation (EEF) recognises eight non-cognitive skills associated with positive outcomes in adolescents: self-perception, motivation, perseverance, self-control, metacognitive strategies, social competencies, resilience, and creativity. Oakes and Griffin's (2017) model focuses specifically on five non-cognitive skills required at A-Level and GCSE of: vision, effort, systems, practice, and behaviour which account for a number of broader academic terms as shown in Table 2.1. The Oakes and Griffin's (2017) model is evidence based having been developed in schools over the past ten years, with the same key stage as my research. The original research tool piloted with 1,669 students in the UK (719 boys and 950 girls).

	Vision	Effort	System	Practice	Behaviour
Grit	✓	✓			
Growth Mindset		✓			✓
Resilience					✓
Metacognition	✓	✓	✓	✓	✓
Self-Efficacy	✓				✓
Conscientiousness		✓	✓	✓	
Self-control	✓	✓			✓

Table 2.1*. Oakes and Griffin (2017:28). Summarising the links to other constructs*

Since there is no individual non-cognitive skill or silver bullet for predicting positive outcomes (Gutman and Schoon, 2013), a multi-faceted approach was embraced in my study. The main non-cognitive skills identified by Oakes and Griffin (2017) were used, with the addition of behaviour and attributes for each characteristic (discussed in Chapter 3). The final groups of characteristics and their attributes were referred to as student learning characteristics and attributes, abbreviated to SLCA throughout this thesis. These served a dual purpose; as a research data collection tool to determine suitable intervention and, a self-evaluative rubric for students (and a student review scale for teachers). The purpose and use of the SLCA audit is further discussed in Chapter 3 and 4.

The acquisition of positive characteristics relating to academic achievement and learning is determined by the student's ability to exercise the capabilities independently and adroitly which requires self-determination and intrinsic motivation. It is possible for a student to be aware of SLCA and only implement these in a cursory fashion when requested to by an adult, such as goal setting, but for its constitution to be meaningful, students need to show ownership and mastery, being able to think strategically about the

characteristic, knowing when and how to use it. These fundamental qualities or root characteristics are referred to by Hoover-Dempsey and Sandler (1997), Hoover-Dempsey, Walker, Sandler, Whetsel, Green, Wilkins and Closson (2005) and, Walker, Shenker and Hoover-Dempsey (2010) as: academic self-efficacy; intrinsic motivation to learn; self-regulatory strategy use; and social self-efficacy for relating to teachers. Academic self-efficacy is the student's belief in their ability to develop new knowledge. Those students possessing this quality are more likely to persist and show resilience in the face of academic adversity. Students who are intrinsically motivated to learn have a genuine interest in the pursuit of knowledge for its own sake and are curious to learn more. Self-regulatory skills are those that support learning, including goal setting, monitoring progress and metacognition. A report by Quigley, Mujis and Stringer (2018) found theses skills can make up to seven months additional progress if used effectively. Self-efficacy for relating to teachers refers to the social dimension of schooling, knowing how to seek help and work cooperatively with teachers, mentors and peers.

Self-determination theory (Grolnick, et al., 1991, Grolnick and Slowiaczek, 1994, Grolnick, Benjet, Kurowski and Apostoleris, 1997; Ryan and Deci, 2000a) provides an alternative perspective, referring to three root characteristics contributing to achievement as autonomy, competence and relatedness. Autonomy refers to choices, jointly established rules and open exchange. Competence refers to the student's ability to execute actions and relatedness refers to feelings of warmth, care and involvement. The degree to which these characteristics are present indicates the type of motivation that influences a student. Those students with low levels of competence, autonomy and relatedness are more likely to be externally motivated, participating in activities through external pressure, punishments and rewards (Ryan and Deci, 2000b). Those with high

levels of the trio are more likely to be internally motivated, even intrinsically motivated (self-determined), whereby activities are completed because they are interesting, enjoyable and the students have the "inherent tendency to seek out novelty and challenges, to extend and exercise one's capacities, to explore, and to learn" (Ryan and Deci, 2000a:70). Figure 2.3 is a visual representation of the motivation continuum by Ryan and Deci (2000b:2).

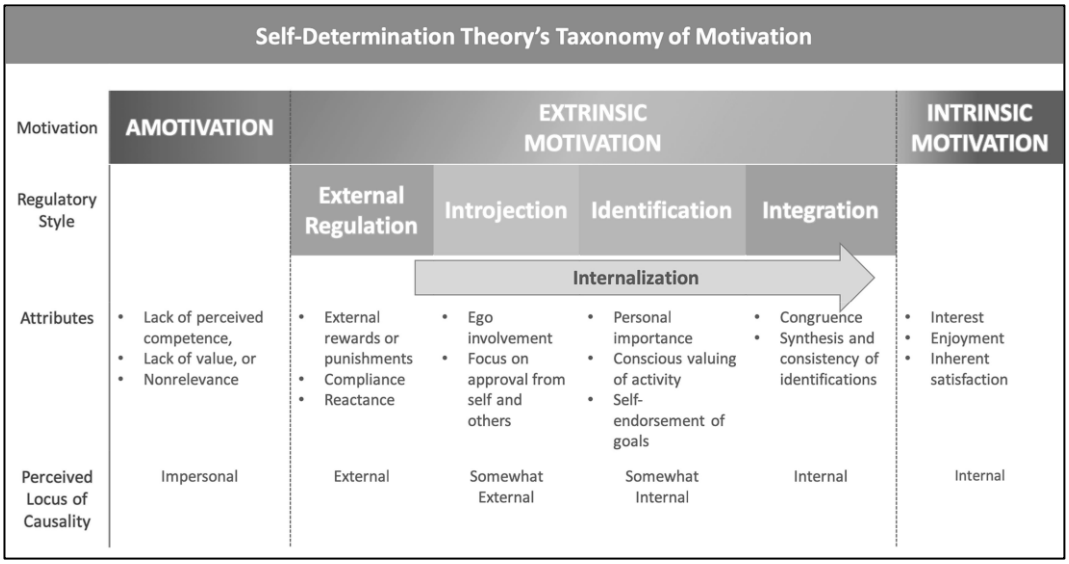

Figure 2.3. Ryan and Deci (2000b:2). Motivation Continuum

As illustrated in Figure 2.3, motivation becomes more intrinsic as it is internalised, the student become less motivated by external rewards and punishments, seeing the personal importance of the activity and taking enjoyment and satisfaction from its pursuit. This is an important process for any parent or educator and at the heart of pedagogy and PAS; igniting that passion for a subject and a thirst for knowledge, is certainly what motivates me and undoubtedly other teachers.

The two theoretical frameworks provide a degree of objectivity and triangulation in determining the desired goal of student intrinsic motivation and the development of my

conceptual model. Certain commonalities exist relevant to the research; competence in Grolnick et al. (1991) and Ryan and Deci's (2000a) research is characterised by the student's belief in their ability to perform a skill or an activity to succeed. This is mirrored within Hoover-Dempsey and Sandler's (1997) and Hoover-Dempsey et al. (2005) attribute of academic self-efficacy. Similarly, both theories value the importance of what is referred to in one theory as autonomy and the other self-regulatory strategy use. Finally, both impress the importance of parent and teacher support, referred to by Grolnick et al. (1991) as control understanding or relatedness by Ryan and Deci (2000a), this is the degree to which students understand who is responsible for school support and outcomes, referred to in Hoover-Dempsey and Sandler (1997) and Hoover-Dempsey et al. (2005) as social self-efficacy for relating to teachers. Both are included in the illustration of my conceptual model shown in Figure 2.4. Although different terms are used, Grolnick et al. (1991) and Hoover-Dempsey et al. (1995,1997, 2005) recognise the importance of self-regulation. Zimmerman (1990, 2002, 2008) provides a pedagogical lens for focusing these terms on learning. Zimmerman views learning as an activity conducted by students proactively, where learners adopt metacognitive processes to set goals, organise, monitor and self-evaluative using a self-orientated feedback loop (Zimmerman, 1990). Later work by the author refers to these stages as the forethought phase, performance phase and the self-reflection phase (Zimmerman, 2008). The self-evaluative and introspective nature of the forethought and self-reflection phase are important considerations for the intervention instruments, as is the formative feedback needed to enable the performance phase. Zimmerman (2002) like Hoover-Dempsey et al. (1995,1997, 2005) and Ryan and Deci (2000b) recognise that effective self-regulation needs to be underpinned by intrinsic motivation and a learning goal orientation, whereby, students value a task or a process of learning for its own merits.

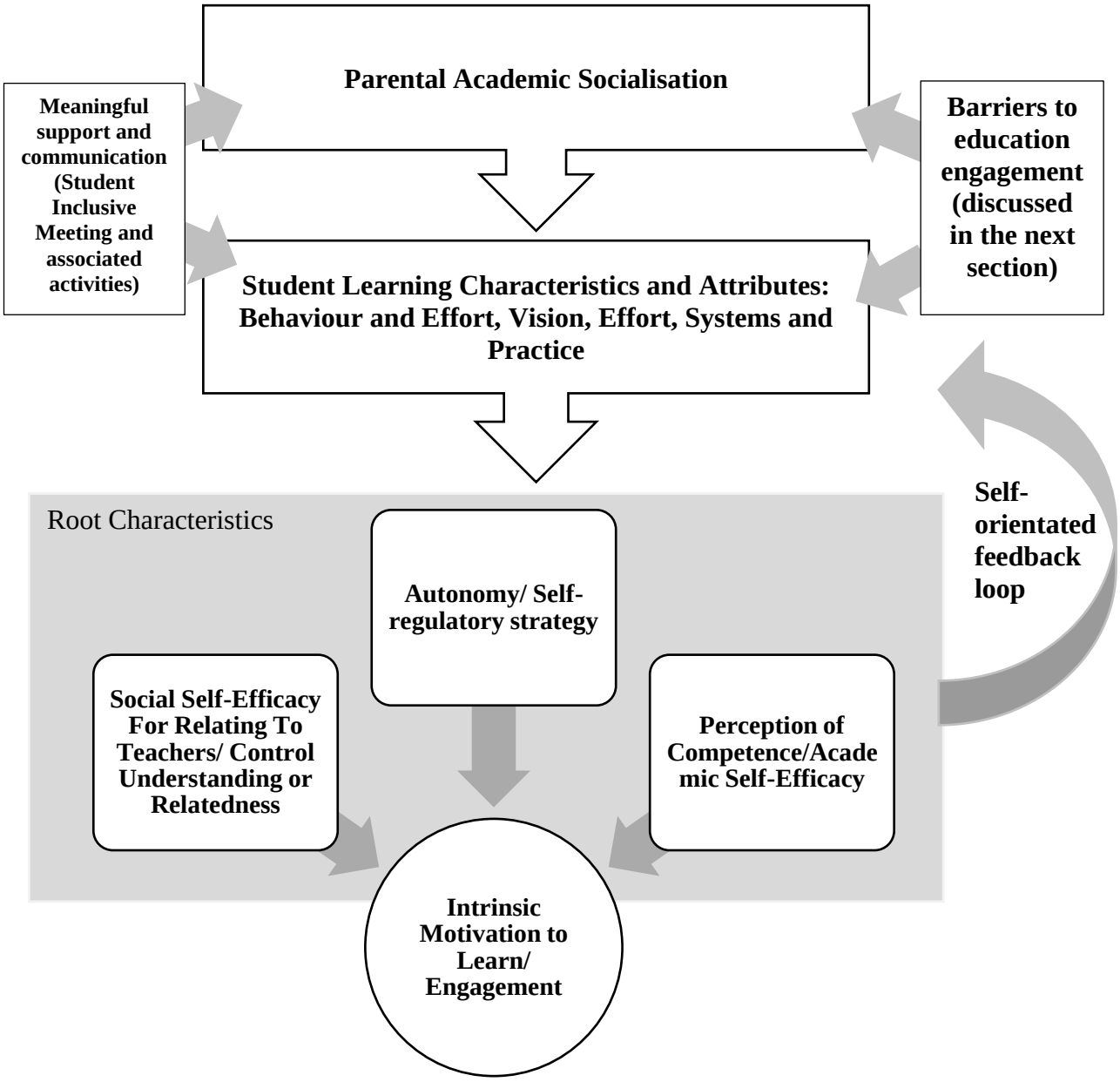

Figure 2.4. Conceptual model for student engagement

Figure 2.4 is my conceptual model for developing engagement and intrinsic motivation to learn, based on the principle that engagement can be influenced by the root characteristics, which in turn are influenced by SLCA and PAS. The SLCA were based on Oakes and Griffin (2017) research and the three categories of parental academic socialisation were based on Suizzo and Soon's (2006) research. The gradational steps in Figure 2.4, moving from PAS to intrinsic motivation were based on the Hoover-

Dempsey and Sandler (1995, 1997) model discussed earlier in this chapter. Key features of the approach include reducing levels of controlled behaviours (Grolnick et al., 1991) and developing "thoughts, feelings, and behaviours that are orientated to attaining goals" (Zimmerman, 2002:65). Using Zimmerman (1990) and formative feedback processes discussed later in this chapter, a virtuous cycle can be established between the SLCA and root characteristics (see Figure 2.4). An awareness of the barriers faced by parents, teachers and students was important to understand the factors inhibiting educational engagement and how they may be overcome.

The reengineered meeting (the Student Inclusive Meeting) and the associated activities can be used by parents and teachers to carefully manage increased autonomy, working with the students in open dialogue, helping them to reflect and providing support with metacognition, learning mastery, goal setting and expectations. Providing meaningful support and communication is important in facilitating warmth, empathy and provision of choice (Skinner, Johnson and Snyder, 2005), and establishing educational partnership. Furthermore, student discourse offers a mechanism for feedback which develops competence (Ryan and Deci, 2000a), encouraging self-initiation, contributing to self-determination (Grolnick et al, 2014) and social self-efficacy for relating to teachers.

2.2 Barriers to engagement

To ensure the action research is based on a sound conceptual framework, a critical understanding of the barriers to parents, teachers (as professionals and representatives of the school) and students is required that may impede the positive behaviours and

effective practices described in the previous section. Certain barriers remain beyond the purview of my research due to the limited timeframe, resources and small-scale nature. Moreover, some parent and teacher beliefs and possibly misconceptions regarding engagement may be difficult to change, being deep-rooted and entrenched. This section does not seek to categorise participants into homogenous groups or make broad generalisations and assumptions. For instance, I am aware that not all parents with English as a secondary language find it difficult to engage with the school, but this group is more likely to face difficulties. Understanding the underlying issues is needed to see if the research can make an improvement or provide a solution.

The purpose of Catholic education in England is to "care for the poor and educate those who are socially, academically, physically or emotionally disadvantaged" (CES, 2022: About Us). Its focus on community and the importance of social institutions, whilst recognising the uniqueness of each human made in God's image, ensures it accounts for both individualist and collectivists social value orientations (Ballor, 2018). Many parents send their children to Catholic schools because of these strong values that underpin the schooling even if they are not Catholic; a third of all students are of another faith or none which is over a quarter of a million students (CES, 2022). The Catholic schools within this study promote the values of dignity, respect, kindness and providing equal opportunities for all students (School B and Y Policies 2021-2022). They both recognise parents as the first and foremost educators of the child and the importance of a "partnership" (School B and School Y Mission Statements), School Y refers to the purpose of this partnership to "foster open, honest supportive relationships and welcome parents to be involved in all aspects of school life" (School Y mission statement). The emphasis these schools place on supporting parents and the mission of

Catholic education aids the reduction of educational engagement barriers, particularly to parents and students, discussed in this section.

2.2.1 Historical context

A key barrier to engagement is the classical and somewhat antiquated approach to reporting practices still present in the English education system. The 1986 Education Act gave parents the right to see their child's records, it also became mandatory for schools to issue a detailed annual report to parents. The Educational Regulations Act 2005 required all schools in England to provide parents with a written report at least once a year with "arrangements for discussing the report with the pupil's teacher" (Schedule 1:1c); this is also referred to in the DfE Governance Handbook and Competency Framework (2017: Section 6.4.13). Schools acting on this requirement typically used PTM to facilitate this, however, there is no prerequisite to the exact format of the discussion (The Key, 2018). This requirement was intentionally elemental to provide schools (Headteachers) with the flexibility to add supplementary aspects to make it applicable to the specific school setting and phase. Schedule 1 from the Education Regulations Act (2005) lists the information to be provided and the requirement for its discussion with parents.

a) Brief particulars of achievements in all subjects and activities forming part of the school curriculum.
b) Comments on general progress.
c) Arrangements for discussing the report with the pupil's teacher.
d) Attendance record, except where the pupil is in:

i) the reception year; or

ii) Year 12 or 13 and is no longer of compulsory school age.

e) The results of any public examinations taken, by subject and grade.

f) Details of any vocational qualifications or credits towards any such qualifications gained.

g) The results of any NC tests taken during that year.

(The Education Regulations Act, Schedule 1, Regulation 6 (4), 2005)

The language and the types of information to be discussed tend to be summative or evaluative with little opportunity for collaboration or goal setting. Furthermore, by discussing the report, the PTM acts a summary of an evaluation, increasing repetition and limiting its value for formative action. The regulations regarding reporting and the follow up discussion also state that parents or those students leaving education at 18 years old are to receive the information (Section 6: Paragraph 7) and not the student themselves, omitting the subject from their own educational process. The rationale behind the regulations was to provide parents with greater transparency of school processes and when originally designed, limited technological capabilities made home school communication more challenging, however, families now have greater online access and reporting has become more sophisticated. In the schools that I work with, reporting data is provided in a meaningful, accessible and regular fashion that requires limited explanation. Interim tracking reports provide snapshots throughout the year, normally including effort, progress and the target grade, with colour coding to simplify the information.

2.2.2 Parental barriers to educational engagement

Baumrind (1971) originally posited three types of parenting styles permissive, authoritarian and authoritative. A permissive parenting style is largely non-controlling, warm and largely laissez faire, where parents are happy for the child to make decisions about their education and are often missing, passive or indifferent about their involvement. An authoritarian parenting style is associated with being detached and controlling, focusing on obedience, punishment and discipline. An authoritative parenting style is associated with higher levels of student self-esteem, resilience, autonomy, self-regulated learning and achievement in students, whilst the other two styles are not as conducive and can even hinder academic development (Harris and Goodall, 2008; Goodall and Vorhaus, 2011; Goodall, 2013; Yamamoto and Sonnenschein, 2016). Having knowledge of parenting styles is useful in understanding a parent's approach to involvement which can impede or facilitate effective engagement in learning (Goodall, 2013).

Parental role construction (closely associated with parenting style), is the parent's belief about their involvement in the child's schooling, in essence, how they perceive their parent job description. The extent to which parents believe they are involved in the teaching-learning process can be a strong indicator of involvement (Grolnick et al., 1997). Parents may hold fixed assumptions on the role of the home and the role of the school, not seeing these to be intrinsically linked (Goodall and Vorhaus, 2011), they may be unaware of the role they play in developing a positive habitus and cultural capital (Reay, 2000). If parents do not see engagement as part of their parental role, they

are unlikely to prioritise it (Goodall, 2017) or be involved in associated activities such as PAS.

Self-efficacy refers to parents' beliefs about whether their involvement is likely to have a positive influence on their children's education and if they have the competence to contribute. Parent's self-efficacy can inhibit their involvement, particularly at secondary level, where parents may believe they do not have the necessary skills or knowledge to support their child or influence the school (Eccles and Harold, 1996; Brien and Stelmach, 2009; Hack, 2007). To avoid facing their feared inadequacies or negatively impacting their child, parents with low self-efficacy may avoid involvement being absent from PTM or related communications. The use of support guides and toolkits can increase parent's self-efficacy and enhance parent's active role construction by providing useful advice on the curriculum but also PAS processes (Hoover-Dempsey, 2005; Collins, Moles and Cross, 1982). Providing information before a PTM, such as a frequently asked questions sheet, can increase confidence by enabling parents to feel more knowledgeable and educated regarding the event, while potentially answering questions they would not be willing to ask face-to-face in fear of looking ill-informed.

Class and social economic status (SES) may be associated with parental educational engagement and student achievement (Grolnick et al., 1997). Although variations in engagement practices do exist across SES groups (Haack, 2007), it is more complex than homogenous groupings and SES alone does not explain engagement. Often, available resources, such as money, time and cultural capital (Minke and Anderson, 2007; Walker et al., 2010) govern the capacity for engagement, resulting in more

favourable conditions for those with more resources (Lareau, 1987; Räty, Kasanen and Laine, 2009).

Lower SES families may feel marginalised by schools, as the culture, behaviour and practices do not correspond to the habitus of working-class parents (Bourdieu and Passeron, 1990). Seminal work by Bourdieu (1977) suggests that school culture may inherently advantage the middle-classes. Working-class parents may lack the reasoning and negotiating skills to acquire the best for their children. As Goodall (2017:86) states "in effect, children thus benefit twice, once from the nature of their parents' relationship to the schooling system and again from inheriting the ability to relate to the system in the same way", parents from the middle-classes being more educated are more informed of school systems and how to manipulate these to their advantage. Middle-class parents may have the means of investing their cultural capital to ensure an optimal educational setting, as Reay (2004:541) explains, they have "possession of economic, cultural, and social capitals, and 'a feel for the game' generated by middle-class habitus". These forms of capital ensure they have the power to influence collective decisions in schools, select schools by moving location or adopt self-exclusion by sending their child to independent schools.

Albeit unconscious, teachers may find it easier to communicate with middle-class parents by association. They may struggle with supporting parents whose behaviour and communication differ significantly from their own. Based on personal values and beliefs, the teacher can create a definition of a normal parent (Lasky, 2000, Epstein and Dauber, 1991; Power and Clark, 2000), creating an affinity bias whereby they prefer a person if they believe that person shares their beliefs or points of reference and adopting

a confirmation bias when parents do not conform to this. Teachers may be unaware they exhibit bias in their interactions (Lasky, 2000; Epstein and Dauber, 1991; Power and Clark, 2000). Training is required to help teachers decouple any unconscious bias or stereotypical associations of SES. Furthermore, language used in communication, especially PTM, needs to be clear, avoiding assumptions regarding parents understanding of school systems or the curriculum. Any educational engagement activities should consider the finite resources available to some parents by being cost-neutral, time-efficient and flexible in delivery.

London represents the most ethnically diverse region in England and Wales, 40.2% of residents identify as either Asian, Black, Mixed or other ethnic groups (Office for National Statistics, 2020). The cultural and familial beliefs regarding education for these groups may differ significantly to those values often established in schools by the white-middle classes (Fan, Li and Sandoval, 2018; Bourdieu, 1977). Trumbull, Rothstein-Fisch, Greenford and Quiroz (2001) suggest there are two distinct cultural value orientations associated with ethnicity and culture; collectivism and individualism. Individualism encourages independence, the ability to engage in discussion and debate and the role of the parent as educator, whereas collectivism recognises the student to be part of a group, to listen to authority and the teacher's role to educate. A discord in social construction can occur when these cultures are not shared between home and school, which can manifest in the PTM and engagement activities. For instance, teachers may encourage students to ask lots of questions during class and be critical, whereas the home culture may believe in respectful silence, listening and compliance. Whilst my research does not identify the value orientation associated with an ethnicity,

it is important to be aware of possible parental motivations to discourse and barriers to engagement.

In the UK the proportion of pupils in secondary school with English as an additional language (EAL) is 17.1% (DfE, 2021). The students involved with my research have a high level of proficiency of English (graded as Competent or Fluent), however, there is no measure used to determine parent levels. Parents with limited English will find it difficult to be involved with their child's schooling, lacking the language proficiency to engage with school systems and providing support for home learning (Evans, Schneider, Arnot, Fisher, Forbes, Hu and Liu, 2016; Rodriguez-Brown, 2009). This can lead to anxiety amongst parents as they worry their level of English will present a barrier to the school (Pim, 2010). In PTM, parents can be discouraged from actively engaging due to language, inhibiting school-related PAS processes, most significantly communication. Schneider and Arnot (2018), argue that a broad range of communication strategies facilitate interactional and transactional communication. Similarly, Solomon (2020) recommends that schools use clear, simple English with visual support when communicating, including audio and video for key messages. To support EAL families, engagement methods must take a variety of forms, avoiding complex language to ensure that any resources are accessible. Providing PAS support documentation is a useful method due to its permanent nature, available for reference or translation at a later stage. If student self-regulation and autonomy practices are adopted by a school, engagement becomes more collaborative, particularly with communication. Whilst parents remain vital in this process, restructuring PTM could potentially reduce EAL parents' anxiety regarding involvement, as the student takes more of a central role and greater educational ownership.

For some parents, the PTM can represent the only major interaction with the school. It is disappointing that this can be a ritualised occasion (Minke and Anderson, 2003) due to the complexity of the home-school cultural encounter. Expertise trading can occur with both teacher and parent making claims to better know the child (Pushor, 2012), leading to knowledge negotiations as both parties are entrenched and exposed (Maclure and Walker, 2000). Parents avoid open disagreements, perceiving teachers as their superiors or to avoid adversely impacting their child (Goodall and Vorhaus, 2011). Teachers fearing their expert status could be undermined (Walker, 1998), may favour a limited dialogue approach, using their professional status to protect their position to produce a defensive discourse of orthodoxy (Bourdieu, 1993 cited in Baeck, 2010). A limited dialogue approach seeks to establish the teacher's expert status immediately, providing few opportunities for the parent to contribute. In some cases, parents will avoid interactions for exactly this reason; to avoid undermining the teacher's professional status (Dobbins and Abbott, 2010). If the school culture is not welcoming, over time, parents may exhibit discontent and negativity towards the school, feeling unwelcome and unimportant (Cambell, 2011), avoiding engagement. From a sociological perspective, some school cultures may promote a definition for a 'good parent' as one that defers to the school and the professional claim of the teachers (Meighan and Harber, 2007). Schools must appreciate that parents are the first educators of the child and so have a fundamental right to be treated as educational partners. Greater parental engagement can bring with it a potential levelling out of the power imbalances between teacher and parent. Training for teachers is useful in preventing such negative, formulaic experiences. Some of the methods explored later in this chapter provide viable alternative meeting formats.

Although attitudes and perceptions of parenting are changing, the term parent is often used in relation to the mother rather than co-parents or the father (Campbell, 2011). Father involvement has been found to have a positive impact on student achievement (Kim and Hill, 2015; Adamsons and Johnson, 2013). However, traditional gender roles can be perpetuated by schools with programmes, policies and interventions favouring mothers (Hoover-Dempsey and Sandler, 1997; Rane and McBride, 2000). The influence of parent gender was not considered in the findings; a gender-neutral approach was taken to addressing parents when communicating and in the creation of intervention documents, avoiding titles such as mother or father.

For many families, intensification has meant longer working hours and often inflexible working schedules resulting in greater pressures on work-life balance and family responsibilities. These constraints are exacerbated in single parent family (Hack, 2007). Home learning and PAS can be more challenging due to shift work and the need to prioritise primary needs such as cooking and care, resulting in limited child contact. To compound the situation, communication with parents by schools is made at inconvenient times, PTM are often scheduled for directly after school or early evening. Stringent timings may result in a monetary sacrifice for childcare costs or lost working hours. Wherever possible, schools should ensure they are flexible with events such as PTM, providing times and dates that accommodate parents.

Technical jargon, acronyms and abbreviations used in school communications can be particularly perplexing to parents due to their unfamiliarity with the associated concepts. There can be significant variation across school systems for reporting, which can be challenging for parents. Cuttance and Stokes' (2000) research, based on parent views in

Australian state schools, found that reports varied in quality and their value was undermined through generalisations or comment banks. Greater standardisation and clarity were desired by parents with advice on what the report means for future learning goals. A significant issue with reports is the absence of practical strategies and advice that parents can use to support their child (Power and Clark, 2000). Their timing, normally at the end of the academic year, is also not conducive for supporting learning development (Cuttance and Stokes, 2000).

The use of technology can positively support engagement and provide a mechanism to involve all parents, including those who a school may have determined as 'hard to reach' (Goodall, 2016). Text messages can provide key information accessible at any time. An EEF sponsored trial involving texting parents regarding tests, missing homework and parent-student conversation prompts, found a moderate effect size but the method was still advisable due to the limited cost implications (Miller, Davison, Yohanis, Sloan, Gildea, and Thurston, 2017). The Cambridgeshire Educational Trust used emails to send daily revision question emails to help parents engage with their children's revision and to encourage education-based discussion in the home (Hutchinson, 2019). As a result of the COVID-19 pandemic the nature of school communication has changed with more online options. Video conferencing platforms were used to conduct lessons but also to facilitate student and parent engagement, including PTM. The online meeting format provided greater flexibility for parent and teachers, being able to conduct the meetings without commuting and the need for childcare. Adapted methods of all three communication techniques have been employed within my research.

Students are not merely the objects of focus but significant influencers of parental involvement (Hoover-Dempsey et al., 2005; Walker et al., 2010). Student invitations to participate, directly impact parental role construction and levels of self-efficacy. This can manifest in positive active involvement, whereby the child seeks advice and support, extra educational work and readily discusses their school day. Alternatively, children can be passive or even active in parent un-involvement, where they work to rebuff attempts, discouraging, evading and obstructing involvement (Edwards and Alfred, 2000; Desforges and Abouchaar, 2003). These children are keen to separate school life from home life or see themselves as autonomous. As children enter adolescence, parents can often misinterpret this growing sense of autonomy as a cue to reduce parental involvement or for it to become more indirect (Hill and Tyson, 2009). Student behaviour can also influence their level of involvement; often parents of more challenging children are less likely to be involved when communicating with teachers, fearing they will be blamed (Grolnick, Weiss, McKenzie, and Wrightman, 1996; Beresford and Hardie, 1996). Dissuading, obstructing, evading parental involvement and failing to seek support from other sources (Edwards and Alfred, 2000) is more prevalent with boys, an important point to recognise, since my research solely focuses on this group.

As discussed in this section, engagement for some parents can be more challenging physically, behaviourally and emotionally and these parents can be mischaracterised by schools as ‘hard to reach’, especially those with a lower socio-economic status (Watt, 2016). Campbell (2011) defines ‘hard to reach’ parents as those with low levels of engagement with the school, do not attend school meetings nor respond to communications and exhibit high levels of inertia in overcoming perceived barriers to

involvement. However, this definition, pathologises the parents, laying the blame on them for lack of engagement when it can be the school themselves that inhibit accessibility. In effect, the schools for these parent groups can be 'hard to reach' (Crozier and Davies, 2007). In other cases, parents can feel alienated from the school system with many engagement expectations being assumed and thus hidden, with little opportunity for explanation or training. Schools can ignore particular needs or perspectives in favour of a 'one size fits all' approach to the parent body (Crozier and Davies, 2007), often corresponding to the middle-classes (Bourdieu, 1977). The conception of parent engagement may also be exclusively focused on school-mandated actions (Schnee and Bose, 2010). Schools need to be supportive, respectful and culturally relevant (Kemp, Marcenko, Hoagwood and Vesenski, 2009) developing constructive relationships, communication and partnership (Day, 2013) with all parents. For this to occur "greater latitude in conceptualising and understanding parental involvement" (Schnee and Bose, 2010:112) is required.

2.2.3 Student barriers to educational engagement

Without suitable collaborative and partnership opportunities students can become disenfranchised, having a limited forum to express and explain their views (Walker, 1998). Their marginalised position is symptomatic with the perception of the student as the subject that education is done onto rather than with, merely "objects of concern" (Edwards and Alldred, 2000:440). At traditional PTM, the student is either physically absent or rendered absent by their status and position amongst adults. Due to the structure of such meetings and in anticipation of the discussion, students can become anxious about the event (Minke and Anderson, 2003). According to Adelwärd,

Evaldsson and Reimers (1997) cited in Tholander (2011)[1], conversation patterns at parent teacher meetings were calculated to be 65% teacher discourse, 20% parent and only 15% student. Of the 15% student discourse, most was short sentences or short words. In removing the students from the discourse, the critical link between parents and teachers is removed which widens the institutional separation of home and school (Edwards and Alldred, 2000), impacting the ecological approach to education as a collaboration between all stakeholders (Vickers et al., 2002). Cuttance and Stokes (2000) research found that parents were eager for their children to be more involved in the reporting process. The lack of involvement fails to support the student's educational ownership and self-regulation (Tholander, 2011) as there is little opportunity for reflexivity.

Student independence, autonomy and achievement are often marred by the parent and teacher barriers described in the previous sections. Significant issues arise when there is no parent engagement or a traditional structure to parental agency is adopted, being school focused rather than learning centred (Goodall, 2017), both cases can be detrimental to the student. To overcome many student engagement barriers, they must be empowered to take greater ownership of their education. For this to occur, students need to prepare for the meetings by self-evaluating their strengths and areas for improvement in relation to their SLCA and curriculum knowledge, creating suitable goals to determine how they can be achieved (Van der Eem and Haelermans, 2014; Goodman, 2008). However, to do so the goals must be known and accurately defined through realistic assessment (Hattie and Yates, 2013). It is the role of teachers to make this become more salient by providing feedback that attends to self-regulation (Hattie

[1] Original Adelwärd, Evaldsson and Reimers (1997) research was written in Swedish

and Timperley, 2007). A barrier lies with the perceptions of students by parents and teachers as passive participants, for effective change to occur they must be considered equal interlocutors and collaborators in their education.

In traditional PTM with EAL parents, students often act as translators for the parent teacher dialogue, being "the objects of evaluation, but asked to take up the voice of an evaluator. They are translators but sometimes also participants in the exchange. They are children speaking to and for adults but under scrutiny of two different kinds of authority" (García-Sánchez, Orellana and Hopkins, 2011:149). These paradoxical roles inhibit the student's engagement by their attendance in the meeting as a third party. By reengineering communication, the relaying of content is reduced as the student is more centrally and actively engaged in the discourse, providing their own input in addition to acting as an intermediary.

According to Bourdieu (1977), cultural capital is required for students to benefit from other types of capital including economic, social and symbolic. The habitus of a student, influenced by their home and family life, can impact the cultural capital they acquire (Hart, 2013). Cultural reproduction in schools can also limit the development of cultural capital, favouring those students from middle-class backgrounds where cultural capital is more obtainable, if not prevailing (Goodall, 2017).

2.2.4 Teacher barriers to supporting educational engagement

Due to statutory requirements, budget cuts and managerialism, the scope of a teacher's role has broadened. Increasing class sizes, greater accountability and the teaching of

secondary subjects, makes it increasingly difficult for teachers to dedicate effective time to parent engagement due to excessive workload. In the DfE Teacher Workload Survey (2019), secondary teachers reported working beyond their contracted hours, averaging 49.1 hours a week, finding it hard to achieve a suitable work-life balance. It is therefore no surprise that focusing on the PTM may represent a low priority.

Intensification exists within the PTM, teachers may present a structured monologue in the hope of the meeting finishing within the five-minute deadline. This intentionally creates little opportunity for parents to interject in the fear that questions will generate more workload. These traditional style PTM provide little opportunity for real discourse, which is unfortunate since they normally represent the only opportunity during the year to meet face-to-face. Other communication to parents, such as emails, text messages and phone calls, are used sparingly as staff do not have the time or school policy dictates a regulated approach. Any potential engagement activities must not further burden teachers, in fact, they should alleviate the situation with the home, with parents and students having more responsibility for learning.

The quality of the teacher's relationship with parents can influence student achievement and motivation (Fan and Chen, 2001). Communicating with parents is a central tenant of the teaching profession, however, little training is provided to novice teachers on how to approach family-school partnerships and PTM (Walker and Dodger, 2012). Research by Baeck (2010) found that out of 355 teachers surveyed, those requiring further support with home-school cooperation, tended to be teachers new to the profession. As a result of limited training, the teachers understanding of the PTM purpose can become misconstrued, with dialogue entrenched in "expertise trading" (MacLure and Walker,

2000:19). For the cycle to be broken teachers require formal training and coaching, especially when working with parents whose backgrounds differ from their own (Goodall and Voorhaus, 2011). Collaboration and effective dialogue with parents and students needs to be a learned process through a mix of theory, observation, experiential learning and reflection. By providing suitable initial and in-service teacher training, the effectiveness of parental involvement can be enhanced (Hoover-Dempsey et al., 2005). Walker and Dotger (2012) suggest that teachers should be trained through role-play, offering teachers opportunities to practice through repeated exposure to realistic problem contexts (this same process would also be useful for students). Vickers et al. (2002) suggest that teachers should practice their communication skills in relation to active listening principles. Both are legitimate approaches that require reflective practice and would certainly be a vast improvement on the status quo.

2.3 Impact of COVID-19

Most of the literature review was conducted before the COVID-19 outbreak, as was the traditional PTM of which the Phase 1 data was based upon. The changes to the methodology and the Phase 2 intervention due to COVID-19 are discussed later in the thesis. During the pandemic both schools involved in the research made an emergency transition to online classes due to mandatory closures under the Coronavirus Act 2020. Introduced to control the pandemic, the Coronavirus Act 2020 encompassed two significant lockdown periods from March 2020 to June 2020 and January 2021 to March 2021. The Department for Education during the second lockdown required schools to provide five hours a day at KS3 and KS4 of remote educational provision, mandated through the Coronavirus Act 2020 (Department for Education, 2021). These

periods of only remote learning presented significant obstacles including access to internet enabled devices and connectivity (Driessen, Beatty, Stokes, Wood and Ballen, 2020). As Harris and Jones (2020: 243) commented "it has redefined learning as a remote, screen-based activity limiting most learners to on-line teacher support", during this time connect to learn, learn to connect became a daily reality. The adverse effects on student's well-being and learning cannot be under-estimated, never more so than for the vulnerable and those from low-income families. The crisis may have served to widen the attainment gap, deepening the digital divide of social inequality and poverty, as affluent parents had greater resources at home to facilitate learning (Calarco, 2020; Rowland, 2020; Wodon, 2020). As part of the Department for Education's Get Help with Technology for Remote Education (2020), both School Y (a suburban school) and School B (an inner-city school) provided laptops to students identified from low-income families. However, this process and most government financial support did not arrive until after the last lockdown period and little support could be provided to improve home internet connectivity. For some students during the lockdown period or when self-isolating, not having access to digital tools may have rendered them out of the system (Azorin, 2020). To exacerbate this situation, some older students had responsibility for taking care of their siblings while their parents attempted to remain at work in a time of unprecedented job insecurity or were required to as keyworkers (De Witt, 2020).

A study by Zaccoletti, Camacho, Correia, Aguiar, Mason, Alves and Daniel (2020), focusing on student motivation based on self-determination theory (Ryan and Deci, 2000a) as perceived by parents, found a decrease in academic motivation during the pandemic. They suggested that COVID-19 restrictions and lockdowns may have threatened the satisfaction of competence, autonomy, and relatedness needs, thereby

hindering students' academic motivation. This in turn lead to issues with student educational engagement including self-regulation and developing SLCA. The remote nature of teacher support and their limited ability to provide critical feedback, further intensified the problem.

There may be some unforeseen benefits from the pandemic, particularly for teenagers, where the altered nature of learning provided greater freedoms and flexibility. Zacoletti et al. (2020) found that older students' motivation did not decrease as significantly as younger student as they had already established some self-regulation strategies. The Reimers and Schleicher's Organisation for Economic Co-operation and Development (OECD) report on the educational response to COVID-19 (2020), found that a significant positive outcome was the increased autonomy of students to manage their own learning.

Some parents were also under increased strain with changes to work practices and having the enhanced responsibility for the education of their child. Whilst monitoring work completion at home would be a familiar activity for parents, supporting their child in online learning and ensuring they remained motivated, would have been a largely alien concept. Many felt insufficiently prepared and exhibited low self-efficacy; a Sutton Trust Report by Cullinane and Montacute (2020) found that only 47% of middle-class parents felt confident home-schooling their children compared to 37% of working-class parents.

Yet, there have been advantages, greater parental responsibility also increased engagement in the child's learning. In a survey completed by Garbe, Ogurlu, Logan and

Cook (2020), 62.3% of parents stated they spent more than an hour a day supporting their child's learning at home. With intensified parental engagement, certain PAS processes can become more focused and regular.

The pandemic was a time of great anxiety for teachers, using unfamiliar technology they quickly needed to master to provide carefully individualised learning (Kaden, 2020; Azorin, 2020). School leaders had to contend with a completely unpredictable situation with little scope for long term planning, a balancing act of managing the well-being of its staff, while providing the best possible education for the students. Crisis and change management were essential skills (Harris and Jones, 2020), often required conjointly.

For education, the pandemic has provided some opportunities to reappraise approaches and practice. First, the sensible suspension of school accountability measures such as Ofsted allowed schools to focus solely on the crisis. Second, schools started to collaborate more in a spirit of open professionalism to share good practice and strengthen the teaching community (Azorin, 2020, Hargreaves and Fullan, 2020; Zhao, 2020). The pandemic has also promoted institutional self-examination and change, having "unleashed a wealth of energy in innovative, collaborative and laser-focused problem solving" (Hargreaves and Fullan, 2020:334). COVID-19 represented a Fait Accompli; schools had no alternative but to trial new methods of teaching, learning and communication often facilitated through technology. The adoption of new digital technology in home-school communication during the pandemic provided a further method to interact with multiple families at once, without parents being physically present or initiating contact (Goodall, 2016). The research sought to capitalise on these advancements to deliver aspects of the intervention, discussed later in the thesis.

2.4 Alternative meeting formats

There are many limitations to the existing PTM. The name given to these meetings perhaps suggests the root of the problem, the absence of the student. To fully understand how to reengineer such meetings, it necessary to review alternatives.

2.4.1 Family conference model

Vickers et al. (2002), Minke and Anderson (2003) and Minke's (2010) research promote an alternative approach to the traditional structure, advocating a collaborative, family version characterised by two-way conversation, mutually agreed goals, and shared decision making. The model was based on systems theory (Bronfenbrenner, 1979), active listening, solution-oriented counselling, and family-school consultation and collaboration models. Minke and Anderson's (2003) main study was linked to previous research, using the CORE model (Vickers, 2002), the acronym representing connecting, optimism, respect and empowerment. Data indicated that communication and positive conversational experiences improved, as did learning about the child and each other. Active student participation increased (M = 25.4% range= 7% - 52%) and teacher questions eliciting student involvement increased to 81% of all questions. Intervals where only the teacher spoke reduced by 21%. Fifty two percent of participants reported feeling more listened to by teachers. At the time of Minke's (2010) research, the model had been adopted by the University of Delaware to train preservice and in-service teachers.

Teachers, parents and students were expected to prepare for the conference, including considering areas of strength and development for their child or themselves. Teachers were encouraged to consider the key points they wanted to make and anecdotes they might want to share that illustrate student qualities. Prior to the meeting, teachers were trained in active listening techniques and given the opportunity to practice using role plays. During the meeting the student started with introductions followed by identifying their strengths. Once all strengths were discussed by students, parents were asked for any additional strengths they have identified and then the teacher did the same. The same process was repeated for areas of development, which were prioritised with suitable strategies identified and agreed upon.

The model provides a viable alternative to traditional meetings with a useful framework to train and guide teachers. It promotes a more collaborative approach based on mutually agreed goals with all having an equal stake. The concept of pre and post conference activities is also an effective addition, making the actual meeting part of a greater process. This research has been influential to my study, emphasising the importance of preparation and feedback but adjustments are required for a secondary school setting, particularly the timing issues associated with multiple subject teacher meetings. Encouraging the student to consider their strengths and areas for development is useful, but on its own, without the necessary training to ensure this is meaningful, it will not develop the student's criticality and reflexivity. Categorisation of potential strengths and areas of development may aid this process, as would a longer and more punctuated preparation process, both of which I considered in the design of the reconstructed meeting.

2.4.2 Student-led conferences

Student-led conferences represent a dialogue between parents, teachers and students where the student leads the meeting. The meeting normally focuses on learning, identifying strengths, areas of development and progress. Physically, these meetings have the same arrangement as a face-to-face traditional PTM (a description of traditional PTM in School B and Y is provided in Chapter 3).

Tholander (2011), suggests a student-led model which increases the student and parents' democratic commitment. The student completes a self-assessment pro forma before the conference which is then used to guide the conversation on the evening in which the student leads the meeting. This encourages them to be less combative, take more responsibility and grow in independence. Using this approach, working with students at the equivalent of Key Stage 3 in the UK, student talk occupied 35% of all talk with parents occupying a further 10%. By increasing the student's role in the meeting, teacher administration and preparation was also reduced. However, Tholander (2011) found the pro forma carried some limitations impacting the staging of the conference, with students reading items of self-assessment from the document verbatim, which pinioned the student's comments and prevented them from discussing some of the issues most important to them.

Van der Eem and Haelermans (2014), developed an alternative model whereby the student constructed an agenda for the meeting and a portfolio which described their results and study behaviour. Students were encouraged to set goals and decide on strategies to achieve these goals. Following the conference, the student writes a report

regarding the meeting and the outcomes. Through this structure, Van der Eem and Haelermans (2014) report that students were able to develop valuable metacognitive skills and gain useful feedback. In addition, students developed autonomy which is a key element in improving motivation (Ryan and Deci, 2000b). The study involved a control group (PTM) and a treatment group (student-led). On average students in the treatment group spoke for 23.56% more time then the control group, parents spoke marginally more (0.5%). The study also reported that on average, the treatment group students scored higher grades throughout the year compared to control group (driven by greatly improved grades in Maths) and boys benefitted more than girls, as did low performing students. The conference took considerably longer than a normal conference, lasting 30 minutes in contrast to the traditional meeting length of 10 minutes.

Taylor-Patel (2011), sought to identify how effective the student-led meeting was for reporting student progress, achievement and next steps for all those involved. The study reported that the meeting approach prepared students for being assessors of their own learning, gaining a better knowledge and understanding of themselves as learners. Students also gained real life skills in reporting and presenting and became more confident in sharing information. The conferences improved attendance, participation, engagement and understanding of learning. As with some of the other models, Taylor-Patel's (2011) approach focused on primary schools where parents normally see one teacher.

Goodman (2008) suggests a student-led, teacher-supported conference. In this model students prepare a portfolio for all core subjects and talking points to explain their

learning. They were required to: write goals for each subject; document work habits; use class time to rehearse; and follow an agenda during the meeting. As a result of the study, parents had a better understanding of how their child learned and found the conference structure valuable and informative. Other benefits including empowering students to take greater responsibility for their learning and conference attendance increased by 21%.

Much of the other research reviewed on student-led conferences including Borba and Olvera (2001); Conderman, Hatcher and Ikan (1998, 2000); Hackmann, Kenworthy, and Nibbelink (1998); Hennick (2016); Le Countryman and Schroeder; 1996 and Kinney (2012) provided less academic rigour when considered individually, describing its use in schools rather than drawing causal conclusions. Once collated certain commonalities emerged that offered a level of external validity through generalisation. The meeting format was found to provide greater opportunities for collaboration by creating a shared dialogue through the restructured relationships. Student barriers to engagement were reduced by greater voice and ownership, building confidence and motivation. The redefined roles, with the greater facilitatory role of the teacher, encouraged the parents' participation in learning, improving self-efficacy and reducing power imbalances and "expertise trading" (MacLure and Walker, 2000:19). Furthermore, the student-led nature meant there was less administration and preparation required by teachers. The changes in parent and student role construction were also attributed with an increase in parent and student attendance.

Student-led conferences are supportive of the PAS processes identified in this research including reflective enhancing communication, developing metacognition, expectations

and aspirations, goal setting, and providing structure. However, certain models had greater providence in the development of the research design, particularly Van der Eem and Haelermans (2014) and Goodman (2008) who used metacognitive and self-evaluative activities as part of the students' preparation for the conference.

Whilst there are certainly advantages with the student-led conference model, a great deal of the literature focuses on its use in a primary setting where parents often see only one teacher over a greater period of time. If this model was replicated at secondary level, time would be incredibly limited, the situation exacerbated by the student's limited experience of chairing a meeting or being in a position of authority. Furthermore, any format needs to recognise the expert position of the parents and teachers in contributing to the discourse. For the meeting to be productive, an agreed structure is needed with an agenda and potential outcomes, including mechanisms to ensure those involved are listened to.

2.4.3 Structured conversations

To establish collaborative PTM, the growing autonomy and maturity of the student should be recognised, creating a greater equality between interlocutors to develop a negotiated truth through a process of deliberation. This parity helps increase continuity and congruency "by employing forms of communication that promise all outcomes reached in conformity with the procedure are reasonable" (Habermas, 1996: 304). Tevit (2014) suggests several elements required for deliberation including: respect; reciprocity; equality; openness to changing one's mind; listening; answering; providing information; talking about the information; posing questions; expressing

disagreement; achieving mutual understanding; and meta-communication. Within this discourse process, the teacher should act as moderator by establishing positive relationships with parents and students, creating a positive environment, and safeguarding the principles of deliberation. A key communication skill to enable a more balanced meeting is active listening; this involves a multistep process of being empathetic, asking appropriate questions at timely intervals, and paraphrasing or summarizing for the purposes of verification. The goal is to develop a clear understanding of the speaker's concern while communicating the listener's interest in the speaker's message (McNaughton, Hamlin, McCarthy, Head-Reeves and Schreiner, 2008). The listener can share their opinion and collaborate on solutions once they have gained a clear understanding, but it is important they withhold any judgements (Hoppe, 2006).

Structured Conversations was originally part of the Achievement for All strategy from DfCSF (2009). It focused on improving engagement of parents with children classified as SEND (special educational needs and disabilities) to agree a support plan for the child. The Structured Conversations aspect proved to be very effective, Lendrum, Barlow and Humphrey (2015), conducted a case study review of the programme with 10 participating local authorities and found greater engagement and confidence by parents of pupils with SEND and improved relationships between parents and schools. The model is seminal for my research as it represents a truly collaborative home-school meeting. The reason for its success lies in its prescribed format, many elements of which can be applied to reengineering the PTM:

- establish an effective relationship between parent and the key teacher;

- allow the parent an opportunity to share their concerns and, together, agree their aspirations for their child;
- set clear goals and targets for learning and improvement in wider outcomes;
- determine activities which will contribute to the achievement of those targets; and
- identify the responsibilities of the parent, the pupil and the school.

(Achievement for All: The structured Conversation DfCSF, 2009:4)

To ensure the effectiveness of the meeting, a framework is adopted involving a verbal contract agreed between participants regarding the purpose and outcomes. During the actual meeting the Explore stage is designed to help the parent identify the needs of their child to raise their achievement; the teacher uses active listening skills, paraphrasing and use of silence to communicate understanding. In the Focus stage the teacher helps the parent identify the key issues and priorities for action. This involves further paraphrasing but also targeted questioning. The third phase, Plan, is concerned with the actions required to address the identified issues. Targets need to be based on analysis, be practical, agreed with the parents and the child with suitable timescales and success criteria. For the teacher this involves providing information without jargon or confusing terminology and setting goals that are outcome orientated. Finally, the Review stage provides an opportunity to summarise the key points, clarify the next steps and arrange dates for further meetings or alternative communication.

The model has consonance with the feedback strategies discussed in the following section, including its use of formative action and the resulting feedback loop. Furthermore, many aspects of the framework can be applied to a PTM, such as the importance of preparation, the need to identify strengths and areas for improvement, clear goals and a plan of action and subsequent communication. The DfCSF Handbook

(2009) also provides training resources including scenario and role-based activities to help teachers develop their skills. One aspect which will not be adopted is the marginalised position of the student, who is the subject of meeting rather than a key collaborator, this may be linked to the student's ability to interact.

2.5 Formative feedback and action

Both summative and formative feedback are important pedagogical practices to enable responsive teaching. Summative feedback is evaluative, focusing on the product to understand over performance, while formative feedback tends to be more effective in diagnosing problems and strategies for improvement (Brown, Peterson, and Yao, 2016). The annual report is normally provided in the summer term as a summative report, while most PTM are scheduled earlier in the academic year. Given the meeting's timing, it is well positioned as a formative feedback opportunity. However, this opportunity can be lost in an evaluative structure with teacher value judgments or reporting on summative assessments similar to the annual report.

Using the meeting as method of formative feedback is a powerful strategy to improve student achievement and learning. Students who actively use feedback are more likely to increase self-regulation (Brown et al., 2016). Wiliam (2018:52) describes three main elements associated with the feedback process including where the learner is going, where the learner is right now and how to get there. Hattie and Timperley (2007) suggest three key questions for effective feedback: Where am I going (Feed Up); How am I going (Feed Back); and, Where to next (Feed Forward). The idea of a learning journey and the importance of a feedback loop (Brooks, Carroll, Gillies and Hattie,

2019) are key in both models and an important consideration for the feedback design within my research. The feedback loop allows the student to reshape their learning if their formative results are less than optimal. It could be argued that students who receive feedback regarding sub-optimal progress are less likely to engage due to low self-esteem, however, this may not be the case, especially if the student is involved in generating their own analysis and recommendations (Brown et al., 2016). The reengineered student inclusive meeting is intended to provide an opportunity for formative feedback to assist with Feed Back and ultimately result in Feed Forward, with student self-evaluation and assessment of their goals to actualise Feed Up. Nicol and Macfarlane-Dick (2006), suggest seven characteristics of effective feedback, any feedback practices during the intervention phase need to be aligned to these practices to ensure feedback is clear, motivating, meaningful and encourages self-reflection for both the teacher and student:

1. helps clarify what good performance is;
2. facilitates the development of self-assessment (reflection) in learning;
3. delivers high-quality information to students about their learning;
4. encourages teacher and peer dialogue around learning;
5. encourages positive motivational beliefs and self-esteem;
6. provides opportunities to close the gap between current and desired performance; and
7. provides information to teachers that can be used to help shape teaching.

Wiggins (2012), similarly to Nicol and Macfarlane-Dick (2006), identifies factors for effective feedback including: being goal-referenced, tangible and transparent,

actionable, user-friendly (specific and personalized), timely, ongoing, and consistent. In both cases, the importance of discourse and the involvement of students in decision making and self-evaluation are important for students to take ownership of their learning. Therefore, self-review, formative action and a focus on pertinent, measured goals were key features in the development of the meeting format and intervention instruments within my research.

For feedback to be meaningful it needs to be carefully orchestrated by the teacher, including supporting students to set suitable targets. Self-regulated learning such as goal setting, strategy use and self-evaluation can be learned from instruction and modelling (Zimmerman, 2002). Students need to be encouraged to adopt a growth mindset to improvement, endorsing a strategy-focused approach in the face of what may be deemed as failure. Effective goal formation for Feed Up and Feed Forward (Hattie and Timperley, 2007), is dependent on goals that have a mastery orientation rather than a performance orientation. Based on trichotomous theory of achievement goals, students should seek to obtain competence, understanding that effort and outcome are linked, as opposed to seeking favourable judgments in comparison to others or goals that are intentionally set to avoid appearing unable (Barkoukis, Ntoumanis and Nikitaras, 2007). While performance orientated goals may have some benefits, goal mastery has a greater association with long-term retention and intrinsic motivation (Muis and Edwards, 2009) as a form of competence-based regulation. This viewpoint is supported by Elliot and McGregor (2001), who found that student self-determined motivation was positively related to mastery goals and unrelated to performance goals. Close attention within my research was paid to the teachers' role in scaffolding autonomy and independence with goal setting since their impact can be significant in developing both pupil intrinsic

motivation and mastery goals. Teacher autonomy support associated with self-determination theory was found by Ciani, Sheldon, Hilpert, and Easter (2011) with undergraduate students, to be a useful method to maintain a mastery approach.

2.6 Summary

The research focuses on the sociological interactions and associated problems with the existing behaviours, relationships and communications (Mkandawire, 2008) used for educational engagement. Whilst some aspects of the psychology of education are explored including learning theories and cognitive science, using the conceptual framework based on research by Hoover-Dempsey et al. (1995,1997, 2005) and Grolnick et al. (1991), the study explores the powerful influence social interactions have over engagement and ultimately student motivation.

A broad range of theory was required to ensure the methodology was evidence-informed, based on a sound body of knowledge and good practice. The final three sections are used to synthesize the key ideas from the literature review and to identify possible components of the reengineered meeting and intervention activities.

2.6.1 Parental educational engagement

The research focuses on the central tenant that all parental engagement activities should be for the beneficence of the child, as Goodall (2020) states, “parental engagement in learning isn’t as much about delivering content as about supporting young people’s self-confidence, their view of themselves as people who can learn”. When considering suitable features of PAS, Hoover-Dempsey and Sandler’s (1995) Level 2 mechanisms

of encouragement, modelling, reinforcement and instruction combined with Goodall's (2017) parental engagement with learning features, including moral support, guidance and attitude toward learning in the home, provide a suitable theoretical basis. However, both would be difficult to apply to the research as they represent constructs rather than practical activities. To operationalise their meaning, an adapted version of Suizzo and Soon's (2006) PAS characteristics offer a suitable focus on PTM and associated parental engagement activities.

For parental engagement to be effective, a range of methods must be adopted, having a one-off event such as PTM does not offer sufficient scope, as Goodall (2017: 113) comments "there is no one intervention, no singular programme, which will 'solve' all of the issues around parental engagement". Van Poortvliet, Axford and Lloyd (2018) recommend schools provide practical strategies for home learning support, including tailoring communications that encourage a positive dialogue about learning. Access to key information and the knowledge it provides can empower parents, elevating their educative status to that of the school, by doing so, barriers to engagement are removed such as power imbalances and efficacy is increased. Tips, guides and resources provided through newsletters, toolkits, text messages, emails and videos can support and educate parents in evidence-informed principles, developing parental self-efficacy and role construction, while influencing parenting style. The curriculum, report and course structure can also be explained through tailored documentation, detaching the need for their discussion at PTM, improving the quality of the dialogue and its focus on the student. Furthermore, providing a range of resources through different communication media, ensures that schools increase access and flexibility for parents, being more accountable for different school familial groups. Given the COVID-19 pandemic and

the associated restrictions, online communication is to be embraced as it provides another means to develop a partnership with parents.

2.6.2 Student educational engagement

A student's academic success can be determined by the level of intrinsic motivation they possess. Ryan and Deci's (2000a) Self-Determination Theory and Hoover-Dempsey and Sadler's (1997) Student Attributes, posit core behaviours that impact the type of motivation that may be exhibited by a student. Combined they provide a suitable conceptual framework for understanding SLCA. Oakes and Griffin's (2017:18) VESPA model and the Behaviours for Learning Grid developed through a previous action research project, provide a method of operationalisation relevant to GCSE secondary school education. They also illustrate the need for SLCA to be addressed in a variety formats linked to the curriculum and learning. A critical method for developing SLCA is self-review, audits provide effective self-evaluation, not only for non-cognitive skills but also curriculum knowledge. Using audits should be a key method in any student educational engagement strategy as it empowers the student, giving them the ability to identify strengths and areas for improvement. However, for self-evaluation to be effective and rich, accurate data needs to be available and presented in a usable format. Furthermore, students need to be educated on how to develop SLCA and thus in turn improve their academic achievement, without this understanding, it is difficult for students to collaborate during the PTM efficaciously.

2.6.3 Reengineering the parent teacher meeting

There is a need to explore an alternative to the existing approach which is no-longer fit for purpose. PTM should provide a unique transcultural occasion of open dialogue for all. Inclusivity is an important component, but the student should not lead the meeting given their limited experience of chairing or being in a position of authority. Parents and teachers have the experience and knowledge to contribute to any discourse as experts. The greatest use of student-led meetings is at primary level, allowing many students to present to their parents at once, while the sole classroom teacher acts as a host (Vickers et al., 2002). This would be difficult to facilitate with multiple subject teachers. Also, student-led meetings can take longer, a significant issue at secondary level. Van der Eem and Haelermans' (2014) student-led model with secondary school aged students lasted 30 minutes in contrast to the original meeting length of 10 minutes. Therefore, a viable alternative proposed by my research, encompassing elements of the family conference model (Minke and Anderson, 2003) and the student-led conference, is an inclusive version, where all participants are equal interlocutors. By restructuring parent teacher meetings, and the associated activities to be more inclusive, there are further opportunities for deliberation and communally decided goals including those relating to home learning. Using Nicol and Macfarlane-Dick (2006) and Wiggins (2012), the formative purpose of the meeting will be carefully planned to offer opportunities for Feed Back, Feed Forward, to actualise Feed Up (Hattie and Timperley, 2007). By increasing pupil ownership and voice in these meetings, autonomy and independence are promoted, which in turn supports motivation This reconfiguration promotes reflection enhancing communication, encouraging students to think about causes, consequences and modifications to their behaviour. The Structured Conversations

Framework DfCSF (2009) will be used to develop the style of the meeting, encouraging mutual respect and collaboration through active listening techniques. Training and preparation for all participants is required since the new approach, its agenda and outcomes contrast significantly with the traditional meeting. Students need to engage in self-review by understanding their strengths, weaknesses and targets both from a curriculum perspective and SLCA. In addition to having the self-regulatory knowledge, students would benefit from being trained in their delivery of this information during the meeting. Teacher training should be provided on: the meeting format; avoiding bias to particular parental groups; simplifying their language for parents with limited English language fluency; and adopting active listening techniques. Many of the alternative meeting formats discussed have found role-play and the use of scenarios as a suitable training method for both teachers and students. Parents should be educated in the benefits of encouraging student autonomy and self-regulation and how they can facilitate these. Ultimately, the meeting should focus on student progress and performance but also increase parental self-efficacy and role construction.

Other engagement activities are needed than solely the meeting. Students need to be supported with understanding their vision, evaluating their progress and selecting strategies for their development. Whilst the reengineered Student Inclusive Meeting represents the keystone of the strategy, it will have limited impact if used in isolation without the supportive, voussoir, activities. Furthermore, to develop meaningful educational engagement, parents and students will need to be actors and advocates in this process rather than passive participants.

This research recognises the importance in promoting a more inclusive, democratic conceptualisation for education reimagining the relationships and roles of those involved. To enhance educational engagement, the conceptual framework must be based on all three aspects within this summary; their relationship is mutualistic and the success of one is dependent on the others. Parental engagement, in particular those activities associated with PAS, support the development of SLCA. If SLCA are effectively established, students can become more engaged, autonomous and self-regulating. Both parent and student engagement can only be improved through effective support and communication including assessing the value of existing structures (Research Question One: To what extent do current parent teacher meetings engender student and parent educational engagement), reengineering the annual meeting using good practice, and, an action research process to reduce some of the engagement barriers faced by participants (Research Question Two: What good practice exists in developing student and parent educational engagement and Research Question Three: To what extent does reengineering the meeting to an inclusive structure develop student and parent educational engagement).

CHAPTER 3: METHODOLOGY

The following section outlines the research intentions and the associated methodological approach which is predicated on my values. Since no research is truly value free (McNiff, 2012), this section begins by establishing my interpretation of knowable truths and social reality. Using this epistemological analysis, a clear rationale for the method, research tools, validity and reliability evolve. Each research tool is discussed and possible constraints are presented. By illuminating the problems and pursuing constructive possibilities (Malone and Hogan, 2020), through agency and change using action research, the study, although exploratory, seeks to understand and then remodel the existing approach to educational engagement, in particular parent teacher meetings.

A discussion regarding each instrument and its implementation is provided in Chapter 4. Chapter 5 explores the impact of the intervention instruments and the themes arising from the reengineered meeting.

3.1 Personal Values

My parents arrived in the UK from Ireland at the age of 16 and raised five children, all of whom attended Catholic schools and went on to university and successful careers in their chosen fields. My parents were always very involved in schooling and recognised the importance of education as a vehicle for social mobility and inclusion (Zuber-Skeritt, 2018). Such a positive familial and educational experience has left a lasting impression and I have inherited many of my parents' values, including a deep-rooted

loyalty and fidelity to Catholic education. Having worked in both schools involved in the study, I have a first-hand understanding of their mission, including supporting immigrant families such as my own and the disadvantaged. Furthermore, having attended one school as student and teacher, I am able to engage more empathetically with students and teachers alike with greater organisational awareness. This cultural narrative provides me with a substantial element of my motivation and commitment, having experienced both educative perspectives in the same school. Importantly, my vocation and profession are aligned (Healey and Lydon, 2021); as a Catholic leader, based on Jesus' ministry and example of servant leadership, I have a duty to care for the disadvantaged and poor, as a teacher, in meeting professional standards, I have a duty to "set goals that stretch and challenge pupils of all backgrounds, abilities and dispositions" (DfE, 2011). Knowing that I can make a difference and improve student outcomes is extremely rewarding and maintains my self-efficacy, determination, and resilience in times of doubt and uncertainty.

I believe it is important as a senior leader and researcher that my visible actions are aligned to my values. To be valued as professionals and avoid the status of technical experts, teachers must use their emic positionality and expertise to be the critics and conscience of society (Grace, 2014), generating powerful knowledge (Beck, 2013). This knowledge should be deep-rooted in morality, providing the best for the students. Generalised, top-down research should be used cautiously, since it lacks context; teachers are entirely capable of reflective and critical analysis of their own setting, since they live the problems preventing effectiveness in the curriculum (Tekin and Kotaman, 2013) and have a meticulous understanding of the contextual issues. As Power and Hubbard (1999:19) comment, "One of the most powerful aspects of teacher research is

that it brings those hunches, the teaching lore we carry quietly with us, to the surface of our teaching". Action research, discussed later in this chapter, acts as the vehicle to investigate teacher tacit beliefs and hunches, reforming irrelevant educational practice and providing an alternative to generalised meta-analyses.

As a teacher of 16 years, having attended over 150 PTM and conversely as a parent, I find PTM a deeply troubling aspect of educational practice due to their lack of impact and poorly defined purpose. PTM should be a unique educational offering for face-to-face communication between home and school but instead are often dreaded by participants being perfunctory and conducted with expedience. I am now in a position with the resources, access and privilege to address the phenomena, explore an alternative and share good practice with other educators.

The professional knowledge created through my research seeks to avoid esotericism and the associated exclusion of those who need it; educators. Conceptually, the knowledge is for what Schon (1995) refers to as the swampy lowlands, where research is practical and outcomes are accessible. The use of generalisable data that promotes conformity and teachers' acquiescence seems to be a growing trend in educational research (Malone and Hogan, 2020). The research's exploratory and practitioner nature is a counter to this, recognising the rich individual contexts of schools. As outlined in the DfE Initial Teacher Training Core Content Framework (2016), a one size fits all approach cannot be adopted since every classroom is different, in this spirit, innovation should be explored in terms of need and relevance, rather than prescription.

3.2 Ontology and epistemology

With a commitment to elucidating situated good practice involving the voices of the school community, the research uses a number of tools associated with social science research including interviews, observation and questions. This differs from some of the more empirical, experimental methods associated with educational psychology, since I do not seek to control variables or believe the research to be impartial. Social research is not practised within a vacuum, it must be alive to contextual factors (Bryman, 2016).

This research is positioned within a post-positivistic participatory action research approach, combining both qualitative and quantitative methods. A solely positivistic approach would have failed to recognise the multiple realities and subjectivity associated with the research, which was laden in meanings and behaviours; Positivist educational research conducted by those who are not teachers, is often rejected by schools as the findings and conclusions are detached from the issues lived by teachers in their classrooms (Tekin and Kotaman, 2013). My role as an active agent in acquiring knowledge of the research context (Thomas, 2013) is crucial to ensuring its acceptance and relevance. By traditional positivistic context removal (Denzin and Lincoln, 2005), generalisability could be achieved but at the cost of the research's authenticity, plausibility and claims to truth. Interpretivist tools such as interviews and observations were essential in understanding the intentions and meanings of social actors (Pring, 2010), including the subtlety and nuances of discourse used in educational settings.

Post-positivism pursues objectivity but accepts that multiple truths exist in a variety of forms and the observation of phenomena is true according to the reality of the

experience. It recognises that everything is subjected to evolution and change, nothing is stable, therefore, it is not possible to reach stable facts and laws that are universal (Tekin and Kotaman, 2013). This paradigm provides a more amenable approach but does not address the imbalance that exists in educational research that maintains normative power structures and patterns of dominance. Social injustices and unequal treatment of young people based on their educational aspirations is difficult to justify from a moral position (Hart, 2013). A more democratic ideology of education is sought, independent of social background, which does not lead to distinctive social positions (Meighan and Harber, 2007) or social reproduction (Bourdieu, 1977). I hope my research contributes to education policy that is not determined by a government's economic instrumental goals (Hart, 2013) but instead focuses on human flourishing. However, to obtain such ideals a critical approach is needed to uncover oppression and change conditional knowledge to improve conditions. It is this forthright and direct approach to transformational change through enquiry and action that is best suited to addressing the research questions.

As discussed in the literature review, there are many barriers to engagement that maintain the status quo (Hart, 2013) and ensure that PTM favour those from particular societal groups who are more skilled and capable of engaging teachers (Bourdieu, 1977). The reconstruction of the PTM is an attempt at discarding the normative structures that have otherwise dominated the practice of parent teacher meetings.

Critical realism embodies my belief in agency and aetiology, providing a rich understanding of the social world to address problems through action research. Originally based on the protagonist Karl Popper and later, Roy Bhaskar, the

philosophical approach recognises inquiry is continuous, since social reality perpetually changes, as the world continues to become stratified and differentiated (Bhaskar and Callinicos, 2003). Critics of this paradigm point towards its largely philosophical nature, with little practical guidance or application provided through its structure, however, paradoxically, being malleable and inclusive is one of its strengths in the research. Unlike other critical approaches, it has no preconceived viewpoints regarding oppression, preventing any one causal factor being overplayed, it recognises that their maybe several contributory factors (Houston, 2001). This is representative of barriers in educational engagement, which do not all emerge from one root cause. It looks to identify causal mechanisms while avoiding prediction and determinism. The research is closely aligned to this theme, using an exploratory study to understand and explain the mechanisms that produce tendencies (Houston, 2001) in the school systems studied. My research findings are not predicated on a one-dimensional data outcome (Malone and Horgan, 2020) such as public examination results, rather a range of factors in a much larger commune of formal, informal, summative, and formative methods (Mirzaei Rafe, Noaparast, Hosseini and Sajadieh, 2020).

Critical realism acknowledges that it is impossible to "do justice to the complexity and heterogeneity of the social world" (Archer, Decoteau, Gorski, Little, Porpora, Rutzou, Smith, Steinmetz and Vandenberghe, 2016:3) by reducing or simplifying ontological positions. The approach advocates a stratified approach whereby four modes of reality exist: the materially real, the ideally real, the socially real, and artificially real, recognising value in any epistemic approach, be it investigating one mode of reality or many. In the pursuit of an objective truth, Bhaskarian critical realism favours mixed method studies to understand and triangulate the stratified realities of human experience

and perspective. The use of mixed method in this research is discussed later in this chapter.

Critical realism aims to ensure that research should be useable by teachers and administrators for social change (Mirzaei Rafe, Noaparast, Hosseini and Sajadieh, 2020). It advocates a practical approach to social enquiry, which should be transformational and reflexive using a mix methods approach that is focused on improving practice and is grounded in the principles of critical realism. The intervention activities and the thesis have been designed to be accessible to those in education, to illuminate new understanding into educational engagement between parents, pupils, and teachers.

3.3 Ethics and ownership

Approval to undertake the research was obtained from the university ethics committee on 02/10/2019. The research also followed the British Educational Research Association (BERA, 2018) guidelines, especially the section focusing on responsibilities to participants. A full copy of the ethics submission and the related documents can be found in Appendix A. The deontological imperative of the research was paramount, the knowledge generated had to be intrinsically good and the intervention instrumentally good (Oliver, 2010) to ensure social justice and truth telling for all.

The flowchart in Figure 3.1 illustrates how consent was obtained. Written informed consent was sought from all participants on a completely voluntary basis without

coercion and all were reminded of their right to withdraw from the research without prejudice. At School B, information regarding the research and consent for parents was requested by post and through the parent's virtual learning environment school account. In total 19 responses were received but two were rejected as consent was provided for the child and not the adult (consent for both was required for the research). At School Y, I discussed the study at the Parental Information Evening on 10/10/19 and consent was sought at the event. For those that did not attend, the school provided a covering letter, consent forms, information sheet and pre-paid self-addressed envelope (this was conducted by the school administrator to adhere to Data Protection Regulations (2018)). In total, consent for 12 students and their parents was provided. Contact details were provided for withdrawal on all documentation and students were provided with further contact details for their Head of Year/Learning Coordinator in case they felt uncomfortable contacting me. Furthermore, student participants were reminded that any information shared would remain confidential unless it represented a safeguarding issue and then it would be shared with the designated safeguarding lead at the school. In addition to consent being provided from the Headteachers, a gatekeeper was established, who was a member of the Senior Leadership team. Any communication or resources sent to participants, including the weekly text messages, was also sent to them.

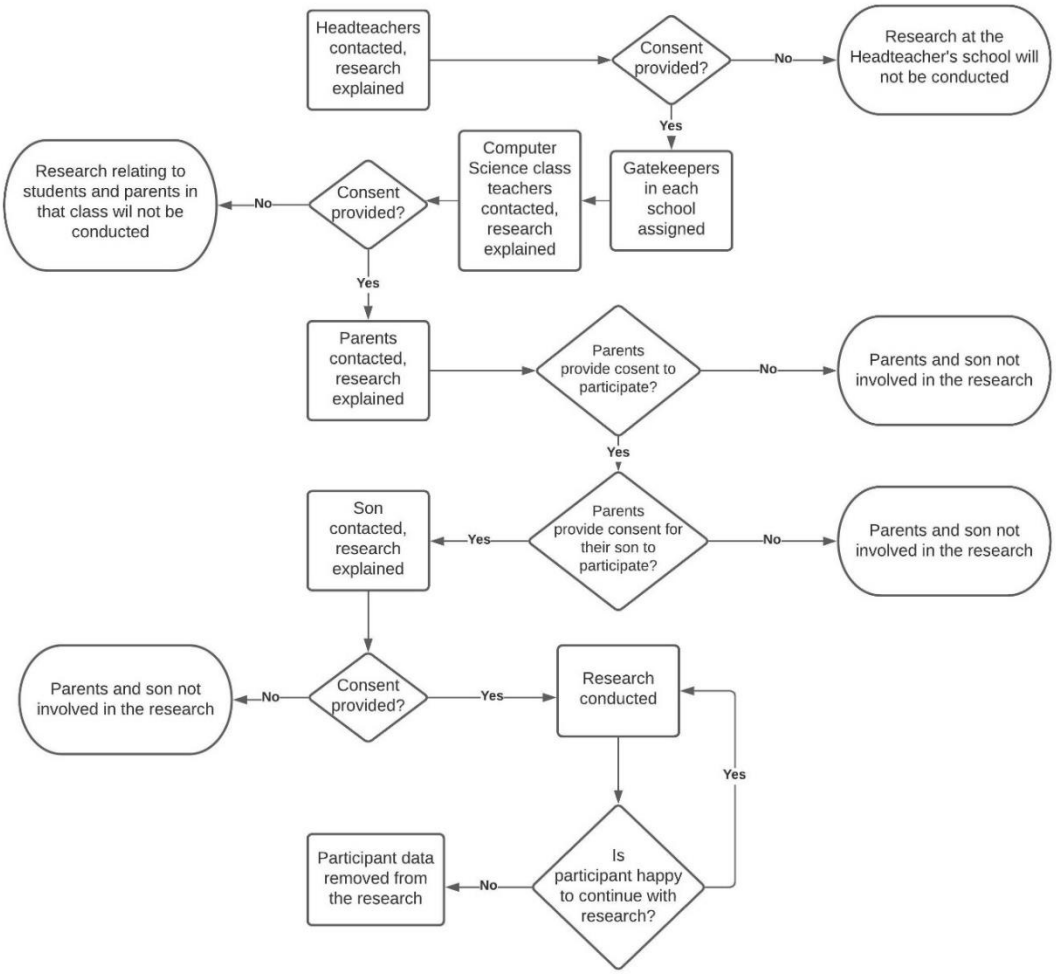

Figure 3.1. Flowchart to obtaining informed consent

To ensure the confidentiality, anonymity and privacy of the information provided, several protocols were adhered to. Any distinguishing features that identified schools or participants were removed. After initial consent was obtained, participants were referred to by code only, with the original sample frame kept encrypted. If online surveys were used, no personal information was required, only the participant code. Any mention to names in the transcripts created from audio recordings were redacted.

In line with the Data Protection Act (2018), since all participants were over the age of 13 years, no information provided by participants was shared with other participants unless consent was provided. This meant that parents were unable to review any

information shared by their son (sharing the information may have also influenced the candidness and honesty of response). Participants were made aware of this at the consent stage.

Since the research was conducted during the COVID-19 pandemic, adjustments had to be made to the original ethics submission to ensure the safety of all those involved and fulfil COVID-19 related school policies (approved by the research supervisor). This included moving many face-to-face data collection aspects to virtual methods or by phone. The universities COVID-19 declaration form for research participants was completed by students in School Y on 11/09/20 and in School B on 18/09/20 for the purpose of face-to-face research.

As a committed egalitarian (Reay, 2018), I plan to make the research accessible and practical, so any positive research outcomes can be shared for potential emancipatory benefits and not for personal gain, career progression or political leverage. I am keen to disseminate any useful knowledge created and in doing so, I am conscious to only make claims to what has worked in a given context and situation.

3.4 Action research and mixed methods

The study uses action research to improve knowledge of the existing situation (McNiff, 2016), through “self-reflective enquiry” (Carr and Kemmis, 2004:162), to investigate the associated problems and trial new approaches. The major aim is changing from practice to praxis (Cohen, Manion and Morrison, 2017), since the methodology bridges the divide between knowing and doing (Foreman-Peck and Heilbronn, 2018), resulting

ideally in the best of both aspects; desirable and sustainable change (Hammond and Wellington, 2020).

Figure 3.2 provides a visual representation of the mixed method action research cycle used, based on Ivankova (2015). The summary for each stage outlines the activities within the first iteration; further iterations are likely to change in focus as other areas of improvement are identified or greater specificity is sought. There were some sub-iterations made within reconnaissance and planning in response to the COVID-19 pandemic, such as the data collection techniques used and modifying material used within the planning and acting phases (see section 3.5.4 and 3.11).

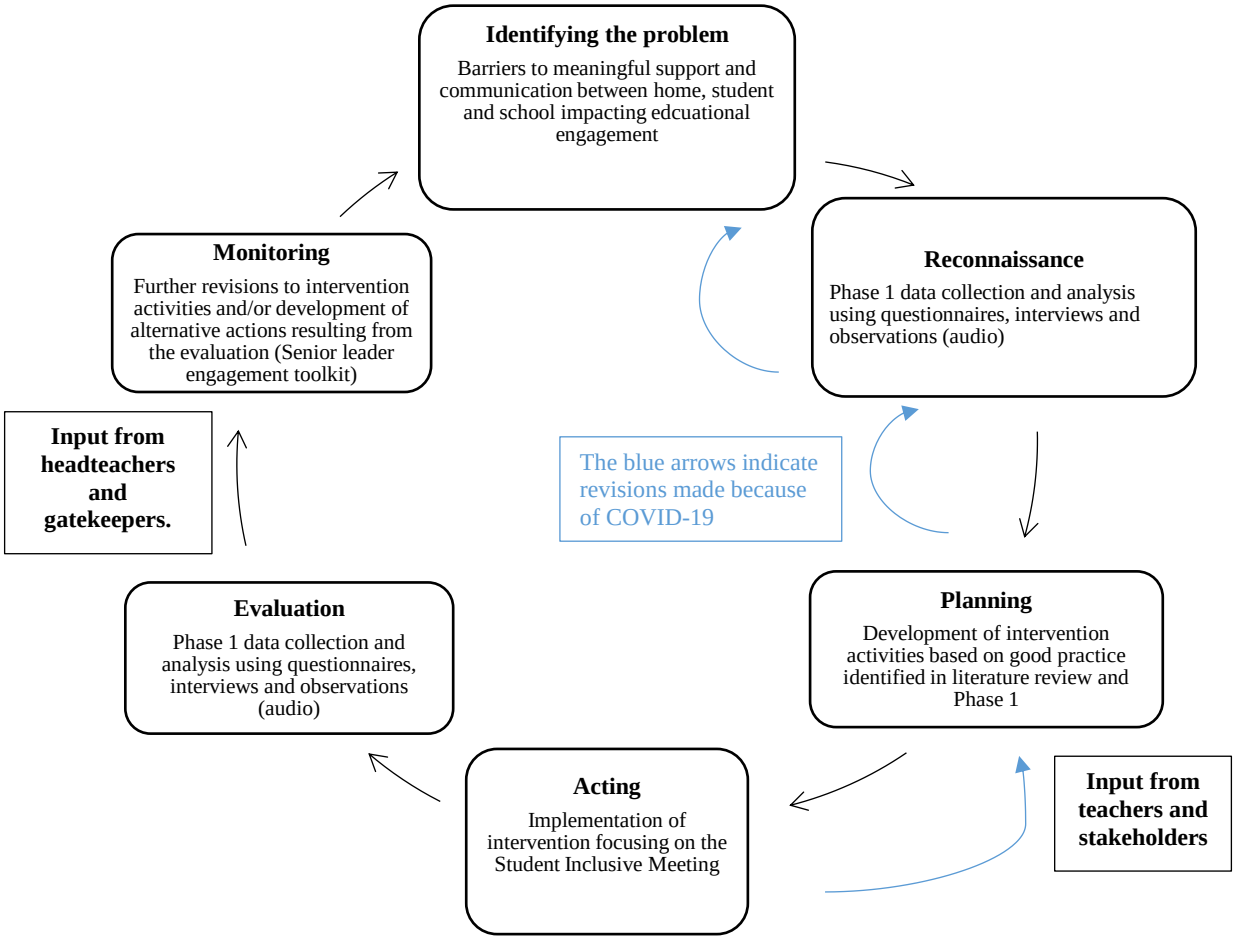

Figure 3.2. Action Research Cycle based on Ivankova, 2015:61 model.

In this action research cycle, the end of one cycle becomes the beginning of something else, where claims to improved learning and practice generate further learning to improve practice (McNiff, 2017). Potential new directions also emerge as illustrated in Figure 3.3, including the use of Student Inclusive Meetings at KS3 and developing teacher instructional coaching with deliberate practice focusing on communication (discussed in Chapter 6).

Figure 3.3. McNiff and Whitehead, 2010. Representation of generative transformational processes

Whilst all participants have contributed through their feedback within research tools, specific technical support was provided during the development of the intervention activities by Computer Science teachers and gatekeepers at each school (two Deputy Headteachers). Using these critical friends (Baskerville and Goldblatt, 2009), I was able to draw on their expert knowledge and ensure the tools were contextually aligned to the needs of the participants. Possible resources to be used within the SLCA sessions were discussed with the Computer Science teachers including the suggested list of home learning activities that students could select on their audit. The parental support toolkits and a sample of the text messages were reviewed by gatekeepers and teachers, advice was provided regarding the order and layout of the toolkits and some possible further resources. Gatekeepers and headteachers have provided suggestions for future developments, including a Senior Leader Engagement Toolkit to be used across the

multi-academy trust. As Goodall and Vorhaus (2011) argue, interventions associated with parental engagement are more likely to be successful if they are supported by school leaders. In the case of my research, having their support has been critical in having the authority and momentum for change. Further senior leader endorsement will also be required within the next action research cycle, where the research engagement methods will be used across all subjects at Y10 and Y11.

Critics of teacher-led action research argue the approach represents an inferior social science research methodology of uncontrolled classroom experiments deficient in scholarship (Higgins, 2016). However, such comments apply sweeping generalisations to the skill and knowledge of the teachers, ignoring the rigour and review applied by these professionals. As exemplified in this Professional Doctorate, action research is often completed with the expertise, support and training from higher education academic institutions. The transformative nature of action research is a powerful way of countering the dominant culture of schooling, ensuring that teachers influence educational practice. Furthermore, it acknowledges and embraces my insider position (McNiff, 2017) and agency.

Action research was used within the study to provide the methodology (McNiff and Whitehead, 2011), with the approach being mixed methods. Mixed method research has been growing in importance and stature since the so-called *paradigm wars* (Gage, 1989). There exist several contrasting definitions for the approach based on an author's orientation, either perceiving it as a methodology (Tashakkori and Teddie, 1998) or as a method, supporting or possessing a philosophical approach (Creswell, Klassen, Plano-Clark and Smith, 2011; Creswell, 2015). For the purpose of this study, mixed methods

is used as pragmatic paradigmatic approach being practice driven rather than idealistic (Denscombe, 2008), sharing qualities of both definitions but focused on the exploratory research questions driving the approach to study and the interpretation and interrogation of data (Tashakkori and Creswell, 2007).

The process of combining mixed methods research with action research is not unusual, since they share common features and are mutualistic to a degree. Both use systemic enquiry to seek comprehensive answers to research questions through a pragmatic use of qualitative and quantitative data. Furthermore, both apply a transformative lens, through reflective practice and phased, cyclical action to seek emancipation and social justice (Ivankova, 2015; Ivankova and Wingo, 2018). To study the complex nature of PTM and account for the subjective perspectives of all those involved, mixed methods enable the meaningful integration of qualitative and quantitative data. Methodological pragmatism rather than puritanism is required to meet the needs of the research (Cohen et al., 2017). Using both methods ensures that the findings are less biased and more credible. It provides greater accuracy, a more complete picture of the phenomena (Denscombe, 2008) and greater authenticity.

Although the research shares some commonalities with a case study methodology including developing a rich and thick description of the phenomena, there are significant differences. Rather than reporting, the action research seeks to enact emancipatory change for the actors involved, using their input to influence the action process, as part of a multi-phase cycle of intervention and review (currently in the third cycle following the two initial pilot studies). Furthermore, my active involvement

instead of detachment and observation may be considered in conflict with a case study approach, whilst welcomed in action research.

The action research approach shares some similarities with an ethnographical approach in that it seeks rich descriptions of context related social situations, using observations as one tool to do so (Cohen et al., 2011). Ethnographic and naturalistic research also recognises the researcher as part of the social world they are studying, requiring reflexive approach to be applied (Hammersley and Atkinson, 2007). However, action research also uses other quantitative and qualitative methods with an explicit focus on problem solving with changes to processes and policies as a result. To do so, it focuses more on analysis than description and the generation of new knowledge (Passos, Cruzes, Dyba, and Mendonça, 2012; Eisenhart, 2019).

Due to the small-scale nature and singular study, the research does not qualify as a meta-analysis, neither would such an approach be desired, due to the associated problems with conflation of unequal comparator groups (Simpson, 2017) and publication bias (Ropovik, Adamkovic, and Greger, 2001) with meta-analysis discussed later in this chapter.

3.4.1 Determining the mixed method type

Owing to the context, the varied actors and the transcultural nature, the research study had the potential to yield some rich and illuminating data, to ensure this was captured effectively, it was necessary to consider an effective mixed method design for the study. Bryman (2016) suggests nine possible approaches based on the priority and sequence of

the collection of quantitative and qualitative data. Creswell and Plano Clark (2011) suggest four major types: exploratory, explanatory, triangulated and embedded. These four types focus on the importance of priority and timing but also on the level of interaction between strands and the procedures used to mix them. The mixing of the strands was important within my research to understand the themes arising at the analysis stage. Focusing on the level of interaction between qualitative and quantitative was significant given that some research tools yielded both. For these reasons, Creswell and Plano Clark (2011) model was selected.

An interactive level was required between qualitative and quantitative strands, as both are used to investigate the research questions and the data from one strand is converted into the other type. For example, the observations provide thematic data but also data that can be subjected to quantitative analysis, such as participant talk intervals and total participant talk time. Categorical analysis of the open questions from the questionnaires, the dialogue from the semi structured interviews and the observations provided further lenses of interpretation. Equal priority was attributed to quantitative and qualitative methods since critical realism favours duality as it provides greater accountability for differing subjective realities. A pluralist approach based on fitness for purpose and applicability, ensures the research is driven by the research questions (Cohen et al., 2011) and provides methodological triangulation. The research used multiphase combination timing since the qualitative and quantitative data collection within each stage were largely concurrent, for example, the qualitative interviews were carried out at the same as the quantitative questionnaires. Based on content analysis of mixed method studies, Bryman (2016) derived a number of reasons for mixing both strands. Similar to those studies he analysed, triangulation,

completeness, enhancement and illustration are of considerable value to this study. The mixing of the qualitative and quantitative strands occurred within data analysis and the findings used the combined analysis to explore themes arising within the action research, providing a rich, coherent written and visual account.

3.4.2 Exploratory mixed methods

Based on the four determining factors and the action research nature, the most suitable method was an exploratory approach focusing on the intervention-development variant. The explanatory design was unsuitable since quantitative data is collected followed by qualitative data rather than concurrently. The triangulation design did seek to merge qualitative and quantitative data through concurrent collection but led to interpretation rather than any intervention. The embedded design prioritised one data type with the other providing a supportive, secondary role and again, this did not account for any potential intervention (Creswell and Plano Clark, 2011). The major advantage of the exploratory design was the generation of a new instrument (representing the Student Inclusive Meeting and the associated activities) and the clear demarcation of phases to make it straightforward to describe, implement, and report. The research is exploratory in nature as it recognises that the intervention instruments developed will not be the sole contributors to parental engagement and academic socialisation. No single method will solve all the issues, but a range of methods that are sensitive to social and cultural backgrounds will improve outcomes (Goodall, 2017). A level of causation was desirable since the reengineered meeting and the associated activities represented a significant aspect of home-school engagement. But determining a direct correlation on parent and student educational engagement would have been injudicious and naïve, as

the number of extraneous variables could not be accounted for. Neither could the impact of the COVID-19 pandemic on student outcomes.

The method differs from a traditional exploratory sequential approach, as the qualitative and quantitative data strands have equal importance to fully explore the phenomena. During the traditional approach, qualitative data is collected building into quantitative data (Creswell, 2015). Whilst aspects of this still exist, as there was more qualitative data collected than quantitative through interviews and observations, both strands have an interactive level and are collected concurrently. In other definitions for mixed method research this is referred to as a parallel mixed design (Tashakkori and Teddlie, 2009). Figure 3.4 below explains the different research strands. This type of mixed method research is normally used with under-researched phenomena. While PTM are certainly not under-researched, there are few versions that adopt an inclusive structure with mid to late adolescent children, focusing on developing SLCA and PAS.

There were three stages to the research consisting of Phase 1, Phase 2 and Phase 3 (see Figure 3.4 below). The primary data collected from participants in Phase 1, in addition to the conceptual framework discussed in Chapter 2, were used to design the intervention instrument based on the culture and experience of the participants (Creswell, 2015). The data served a dual purpose in also addressing the research question: To what extent do current PTM engender student and parent educational engagement? The culture-specific development of the intervention instruments increases the relevance to the group being studied (Creswell and Plano-Clark, 2017). The term ‘intervention’ is often traditionally associated with positivistic research; however, it is used by Creswell (2015) and Creswell and Plano-Clark (2017) for the trial of an

instrument based on initial data collection. A key feature of my action research is improving practice, a fundamental element of its design is action, also referred to as intervention (Ivankova, 2015). Once the intervention was created, it was then reviewed in Phase 3 to assess their value to the participants and areas of focus in the next iteration of the action research cycle. Exploratory research by its nature allows for inductive development based on the primary data followed by integration in the development phase. Based on the intervention and the literature review, it was possible to address the research question: What good practice exists in developing student and parent educational engagement? Phase 3 assessed how the intervention improved upon the existing structure using similar qualitative and quantitative methods as Phase 1 as shown in Figure 3.4. It sought to address the research question: To what extent does reengineering the meeting to an inclusive structure develop student and parent educational engagement? A leading motivation for the research is its practical value to schools, senior leaders and teachers, so the findings were structured into key themes accounting for all three research questions.

Phase 1 and Phase 3	
Qualitative	**Quantitative**
PTM and Student Inclusive Meeting Questionnaire 2: To understand parents', students' and teachers' perceptions of their role, their preparation, the delivery and follow up activities associated with Computer Science PTM and the Student Inclusive Meeting (Short and open questions). **PTM and Student Inclusive Meeting observations using audio recordings:** To understand the discourse that occurs between participants at PTM and the Student Inclusive Meeting. Exploring the categories and themes emerging from its content. **Interviews:** To understand teachers', students', and parents' perceptions of PTM and the Student Inclusive Meeting. Focusing on the discussion of SLCA, support for PAS and its strengths, weaknesses, and potential improvements.	**SLCA Questionnaire 1A:** To understand parents', students', and teachers' perceptions of SLCA in Phase 1 and Phase 3(two variants used, one version for parents and one version for students and teachers). **PAS Questionnaire 1B:** To understand PAS processes in Phase 1 and Phase 3 (parents and students). **Self-Regulation and Autonomy Questionnaire 1C:** To understand student's level of self-regulation including generating a relative autonomy index score in Phase 1 and Phase 3(students only). **PTM and Student Inclusive Meeting Questionnaire 2:** To understand parents', students', and teachers' perceptions of key aspects of the structure, content and delivery of Computer Science PTM and the Student Inclusive Meeting (Likert responses). **PTM and Student Inclusive Meeting observations using audio recordings:** To understand the discourse that occurs between participants at PTM and the Student Inclusive Meeting. Exploring the statistical data relating to the meeting.

Figure 3.4. Qualitative and quantitative research strands

The method did have its drawbacks; it required suitable timing to understand the different qualitative and quantitative methods and conduct each phase, as each needed to be analysed before the next phase could begin. Fortunately, the longitudinal nature provided a suitable window. Phase 2 also needed some forward planning and drafting since an outline of possible intervention activities was required to obtain ethical approval and consent from participants.

3.5 Contextual considerations

3.5.1 Catholic boys' secondary schools

The selection of this population is partly associated with the convenience prospective cohort it provides but also due to the deep knowledge I have of both schools, their culture and the communities they serve. I have maintained good working relationships with the headteachers, who would have understood my principles and motivations in completing the research, which may have aided approval and access.

Both schools involved in the research would be considered as traditional Roman Catholic secondary schools, where Gospel values underpin all aspects of practice. Having experienced the educational ethos first-hand, I was sympathetic to their mission, keen to develop exploratory research that may have a part to play in providing emancipation and social mobility. Furthermore, I believe in the mission of Catholic state schools in England; to serve the most disadvantaged. In the 19th Century, the disadvantaged in these school was largely Irish immigrants (Catholic Education Service, 2020) but a more diverse disadvantaged population is supported today. Catholic schools at both primary and secondary phases are more ethnically diverse than the national figure (CES Census, 2019). At secondary, 12.8% are eligible for Free School Meals, as opposed to 12.4% nationally (CES Census, 2019). In total there are 2117 Catholic schools in England, which represents almost 10% of all state funded schools, educating over 825,032 students. Whilst the majority of these serve the primary phase, 321 are state secondary (CES Census, 2019). By selecting Catholic schools, I was able to take advantage of their catchment, which by its nature, serves the disadvantaged and a greater proportion of the community by ethnicity to which I was keen to advantage.

There are 63 Catholic single-gender secondary schools in England, 26 are boys-only with 10 schools based in London (DfE, 2020). Therefore, by focusing on two Inner London boys' schools, a greater population validity can be gained of boys-only Catholic Schools, representing a potential 8% of the cohort nationally and 20% in London. Boys' schools were selected over girls as Computer Science is a popular choice at GCSE with this gender (in 2019 boys represented over 79% of entries at GCSE (The office for qualification and examination regulations, 2020). Therefore, these schools were more likely to offer the subject and have larger class sizes in comparison, important for obtaining a large enough quantitative sample.

3.5.2 Key stage four and the general certificate of secondary education (GCSE)

The research used a mixed method longitudinal design over two years following the same cohort of students from Year 10 (Y10), aged 14 and 15 to Year 11 (Y11), aged 15 and 16. These ages represent a pivotal period of adolescence for developing self-regulation, a key factor in determining success in school and social relationships (Farley and Kim-Spoon, 2014; McElhaney, Allen, Stephenson and Hare, 2009). Furthermore, students in these year groups were working towards their first public examinations, a significant milestone in schooling, where they are expected to grow in maturity, take greater ownership and become more independent. Although PAS is a continuous process that should start at an early age (Taylor et al., 2004), strategies that "scaffold adolescents' burgeoning autonomy, independence, and cognitive abilities" (Hill and Tyson 2009:758) are important to ensure students develop their own ideas and opinions (Goodall, 2013; Grolnick and Ryan, 1989), and that they are given the appropriate

support for completing GCSE qualifications. This context decision was also based on good practice identified in the literature review; Van der Eem and Haelermans (2014) research on student-led conferencing showed promising results in terms of metacognition and autonomy with a cohort of early adolescent children.

3.5.3 GCSE Computer Science

As part of this exploratory research, a specific subject was required to provide a suitable focus. Computer Science was selected based on greatest need, where teaching expertise and the number of students were low, as were external examination results.

In 2018, only 61% of secondary schools offered Computer Science at GCSE and within these schools, 75% of the Computer Science teachers were non-specialists (Kemp, Wong and Berry, 2019). This lower offer could be attributed to the lack of specialist teachers available to schools and the results in the subject being a grade lower nationally than English and Mathematics. The perception of poor teaching could also be attributed to the low student uptake with only 11% taking the subject at GCSE (Kemp, Wong and Berry, 2019). Student numbers continued to fall in 2020, dropping to 76,180 candidates compared with 78,080 the previous year, representing a 2% reduction (Ofqual, 2020). Over the past five years, significant investment has been made by the government to develop the Computer Science curriculum and the training of teachers, with the introduction of the National Centre for Computing Education (NCCE) involving the British Computing Society (BCS) and Computing at Schools (CAS). However, there is limited investment in parental support and their engagement in the subject. The seminal CAS publications: Computer Science- A curriculum for schools (2012); Computer

Science as a school subject- Seizing the opportunity (2012); and the Royal Society report- After the reboot, Computing education in UK Schools (2017), make little reference to strategies to support parents with the complexity of the curriculum or how to support home learning.

Parents' practical experience of the subject is normally limited, resulting in lower self-efficacy and perceived lack of competence in supporting their children at home, inhibiting their involvement (Brien and Stelmach, 2009; Hack, 2007). Computer Science as a subject in secondary schools has only existed since the 1980's (Passey, 2017; CAS Report, 2012), normally as a niche subject for a few students. In the 1990's, it was disposed in favour of Information Communication Technology (Brown, Sentence, Crick and Humphreys, 2014). Therefore, many parents will have not studied the subject at school, which could influence their decision regarding suitable subject options for their child at GCSE.

On a local level, there are issues associated with the subject. In both School B and School Y, there has been higher than average turnover of Computer Science teachers which has caused disruption to the students' learning. School B's 2019 examination results were positive with 96.7% obtaining levels 9-4 (nationally 65.3%) of which 60% were 9-7 (nationally 24.5%). However, these were exceptional results, achieved in a period of great stability for the department with experienced staff. School Y's 2019 GCSE Computer Science examinations results were lower, with 58% achieving levels 9-4 of which 10% were 9-7. Uptake in both schools is high, having two sets of at least 20 students within each year group.

As an experienced Computer Science teacher, I was aware of the difficulties associated with the subject at GCSE in terms expertise and support for parents. Furthermore, I have a detailed knowledge of the curriculum and its delivery, both have influenced my decision in its selection as the subject used within the research.

3.5.4 Original meeting format

At School B: Inner-City School on 05/03/20 the PTM was held in the main school hall. Three sessions were scheduled in hour blocks starting at 16:30 until 19:30. Prior to the meeting, parents had already booked a timeslot. The name of the child was laid out on the desk, with four chairs around the table. Parents were seated, but teachers moved around the room visiting parents based on the student's name on the table. Students were not formally invited to the meeting. Once the hour-long session was finished, a bell was rung, and parents were asked to vacate the hall.

At School Y: Suburban School for the PTM held on 30/01/20, the Middle Hall at the school was used. Letters were sent to parents in advance of the meeting, stipulating that their son should attend. Three sessions were scheduled in hour blocks, the evening ran from 17:00 until 20:00, parents were allocated a slot based on their surname. At the start of the session the Learning Coordinator welcomed parents and explained key information about the evening. The rest of the evening was organised in the same way as School B: Inner-City School with teachers moving around the room to parents.

Although there may have been slight variations from year to year, from my experience, having attended previous PTM in both schools as a teacher, the meeting structures in

spring 2020 represented the typical process and evening. Furthermore, accounts of PTM within the literature reviewed, such as Walker (1998:165), Maclure and Walker (2016:6) and Kinney (2012) were similar.

3.5.4 COVID-19

The original PTM took place at School Y on 30/01/20 and School B on 05/03/20. The first national lockdown period occurred shortly afterwards on 23/03/20. As a result, both schools remained closed from March 2020 until June 2020, moving to a remote teaching and learning model during this time. In July 2020, schools partially re-opened but students only returned for the equivalent of five days over a four-week period. The staggered return led to a prolonged Phase 1 data collection period, as collection methods required adapting or I had to wait until the schools returned to conduct face-to-face aspects, such as the student group interview at School Y. Phase 2 intervention activities could not be planned until most of the Phase 1 data had been analysed, leading to a delayed start of the research at School Y for teachers and students until after the 2020 summer holidays (see Appendix C: School Y Gantt chart).

Student absence due to COVID-19 was significant. By December 2020, the entire Y11 cohort at School Y had completed two weeks self-isolation and the school physically closed, going virtual a week before Christmas, due to the rate at which the virus was spreading through the school. Forty-nine out of 120 Y11 students at School B had also self-isolated by this point. Furthermore, teachers participating in the study had periods of self-isolation and ill health related to COVID-19.

The nature of many of the interventions had to change with limited notice. Intervention methods had to be repurposed for online use or condensed to reduce time taken for delivery since opportunities were limited. Originally, it was planned that students would receive hard copy resources in a folder, instead, resources were shared online to make them accessible at home. Constraints posed by COVID-19 are discussed later in this chapter.

3.6 Pilot studies

Two pilot studies were conducted to consider the feasibility of the full-scale study. Pilot study one was conducted at School B in the Autumn and Spring term of 2017-2018 with Y10 students and pilot study two was conducted in School Y in the Spring term of 2019. The pilots ensured that the ethical and legal protocols associated with the research were tested and adhered to, particularly, informed consent and data protection regulations.

Based on the results from the studies, methods of limiting the impact of the powerful position of the researcher, the experimenter effect (Cohen et al., 2013) and prestige bias (Thomas, 2013:208) were developed in the main research. A more nuanced approach to initial contact and research tool distribution was also decided for each school to increase uptake. The questionnaire was shortened and online surveys were adopted to provide parents and students with more time, less surveillance and to enable improved data collection and analysis. Greater quantitative measures were introduced in audio observations to yield more useful data including meeting length, participant talk intervals and participant talk time.

3.7 Sampling strategy

A mixed method stratified purposive sampling strategy was adopted, representing a purposeful non-probability sample (Tashakkori and Teddlie, 2009; Palinkas, Horwitz, Green, Wisdom, Duan, and Hoagwood, 2015). The purposive nature sought to generate as much detail as possible to answer the research questions, while the stratified nature, although somewhat primitive, provided a degree of legitimation and transferability by identifying a central tendency between schools. The strata for the subgroups were those students studying Computer Science at GCSE in both schools and, by the schools' nature, specifically boys. A typical case sample was selected with the full population of Computer Science cohort being able to participate. Due to ethical considerations and the active participation of those involved, consent was required, so volunteer sampling was used. Since the sample was not random, it was necessary to consider the motivation of participants, including acquiescence bias and the powerful position of the researcher when considering the findings and possible limitations.

A prospective cohort longitudinal approach was used over two-years, starting two to three months before the Y10 PTM and continuing beyond the Y11 Student Inclusive Meeting. Using a prospective cohort longitudinal approach, the same parents, students and teachers were involved in Phase 1, 2 and 3, allowing comparisons to be made across phases and to determine the impact of the intervention instruments on particular participants. By adopting a cohort approach, selective sampling could be used for the parent interviews, providing some flexibility if attrition occurred between Phase 1 and 3. However, a significant risk of this approach was the lack of replication or

continuation. Since all Computer Science Y10 students, parents and teachers from both schools were invited to participate originally, there were no alternative pools.

Table 3.1 provides an overview of the sample obtained and how this changed between Phase 1 and Phase 3. All percentages shown indicate the sample size compared to the population, except the final column, this is the percentage of EAL students within the sample. All three GCSE Computer Science teachers, across both schools, provided consent (with an additional teacher providing consent in Phase 3). As discussed in Section 3.3, the teachers had to initially volunteer for the parents and students to be invited from their classes, ensuring suitable triangulation of data collection in Phase 1 and 3 from all three perspectives. Their involvement was paramount since they had extensive knowledge of the students' ability and progress, and experience in developing favourable student learning characteristics as part of their day-to-day role as teachers. Furthermore, their responses may be more objective compared to other participants, not having to limit and demarcate personal bias or parental bias regarding levels of PAS and SLCA. They were also a useful source of subject specific pedagogical knowledge, assisting with the design of intervention instruments such as the parental toolkits and the remodelled meeting.

Phase	Number of Computer Science classes per week	Total Number of Computer Science students	Number of students participating	% of cohort population	Number of parents participating (one set per child)	% of cohort population	Number of teachers participating	% of population	% of sample EAL or different home language to English
School B Phase 1	2	41	17	42%	17	42%	2	100%	18%
School B Phase 2 and 3	2	40	16+	40%	16	40%	1*	100%	19%
School Y Phase 1	2	45	12	27%	12	27%	1	100%	33%
School Y Phase 2 & 3	2	45	12	27%	12 (8)++	27%	2**	100%	33%

+ One student left the subject to focus on other studies
++ 12 School Y parents were involved in the intervention activities. Eight parents completed the Phase 3 Questionnaire 2.
* Original Y10 teacher no longer able to take the class due to health reasons; HOD took both classes in Y11.
**NQT took over responsibility for one class during Y11, one lesson per fortnight team-taught with HOD.

Table 3.1. *Sample overview*

During Phase 1, 17 parents and students from School B, representing 42% of the entire cohort volunteered and 12 parents from School Y representing 27%. Although the parent's gender can determine their focus and level of engagement (Grolnick and Slowiaczek, 1994), this has not been accounted for in the methodology due to the small sample size available to draw comparisons. The larger sample obtained at School B could be associated with the powerful position of the researcher, as I was a senior leader and a member of the Computer Science department at that school (discussed within Section 3.3, 3.9 and Appendix A: Application for Ethical Approval are the methods used to reduce this effect). At the end of Y10, one student dropped the subject in School B to focus on his extra-curricular music pursuits. In School B for Y11, in addition to their own classes, the Head of Department (HOD) took on responsibility for the other classes due to their teacher's ill-health associated with COVID-19. The HOD had previously taught most of the class at Key Stage 3 (KS3). I covered some lessons when

the HOD was unavailable and helped with marking online assignments. As shown in Table 3.1, in School Y, a newly qualified teacher took on most of one class, with the HOD still teaching one lesson per fortnight.

During Phase 1 and Phase 3, all participants completed SLCA Questionnaire 1A, Questionnaire 2 and the observations (if students attended the meeting). Students and parents also completed PAS Questionnaire 1B and only students completed the Self-Regulation and Autonomy Questionnaire 1C. All teachers were interviewed, as were students through group interviews. A random sample approach was used to select two parents from each school for interviews for Phase 1 and then for Phase 3. Across both schools, by Phase 2 and 3, 28 out of a possible 85 participants were involved in the study representing 33% of the cohort. In terms of quantitative research and for the application of statistical methods including Cronbach's Alpha, the generally accepted minimum sample size is n=30 (Salkind, 2014; Van Voorhis and Morgan, 2007) but due to the largely homogeneous nature of the research's population, the slightly smaller sample size is acceptable (Johnson and Christensen, 2012). The sampling error was considered a limitation to the quantitative findings of the research. To account for the small sample size when comparing Phase 1 and Phase 3 data, a non-parametric test; Wilcoxon signed-ranks test was used.

Qualitatively, the research had a robust sample size, Creswell and Creswell (2018) suggest that for phenomenological studies, a sample size of three to ten participants is suitable. Due to data protection regulations, no special category data were collected, such as ethnicity or SEND status. The only demographic indicator was English as an additional language (EAL), which was used to explore possible difficulties associated

with PTM and language. The number of students with EAL within the study was higher than the student EAL national average (sample demographics are shown in the last column in Table 3.1); higher values are typical in London schools, since they represent greater ethnic diversity than other parts of the UK. Eighteen percent of the original sample of students at School B (the inner-city school) were classified as EAL, compared to 33% at School Y (the suburban school). The higher EAL sample at School Y may have contributed to the reduced talk time for parents at the meeting compared to School B (12% at School Y and 19% at School B, see Table 5.1). From listening to the audio recordings of the PTM, it seemed that some parents found it difficult to articulate their responses or ask questions in English. A further indicator was two students at School Y in the original meeting being asked by the teacher on behalf of their parents to take notes. This may also account for the lower completion rate at School Y of Questionnaire 2 for parents in Phase 3 (see Table 3.1), having found the additional free-text answers challenging to complete.

The schools were selected primarily based on their nature as Catholic Boys' schools in London. The possible sample population was small since there are only 10 schools of this kind (DfE, 2020). Having been a senior leader in both schools, I had a strong understanding of the communities they served, how they contrasted and a vested interest in their flourishing. To ensure the schools anonymity, detailed demographic or pupil population data cannot be provided within this thesis, however, the inner-city School B, was Ofsted graded Outstanding. At GCSE, School B in 2019 had a Progress 8 score well above average and those students eligible for Free School Meals was less than 20%. The suburban School Y was Ofsted graded Good, with a Progress 8 score above average and those eligible for Free School Meals over 20% (DfE, 2019). Based on data

collection from Phase 1, while certain intervention tools needed to be differentiated due to specific school needs (a high proportion of EAL at School Y meant the parental toolkits and text messages had to be adjusted accordingly). Some areas of consideration overlapped, especially for the PTM, learning characteristics, vision, practice and systems, and PAS process for Active Involvement and Home Learning (see Appendix C: Mapping of intervention instruments to areas of consideration). Using two schools helped reduce the sampling error (Cohen et al., 2011) in accounting for the GCSE Computer Science population within Catholic Boys' Schools. It added breadth and depth to the initial data collection, providing a rich source of qualitative data, influencing the design of the intervention tools, while providing a level of triangulation, increasing the tools' robustness and potential usefulness to other educators. The increase in quantitative and qualitative data generated and its subsequent mixing within data analysis, provided greater confidence and security in identifying the themes associated with educational engagement, support and communication discussed in Chapter 5: Exploring Change.

All Phase 3 data were collected from participants at School B. The main PTM at School Y was cancelled due to changes in school assessment during a third national COVID-19 lockdown. Phase 3 data were still collected regarding the other engagement activities, with a 100% completion rate for teachers and students, and 66% for parents. To provide a rich account of the Student Inclusive Meeting and to counter the missing School Y feedback, two further interviews were conducted within Phase 3 with School B parents. Data were not collected from one student in School B for Phase 3. For the purpose of statistical analysis, the overall mean value for a category/aspect was assigned to the student where needed for the Wilcoxon signed-rank test.

3.8 Research schedule

A Gantt chart for each school is provided in Appendix C, Table 3.2 provides an overview of activities and timeframes for both schools. Further details regarding each activity including dates, timings, aims, and resources can be found in Appendix C: Engagement Activity Plans.

3.8.1 School B: Inner-City School

Initial participant consent was obtained in the Y10 autumn term in preparation for the PTM in the Y10 spring term. Due to COVID-19, intervention activities started at the end of the Y10 summer term and continued up to the end of the of the Y11 Spring term.

3.8.2 School Y: Suburban School

Initial participant consent was obtained in the Y10 autumn term, in preparation for the PTM in the spring term. Due to COVID-19, intervention activities started at the end of the Y10 summer term and continued up to the end of the of the Y11 spring term. Phase 1 data collection finished at the start of the Y11 autumn term due to COVID-19 restrictions, although, some analysis was ongoing allowing for the Phase 2 intervention to begin for parents at the start of the Y11 autumn term. The gap in intervention activities during the Y11 autumn and spring terms, apart from the parent text messages, was due to periods of self-isolation and the third lockdown. The number of intervention activities completed was reduced due to the cancellation of the Student Inclusive

Meeting. I was notified of the PTM cancellation after students and teachers had completed their initial preparation session for the meeting.

Participant	Activity Number (Linked to Appendix C: Engagement Activity Plan)	Activity Type	Name	Date/ Week Commencing
Student	S1 Both	Face-to-Face	Student consent and research information	18/10/19- 24/02/20 School B 06/09/19- 13/01/2020 School Y
All	S1 Both, P1 Both, T1 Both	Face-to-Face	Original parent teacher meeting	02/03/20 School B 27/01/2020 School Y
Parent	P1 Both	Remote	Parent consent and research information	18/10/19-24/02/20 School B 06/09/19- 13/01/2020 School Y
Parent	P1 Both	Remote/Face-to-Face	Initial parent data collection	02/03/20- 09/03/20 School B 27/01/20, 09/03/20-31/08/20 School Y
Teacher	T1 Both	Face-to-Face	Teacher consent and research information	18/10/19- 24/02/20 School B 06/09/19- 13/01/2020 School Y
Teacher	T1 Both	Face-to-Face	Initial teacher data collection (Initial SLCA review)	02/03/20- 09/03/20 School B 27/01/2020-03/02/2020 School Y
Student	S1 Both	Face-to-Face	Initial student data collection (Initial SLCA review- Session 1)	18/10/19- 24/02/20, 09/03/2020 School B 09/03/2020- 31/08/20 School Y
Phase 1 Data Analysis				16/03/20-25/06/20 School B 27/01/20-21/09/20 School Y
Phase 2 Intervention				29/06/20- 22/03/21 School B 07/09/20-25/05/21 School Y
Student	S2 School B	Face-to-Face	Introduction to research and preparing for the summer break (Session 2 delivered twice)	29/06/20, 13/07/20 School B
Parent	P2 Both	Text	Pedagogy text messages	13/07/20- 22/03/21 School B 07/09/20-25/05/21 School Y
Parent	P3 Both	Text	Computer Science weekly challenge text messages	13/07/20- 22/03/21 School B 07/09/20-25/05/21 School Y

Participant	Activity Number (Linked to Appendix C: Engagement Activity Plan)	Activity Type	Name	Date/ Week Commencing
Parent	P4 Both	Hard copy booklet and PDF	Computer Science GCSE parental support toolkit 1	07/09/20 School B 02/11/20 School Y
Student	S2 School Y	Video	Learning and revision strategies video	16/11/20 School Y
Student	S3 School B	Face-to-Face	Developing a Growth Mindset, grit and metacognition (Session 3)	14/09/20 School B
Student	S3 School Y	Face-to-Face	Introduction to research, learning and revision strategies and SLCA review (Session 2)	30/11/20 School Y
Student	S4 School B	Face-to-Face	Second SLCA review and understanding will vs skills (Session 4)	12/10/20 School B
Student	S4 School Y	Face-to-Face	Growth mindset, grit, goals and the subject audit (Session 3)	07/12/20 School Y
Parent	P5 Both	Video	Research information video	19/10/20 School B 07/12/20 School Y
Teacher	T2 Both	Video	Research information video	19/10/20 School B 07/12/20 School Y
Student	S5 School B	Face-to-Face	Putting planning into practice (Session 5)	11/09/20 School B
Student	S6 School B	Video	Learning and revision strategies video (Session 6)	16/11/20 School B
Parent	P6 School B, P7 School Y	Email	Student subject knowledge audit and intervention methods	16/11/20 School B 18/01/21 School Y
Teacher	T3 Both	Email	Student subject knowledge audit and intervention methods	16/11/20 School B 18/01/21 School Y
Parent	P7 School B, P6 School Y	Hard copy booklet and PDF	Computer Science GCSE parental support toolkit 2	23/11/20 School B 11/01/21 School Y
Student	S5 School Y	Face-to-Face	Inclusive meeting preparation. Using learning strategies and revision techniques (Session 4)	15/03/2021 School Y
Teacher	T4 School B	Remote	Second SLCA review	14/12/20 School B
Student	S7 School B	Remote	Inclusive meeting preparation (Session 1)	11/01/21, 18/01/21 School B
Student	S8 School B	Remote	Inclusive meeting preparation (Session 2)	25/01/21 School B
Parent	P8 School B	Remote	Inclusive meeting preparation	25/01/21 School B
Teacher	T5 School B, T4 School Y	Remote	Inclusive meeting preparation (Session 1)	25/01/21 School B 01/03/21 School Y
Teacher	T6 Both	Remote	Inclusive meeting preparation (Session 2)	25/01/21 School B
All	S9 Both, P9 Both, T7 Both	Remote	Inclusive meeting	25/01/21 School B
Student	S10 School B and S6 School Y	Remote	Student data collection from Phase 2 intervention	01/02/21- 08/03/21 School B 22/03/21- 26/04/21 School Y

Participant	Activity Number (Linked to Appendix C: Engagement Activity Plan)	Activity Type	Name	Date/ Week Commencing
Parent	P10 School B, P8 School Y	Remote	Parent data collection from Phase 2 intervention	01/02/21-08/03/21 School B 22/03/21- 26/04/21 School Y
Teacher	T8 School B, T5 School Y	Remote	Teacher data collection from Phase 2 intervention (Final SLCA review)	01/02/21- 15/02/21 School B 22/03/21- 26/04/21 School Y
All	S11 Both, P11 Both, T9 School B	Remote	Progress towards targets meeting	15/03/21- 22/03/21 School B
Student	S12 School B	Face-to-Face	How to plan a revision session, using flash cards and coping with exams (Session 7) Final subject knowledge audit and modification of SLCA	22/03/21 School B
Phase 3 Data Analysis				29/03/21-31/05/21 School B 03/05/21- 25/05/21 School Y

Table 3.2 Research schedule for School B: Inner-City School and School Y: Suburban School

3.9 Validity and internal consistency

3.9.1 Validity and reliability

There are many threats to the validity of this research not least its small-scale nature, the potential for researcher bias and the influence of the powerful position of the researcher. However, a strong theoretical grounding provided through the two-year taught element of the Professional Doctorate programme has ensured that I am knowledgeable about data authenticity and credibility. I have a clear understanding of my ontological position and my values as a researcher, adopting a reflexive approach to determining their impact. This chapter intentionally acknowledges my values, including biographical aspects, to make explicit to those reading or evaluating the research on how it has been

influenced (Greenbank, 2003). The research design was carefully constructed, based on a detailed conceptual framework, existing good practice, and piloting of the instruments. The small-scale nature may raise questions regarding representativeness or direct replicability across persons, settings, and times (Johnson and Christensen, 2012). Furthermore, the critical action research nature raises generalisability issues, since the study focuses on a situational cultural context, making the conclusions more conditional. However, using mixed methods, the research has catalytic and action validity but in comparability and transferability, not in replicability or predictability (Cohen et al., 2013). The purpose of the research was not to obtain universal facts and laws but rather to provide professional knowledge to improve the effectiveness of education engagement and the PTM.

Meta-analyses and evidence-based studies were used in this research to identify potentially positive educational practices. Using these systematic reviews, in addition to primary research including the pilot investigations, a rich cross section was obtained, important in establishing the position and contribution of this study. However, meta-analyses have their limitations, often conflating unequal comparator groups or failing to recognise differences in data and study designs (Ahn, Ames, and Myers, 2012; Simpson, 2017; Jones, 2018). Furthermore, publication bias can occur, whereby only educational research that has significant or favourable results is published; therefore, those without these traits that remain unpublished cannot contribute to the combined effect size (Ropovik et al., 2001). For these reasons, meta-analyses have been used to shape the conceptual lens but not as the foundation of enquiry. The research is evidence-informed rather than evidence-based, since I am bringing my own prior

knowledge, experience and understanding of the context to bear on the approach (Stoll, 2017) rather than universally adopting an evidence-based study.

Using a longitudinal sampling strategy enhanced space triangulation and methodological triangulation by using the same method on different occasions. It led to prolonged engagement and persistent observation, which in turn increased the truth value of the research as the Hawthorne effect was reduced when participants became more accustomed to me (Boudah, 2011). Triangulation is an important epistemological consideration to understand an objective reality that can only be perceived through multiple social actors and their subjectivity. The mixed methods approach allows for comparison of data sets to examine their accord and convergent validity.

Although both schools were Catholic boys' schools, their context and community were different; therefore, a culturally sensitive approach was required. Through piloting the research at both schools, the language used within the instruments was carefully considered, as was the approach to consent and data collection. Having worked at both schools, I have a unique advantage in understanding both communities enhancing both cultural and ecological validity.

Academic outcomes and achievement have not been included as a measure of the success of the research. The research was exploratory and focused on SLCA and PAS processes associated with intrinsically motivated, self-regulating students. The development of these features may have led to improved examination results, but correlation does not imply causation. However, to test the construct validity, embedded in the design, certain instruments (Questionnaire 1A, 1B and 1C) were specifically

designed to measure the change in SLCA, PAS, self-regulation and autonomy, across the phases. Phase 1 and Phase 3 findings for these tools were compared, using Wilcoxon signed-ranks test and effect size (r = Z / sq.root N) to identify statistical significance and any general causal trends. A non-parametric test was used rather than a parametric test such as Paired T-Test due to the small sample size.

When deciding on the type of research tools to use, similar research studies were considered, including Suizzo and Soon (2006) and Minke and Anderson (2003), including their purpose, intended outcomes and the validity of their original research. This analysis helped to establish provenance and possible effectiveness in the current study but also provided a measure of comparability with others. Each tool is discussed later in this chapter. For quantitative tools, internal reliability was measured using Cronbach's Alpha, as discussed below.

3.9.1 Internal consistency and convergent validity

To ensure the consistency of the coding analysis and provide a degree of investigator triangulation, inter-rater reliability was completed by the research supervisor and the director of studies. A cross section of axial and open codes was examined, representing over 10% of the applicable Phase 1 data. Both agreed with the themes that emerged based on the analysis that was conducted. Whilst coding the raw data provides a suitable method to quantify themes, the mixed methods results and discussion use both raw and coded data to ensure meanings are not lost, misused or reduced.

Cronbach's alpha was used with all Likert scale response questionnaires to determine the internal consistency, construct validity and measure the interrelatedness of items within a particular category (Taber, 2018). Using this, convergent validity was established by testing that items that were meant to be related, were related. By confirming convergent validity, it was possible to establish whether the instruments were testing the theory and providing a suitable level of construct validity (Ginty, 2013). The number of questions within subscales was minimised to ensure there was no redundancy in items and that questionnaires did not take longer to administer than was completely necessary (Taber, 2018).

All Likert scale questionnaires were either based on previous pilot research carried out by me or based on instruments used in similar studies, some with a significant lineage. It is accepted that the current research was unlikely to produce the same alpha coefficients, as it is not possible or desirable to control the variables and replicate the conditions. Educational research is not easily generalisable in this sense, as the milieu of contextual differences inhibits replicability. The alpha for each category within a questionnaire was calculated using SPSS, a statistical software platform, as was the overall alpha for that questionnaire (cross-scale result). The overall alpha provides the measure of the interrelatedness of the questionnaire and determines if the research tool meets a suitable threshold to have internal consistency.

Although there is no formally agreed-upon figure, 0.7 is often considered the threshold for alpha (Taber, 2018). Covariances and correlations were considered, as was the removal of certain questions to model the impact on the alpha. While the alpha figure is certainly important to the research, it was not be taken as absolute, since it only

represents the average degree of interrelatedness (Sijtsma, 2009). For general ability tests and psychological constructs, values below 0.7 are appropriate. Many of the questionnaire foci are related to conceptual thinking, such as motivation or behaviour. Therefore, some level of non-coherence in construct across all students was expected (Nehring, Nowak, zu Belzen and Tiemann, 2015). The sample size is also a further consideration, for the alpha to be calculated effectively, the sample size should exceed the number of items and a minimum sample size should be approximately n=30 (Samuels, 2015). Therefore, it was necessary to consider the data for School B and School Y in combination.

Suitable internal consistency and convergent validity were obtained for each questionnaire, with the overall alpha for each questionnaire being over 0.7. A few individual characteristics were below this threshold, due to the interpretation of reverse questions and questions relating to conceptual thinking. A breakdown of all Cronbach's Alpha values for categories and questionnaires can be found in Appendix B: Cronbach's Alpha values. In having suitable internal consistency, the questionnaires contributed effectively to the construct validity when triangulated through a mixed method approach using the other instruments.

3.10 Phases 1 and 3 research tools

Figure 3.5 provides an overview of the research tools, their phases of use and correlation to the research questions. Most tools used in Phase 3 were adapted from Phase 1 to obtain feedback on the Student Inclusive Meeting and the associated

activities. Phase 3 also provided the majority of the data to address two of the three research questions.

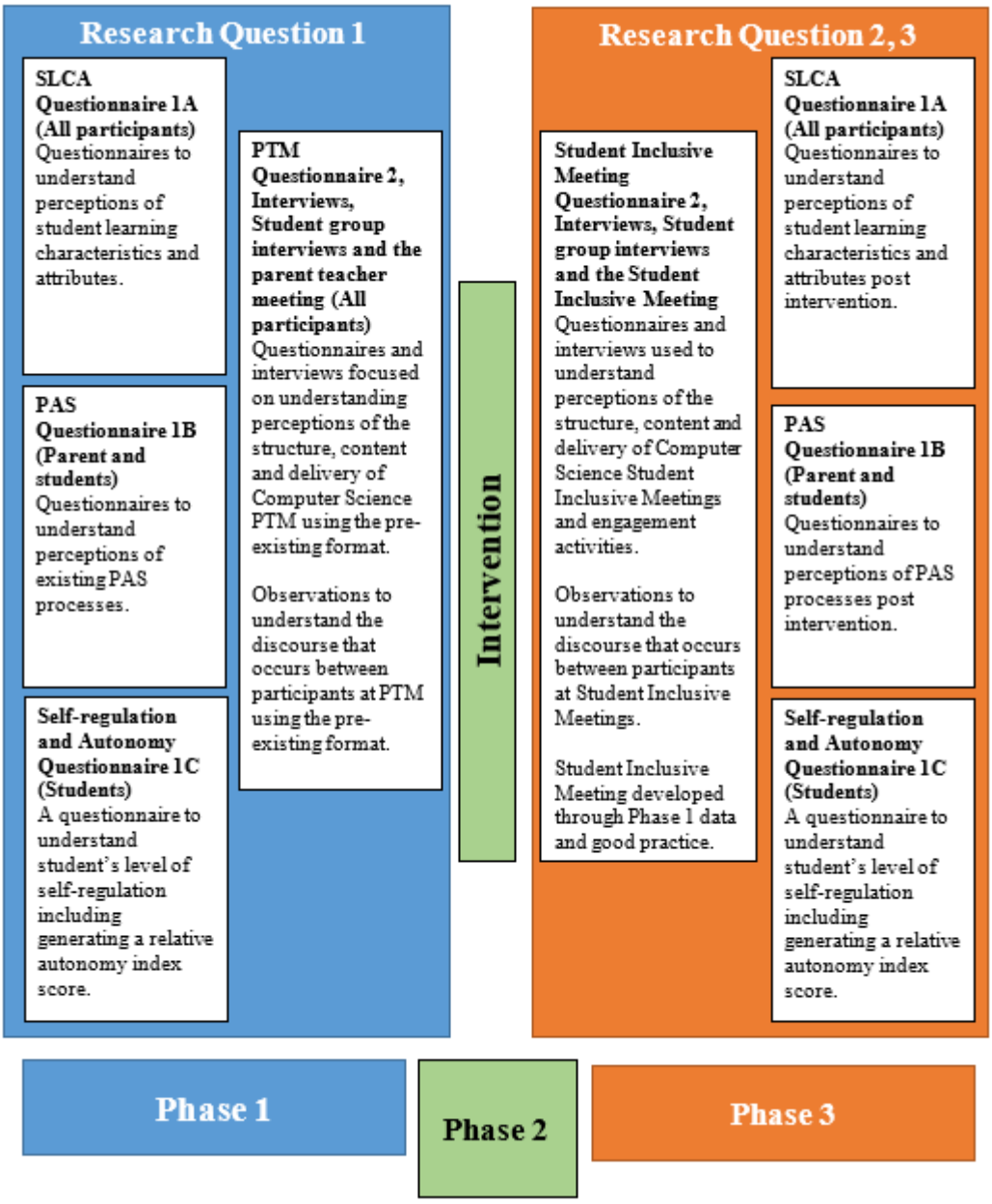

Figure 3.5. Description of research tools used within each phase

This section explains each of the research instruments described in Figure 3.5, including their provenance, purpose, reliability, and validity. Samples of the research tools can be found in Appendix B.

3.10.1 Use of online surveys

As restrictions increased due to the COVID-19 pandemic, the use of the online survey software became more critical to the research as a viable alternative to paper-based research tools. Jisc online survey software, was recommended for use by the university and was also GDPR compliant. The software was intuitive and allowed for easy set-up with suitable validation to prevent errors using range, format, and presence checks. Logical branching validation was also available, directing participants to questions based on their previous answers. Significant advantages included the speed of distribution, the organisation of the data, exporting, and allowing for further analysis using application packages such as Microsoft Excel (Nayak and Narayan, 2019:32; Evans and Mathur, 2005:197). From a participant perspective, questionnaires could be completed at their convenience and built-in spell-check and grammar features provided greater confidence for those participants with poor literacy skills. Before publishing, the questionnaires' format on different devices and browsers was reviewed to ensure it could be viewed accordingly. There were risks in using online questionnaires, including online skills and access, loading times, misinterpretation, inattention, incompletion and, most critically, reduced sample response rate (Cohen et al., 2013:281; Evans and Mathur, 2019:187). However, participant skill levels were high, with online surveys being used in both schools previously with parents. Furthermore, email using SchoolComms was the main method of communication and distribution of information in both schools, with 98% of the schools' parent population having an active email address. A certain level of competence can be expected from teachers since they teach Computer Science, the same applies to Computer Science students.

3.10.2 SLCA Questionnaire 1A (All participants)

The SLCA Questionnaire 1A consisted of two versions: the parent version and the teacher and student version. Both focused on five main characteristics of behaviour and attitude, effort, practice, vision, and systems based on the research by Oakes and Griffin (2017), attributes from other character-like frameworks including Elis and Todd (2018: Appendix 1) and the Behaviours for Learning Grid developed by School Y (Goodwin, 2019). The Behaviours for Learning Grid was developed by an action research group led by the Pastoral Assistant Head with my involvement. Modifications were required to ensure the standardisation of terminology across Schools B and Y. The original categories included participation, independence, presentation and resilience; further categorisation and additional aspects were required to identify all SLCA characteristics. The description types were changed from outstanding, good, acceptable, concerning, and very concerning to represent more of a gradient rather than significant jumps, making progression through these more graduated. Using attributes that had already been developed in one of the research schools increased the likelihood of their precision and reliability in this research. Furthermore, the nature of action research, particularly my involvement, provides a greater understanding of the context. The Oakes and Griffin (2017:18) VESPA Model Continua helped with categorising the different behaviours for learning identified by School Y. The VESPA system 28-item questionnaire (Oakes and Griffin, 2017:218), supported question development, including the 17 questions developed for the parent version, this included the characteristics vision, effort, systems, practice and attitude. An amendment was made to distinguish between behaviour and attitude. In the Ofsted Education Inspection Framework (2019), behaviour was no longer part of the personal development, behaviour and welfare section, as it was in the

Ofsted Inspection Framework (2015) but considered in duality with attitude. Whilst behaviour might indicate attitude, the relationship is not always causal, as it is possible to have a poor attitude but still exhibit good, or at least passive, behaviour. Therefore, Behaviour is not always a subset of Attitude, parity that requires separation but not independence exists between these characteristics. A similar approach was taken by Turner, Scott, Jackson, Wrathmell, Lees and Hunt (2019), who adapted the model to include Behaviour and Intelligence in their use of the tool for reporting.

In both Phase 1 and Phase 3, the student and teacher questionnaire consisted of 24 questions, each focusing on attributes associated with the five main characteristics (see Appendix B: SLCA Questionnaire 1A). The questionnaire started with a paragraph explaining key terms to aid completion by the participants. Each question had five descriptors: very good, good, acceptable, poor, and very poor. Teachers were asked to complete the questionnaire for each student, using a spreadsheet emailed to them. The spreadsheet showed the question, descriptor (colour coded green to red) and the Likert scale response. Students completed the same questionnaires, reflecting on their own characteristics. Students completed this questionnaire as part of a student engagement spreadsheet which also included a subject knowledge audit (to ensure confidentiality user access right were set on folders storing the spreadsheet so only the student and I had access). The original idea of using a competency style framework for students was based on Taylor-Patel (2011:61). The student version is based on the principle of a self-evaluative rubric. Rubrics can be effective review mechanisms to support learner progression by regulating and monitoring their own learning; this can also lead to improvements in self-efficacy (Campbell and Bokhove, 2021). The document was accessed from a folder set up on the school network, which I could also access; students

were only identified by codes on each spreadsheet. At School Y, during periods of lockdown, students completed the questionnaire using Jisc online survey software and the data were transferred to their spreadsheet. Over the course of the study, the student questionnaire was completed three times. This provided a method of self-evaluation for students.

The participating parents of each student answered 17 questions. Their questionnaire focused on the student attributes recognisable to parents, representing the same five main characteristics used within the student and teacher questionnaires. The five-point Likert scale responses were: always, frequently, sometimes, rarely, and never. Different questionnaires were required as parents' understanding and experience of characteristics would be different from those of the teacher and the student. For instance, the aspects *Focused in the lesson contributing throughout* or *Easily distracted and distracts others* are relevant and determinable for students and teachers but not parents. While it was not possible to draw direct comparisons between parent and teacher/student questions for specific attributes, it was possible at a higher level for the five main characteristics since all parent questions were categorised. The parent questionnaire was disseminated using Jisc online survey software. Parents completed the questionnaire in conjunction with Questionnaire 1B. No personal information was required for its completion. For all questionnaires, participants were provided with a code beforehand, which they entered at the beginning, allowing for correlation between parent, student and teacher.

3.10.3 PAS Questionnaire 1B (Parents and students)

Initial research into potential questionnaire structures considered Hoover-Dempsey and Sandler's (2005) Parent/student report of encouragement scale, Alivernini and Lucidi's (2011) Perceived parental/teacher support for autonomy and Grolnick and Slowiaczek's (1994) Parent-School interaction questionnaire, parenting context questionnaire, and the parent involvement measure. The final PAS Questionnaire was based on a version developed by Suizzo and Soon (2006) of 32 Likert scale questions, that combined many elements of the other questionnaires but was more aligned with this research due to its mixed method approach. The number of questions was reduced from the original version, after a critical review with my previous research supervisor and pre-testing of the instrument in pilot studies at School B in 2018 and School Y in 2019. The aggregation of questions was intended to reduce repetition and to focus the questionnaire on key PAS characteristics important to the research.

The Likert scale was modified to represent five answer types: never, rarely, sometimes, often, and frequently, instead of the four in the original study. This structure provided greater uniformity with the parent version of the SLCA Questionnaire 1A. Providing a mid-point was felt to be important to account for a true representation of beliefs and not to polarise responses. To reduce respondent bias favouring the left side (Friedman and Amoo, 1999) or pattern selection, the wording of some questions used reverse orientation (Van Sonderen, Sanderman and Coyne, 2013).

Prestige bias was a significant issue faced by this research. All questionnaires, especially 1A and 1B, encouraged participants to reflect on their own effectiveness in

relation to PAS (Questionnaire 1A), SLCA (Questionnaire 1B and 1C) and PTM (Questionnaire 2). Parents, students, and teachers may struggle to answer this style of question without inflating answers to ensure they are perceived accordingly. To reduce the critique effect, questions were designed to be impassive and non-judgemental, for example, 'What you see as your role in parent teacher meetings?' The Likert scales tried to avoid emotive language, such as bad or terrible or excellent; sometimes this was not possible, where a spectrum of attitudes needed to be measured.

The participating parents and students in both Phase 1 and Phase 3 completed 19 questions (see Appendix B: PAS Questionnaire). The question wording was altered to address the parent or the child but otherwise, the content remained alike. There were three subcategories representing different aspects of PAS, with the following associated questions:

- Reflective enhancing communication and developing metacognition (RECM). Questions 1, 3,7,10,17,18,19.
- Active involvement and home learning activities (AIHL). Questions 2,5,6,8,9,11,13.
- Expectation, aspiration, goal setting and providing structure (EAGS). Questions 4,12,14,15,16.

Parents completed the questionnaire in conjunction with Questionnaire 1A. Students completed the questionnaire with Questionnaires 1C and Questionnaire 2. In both schools, with both participant types, this was completed using the Jisc online survey software.

3.10.4 Self-Regulation and Autonomy Questionnaire 1C (Students)

The questionnaire was principally designed to determine the domains of self-regulation, such as why students complete their schoolwork. During the initial investigation, some alternative tools were considered, including Alivernini and Lucidi's (2011) Perceived efficacy scale for self-regulated learning, and Hoover-Dempsey et al. (2005) Intrinsic motivation to learn scale and Self-regulatory strategy use scale. However, many of the reviewed research studies tended to refer to the seminal version created by Ryan and Connell (1989) called the Self-regulation scale. This scale showed significant provenance, having been adapted and used by other researchers including Grolnick et al. (1991), Grolnick and Slowiaczek (1994), Burton, Lydon, D'Alessandro and Koestner (2006), Griffith and Grolnick (2014) and Suizzo et al. (2016). The scale represents a continuum from less to more self-determined domains of regulation:

- external measures engagement in activities to avoid external consequences or to obey rules;
- introjected measures behaviour conducted to avoid guilt or anxiety or to gain adult approval;
- identified measures behaviour performed to achieve a self-valued goal; and
- intrinsic measures behaviour performed for inherent enjoyment.

The academic self-regulation questionnaire consisted of 32 items sub-divided into four categories. The questionnaire was completed by students in both Phase 1 and Phase 3 (see Appendix B: Self-Regulation and Autonomy Questionnaire 1C). A four-point

Likert scale was used with values of very true, sort of true, not very true and not at all true. There were four categories of question including: why do I want to do my homework (8 questions); why do I work on my classwork (8 questions); why do I try and answer hard questions in class (8 question); and why do I try to do well in school (8 questions). Although the questions were divided into categories, certain questions correlated with different subscales. Using the values for these questions, the mean value for each type of subscale was determined. The Relative Autonomy Index (RAI) was used to calculate the autonomy of individuals, producing a scaled result between minus six and six using the formula (2 * Intrinsic) + Identified - Introjected – (2 * External). To form the RAI, the external and introjected subscales are negatively weighted (controlled subscales) and the identified and intrinsic subscales are positively weighted (autonomous subscales). Therefore, the more controlled the regulatory style, the larger its negative weight and the more autonomous the regulatory style, the larger its positive weight (Center for self-determination theory, 2020). Students completed the questionnaire in conjunction with Questionnaires 1B and 2. In both schools, this was completed using the Jisc online survey software.

3.10.5 PTM and Student Inclusive Meeting Questionnaire 2 (All participants)

The questionnaire was based on tools used in other PTM research, including Minke and Anderson (2003), Vickers et al. (2002) and Taylor-Patel (2011). The Phase 1 questionnaire developed was piloted with School B in 2017-2018 as part of the EdD 7004 small-scale enquiry module (Lanigan, 2018) and then modified accordingly following the findings (see Appendix B: PTM and Student Inclusive Meeting Questionnaire 2).

There were two distinct sections of the Phase 1 questionnaire. Section One focused on the PTM in general, its structure, perceived purpose and how participants prepared for it. It consisted of 13 open questions with five further questions depending on the answer type. For this, participants did not have to focus solely on their experience of Computer Science PTM, as the questions were designed to capture the wider context such as roles, PAS and training. Narrowing the field at this point, could have removed some of the rich context and background required. Furthermore, some parents may not be able to recall specific information relating to only the Computer Science meetings. Section Two consisted of 15 Likert scale questions gauging the level of discussion in the Computer Science meeting of key research themes, such as SLCA, collaboration and development of targets. The responses provided a benchmark for current perceptions and key information to design effective Phase 2 intervention instruments.

This questionnaire was completed by all participants, but the questionnaire profile differed slightly based on the participant type. Two open questions were excluded from the teacher questionnaire as they were directed exclusively at parents and students. An open question was also removed from the student questionnaire. Other minor changes accounted for the change in relational term, such as from ‘my son’ to ‘I’ or ‘my’.

For Phase 1, parents and teachers received the option of an online version using the Jisc software or a hard copy of the questionnaire, while students only received an online version with question validation to provide branching based on student responses. The alternative completion methods for parent and teacher questionnaires provided the greatest possible convenience and flexibility (for those with limited computer literacy), to ensure completion. Students completed the questionnaire, online, in conjunction with

Questionnaire 1A and 1B after the PTM. Parents received the questionnaire independent of other research activities.

In Phase 3, further questions were added to provide feedback from the Phase 2 intervention, in particular the Student Inclusive Meeting. Questions focused on the helpfulness of different engagement methods and how they could be improved, their preferred meeting style (Student Inclusive Meeting, PTM, no preference), resulting engagement and the impact of COVID-19. Selection of certain responses, led to answer branching and further questions (see Appendix B: PTM and Student Inclusive Meeting Questionnaire 2). Due to the impact of COVID-19, the Y11 Student Inclusive Meeting at School Y was cancelled, any aspects of Questionnaire 2 that focused on the Student Inclusive Meeting were removed for these participants. All other participants completed the questionnaire in conjunction with the other surveys using the Jisc online survey software, paper-based versions were no longer an option.

3.10.6 Teacher and parent interviews

Critical realism embraces the provisionality of human reality, providing it is triangulated with other accounts and research tools. Interviews are essential to account for the social and cultural backgrounds of the families involved in the research. Whilst there are drawbacks associated with this method including interview bias, dishonestly, self-deception, social desirability, and the accuracy of respondent memories, it provides an account of how people articulate their moral realities including their troubles and good fortune (Silverman, 2015:201). Furthermore, interviews are an expedient way to

explore people's definitions of situations and constructions of reality (Punch and Oancea, 2014:182).

The use of interviews was based on previous research conducted by Minke and Anderson (2003) and Taylor-Patel (2011). The open-ended questions were designed to encourage free responses but also increase flexibility, informality and reduce response bias associated with closed questions and participants answering without thinking (Wright and Powell, 2016). The question wording was non-esoteric, straightforward, and pitched to support all but particularly EAL respondents. Phase 1 interviews were semi-structured, consisting of 16 questions for parents and 15 questions for teachers (see Appendix B: Teacher and parent interviews); the difference was a PAS question only directed at parents. The questions focused on the following areas:

- training and support for PTM;
- PTM preparation, Involvement/ roles of different participants;
- description and features of PTM including teacher structure adopted;
- success factors, improvements, likes and dislikes associated with PTM;
- information recorded from PTM;
- further activities based on PTM content;
- information shared at PTM;
- information from PTM used for PAS;
- training and support for PAS, effectiveness and how this could be improved; and
- review of SLCA, their discussion and potential benefit of discussion during PTM.

The Phase 3 interviews included additional questions that provided feedback on the Phase 2 intervention. These included: the effectiveness of the engagement methods; feelings regarding the active role of the student in the Student Inclusive Meeting; further discussions regarding home learning as a result of the Student Inclusive Meeting; levels of engagement as a result of the research; and the impact of COVID-19 (see Appendix B: Teacher and parent interviews).

The question order largely remained the same for all participants unless a participant answered later questions within an answer. The questions were intended to prompt participants to recall the meeting and the specific features of the PTM. To aid this process, a conversational approach to dialogue was adopted to encourage a natural flow and feel to the conversation. The interviews were used to triangulate findings with other tools and to seek further elaboration and exploration of key themes.

Each interview was recorded using a digital dictaphone and all were conducted by me. All teachers participated in the interviews. For Phase 1, two students' parents were interviewed from each school. A parent or couple representing an individual student was selected based on a convenience sample. From the responses collected, the participants for the two school interview slots were selected at random. The interviews were conducted at a prearranged time; the length of the meetings was between 15 and 40 minutes for parents and teachers. For Phase 3, since the interviews largely focused on the Student Inclusive Meeting and parents at School Y had no experience of this, a larger interview sample of four parents was obtained from School B.

Parent interviews were conducted by phone; initially, this was to make it as convenient as possible for parents but later became a requirement in response to COVID-19 restrictions. The lack of face-to-face communication is a limitation of the telephone interview approach, particularly since face-to-face is a useful tool for establishing positive relationships with interviewees. Also, a natural context might yield greater accuracy (Cohen et al., 2011:441) and allow the interviewer to register non-verbal data. However, the benefits of phone interviews include a reduction in the experimenter effect, greater time efficiencies and flexibility (Block and Erskine, 2012) and respondents are more relaxed (Novick, 2008), being able to participate in the interview in a comfortable location of their choice. The remote nature of telephone interviews also reduces the intimacy that face-to-face interviews can compound, making it easier for respondents to disclose information. Teacher interviews were conducted by phone and face-to-face based on access and COVID-19 restrictions. Audio was transcribed and used for the coding analysis, as discussed later in this chapter.

3.10.7 Student group interviews

The use of student group interviews was based on previous research conducted by Minke and Anderson (2003: Appendix 2) and Taylor-Patel (2011: Appendix A and C). The questions were the same 17 as the parent interview, with the addition of: *If you haven't attended a parent teacher meeting, would you like to? Why?* and a further activity in Phase 1, where students were asked to rank the SLCA characteristics in order of importance (see Appendix B: Student group interviews).

Both focus group and group interviewing literature was used in developing the research tool since they share many commonalities, focus groups are considered as an adjunct of group interviews (Cohen et al., 2011:432). Since I was providing an element of control and leadership, acting as an interviewer rather than a facilitator, the structure itself was more aligned to an interview approach (Thomas, 2013). Whilst the interviews did allow for collective meaning-making in accounting for student perceptions, the majority of discussion was between the interviewer and group. Furthermore, there was no reliance on the interaction within the group to discuss the topic/questions provided by me (Morgan, 1996), I lead the process.

To assist with planning the group interview, Gibson's (2007) research was used; based on this, the Computer Science classrooms were chosen as a suitable location to balance accessibility and familiarity. The group composition was pre-determined by the Computer Science students who had provided consent. Lunchtime was used to ensure full attendance. Some interviews were conducted in larger rooms or outside to adhere to the school's COVID-19 policy. The students were asked to sit in a circle and the dictaphone was placed between them; this ensured the best sound quality but also created parity amongst participants, since no students were singled out or excluded by their position. I conducted the interview, sitting at eye level within the circle to maintain a casual conversational approach, to reduce the powerful position of the researcher and increase dialogue. Students were reminded that all recordings would be anonymised, kept confidential and the information would not be shared with parents or teachers unless a safeguarding concern was raised (students were aware of the meaning and school protocols relating to the term 'safeguarding'). They were reminded of their right to withdraw from the research at any time.

I was acutely aware of the potential for socially desirable responses and the students' unwillingness to contradict an adult and assert themselves. The group rather than individual approach, provides strength in numbers, allowing students to adopt a risky shift, where a group is more likely to adopt riskier decision making than individuals (Thomas, 2013:203). I adopted methods from the literature review, including CORE active listening methods and structured conversations (Vickers et al., 2002; Lendrum et al., 2015), such as encouragement, paraphrasing and impartial responses. Suitable silences were provided to give the participants time to think, reflect on peer comments and then speak (Seidman, 1997).

During the group interview, some students responded to questions with gestures such as nodding and needed to be reminded to voice a response. Time was given for student responses to questions and where possible 'what' and 'how' questions were used instead of 'why' to elicit a more detailed response. Probes for explanation, clarification and checking meaning were used (Gibson, 2007). The interviewer was vigilant of who was trying to speak and informal turn-taking was facilitated to encourage all to contribute. After the meeting, the students were thanked for their time. Although, I reminded students of the need for the meeting content to be confidential and anonymous, this could not be guaranteed.

Efforts were made to limit certain students' monopolising the conversation, however, there were some who were more vocal than others. Some of the quieter students may have been so due to the powerful position of the researcher (Parker and Tritter, 2006). Some prompting was required from students who answered with a nod or a gesture, for these students articulating their thoughts in a group or in front of me may have made

them anxious. The group results provided a joint account of educational engagement rather than the detail that may have been provided in an individual interview, however, the time and resources required for this, in addition to the benefits of interviewing children in a group context, outweighed the advantages of individual interviews.

A Phase 3 student group interview was only conducted in School B, for the same reasons as discussed in the previous section. Again, further questions were added to obtain feedback on the Phase 2 intervention (see Appendix B: Student group interviews).

3.10.8 Parent teacher meetings and Student Inclusive Meeting observations

The use of audio observations was to provide a dialogic analysis of the meeting, based on its use in other studies, including Taylor-Patel (2011) and Van der Eem and Haelermas (2014). For Phase 1, observations were completed using two digital dictaphones at School B on 05/03/20 and School Y on 30/01/20 (see Appendix B: PTM and Student Inclusive Meeting observations). Teachers were provided with a list of participating parents and students and asked to record, using a template, the transcription order and who attended the meeting. Questionnaire 2 was also distributed in hard copy. Before starting the recording, parents and students were again asked verbally for consent and given assurances regarding the confidentiality and anonymity of the recording. Teachers placed the dictaphone between the participants and began the recording. During Phase 3 for School B, Student Inclusive Meetings were conducted using specialist online meeting software. The same protocols were followed and a dictaphone was used by the teacher to record the audio from their laptop (see Appendix B: PTM and Student Inclusive Meeting observations).

The transcriptions from the recordings were used in coding and analysis to extrapolate statistical data including: the meeting length; the average meeting length; participant talk intervals (greater or equal to 10 seconds); participant talk time (per second, approximately); and the range of meeting length per school and participant type. Values were rounded to the nearest second and instances where two participants spoke simultaneously were recorded separately. For Phase 3, the specialist online software was pre-programmed to end the meeting at six minutes. Providing six minutes ensured teaching staff could conduct all meetings within three hours, ensuring no additional working time was required compared to the original PTM. The statistical approach to talk intervals and talk time was adopted from research by Minke and Anderson (2003:54) and Tholander (2011). Without such a statistical focus, qualitative data alone can be misleading suggesting parity or dominance when neither exists.

Transcription is an essential process for the analysis of data but can lead to context stripping. The transcription text cannot capture behaviour, expression and body language; furthermore, the recording equipment and process can distract respondents or make them self-conscious (Bryman, 2001). Making notes was an alternative approach but presented issues with descriptive validity, as effective notetaking focusing on both text and behaviour would be difficult to produce, given the number of participants and the conversational nature. Observational bias would be a further issue associated with notetaking, since the class teacher would be unable to complete this process, so I would need to be nearby, visibly recording information. Using video recording devices was discounted due to the operational difficulty in using these devices in a school hall. Moving families to other rooms was considered but would create an artificiality to the

meeting and would increase the Hawthorne effect. Audio was felt to be the least intrusive mechanism to record the discourse accurately. Since the teacher administers the audio equipment, the PTM and the subsequent recording are derived from a more natural setting, preserving cultural validity at the school level. Due to the nature of PTM, there was substantial background noise, however, not much was inaudible.

3.10.9 Parent teacher meeting and Student Inclusive Meeting content analysis

Codes were used to capture the complexity and comprehensiveness of the data. In this research, open codes were developed, followed by axial codes and then concept (category) codes (see Appendix B: Concept, axial and open codes diagram). The overall concept codes or selective codes represented the core categories from which all other categories were integrated (Corbin and Strauss, 1990). Once concept codes were developed, quantitative analysis was conducted generating frequencies for codes. It was then possible to complete graphical representations, summaries and comparisons. NVivo software was used to record the codes. The process could have been completed using alternatives including by hand, however, the software had the significant benefit of improved organisation and analysis.

The contextual units for analysis included qualitative data from Questionnaire 2, PTM transcripts, interviews, and student group interviews. Open codes were the first stage of the process, turning observations into concrete instances of meaning (Saldana, 2016:6). These codes were provisional labels, descriptive and largely primitive with low inference but as discrete as possible to ensure reliability when analysed by different coders for inter-rater reliability (Silverman, 2015:116). The codes were only ascribed

once the relevant data sources were read and then re-read, and the draft versions were refined and modified. The coding units were phrases or sentences and more than one code could exist within a sentence. In some cases, coding units represented an entire PTM transcript where the meeting as a whole needed to be considered, such as the open codes *Collaborative, supportive and discourse* and *Teacher dominant, monitoring and reporting*. Axial codes were category labels ascribed to a group of open codes, interleaving the substantive categories that emerged (Cohen et al., 2011:561; Punch and Oancea, 2014:235). The three major categories for coding were PAS, SLCA and PTM.

When considering the reliability and validity of the coding analysis, the inter-rater reliability showed suitable confidence between raters for the codes used. In some cases, the contextual units do not relinquish codable data. The lack of codes may be associated with the limited literacy or lack of written English for some participants but also because the response provided no discernible code, it essentially sat on the fence.

Coding analysis was a powerful tool for identifying themes and making comparisons. However, the raw data were returned to regularly, to identify any missed meanings and to analyse the discourse within the original context of a conversation between participants.

PAS codes

The PAS categories used were based on a version developed by Suizzo and Soon (2006) adapted for the context of this study, using the three global categories. In determining what to code, it was decided that comments relating to the PAS category or the need for

the category would be coded. Specific references to its use by a particular parent with a particular student were not required. The aim was to determine the frequency and spread to which different categories were discussed, not to measure the categories' intent, implementation and impact on individual students. Open codes were largely based on the deductive codes from the PAS Questionnaire 1B categories and the literature review. Three inductive open codes emerged during the coding analysis: the need for parents to have a greater knowledge of learning strategies; issues with students understanding and praxis of learning strategies (also indicated in SLCA Questionnaire 1A); and parents organising learnings resources. The open code for parents organising learning resources accounted for specific references made to books, online platforms, YouTube channels, newspapers and magazines. Originally, it was planned for references to learning resources to be included within *AIHL: Organise learning opportunities such as tutors, museums, exhibitions*, however, this code was too broad and did not distinguish between resources and physical activity. Also, reference to organising, acquiring or purchasing resources by parents was discussed nearly once in every PTM for Phase 1 (24 references made). This high frequency suggested a greater relevance to participants, so a separate open code was also desirable for analysis purposes. The new open codes were categorised as follows:

- *RECM: Developing an understanding of the different learning strategies and metacognition practices;*
- *AIHL: Support the child's development of learning strategies; and*
- *AIHL: Organise learning resources such as textbooks, books, newspaper and online learning platforms.*

In both schools, there were a limited number of open codes for *RECM: Improve communication with the school*; in most cases, by its nature, PTM should improve communication with the school. However, a value for this subcategory code was only recorded if there was a specific reference to an improvement in communication; this was to ensure the reliability of the data and not to make assumptions about improvement without specific reference by participants.

School B PAS coding was completed before School Y. To ensure consistency and to accurately represent themes and categories, the new subcategories and codes were applied to School Y data and the conceptual framework overall.

SLCA codes

The SLCA were those identified in the literature review to best support self-regulation and metacognition. These included *Behaviour and Attitude, Effort, Vision, Practice* and *Systems*, referred to as VESPAB and based on Oakes and Griffin (2017) and the Behaviours for Learning Grid developed by School Y (Goodwin, 2019). Participants had already completed the SLCA Questionnaire 1A gauging these characteristics and attributes before the PTM. To ensure reliability and deductive coding for the other research tools, especially the PTM transcriptions, the same characteristics and attributes were used for axial and open codes as for the questionnaire.

The coding analysis identified the characteristics discussed in general and not only when attributed to a particular student. For instance, the comments ‘It is important to review feedback’ and ‘John makes good use of feedback’ would both be coded. From a

pilot research study, it was noted that further categories of information existed at the meeting, so a new inductive axial code was used to represent this characteristic, *Reporting and course information*. Using inductive coding during the analysis of the transcriptions, subcategories emerged for this new axial code, including *Course content, Prior assessment, Future assessment, Progress towards target/predicted grade, Resources available, Subject and teacher introduction,* and *Subject enjoyment* (see Appendix B: Concept, axial and open codes diagram).

PTM codes

The PTM format axial codes and associated open codes were based on the research questions and literature review. The axial code *Roles* was coded mainly for the PTM transcriptions and indicated the PTM roles based on the type of talk. It should be noted that some responses did not provide a suitably clear distinction to be placed within a particular category or the answer was too limited to provide the necessary evidence; these were not considered in the coding analysis. To determine the axial code *Purpose* each PTM was categorised as being collaborative or teacher dominant. For Phase 1, the meaning of collaborative at School B involved parents and the teacher since students did not attend the Y10 meeting.

Correlation between axial codes

There is potentially a level of interaction between the three category/concept codes for PTM, PAS and SLCA. The meeting can influence the actions taken by parents and the level of PAS adopted. For instance, a teacher might suggest specialist resources for a

parent to purchase or suggest a method for home learning support, which if enacted by parents, could contribute to PAS. PAS, in turn, has the potential to support the development of SLCA, as does the meeting. Hoover-Dempsey and Sandler's (1997) model suggests that Level 2 parent engagement activities can lead to Level 3 and 4 student attributes conducive to achievement (see Figure 2.1). The meeting in its original format is limited in supporting both PAS and SLCA; Goodall and Montgomery (2014) perceived it as an involvement activity with the school, rather than engagement (see Figure 2.2), and Hill and Tyson (2009) only found a moderate impact on achievement for such a school-based involvement activity. By remodelling education engagement and the meeting, it is hoped that clear links are established between the three categories. Therefore, the open codes below, which belong to each individual SLCA axial code, also refer to the discussion of that SLCA at the PTM/ Student Inclusive Meeting.

- Discussed at the meeting (reference to the axial SLCA being acknowledged as discussed during PTM).
- Not discussed at the meeting (reference to the axial SLCA being acknowledged as not being discussed during PTM).
- Should it be discussed (reference to the axial SLCA being acknowledged as an area that should be discussed at PTM).

3.11 Constraints

In this chapter the possible issues surrounding validity and reliability were identified, including generalisability, acquiescence bias, the Hawthorne effect, and the powerful position of the researcher. As discussed, the methodology and research tools have been

designed to reduce these factors. However, it must be acknowledged that they cannot be removed. Furthermore, certain constraints that have impacted the research and the results need to be recognised.

The time the study could be completed within was finite; at the end of Y11 students go on to study a variety of other subjects at key stage five, which means there is no further opportunity for intervention or data collection with this cohort. This meant that the prospective cohort longitudinal approach had to be completed within the two-year window, preventing any research drift and keeping the study focused on the research questions.

Access to participants became increasingly difficult after the initial PTM; this was due largely to COVID-19 restrictions, lockdown periods and self-isolation. For the safety of all, school policies in relation to COVID-19 needed to be adhered to and so many types of participant interaction had to change. Some student SLCA sessions had to be modified for delivery remotely. For instance, two student SLCA sessions were due to take place at School Y afterschool on 13/11/20 and 20/11/20. It had not been possible to teach these sessions during the school day due to a reduced lunch time and changes to the school day to maintain year group bubbles. Unfortunately, all Y11 students went into isolation for two and a half weeks starting on 11/11/20. The session was then pre-recorded, emailed and posted online for the students and reminders were sent to the parents by text.

Due to the uncertainty caused by the pandemic, it was not exactly clear what assessment method would determine the awarding grade for a general certificate of secondary

education (GCSE). At the time of the Student Inclusive Meeting at School B (28/01/2021), the approach to final assessments for examination years was still unclear as the DfE consultation on how GCSE, AS and A-Level grades should be awarded in summer 2021 had not concluded (DfE, 2021a). Based on the DfE guidance provided in response to the consultation (DfE, 2021b), teacher assessed grades were to be used (this was decided on 25/02/21). Both School B and School Y, decided on using short, assessed tasks, covering content from the year, to examine students. However, this period of uncertainty was a difficult time for all; teachers were unsure what to teach, students were unsure what to learn and review, and parents were unsure how to help and encourage. With the ambiguity came issues with planning content for the intervention activities.

The pandemic and the assessment uncertainty resulted in the School Y PTM, due to take place on 25/03/21, being postponed and then cancelled. The initial PTM postponement was to allow students to take their pre-examination point exams (PEPs), so that their results could be discussed at the meeting. The original PEPs were due to start on 22/02/21 but were cancelled as the school was closed for the third COVID-19 lockdown. The new meeting was planned for early May 2020. However, following the DfE decision regarding teacher determined grades, assessments needed to be completed at this time and so the PEPs and the PTM were cancelled. I considered an alternative meeting for participants using the Student Inclusive Meeting approach, but the school was concerned with the lack of parity that would exist between participant and non-participant students and parents. The cancellation had a significant impact on the Phase 2 intervention at School Y since the reengineered meeting represented the centre piece of all activity. Phase 3 data were collected for the other intervention activities at School

Y to address the second research question: What good practice exists in developing student and parent educational engagement? This included responses for Questionnaires 1A, 1B, 1C and a modified Questionnaire 2. Much of the data from these research tools had already been collected by the time I was informed of the meeting cancelation (20/03/20). No interviews were conducted with School Y participants, as the absence of the Student Inclusive Meeting meant that participants were unable to experience the full impact of the intervention. While School Y data could not contribute directly to addressing the third research question: To what extent does reengineering the meeting to an inclusive structure develop student and parent educational engagement? indirectly, this was achieved through the exploratory concurrent mixed method approach adopted, as the Phase 1 data from School Y and School B had been partly used in combination to design the Phase 2 intervention approach. Therefore, the School Y Phase 1 data influenced the outcomes of the Phase 3 data at School B. In relation to the first research question: To what extent do current parent teacher meetings engender student and parent educational engagement? School Y played an equal part, as the lack of the Student Inclusive Meeting had no impact on the Phase 1 data collected to address this question.

CHAPTER 4: DEVELOPING INTERVENTIONS

Using an action research approach, Phase 2 focused on improving engagement practices identified as insufficient in Phase 1 or introducing new engagement methods based on the literature review. This section provides a description of the instrument, its purpose and implementation. Feedback relating to an instrument's effectiveness, based on the Phase 3 data collection, is discussed in Chapter 5. The provenance of each intervention instrument is based on the conceptual framework and the good practice identified in Chapter 2. By combining existing theory and practice with my current study, the research question: What good practice exists in developing student and parent educational engagement? can be addressed. In determining good practice, positive outcomes associated with statistical data and feedback from qualitative tools have been used. Although a description of the reengineered meeting is provided in this chapter, there is no discussion of its value or impact; this is the central tenet of Chapter 5 and the associated themes.

A table mapping the areas of consideration to intervention instruments can be found in Appendix C: Mapping of intervention instruments to areas of consideration. Further results have been included for Phase 1 and Phase 3 in Appendix D; although relevant, they are not explicitly referenced in Chapter 5 to ensure the section remains focused on exploring key themes.

4.1 The intervention strategy

The intervention strategy at School B and School Y consisted of several bespoke intervention activities as outlined in Figure 4.1. A sample of the engagement activity plans for each participant type is provided in Appendix C: Engagement activity plans, with associated dates, resources and rationale. The timings corresponding to these activities are provided in Table 3.2 in Chapter 3. In both schools, text messages and the toolkits were provided as planned; however, other timings changed due to the impact of COVID-19. As shown in Table 4.1, there were a reduced number of activities at School Y. SLCA student sessions had to be combined and taught within a shorter period of time compared to School B and the Student Inclusive Meeting and its associated training activities were cancelled (explained in the constraints section of Chapter 3). Furthermore, the second SLCA teacher review at School Y by teachers was not conducted, as there was no assessment opportunity since the PEP exams that were due to start on 22/02/21 were cancelled due the third COVID-19 lockdown. The codes in Table 4.1, for instance S2, correspond to the intervention activity for which a detailed plan was made, samples of these can be found in Appendix C: Engagement activity plans.

No	School B: Inner-City School			School Y: Suburban School		
	Students	**Parents**	**Teachers**	**Students**	**Parents**	**Teachers**
1	Introduction to the research and preparing for the summer break (S2)	Pedagogy text messages (P2)	Research information video (T2)	Learning and revision strategies video (S2)	Pedagogy text messages (P2)	Research information video (T2)
2	Developing a growth mindset, grit and metacognition (S3)	Computer Science challenge text messages (P3)	Subject knowledge audit (T3)	Introduction to research, learning and revision strategies and SLCA review (S3)	Computer Science challenge text messages (P3)	Subject knowledge audit (T3)

No	School B: Inner-City School			School Y: Suburban School		
	Students	**Parents**	**Teachers**	**Students**	**Parents**	**Teachers**
3	Second SLCA review and understanding will vs skills (S4)	Computer Science GCSE Parental Support Toolkit 1 (P4)	Second SLCA review (T4)	Growth mindset, grit, goals and the subject audit (S4)	Computer Science GCSE Parental Support Toolkit 1 (P4)	Second SLCA review (T4)
4	Putting planning into practice and subject knowledge audit (S5)	Research information video (P5)	Student Inclusive Meeting preparation (Session 1-T5)	Using learning strategies and revision techniques. Student Inclusive Meeting preparation (Session 1-S5)	Research information video (P5)	Student Inclusive Meeting preparation (Session 1-T4)
5	Learning and revision strategies video (S6)	Subject Knowledge Audit (P6)	Student Inclusive Meeting preparation (Session 2-T6)		Computer Science GCSE Parental Support Toolkit 2 (P6)	
6	Student Inclusive Meeting preparation (Session 1-S7)	Computer Science GCSE Parental Support Toolkit 2 (P7)	Student Inclusive Meeting (T7)		Subject Knowledge Audit (P7)	
7	Student Inclusive Meeting preparation (Session 2- S8)	Student Inclusive Meeting preparation (P8)	Progress towards targets meeting (T9)			
8	Student Inclusive Meeting (S9)	Student Inclusive Meeting (P9)				
9	Progress towards targets meeting (S11)					
10	How to plan a revision session, using flash cards and coping with exams (S12)					

Table 4.1. *Intervention activities for each participant at School B: Inner-City School and School Y: Suburban School*

Several publications were used in the production of the intervention activities including resources developed through the PiXL School Partnership (PiXL, Secondary, 2021), a group of 1,400 schools that share good practice. Buzan and Harrison's (2011) book on Study Skills, in particular the section on memory techniques, was used within the SLCA sessions described in this chapter. Blakey's (2013) book on study skills and revision provided a degree of confirmation of ideas covered within Oakes and Griffin (2017) and the PiXL School Partnership (2021). De Bono's (2017) work, although aimed at younger children, provided some useful techniques included in the SLCA sessions. Walker (2017) provided some useful strategies for teacher training, including discussing grades with students and developing a thicker skin for conversations with parents. Busch and Watson (2019) provided useful synopses of educational studies that were used within the pedagogy text messages and parental support toolkits.

4.2 Intervention instruments

As an experienced Computer Science teacher and senior leader, I had some of the necessary knowledge to design the intervention instruments, however, the support of participants and key stakeholders was vital to ensure they were contextualised to the school settings and reflected the current progress of the students. The initial intervention design was based on the Phase 1 analysis and the review of good practice from the literature review. Further modifications were made based on feedback from samples of the intervention resources provided to colleagues, the Deputy Headteachers and the Computer Science teachers at each school.

4.2.1 Parent text messages

Over 34 weeks, two text messages per week were sent to parents focusing on curriculum and pedagogy. The pedagogy texts were sent Monday to Wednesday, while curriculum texts were sent from Thursday onwards. The spaced nature was to reduce information overload and time intensity for parents. Furthermore, the curriculum texts required a convenient time for both parent and child to interact, which was most likely to occur during the weekend. Prior to the study, text messages were used by both schools on an ad hoc basis or in emergencies but not for regular communication.

Pedagogy text messages

The pedagogy texts were normally 140-240 characters in length, providing practical engagement advice, based on research, focusing on specific SLCA and PAS methods identified in Phase 1 as requiring improvement. A sample of messages were reviewed beforehand by the Deputy Headteachers with pastoral responsibilities and suggestions were provided on how the messages could be further tailored to the needs of the parents and the school. Text messages made reference to other research activities or key dates in the academic calendar. Many messages provided links to websites, news articles and videos. Two examples are provided in Figure 4.1; further samples can be found in Appendix C: Pedagogy text messages, with reference to the areas of consideration they address.

Students need to adopt a growth mindset. With effort, good strategies and help, they can always improve. Please watch this video https://tinyurl.com/y5flkgjp (School Y, 26/10/20)

Recent research shows that the mere presence of a mobile phone around a student can led to a 20% reduction in attention, concentration and performance in tasks that were demanding and complex. Encourage you son to put his phone out of sight when working at home.
(School B, 09/11/20)

Figure 4.1. Example pedagogy text messages for School B: Inner-City School and School Y: Suburban School

The Phase 1 results from SLCA Questionnaire 1A in both schools identified that students lacked certain SLCA, in particular, planning and revision strategies, text messages provided parents with key information regarding these characteristics. Phase 1 PAS Questionnaire 1B, identified that parents struggled with providing further support on difficult concepts and finding further learning opportunities for their son. Therefore, some pedagogy text messages focused on providing resources such as suitable museums, useful websites, books, articles, or practical support for students who were struggling.

Computer Science Challenge Text Messages

The use of quiz-style text messages was based on a study conducted by Hutchinson (2019), which used emails to provide short answer revision questions to parents of Year 11 children. The text messages were produced in collaboration with the Computer Science teachers at both schools to ensure they focused on key foundation principles or areas where students often had misconceptions. The curriculum text messages followed a set structure: a question, followed by an answer and then a link to support. The support was either a website or a video on the concept or topic. The questions worked

systematically through the GCSE Computer Science specification, beginning with the theory component (Paper 1). Two examples are provided in Figure 4.2, further samples can be found in Appendix C: Computer Science challenge text messages.

Question: Which of the following units of memory is the smallest: Terabyte, kilobyte or megabyte? Answer: Kilobyte (KB)
Further support: www.tinyurl.com/y4m5bzg4
(School B, 22/07/20)

CS Question: What is an assembly Language?
Answer: Low level language written in mnemonics, direct relationship with machine code
Support: https://tinyurl.com/yb77y7xv

Figure 4.2. Example Computer Science challenge text messages for School B: Inner-City School and School Y: Suburban School

The messages introduced parents to the Computer Science curriculum and the terminology used. Parents were not expected to answer the questions but use them as an opportunity to support their son's revision through the process of retrieval practice. Retrieval practice is an active learning process of deliberate recalling of information, which is a very effective learning strategy (Dunlosky, 2013). Furthermore, reviewing assessment material was identified as an SLCA area of need in School B from Phase 1, as was revision planning and strategies in both schools.

4.2.2 Computer Science parental support toolkits

Two hard-copy toolkits were provided to parents at School B in September 2020 and November 2020, and School Y in November 2020 and January 2021 (see Appendix C: Computer Science parental support toolkit). PDF versions were texted to parents via a link. Prior to dissemination they were reviewed by the Deputy Headteachers and

Computer Science teachers at both schools and revised accordingly to account for student progress and the school context. The toolkits were designed to provide parents with the necessary knowledge to support PAS processes. Section titles included: learning and revision strategies; developing grit and growth mindset, the importance of setting goals, and Computer Science co-curricular activities and resources. PAS training and support were identified as in need of improvement from Phase 1. The first toolkit, which provided background information regarding the research, explained key metacognitive strategies and practical curriculum-based activities. The second toolkit, given its intentional timing before mock examinations, included a greater focus on revision strategies, exam preparation, health and well-being.

The use of toolkits with parents was an original approach in both schools. School Y normally conducted a Y11 Subject Information Evening at the start of the year, relating to course information and resources, at this, the Headteacher provided advice on supporting home learning. At School B, resources were posted on the virtual learning environment relating to subjects with some PAS associated documentation.

The toolkit's content provided further detail of concepts covered in the pedagogy text messages, sent at approximately the same time. The inclusion of useful Computer Science resources, enrichment activities, explanations of the curriculum structure, and programming questions was to provide parents with further learning opportunities for their son, shown as need of improvement from the Phase 1 PAS Questionnaire 1B. A supplementary function was to develop home-learning activities and increase regular discussions regarding learning.

4.2.3 Student SLCA sessions and video

Session length and structure differed for School B and School Y due to COVID-19 restrictions. Students in both schools received at least four hours of sessions. The sessions' purpose was to educate students on the associated SLCA cognitive and self-regulative behaviours that will contribute to their success and to provide practical support for their implementation.

Prior to the research, both schools provided an assembly on revision methods before the mock exams. School Y accompanied this with further support activities during form time. Some SLCA information was provided through assemblies, but the information was homogenised, with no opportunities for student self-evaluation. Neither school provided sessions that involved students reflecting on their own progress, needs and SLCA. School Y used a learning behaviours workbook, but this was restricted to students with behavioural issues.

Sessions were based on areas requiring improvement as identified from the Phase 1 SLCA Questionnaire 1A and PTM. Session activities included: worksheets, teacher-led discussions, videos, and peer work. More than one characteristic would be covered in a session as most SLCA were linked and a multi-faceted approach was designed to embed key messages. Although metacognition should be taught explicitly, it is not a general skill that can be separated from subject knowledge (Quigley et al., 2018), so activities were linked to the Computer Science curriculum. The sessions were practical and reflexive to encourage students to take on a more active process in their learning (Oakes

and Griffin, 2017), topics included: understanding will versus skills; putting planning into practice, and developing a growth mindset, grit and metacognition.

Of particular concern in both schools was students' use of *Systems*, especially *Revision planning and strategies* identified in SLCA Questionnaire 1A. The autumn term of 2020 was significantly disrupted by COVID-19 and a face-to-face session was felt unsuitable. Furthermore, a resource with posterity and flexibility was considered more useful, so a 23-minute video was created. The same video was used at both schools and covered a range of strategies, skills and tools to improve learning and revision. The video was also shared with teachers and parents to develop their knowledge and encourage further dialogue.

The video provided a flexible resource for review in the students' own time. The video was designed to explain the benefits of learning strategies and developing SLCA. Students are more likely to be motivated to adopt such techniques if they have a clear understanding of the benefits to them (Mccrea, 2020). Furthermore, by increasing the students' understanding of the techniques, they will become more confident in their use, giving them the capability to take greater ownership (Smith, 2017). The sessions also provided an effective mechanism to identify and address elements of SLCA lacking in Phase 1. A similar reflexive audit and intervention approach could be used in any school setting to determine the sessions' content.

4.2.4 Research information video

The ten-minute video explained the research, key terminology and the Phase 2 intervention activities. A key message was the importance of PAS to influence SLCA and, in turn, student achievement. School B parents received a link to the video by email and text message during October 2020, School Y received this during December 2020. The video was a narrated PowerPoint presentation (see Appendix C: Research information video). The explanation of the research and key terminology such as growth mindset, fixed intelligence, metacognition and self-regulation, was to ensure that the research was accessible to all parents (the first parental toolkit already provided some basic information). Comments were invited through an online form to ensure engagement strategies remained focused on participant feedback.

4.2.5 SLCA and subject knowledge audit

The audit process was designed to increase student self-evaluation and actualise the Feed Forward process (Hattie and Timperley, 2007), which in turn, increases self-regulation and metacognition (Quigley et al., 2018; Zimmerman, 2002). The audits were part of the student engagement spreadsheet consisting of five worksheets (See Appendix C: SLCA and subject knowledge audit).

1. **SLCA Audit 1-** This was used for Phase 1 data collection (SLCA Questionnaire 1A) and as a student self-review tool. Students evaluated their progress using a rubric of five main characteristics and their attributes using five statements representing: very good; good; acceptable; poor; and, very poor. For example, under

the characteristic behaviour, students could grade themselves on attributes including dealing with failure, self-efficacy and behaviour when working with others.

2. **SLCA Audit 2-** Completed mid-way through the study. Students used the same characteristics and attributes to complete a self-review.
3. **SLCA Audit 3-** Completed at the end of the study, fulfilling the same dual purpose as SLCA Audit 2.
4. **Totals-** This was used by students to track their progress across the three SLCA rubrics. The worksheet was colour coded for each aspect to indicate if their progress was worse, the same or better. For each attribute, students were asked to provide a brief explanation of their progress or lack thereof. For instance, one student whose self-graded progress moved from acceptable to good between SLCA Audit 1 and SLCA Audit 2 for the attribute dealing with failure commented "I gain more knowledge from feedback than before" (School B Student 2 SLCA and subject knowledge audit).
5. **Subject Audit:** This listed the topics within the Computer Science curriculum, students selected the number '1, 2 or 3' next to each topic. 1 indicated an area of strength with no improvements required, 2 indicated an area requiring some improvement and 3 required significant improvement. Once a number was selected, the topic was automatically added to one of two columns with corresponding names. Students also considered the topic requiring the most improvement. Several intervention methods were provided with advice for their use, the student then selected the most suitable intervention methods. For example, if the student selected review class materials, then the action was to decide on a sixty-minute challenge per week up to the exams using material from class. Encouraging the student to reflect on the value and suitability of resources has been found to increase self-reflection

and improve academic achievement (Chen, Chavez, Ong and Gunderson, 2017). The same worksheet was regularly updated after assessments, using the question level analysis report (QLA), completed by teachers based on the student's mock examination. The curriculum audit and the student selected intervention strategies were converted to a PDF and sent by email to parents and teachers alongside the research information video and the learning and revision strategies video.

Prior to the research, there were no formal opportunities at either school for students to audit their Computer Science curriculum knowledge or independently consider a range of intervention options (the intervention options were designed in collaboration with the Computer Science teachers). Previously, teachers would suggest intervention activities either in class or during the PTM, but these would be generalised rather than prescribed.

The subject knowledge audit required precise progress information for individual topics; a pre-requisite for its completion was rich data for students to base their decisions on, and, for clarification of standards and criteria (Brooks et al., 2019). Question Level Analyses (QLA), a regular practice at School Y, was used to give formative feedback on topic progression after assessments, including the mock examinations. Teachers created a breakdown of question topics and the marks awarded, helping to inform students of their topic strengths and areas for improvement.

Disseminating the subject knowledge audit to parents, was designed as a formative reporting opportunity. The aim was to generate meaningful home learning dialogue, focusing on improving Phase 1 PAS processes relating to discussions, praise for task completion and allowing students to make difficult decisions. The student selected

intervention methods were relayed to parents as a means of reviewing student progress and developing home learning activities linked to the curriculum. Teachers received all student audits to assess progress, provide individual support and identify global areas of strength and weakness in the group, to inform their teaching of the curriculum.

The audit process was designed to increase student self-regulation. Hattie's (2012) meta-analysis on student achievement influences found that student self-evaluation and self-reported grades had the most significant effect size out of all educational activities. Rubrics were used as a mechanism for delivery in the research due to their mediating effect on self-regulation and performance (Pandero and Jonsson, 2013).

4.2.6 Student Inclusive Meeting and the associated training and support

The Student Inclusive Meeting represented the central tenet for the research engagement activities within the study. It was designed with a dual purpose. First, as a formative feedback opportunity to ensure that students understood their current position and how to improve. Second, an opportunity for PAS to assist with the student's development. Its success was heavily reliant on the other engagement activities, principally, effective student self-assessment and strategies for student development. Figure 4.3 illustrates the stages associated with the meeting process.

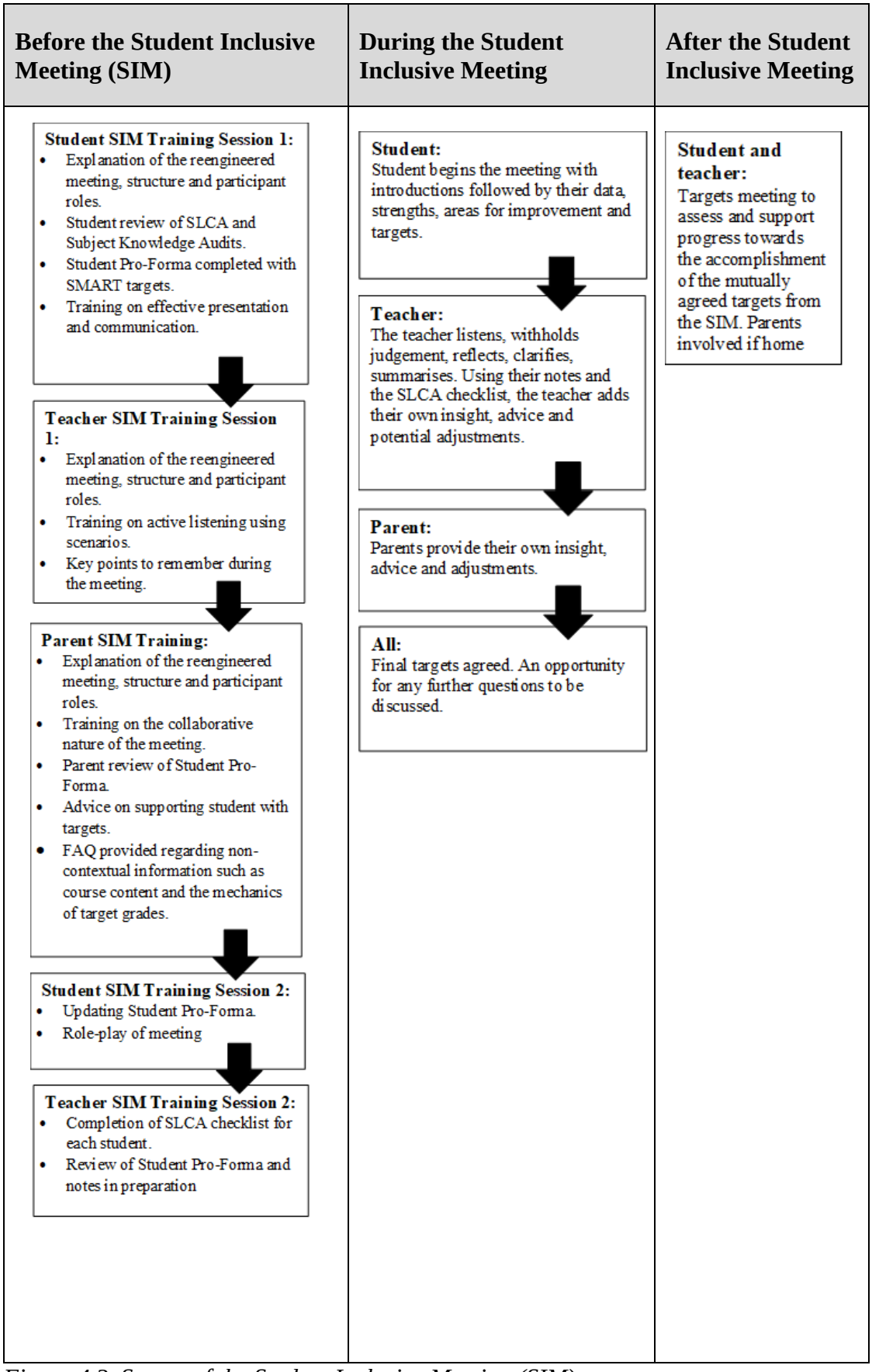

Figure 4.3. Stages of the Student Inclusive Meeting (SIM)

Before the Student Inclusive Meeting

Students, parents and teachers received different training sessions, but common features included the rationale for the reengineered meeting, the new structure and the roles within this. Training began two weeks prior to the Student Inclusive Meeting with students. Most training was completed remotely using online meeting software.

Students completed the second audit as part of the initial Student Inclusive Meeting training session. With the aid of their mock examination question level analysis and their latest tracking data, they completed a pro forma used to scaffold the student's discussion during the meeting (see Appendix C: Pro forma for Student Inclusive Meeting). This was based on a similar approach adopted by Tholander (2011) and Minke and Anderson (2003). Areas included: their progress data (effort grade, progress grade and target grade), their strengths, areas for improvement, and targets. Students were encouraged to consider the presence, or lack thereof, of student learning characteristics and attributes. A SMART approach (specific, measurable, achievable, realistic and timely) was used to ensure targets were tangible and their success could be measured. For instance, one target created by Student 7 School B was "I need to work on my understanding of trace tables. I will complete the work related to this topic on Seneca learning before the February half term. I will ask Mr Wessels to set me a question on trace tables to see how well I get on with it". It was important to ensure the goals were challenging but within reach, because if goals were unattainable, students would abandon increasing competence, favouring lower goals to avoid failure (Wiliam, 2018). A helpsheet was provided with potential SLCA and intervention methods that could be used within their targets to scaffold this process. Students were encouraged to include the role of their parents and/or teacher within the targets, for example, testing or

marking their work. During the training, advice on presenting and communicating effectively was discussed, to emphasise the importance of their voice as a key interlocutor. The second Student Inclusive Meeting preparation session focused on personalising the pro forma to make it less scripted and more conversational. Role-playing the meeting in pairs aimed to reduce meeting nerves and anxiety.

A key component of the teacher training was active listening techniques adapted from the Structured Conversation Handbook (DfCSF, 2009) and Minke and Anderson (2003). Practice is an important element of training to develop professional expertise (Grossman, Hammerness and McDonald, 2009). Cohen, Wong, Krishnamachari and Berlin (2020) found that simulating teacher environments during initial teacher training compared to reflection alone helped to significantly improve behavioural and communication skills. Several scenarios were used where teachers had to identify a traditional response to a meeting situation and provide an active listening response. For example, Scenario 5- parent: I don't really understand all of the information in John's progress report. Are you saying John can't learn? (see Appendix C: Teacher Training Presentation for SIM (Session 1)). The restructuring was designed to increase the teachers' listening skills and enable greater parity in dialogue. Although their expertise in subject knowledge and pedagogy was still essential, reducing their dominance was designed to allow for more parent and student voice to emerge. Changing the approach to discourse was also aimed at reducing the pressure on teachers to lead the meeting and feel the need to bridge conversations or fill silences. The second teacher training session focused on preparation for each meeting by reviewing the student's pro forma and completing an SLCA checklist of their progress. The checklist comprised a summarised version of SLCA Questionnaire 1A, designed to ensure the meeting time could be

concentrated on solution orientated content and specific formative action (Harrison, 2021). A frequently asked questions (FAQ) style document was provided for reference, addressing concerns, and key information.

Phase 1 showed a disparity in role construction amongst parents with a split between collaboration and passivity; their training session was designed to educate parents on the potential benefits of collaborative discourse. Parents were encouraged to review their son's pro forma and consider potential questions they may have had for the meeting. A Computer Science FAQ style document was distributed, aimed at reducing unnecessary dialogue regarding generic course and report information at the Student Inclusive Meeting. Questions included: how is the course assessed, when should my son start revising and how can I help my son at home? (see Appendix C: FAQ for parents).

A key consideration of the parent and teacher training sessions was to ensure that any discourse was mediated, so that student criticism was purposeful and praise for specific tasks was included to encourage autonomy and self-regulation.

During the Student Inclusive Meeting

In designing the meeting, greater content coordination was sought so that all involved knew what to expect and could prepare sufficiently. Based on Phase 1 data, across both schools, the average meeting length was approximately five minutes. Using the online software, it was possible to schedule meetings for four or six minutes. Four was rejected as it offered little meaningful time for discussion. Using six minutes allowed a total of 30 sessions, which was possible within the normal three-hour meeting window.

The meeting at School B occurred on 28/01/21. Two weeks before this, parents were emailed a link to access the online software and make appointments to see their son's teachers. At this time, the students had not been physically in school since December 2020 due to COVID-19 restrictions. The window for scheduling meetings was between 17:00 and 20:00. Teacher 2 conducted the meetings from school. All participants had their cameras on throughout the meeting; students attended with their parent/s virtually, usually from home.

The student started the meeting with participant introductions, followed by their self-evaluation using the pro forma as a guide, students provided their own assessment of strengths, areas for improvement and targets, drawing commonalities between the two and seeking the student's input, School B Student 6 during the Student Inclusive Meeting opened with "Alright, so my biggest weakness is probably the units we study in my first year, just all of them basically, I guess it was third year. But all those I mean I did rather poor in my test, I think I could've probably got a lot more marks there. I was quite pleased with, like the ethical hacking or the ethical hacking stuff in that part I got my marks there". Often the teacher would probe for further detail or provide confirmation " Yeah, I think that's a good idea and it's a good way to give yourself, keep yourself motivated as well... When it comes to networks, are there specific sections in networks that you struggle with" (School B Student Inclusive Meeting Student 1). Parents contributed in a similar vein with their own perceptions of student progress and targets. Mutually agreed SMART targets were decided, often encompassing the student's original targets. The teacher suggested further home learning activities for PAS and the development of SLCA. It was important that the student's self-evaluation formed the initial basis for discussions so that any teacher

advice regarding SLCA and PAS would be prescribed rather than generic. The student took notes during the meeting and recorded the targets, placing the onus of responsibility on the student and reducing inconsistencies in notetaking by parents observed in Phase 1. The meeting ended with an opportunity for any further questions from participants.

After the Student Inclusive Meeting

A targets meeting was planned as an opportunity for teachers to assess and support progress towards the accomplishment of the mutually agreed targets from the Student Inclusive Meeting. This process was designed to support self-regulation, ensuring that students took the necessary action, developing learning characteristics including *Vision, Systems,* and *Practice* (including self-efficacy). On the students' return to school in March 2021, after the third COVID-19 lockdown, a short meeting was held between the teacher and the student. Due to the change in the final assessment approach for awarding GCSE grades, amendments were discussed to improve the suitability of targets for completing teacher assessed grades as opposed to external examinations. Parents were involved if further home support was required or if progress towards targets was limited.

4.2.7 Response to COVID-19 and online meeting software

At the time of the original PTM, school and educational engagement practices had not changed in response to the Coronavirus pandemic. However, the entirety of Phase 2 was conducted with COVID-19 restrictions applied. Therefore, some intervention activities

are not directly related to the areas of consideration from Phase 1 but in response to the COVID-19 pandemic, required to ensure the continuity of the research design. I was responsible for the management of IT at School B during this time and was tasked by the Headteacher to lead the blended/remote learning school provision from February 2020.

Due to COVID-19 restrictions, it was no longer possible to hold face-to-face parent teacher events, including parent teacher meetings; the ramifications of this for the research were significant. Viable meeting alternatives were considered, to use solely with the research cohort and a suitable online parent teacher meeting software called SchoolCloud (www.schoolcloud.co.uk). On investigation, the whole school benefits of using this were overwhelming and the opportunity was presented to members of the senior leadership teams in Schools B and Y. Both schools adopted the software to replace the original face-to-face meetings. The software provided a video conferencing style environment for parents, student, and teachers to meet. The new online method used in Phase 3 enabled participants to locate anywhere, reducing the need for travel and complications with childcare and commuting, all of which can present significant challenges for single-parent or low-income families with inflexible working schedules (Hack, 2007). Participants could conduct the meeting from the comfort of their homes, which helped to reduce any associated anxiety or reticence about visiting the school. Removing the need to be physically present could help to develop a dialogue with those parents who had not previously engaged with the traditional approach. Furthermore, through in-built reporting features, administrative staff were able to identify parents who failed to book appointments and send reminders. The duration, time and number of participants for the meeting were all customisable by the school. Personal and

scheduling information was directly integrated from the Student Information Management System (SIMS) and parents were able to select virtual appointments with teachers. The meetings provided parents with greater flexibility, allowing them to select slots with teachers over a three-hour period rather than one hour and each meeting was automatically limited to six minutes ensuring set meeting timings. The Phase 3 time allocation for each meeting was more than the average length of the original Phase 1 PTM for each school. The short meeting length was an issue identified by participants in Phase 1 and so this goes someway to improving the situation by providing consistency; however, even more time would be beneficial.

The disruptive innovation caused by the COVID-19 pandemic (Arnett, 2021), introduced an astonishingly effective medium for facilitating parent and student engagement. The method has proved so advantageous that both schools have adopted a hybrid version of the software for the 2021-2022 academic year, providing parents with the flexibility of online or face-to-face meetings.

CHAPTER 5: EXPLORING CHANGE

The findings have been presented in three sections beginning with the impact of the intervention instruments on support and communication for educational engagement and their identification as good practice. The impact of the meeting is then explored as five key themes used to distil the significant amount of data collected using the mixed method action research approach and ensure its accessibility, so it may be used as a springboard for development by other practitioners. The chapter finishes by discussing the impact of COVID-19 on the findings and participant preference when comparing the traditional meeting to the Student Inclusive Meeting.

5.1 Intervention Instrument Impact

Phase 3 Student Inclusive Meeting Questionnaire 2 Likert scale responses shown in Table 5.1 were: not helpful, slightly helpful, moderately helpful, very helpful, and extremely helpful. Table 5.1 shows that almost all intervention activities were considered at least moderately helpful in both schools, with the overall mean value in School B representing the response, very helpful. Based on Questionnaire 2, 76% of participants felt parents were more engaged in their son's education because of the intervention and 84% felt students were more engaged.

	Student Inclusive Meeting training (M)	Student Inclusive Meeting (M)	Computer Science challenge text message (M)	Pedagogy text message (M)	Subject knowledge audit and intervention options (M)	Bespoke videos (M)	Computer Science Parental support toolkits (M)	Student SLCA session (M)	Overall (M)
Parent School B	4.0	4.1	4.4	4.3	4.3	3.9	4.3	+	4.2
Student School B	3.3	3.6	3.4	+	3.6	3.7	+	4.2	3.6
Teacher School B	5.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	4.9
Overall School B (M)	4.1	4.2	4.3	4.2	4.3	4.2	4.6	4.6	4.3
Parent School Y	*	*	3.9	3.6	3.6	3.6	3.5	+	3.7
Student School Y	*	*	2.8	+	3.8	3.3	+	4.1	3.5
Teacher School Y	4.0	*	4.5	3.0	4.5	3.5	4.0	4.0	3.9
Overall School Y (M)	*	*	3.7	3.3	4.0	3.5	3.8	4.0	3.7
* Unable to collect data as there was no Student Inclusive Meeting at School Y + Participants were not asked about the intervention instrument as they had no experience or understanding of the tool									

Table 5.1. *Phase 3 School B: Inner-City School and School Y: Suburban School Y intervention activity findings*

As shown in Table 5.2, participant responses suggested that the intervention activities ranged on the Likert scale between very helpful and extremely helpful for developing an understanding of the curriculum. The responses for teachers shown in Table 5.2 related to the teachers' perception of parents and students improved understanding rather than their own. The teachers' responses in both schools (School B, M = 5; School Y, M = 4.5), alongside parents in School B (M = 4.1), found the intervention activities ranging between being very helpful and extremely helpful, for students the activities ranged from moderately helpful to very helpful (M = 3.8). During the School B interviews, all four parents, Teacher 2 and the student group agreed, that parents were more informed regarding the Computer Science curriculum.

How helpful were the research activities in supporting and developing your [parents/ students] understanding of the Computer Science curriculum and course requirements? (M)	
Parent School B	4.1
Student School B	3.8
Teacher School B	5.0
Parent School Y	3.5
Student School Y	3.8
Teacher School Y	4.5

Table 5.2. *Phase 3 School B: Inner-City School and School Y: Suburban School responses relating to improved understanding of the Computer Science curriculum and course requirements*

An apt word used by Parent 8 during the interview (01/03/21), advocating the use of all intervention activities, was “Suite”, suggesting a connected series of activities. Participants were not a homogenous group; what was a helpful method for some, was not for others, the same is applicable for all families within schools, therefore, engagement should always be regular, targeted, and multi-tiered (Van Poortvliet et al., 2018).

5.1.1 Text Messages

Based on Phase 3 results, the pedagogy text messages had one of the lowest overall Questionnaire 2 Likert responses in both schools (School B Overall M=4.2; School Y Overall M=3.3), between moderately helpful and very helpful, a possible reason for this was the high frequency of messages, which may have been overwhelming, providing too much information to utilise in a short space of time. However, a dichotomy exists; during interviews, parents and teachers commented on their usefulness for initiating home conversations, developing knowledge and providing a sense of involvement.

Parent 15, during their interview, said they found it an effective method for improving knowledge of revision methods.

Parents and teachers were very positive regarding the Computer Science challenge text messages. Phase 3 Questionnaire 2 responses, as shown in Figure 4.2, ranged between very helpful and extremely helpful (School B Parent M = 4.4, Teacher M = 5; School Y Parent M = 4.5, Teacher M = 3.6). Benefits referred to: their quick reference nature, links to further support, storage for future reference, and their use in sparking home-learning conversations, "cos often at tea we would say to [student], we would just ask him and it would start a conversation, I found it very useful" (Parent 16 Interview, 09/03/21) and "we'd do the quiz quickly, and it was a nice chance to talk about Computer Science" (Parent 18 Interview, 24/02/21). Whilst students recognised the text messages value in identifying gaps in knowledge and engaging parents in the subject, Likert responses were lower, which could be associated with the increase in parental monitoring or the pressure generated by the spot-test format. The retrieval practice intent of the tool was also considered an important benefit by participants, "I did like the texts in particular which asked the questions because it made me remember things that I might have thought I knew but when it came to answering the question it made me realise, I actually do need to revise that more" (Student Group Interviews, 12/03/21). Although it only provided a snapshot, the text messages allowed parents have a better understanding of the curriculum, "that [text messages] was great because as parents we didn't, we wouldn't really go and look in his computer science to see you know what the curriculum consists of, whereas with those it made me realise what sort of questions, what sort of information he does need to know" (Parent 15 Interview, 11/02/21) and to gauge their child's progress, "it gave them an idea of how because he could tell me and

explain what he was doing at different parts of the curriculum I was better informed at you know assessing what he was saying" (Parent 8 Interview, 01/03/21). The weekly curriculum insight the texts provided were useful for parents who may not have experienced the subject first-hand during their own schooling or those who have limited knowledge of the subject such as Parent 15.

5.1.2 Computer Science parental support toolkit and research information video

The Computer Science parental support toolkits represented the highest Phase 3 Questionnaire 2 response for parents in School B, with an average participant response on the Likert scale between very helpful to extremely helpful (see Figure 5.1). This was lower in School Y, particularly for parents. The booklets' design was intended to support parents with limited English, especially in School Y, with the removal of technical jargon, acronyms and the use of infographics and visual support for key messages (Solomon, 2020). However, the length and detail may have been discouraging and too much for quick referencing, Parent 18 at School B commented "I think I had a quick flick through some of them and just put them on the side and then left them, … I'm a busy woman, I've got three kids and a job, and you know there's only so much support you can give" (Parent 18 Interview 24/02/21). The aim of the tool was to deliver pedagogy and curriculum advice in parallel to the pedagogy text messages ensuring that key messages were embedded. Furthermore, the toolkits were intended to increase parental self-efficacy, role construction and expertise, making parents more confident in the PAS processes and their understanding of the school curriculum, as Parent 8 at School B commented "It was just really well founded and it was a really good springboard for conversation and I could see it was all being cemented in the

classroom, so that was … I really liked that" (Parent 8 Interview 01/03/21). The content design included information relating to the curriculum, learning resources and co-curricular opportunities, reducing their need for discussion in the PTM.

5.1.3 Student SLCA sessions and video

During Phase 3 feedback, participants identified the SLCA sessions and videos, in both schools, as one of the most helpful intervention activities (School B Overall M = 4.6; School Y Overall M = 4.0). During the student group interviews, participant commented on the use of the session in developing metacognitive thinking; "earlier it was just note taking but now I've realised that doesn't work and I've started doing like past papers and things" and "yeah, same, the note taking wasn't helping but the flash cards help" (Student Group Interview, 12/03/21). The SLCA sessions educated students on the associated cognitive and self-regulative behaviours that contribute to their success but also provided practical support for their implementation, enabling an active learning process (Oakes and Griffin, 2017).

5.1.4 SLCA and subject knowledge audit

Participants in both schools found the SLCA and subject audits very helpful (School B Overall M = 4.3; School Y Overall M = 4.0). Phase 3 Questionnaire 2 and interview responses were particularly positive in relation to student self-assessment. One student during a student group interview said, "you can visualise what you've done, what you haven't done and what you need to learn" (Student Group Interview, 12/03/21). The student's response is indicative of an effective feedback process, whereby they identify

where they are going and where they are right now (Wiliam, 2018); this, supports progression and how learning outcomes build on one another. By reflecting on teacher feedback, students can begin to metacognitively consider the effectiveness of their learning strategies (Clark, 2012). The element of how they get there was a further feature of the audits, where students selected the most important resources and activities to address in future learning; this is a crucial metacognitive process (Higgins, Baumfield and Hall, 2007). Whilst the use of curriculum audits is not uncommon, reviewing both non-cognitive skills and curriculum is rarely completed. To improve subject knowledge or a key curriculum skill, certain characteristics are needed. As one student noted, "I also learn my weaknesses in terms of planning and organisation, not just the topics to revise because I wasn't making revision timetable and stuff like that" (Student Group Interview, 12/03/21). What this student realised is the association between curriculum difficulties and the lack of particular characteristics, in this case, planning and organisation. The audits help to overcome the absence of the student in the learning process, as they can diagnose and articulate their own strengths and areas for improvement, which is required for them to confidently contribute to Student Inclusive Meeting discussions. However, teacher monitoring is still an important part in the process of establishing where the students are in their learning (Wiliam, 2011).

The parents and teachers also appreciated receiving a copy of the student audit. The audit not only represented a further reporting mechanism for home-school communication but allowed for parents to have a better understanding of their son's progress, support their learning and stimulate home learning conversations. For teachers, the audits provided a useful formative feedback activity to influence future support and teaching.

5.2 Meeting Impact

The findings are presented based on the themes arising from the original meeting compared to the reengineered format and the intervention activities. There are five main themes including: the preparation and training of participants for the meeting; participant interactions and their role in the meeting; what was the perceived purpose and structure; and did the meeting engender parent and student education engagement. Through this approach, each of the research questions is addressed.

5.2.1 Preparation and training for the meeting

As discussed in the literature review, PTM should represent an opportunity to develop a learning centred model of education (Goodall, 2017), where parents are considered educational partners (Suizzo et al., 2016). For parents to be effective partners, the extant literature indicates training is required to understand their role and purpose in engagement, helping to improve parental self-efficacy and role construction for educational support (Goodall and Vorhaus, 2011; Hoover-Dempsey et al., 2005). Based on Questionnaire 2 responses, no parents from School B and Y were offered training for the original meeting, so preparation was varied. In School B, parents prepared by reviewing tracking reports and assessment data. Some parents spoke to their son regarding areas of concern or reviewed homework or their son's diary. Questionnaire 2 findings at School Y indicated 50% (n = 6) of parents prepared by checking homework, reviewing previous reports and planning questions. Of the six parents who did not prepare, 33% (n = 2) said they did not have the time, since they came directly from work.

Similarly, as indicated by Questionnaire 2, in both schools, students received no training or support and only a few had prepared (25%, n = 3 of School Y students). The absence of training inhibited student discourse as they lacked the necessary confidence, knowledge and experience for collaborating with adults. Furthermore, most could not effectively prepare, as guidance regarding the meeting was not provided, so they were only able to speculate on its contents. This disconnection only serves to discourage students from taking responsibility for their education.

The lack of teacher training for the original PTM is one of the root causes for the discordance and unclear purpose of the meeting. Professional development for teachers is fundamental to successful teaching (Coe, Aloisi, Higgins and Major, 2014). The lack of training means that teachers are underprepared for the emotional labour of parents evening (Hargreaves, 2000), and the significant interpersonal skills required to move from providing information to communicating (Goodall, 2017). Based on responses from the interviews, none of the teachers involved in the research had formal training for the original PTM. All teachers based their meeting behaviour and communication style on anecdotal information or learning through observing colleagues (Teacher 1 observed their mentor during their ITT year), possibly perpetuating poor practice and providing little consistency in structure. Teachers prepared by collating the latest assessment, tracking data and resources to recommend to parents.

A significant change from the original PTM was the amount of training and support provided to prepare participants for the reengineered approach. It was important to make participants aware of the benefits for students, particularly parents, as they are

more likely to participate in engagement activities if they perceive a direct positive impact for their child (Goodall and Vorhaus, 2011). Parent and student engagement increased through their active involvement and ownership of the meeting preparation and they developed a clear understanding of its purpose, through training. Based on Phase 3 Questionnaire 2 responses, parents who prepared did so by discussing the meeting with their son. Parent preparation also included the online training sessions, the FAQ sheet provided and reviewing their son's curriculum and SLCA audits. Questionnaire 2 participant mean responses relating to training for teachers and parents ranged from very helpful to extremely helpful (School B Overall Teacher M = 5; Overall Parent M = 4).

Preparation by Teacher 2 (School B) for the Student Inclusive Meeting included a greater focus on activities to support student dialogue and formative action, audits, prior assessments, and target grades. The teacher also completed an SLCA checklist to help guide the meeting conversation and to better ascribe possible actions and feedback. For parents and teachers, it was important to emphasise the new substantial role of the student in the meeting but also the importance of their roles as experts. Teacher 2 during interview described how they used their Student Inclusive Meeting training to take more of a listening role to encourage student participation. Active listening techniques helped to reduce teacher talk and develop student engagement, contributing to student talk time equating to 30% of the Student Inclusive Meeting and averaging at least three ten-second talk intervals.

A key aspect of the student training was attending the preparation sessions and the completion of their pro forma. In addition to practising in the training sessions, half of

students prepared by discussing its contents with parents (based on Parent Questionnaire 2). In Student Questionnaire 2, 12 out of the 16 comments referred to a reflective review process undertaken by the student in preparation for the meeting "I made sure I came in knowing what I wanted to improve" (Student 19 Questionnaire 2, 10/03/21) and "I prepared my answers and script, thinking of what I am weaker at and what I am better at" (Student 9 Questionnaire 2, 06/02/21). Whilst students appreciated the outcomes associated with the meeting, the training was considered only moderately helpful (School B Student M = 3.3), one of the lowest intervention aspects. The training would not need to be so intense or formal in the future, as less consideration of the structure and approach would be required, with the same format being applicable to other subjects.

5.2.2 Participant role construction and collaboration

Opportunities for collaboration are limited in the traditional PTM. At both schools, the teacher spoke for over 81% of the meetings with at least five ten-second talk intervals compared to one or fewer ten-second talk interval by parents, as shown in Figure 5.1. The teacher dominance and passivity of the other participants was a significant limitation. Based on coding analysis of the full transcripts from each meeting, 75% of School Y and 53% of School B PTM were characterised by teacher dominance, monitoring and reporting. Eighty six percent of Questionnaire 2 responses in both schools perceived the teachers' role as dominant with phrases used including: to update, to tell us, to let the student know, to inform, to firmly deliver the child's progress, and to lead the discussion. One student commented, "I see them as advisors to help our parents help us study better" (School B Student Group Interview, 18/03/20). Conversely,

Teacher 1 felt their role was less authoritative and more of a supportive expert, "personally, I see it as more of a coach, I don't see it as a lecturer" (School Y Teacher 1 Interview, 13/04/20). For collaboration to occur, there needs to be a level of equality to the discourse, where participants are given the opportunity to deliberate and collaborate. If the teacher dominates the meeting, their agenda is prioritised and steered by their convictions, leaving little space for parent or student voice. Furthermore, parents may not receive answers to critical questions or receive the necessary support. One parent referred to the meeting as, "the usual teacher download for five minutes and then a question at the end and the kid not saying anything" (School B Parent 18 Interview, 24/02/21); this limits the value and outcomes to the meeting. Parents tended to provide short answer responses to questions posed by the teacher, such as "Is that alright?", "Is there any questions mum?" and "yeah, but like I say anything from your side?" (School Y and B PTM, 27/01/20 and 02/03/20). In School Y, the limited responses of some parents may be associated with the English language fluency of some parents. To elicit more relevant responses, targeted questioning by the teachers would have been more suitable. Whilst the position of the teacher as a professional and expert of pedagogy and curriculum should be recognised, the parent also has a unique understanding and knowledge of the child; both are required to effectively support the child and so collaboration is important to enable engagement and action.

Vickers et al. (2002) suggest that a collaborative approach to a meeting ensures that decision making is a shared responsibility and this in turn improves parental role construction and reduces power imbalances. By including parents in the wider web of learning, they have more responsibility for school-led outcomes. Structured Conversations, part of the Achievement for All strategy (DfCSF, 2009), states that

effective meetings should allow the parent an opportunity to share their concerns and, together with the school, agree aspirations for the child. Using feedback from Questionnaire 2 and interviews, 46% of responses at School B and 31% of School Y referred to parents as passive rather than collaborative, relaying feedback to students. Of the collaborative comments referred to in School B and Y Questionnaire 2, comments referred to parents being: supportive, involved, listening, contributing, sharing insights from home, coaching, and informing teachers of their concerns. Developing these characteristics was a priority for the reengineered format.

In School Y, 77% of feedback from Questionnaire 2 and interviews represented students as passive during the PTM. Teacher 1 suggested their passivity was a problem for future learning, "If you don't ask a question, they just sit there"
(School Y Teacher 1 Interview, 13/04/20). At School B, no students attended the meeting, although not intentionally excluded; there was no formal invite or specific school request for their attendance, meaning student voice was lost. Students were unanimous in the Phase 1 group interview at wanting to attend, one student commented, "well I would like to learn more and be there personally and not have to have it relayed to me" (School B Student Group Interview, 18/03/20). Parents and teachers are more likely to work cooperatively to achieve educational goals when the student attends (Bilton, Jackson and Hymer, 2017). At School Y, almost all students attended the meeting, but their involvement was limited, representing 3% of all talk time (see Table 5.3), speaking for a maximum of 27 seconds in any meeting.

	School Y Phase 1	School Y Phase 1 range (s)	School B Phase 1	School B Phase 1 range (s)	School B Phase 3	School B Phase 3 range (s)
Average teacher talk time (s)	83%	61-327	81%	56-498	64%	140-236
Average talk time interval of 10 seconds or more	10		8		5	
Average parent talk time (s)	12%	56-498	19%	0-170	6%	3-34
Average parent talk time interval of 10 seconds or more			1		1	
Average student talk time (s)	3%	0-27			30%	35-167
Average student talk time interval of 10 seconds or more	0				3	
Average talk time for all participants per meeting (s)	219	67-422	323	74-668	299	201-340

Table 5.3. Comparison of School B: Inner-City School Phase 1 to Phase 3 meeting talk time

In many PTM meetings, a narrative of the student was provided by the teacher and parent, as one student commented, “we’re the subjects” (School B Student Group Interview, 18/03/20). The students were either physically absent or rendered absent by their status and position amongst the adults, potentially leading to their disenfranchisement, finding it difficult to explain and express their views and opinions (Walker, 1998). There is little opportunity for students to contribute with their own perceptions of strengths, weaknesses, and goals, failing to support their self-initiation which is a contributory factor in self-determination (Grolnick et al., 2014). It is

important that learners see themselves as owners of their learning (Forster, 2009), taking an insider rather than an outsider role.

The dominance of the teacher role within the PTM is not a criticism of those involved in the study but rather the accepted status quo for their traditional position. Furthermore, the four teachers involved in the study wanted their roles to change, Teacher 1 said "what I don't like about it [PTM] is the engagement of conversation between myself and the parent and the student, I feel like it's constantly me talking to them rather than it being a two-way conversation" (School Y Teacher 1 Interview 13/04/20). By developing the parent and student role, their talk time will increase and reduce the pressure on teachers, providing greater time for the teacher to listen to, and reflect on the discourse from other participants.

The reengineered meeting increased equality in the participant discourse. Based on coding analysis of the full transcripts from each Student Inclusive Meeting, all 16 meetings were coded as collaborative, with teachers averaging five multiples of ten-second talk intervals (range 3-8), compared to eight for the PTM (range 1-16) and spoke for 64% of the time as opposed to 81% in the original meeting (see Table 5.3). At School B, students did not attend the original meeting but during the new meeting format, 30% of all talk time was occupied by students, with an average of three ten-second talk intervals per meeting (range 1-5). Parent talk time reduced in the Student Inclusive Meetings dropping from 19% to 6%; however, the ten-second talk intervals remined the same. This reduction may be attributed to the presence of the student in the meeting resulting in three-way communication, limiting the time for parental input. Also, there was a greater emphasis on student involvement and responsibility, with

more discourse and questioning being student focused rather than parent focused. A further factor impacting talk time was the staging of the meeting itself, with all Phase 3 meetings using specialist PTM software that limited the meeting length to six minutes. Unlike the original meeting, the Student Inclusive Meeting length was not able to significantly deviate, which meant the talk time range was smaller (see Table 5.3). The time limitation encouraged a succinct style, with all meetings completed within the allocated three hours, ensuring teachers workload was not increased.

Sixty eight percent of comments from Phase 3 Questionnaire 2 and comments from the interviews and student group interview, referred to parents as collaborative participants within the new meeting format. Many collaborative comments referred to parents observing and listening to their son and then supporting. Although 32% of comments referred to the parents' role as passive, passivity was not always contrasting to the dominant role of the teacher but rather to the student and their involvement, "my role was to listen, to be a further person to whom my son is accountable by sitting there and showing an interest (Parent 18 Interview, 24/02/21). Seventy two percent of comments related to students playing a collaborative role, 14% a lead role and 14% a passive role. Terms used to describe the collaborative nature of the student included: to engage, to state his intentions, to present, to build a direct relationship, to articulate, to interact, and the communicator. Many comments related to sharing their strengths and targets from the pro forma. Sixty two percent of participant comments referred to the teacher taking a collaborative role, listening, prompting, probing and then responding with their own views or identifying any disconnect between views. One student comment included, "moderating the ideas that we put forward" (Student Group Interview, 12/03/21); this is reflected by Teacher 2, who described themselves as a facilitator of the meeting. Tveit

(2014) proposes that the role of a moderator is essential for facilitating dialogue and safeguarding deliberation; it is therefore fitting that teachers are perceived as such. Further confirmation of the new faciliatory teacher role is noted, with the reduction of Questionnaire 2 feedback referring to the teacher as leading the meeting and occupying the dominant role (38%). This redistribution of roles can be attributed to the training provided and the defined structure of the meeting. The importance placed upon parent and student input during the discourse helps to increase their self-efficacy for educational engagement. In the new meeting format, students know they will be listened to, with their beliefs and opinions valued. Collaborating with experts (parents and teachers) using this medium, helps to increase their control understanding (Grolnick et al., 1991 and Grolnick and Slowiaczek, 1994), sometimes referred to as relatedness (Deci and Ryan, 2000b); an important factor in developing student self-determination and intrinsic motivation.

5.2.3 The structure and purpose of the meeting

Questionnaire 2 and the interviews indicated that the majority of participants felt the teacher adopted a structure to the original PTM (School B 83%, n=13; School Y 83%, n=10). This research tools also indicated that some parents viewed the meetings as a good opportunity to receive an expert opinion on their child's progress and students similarly appreciated the teacher's feedback. However, the meeting structure posed a significant engagement barrier to both parents and students since it overly focused on summative data, course characteristics and reporting. Based on coding analysis of the PTM, 48% at School B and 51% at School Y of all codes related to *Reporting and course content*. Figures 5.1 and 5.2 provide concept maps to the categories discussed at

the meeting, *Reporting and course content* dwarf all other discussion areas. Much of this information was generic, relating to the course structure or resources to purchase, rather than tailored support, making poor use of the limited time available. When parents were asked to describe the meeting structure in Questionnaire 2, some responses did not even feature parent feedback as a component. Due to the emphasis on reporting and course information, the teacher tended to share summative data including exam scores or target grades, the result being assessment on learning, rather than assessment for learning:

> "In the first test- right so 59% which is a 5, yeah, which is above your target grade, and then what you've done is in the second test you went slightly down, back to a 4, yeah, and then you picked it back up at a 5. Can we make sure you stay at a 5 and above? Yeah, even better ideally 6"
> (School Y: Suburban School PTM 14, 30/01/20)

The teacher in the quote provides an evaluation or a value judgement rather than support; the grades provided are unusable as they do not have context nor is advice provided on how to improve them. The focus on target grades suggests that the information the teacher values (or thinks the parent might value) is that which can be datafied. This datafication can result in pedagogic reductionism (Williamson, Bayne and Shay, 2020:358). Similar comments were made by teachers in the School B, "[Student] that's him there - he got 72%. Below the class average, which was 75, roughly 75%. It's not a huge cause for concern but his target grade is 8, so I would expect it to be a bit better" (School B PTM 11, 05/03/20). A significant issue at the heart of traditional PTM is the evaluative language used, which often rates, praises or criticises but does not

support feedback (Wiggins, 2012). Effective feedback must focus on what the individual student needs to do to improve (Forster, 2009). The School B PTM 11 quote above, compares the student's progress against the class average, encouraging performance orientated goals rather than mastery goals, this progress comparison is often not conducive to learning (Barkoukis, Ntoumanis and Nikitaras, 2007). The process of feedback should be active in which students are involved and provide input. The current PTM format provides parents and students with information of where they currently are but not how to develop and the process involved, any formative feedback is almost provided as adjunct. Over emphasis on already available diagnostic data relating to prior and current progress during the PTM, reduces the time to discuss next steps and Feed Up (Hattie and Timperley, 2007).

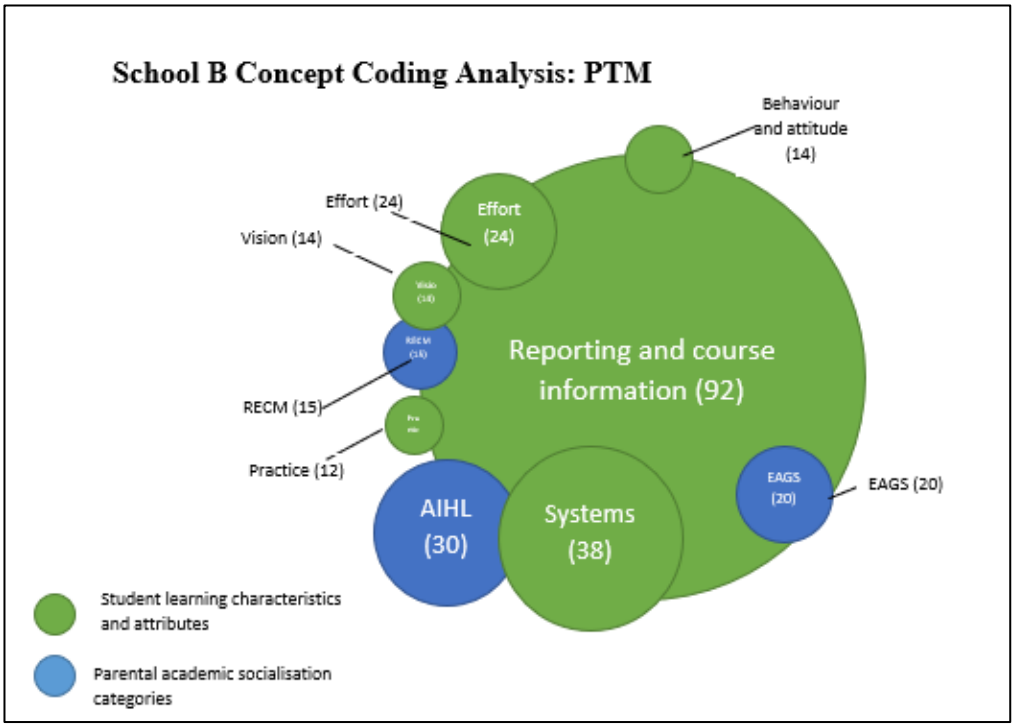

Figure 5.1. School B: Inner-City School concept code analysis of the PTM

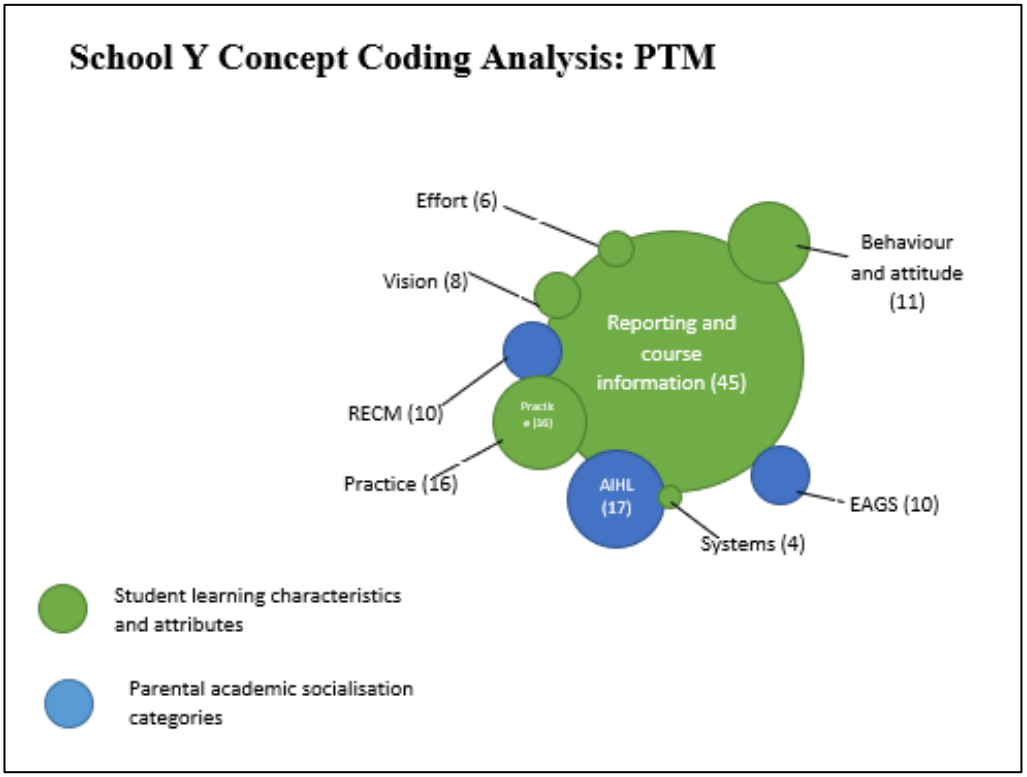

Figure 5.2. School Y: Suburban concept code analysis of the PTM

Historically, the PTM was used to discuss and explain the annual report. Parents now have access to regular, up-to-date assessment data. In both schools involved with the research, interim reports are provided on a termly basis with a full report in the summer. Subject information is also provided through GCSE curriculum booklets, provided at the start of Key Stage 4. Therefore, using the meeting to reiterate the report contents is repetitive and unnecessary, a view shared by Teacher 3 (School B) and Student 6 (School B), "what I dislike about it, is the information is what is already available to the parents in words and I'm just speaking, verbally explaining the information which they kind of already have" (School B Teacher 3 Interview, 17/05/20) and "little of the information is utilisable and its mostly already available to me" (School B Student 6 Questionnaire 2, 16/03/20). Both participants referred to the limited utility or action associated with the meeting content. In the School Y group interview, students were also negative about the meetings, some felt the PTM was a mechanism to inform parents of resources available or felt it lacked advice for home learning, others felt it was not collaborative, "they don't really give solutions, just saying get this textbook. That's pretty much it" (School Y Student Group Interview, 11/09/20). Some students during the group interview felt the meeting was overly negative, focusing on poor behaviour, "It's more about behaviour issues more than work ethic. If you're a bad student they'll usually talk about behaviour or about what the things I shouldn't do". One student remarked that teachers used the meeting as an opportunity to berate them in front of their parents, "it's like they want you to get into trouble instead of trying to help you be a better person" (School Y Student Group Interview 11/09/20). This traditional approach subjugates the students, reducing their position in the discourse and their ability to collaborate. By focusing on the negatives without providing advice, the approach fails to move learning forward.

The original PTM structure inhibited engagement, through interviews and Questionnaire 2, participants indicated the limited time for meetings created a sense of urgency for the teacher to deliver key messages and prevented meaningful discourse. Furthermore, the contrasting length of meetings meant there was little equality, as previous meetings overrunning reduced the available time for the next. The structure of the meeting in hour blocks on one evening, provided little flexibility for parents. The lack of flexibility can place great strain on working parents, particularly those from lower socio-economic backgrounds (Walker et al., 2010), where work schedules may less accommodating or childcare represents a significant expenditure. Findings from Questionnaire 2 indicated that during the PTM, most parents took notes (School B 100%, n = 17; School Y 50%, n = 6) but there was no consistency in the format, with much notetaking relating to resources to purchase rather than actions or areas for discussion. Most students in School B felt the notes were used to relay information from the teacher to the parent and then the student; only 18% (n = 3), referred to the meeting as a catalyst for parental support and discussion. In School Y, 58% (n = 7) of students said they made notes from the meeting including tips, areas for improvement and resources but there was no mention of further conversations with parents. Without structured notes to distil key messages and scaffold further action, the meeting contents can be easily forgotten, generalised or confused with other subjects. Furthermore, for parents who have English as an additional language, unstructured notetaking can be challenging; on two occasions at School Y, the child was asked to scribe on behalf of the parents.

The student inclusive meeting encouraged student agency and involvement through a carefully designed structure and a clearly defined purpose. Based on the meeting

transcriptions, the questioning used by the teacher became more coaching orientated and reflective including, “moving forward, what are you planning to do to improve on those areas you’ve identified as weaknesses?” and “what are your main goals moving forward for the next few months? What are you thinking of achieving?” (Student Inclusive Meeting 1 and 2, 25/01/21). This type of questioning actively seeks the involvement of the student in the learning conversation. The discussion of the next steps is positively associated with the development of learning strategies and their metacognitive evaluation (Baas, Costelijns, Vermeulen, Marten and Segers, 2015).

The majority of responses from Phase 3 Parent and Student Questionnaire 2 at School B, referred to a meeting structure being adopted as part of the student inclusive format. Although descriptions varied, the structure was described as an introduction by students, followed by a discussion of their strengths, weaknesses and targets. The teacher then gathered the information provided, probed further where necessary and either validated, extended or offered contrary advice and feedback. Following this, parents’ input was then sought by the teacher. Teacher and parent interviews yielded similar responses with Parent 16, referring to the nature of the meeting, “it was certainly inclusive, [Student] was involved, yeah. And we all benefited from it, because I remember leaving that meeting feeling quite happy” (Parent 16 Interview, 01/03/21). During the group interview, a student referred to the new format as being more student-led than parent or teacher; this acknowledgement reveals how the meeting has been restructured for students to take a more central position.

In designing the Student Inclusive Meeting, Nicol and Macfarlane-Dick’s (2006) seven characteristics of effective feedback were used to ensure that the meeting was a vehicle

for formative action rather than summative reporting. The audit and use of assessment data, including exam question level analysis, ensured that any student self-assessed targets were guided by the data. Furthermore, when deciding on possible targets before the meeting, students were encouraged to include the role of their parents and/or teacher, for example, testing or marking their work, by doing so, progress was monitored and further supported. After the Student Inclusive Meeting, the target meeting ensured participants had a shared understanding of the student's progress over time (Forster, 2009) and further modifications could be agreed upon. Student Questionnaire 2 feedback suggested the process gave them greater clarity and the tools to examine and self-review their progress, "I was able to properly examine what my true strengths and weaknesses are for the course, which gives me greater perspective of what to focus on improving" (Student 19 Questionnaire 2, 13/02/21). The student comment and other participant responses indicate there was a shared understanding of the purpose and construction of the new meeting, removing the incongruities of the original format and fulfilling its fundamental purpose for formative action.

5.2.4 Engendering parental educational engagement

In this research, the adapted PAS categories from Suizzo and Soon's (2006) study were used to describe and measure parental educational engagement. PAS Questionnaire 1B measured the perceived use of PAS processes by parents, whilst coding analysis of the transcriptions and research tools measured the presence and discussion of PAS, both were required for effective methodological triangulation (Cohen et al., 2013).

Based on Phase 1 data, parental support was perceived as an administrative role rather than active engagement. During the group interviews, students in both schools referred to parents as: overseers, being motivational, checking the quality of work, and enforcing what the teacher said. At School B, students also acknowledged the role of the parent as the purchaser of resources. Parent comments during the Phase 1 interviews suggested a supervisory role in reviewing homework, testing and proofreading, one mother commented, "the teachers are the experts, and you are providing encouragement, providing a nursing environment and policing" (Parent 16 Interview School B, 23/03/20). Teachers at School B felt the best support they could provide parents was lists of resources that students could use at home. More specific subject-based support was considered too challenging given their lack of curriculum knowledge. Making a presumption regarding parental capability may have inhibited parents' active engagement and promoted a more administrative role. Research by Baeck (2010) and Schnee and Bose (2010) suggest similar findings, with school-centred conceptions of the parents' role and ability limiting their agency.

The lack of training regarding the purpose of the meeting may have meant that parents perceived themselves as information conduits in the absence of the child and moderators in their presence, rather than active agents using the information to develop further PAS practices. One of the most important aspects of effective parental engagement is communication and discourse (Hill and Tyson, 2009; Desforges and Abouchaar, 2003; Epstein and Sanders, 2002; Fan and Chen, 2001; Quigley et al., 2018; Van Poortvliet et al., 2018), its absence or reduction to relaying, undermines engagement. Responses from Phase 1 Questionnaire 2 revealed that there were no further activities planned after the meeting between teachers, parents and students. Using a solitary event to support

home learning represents a significant issue; any home-school communication should be part of a larger, regular review and monitoring process.

The PTM coding analysis was influenced by particular areas of conversation selected by the teacher at the meeting, meaning the discussion of PAS was not equal. For instance, the code for AIHL appears several times during meeting conversations in both School B and Y (see Appendix D: Phase 1 SLCA), on deeper analysis, this figure relates mostly to just one open code: *AIHL-Organising resources such as textbooks, books, newspapers and online platforms*, a great deal of the teachers' comments focused on useful resources and textbooks, which parents then responded to. At School Y, the higher proportion of codes for: *AIHL-Develop home learning activities linked to the curriculum and PTM*, corresponds to the repeated request by Teacher 1 (School Y) for parents to help their son work through two pages of the textbook a week, to which parents agreed.

Phase 1 PAS Questionnaire 1B (see Appendix D: PAS Questionnaire 1B) provided a good indication of deficient areas to determine intervention in Phase 2. The low levels of AIHL identified within this questionnaire, especially by students (Student School B M = 3.3; Student School Y M = 3.2) suggests that parental support was strongest in behaviour and communication (RECM) and setting goals (EAGS) but not in monitoring work, providing extra support or organising further resources (AIHL).

On conducting the intervention activities and the reengineered Student Inclusive Meeting format, many participants felt that parental engagement was higher (see Table

5.5). School Y responses were more divided; this could be linked to the reduction in intervention activities and the absence of the Student Inclusive Meeting.

Are you [parent] (your parent/s) more engaged with your son's learning and education as a result of this project?		
	Yes (n)	No (n)
Parent School B	15	1
Student School B	13	3
Teacher School B	1	0
Parent School Y	6	2
Student School Y	6	6
Teacher School Y	1	1

Table 5.4. Phase 3 School B: Inner-City School and School Y: Suburban School parent educational engagement

A dominant theme in both schools was the increase in pedagogy, progress and curriculum discussions between parents and students as a result of the new structure. School B parent comments included, "it has forced certain conversations that we may not otherwise have had and to put some structure therein" (School B Parent 6 Questionnaire 2,15/03/21) and "helped with structured and less emotional conversations with my son" (School B Parent 7 Questionnaire 2, 20/02/21). Parent 8 commented:

> "It has become mainstreamed into our regular monitoring of progress and more importantly, really fun and engaged conversations at home which bring his learning to life. We are always talking about systems functionality, the joy of programming, the ethics of the sector and it is very rewarding. I couldn't have had such good engagement without the work of this programme. I don't need to nag on his learning goals as I feel confident he really owns them"
> (School B: Inner-City School Parent 8 Questionnaire 2, 02/02/21)

This parent's comments suggest a new level of understanding and confidence in the curriculum, increasing their capability to initiate and lead related home learning conversations. In both schools, Questionnaire 2 responses referred to parents improved understanding of the curriculum. One student at School Y commented, "my parents now know to take computing as a subject more seriously" (School Y Student 10 Questionnaire 2, 23/04/21). During interview, Parent 8 commented that this greater understanding gave them the confidence to let their son have more independence and autonomy, particularly with A-Level subject selection. Furthermore, they suggested that this trust meant their son felt validated and self-confident. Teacher 2 during interview, felt the new level of engagement shifted the onus of responsibility for learning and targets from solely the pursuit of teachers to the parent as well. However, some students during the group interview felt that parents were no further engaged since they were already heavily involved, as they had a detailed knowledge of the subject having studied it at university.

Based on the Phase 3 coding analysis, there was an increase in the discussion of all three categories of PAS, but EAGS remained lower. This is not attributed to its intentional lack of discussion but the nature of the meeting focusing on particular subcategories relevant to PAS at that time, such as the discussion of learning strategies required for teacher assessed grades (representing the second most coded response for AIHL**)**. The increase in coded responses in RECM for some subcategories would suggest that parents were allowing students to make significant decisions and encouraging independence and self-regulation. This could be attributed to the higher levels of trust required in students, managing their home learning in the absence of physical lessons and schooling. Contextual factors and the academic calendar will

always influence the discussion of PAS processes at the meeting; without other engagement activities, parents could receive quite narrow advice and support, especially since the six-minute meeting is not solely focused on supporting parents.

Based on Phase 3 PAS Questionnaire 1B shown in Table 5.6, perceived use of AIHL, RECM and EAGS increased in School B overall and for parents but not for students. This can be correlated to the relevant intervention activities but can also be attributed to increased parent engagement during the lockdown. *RECM* and *EAGS* remained the highest categories with Likert scale responses ranging between often and frequently in Phase 1 and Phase 3 for School B. The results for School Y show a slight decrease in values (see Table 5.6), with *AIHL* and *EAGS* being the most significant.

	RECM	AIHL	EAGS	Overall
Phase 3 Parent- School B (M)	4.6	3.9	4.5	4.3
Difference from Phase 1 Parent- School B	0.3	0.2	0.4	0.3
Phase 3 Student- School B (M)	4	3	3.8	3.6
Difference from Phase 1 Student- School B	0.2	-0.3	0	0
Phase 3 overall- School B (M)	4.3	3.4	4.1	4
Difference overall from Phase 1 - School B	0.2	-0.1	0.2	0.1
Phase 3 Parent- School Y (M)	4.6	3.9	4.5	4.3
Difference from Phase 1 Parent- School Y (M)	0.1	-0.2	-0.1	-0.1
Phase 3 Student- School Y (M)	3.9	3.3	3.9	3.7
Difference from Phase 1 Student- School Y (M)	0	0.1	-0.3	-0.1
Phase 3 overall- School Y (M)	4.2	3.6	4.2	4
Difference overall from Phase 1 - School Y	0	-0.1	-0.2	-0.1

Table 5.5. *Phase 1 to Phase 3 School B: Inner-City School and School Y: Suburban School PAS category difference*

For School B, of the seven areas identified for intervention (see Table 5.7), most showed an improvement in the Phase 3 PAS Questionnaire 1B for participant types, especially for students. Overall, there were improvements in the intervention areas for School Y, but student results showed a decrease in PAS processes associated with explaining difficult ideas (or seeking help) and organising further learning opportunities; conversely, the parent responses for these questions showed a significant increase.

		Intervention inclusion criteria	Phase 3 Parent (M)	Difference from Phase 1- Parent	Phase 3 Student (M)	Difference from Phase 1 - Student
School B: Inner-City School	**AIHL: I plan further activities to support my son based on the feedback received from parent teacher meetings**	Student red	4.1	-0.1	3.8	0.9
	AIHL: I do not regularly review classwork and homework- reverse orientated	Parent red	3	0.4	2.8	1
	AIHL: I explain difficult ideas to my son when he does not understand or seek further help for him	Student red	3.9	-0.2	3.4	0.4
	AIHL: I organise further learning opportunities outside school e.g. tutors, museums, library visits	Student red	4.2	0.1	3.2	0.6
	RECM: I allow for my son to make some significant decisions regarding their education independently	Student yellow, parent yellow	4.4	0.8	4.1	0.6
	AIHL: I ensure my son keeps to a regular homework timetable	Parent red, student yellow	4.1	0.7	3.7	0.2
School Y: Suburban School	**EAGS: I provide a structured environment for my son and rules regarding work and leisure time**	Student yellow, parent yellow	4.3	0.7	3.4	0.1
	AIHL: I plan further activities to support my son based on the feedback received from parent teacher meetings	Student yellow, parent yellow	4.3	0	3.4	0.1
	AIHL: I do not regularly review classwork and homework- reverse orientated	Parent red	2.6	-1.3	4.3	0.7
	AIHL: I explain difficult ideas to my son when he does not understand or seek further help for him	Student red	4.6	0.5	2.6	-0.4
	AIHL: I organise further learning opportunities outside school e.g. tutors, museums, library visits	Student red, parent red	4.3	0.7	2.8	-0.4
Green indicates a significant increase of 0.5 or more above the mean, yellow indicates 0.1 to 0.49 below the mean, red represents 0.5 or more below the mean.						

Table 5.6. *Phase 1 to Phase 3 School B: Inner-City School and School Y: Suburban School difference for PAS intervention areas*

When data are combined from both schools for PAS Questionnaire 1B, there is no statistical significance the between Phase 1 and Phase 3 data. However, on the removal of the reverse questions (Q5 and Q11) that have been associated with misinterpretation by participants, the parent data has statistical significance with a $p=0.0414$ (significance level of $p \leq 0.05$) and a medium effect size of 0.3. The lack of significance in the student data suggests they did not find an increase in PAS. The absence of the Student Inclusive Meeting and the associated activities, including the home learning discussions, may have impacted the data from School Y, in turn reducing the perceived parental engagement. A further explanation could be attributed to the student's lack of invitation for parent involvement (Edwards and Alfred, 2000), one parent commented "whilst we have discussions about what he is doing, our son is somewhat dismissive of interference and we are often told to back off." (Parent 14 Questionnaire 2, 02/02/21). Parent 14, having experienced similar behaviour with their two older children, felt there was a fine line between support and interference. One student suggested their parents did not engage in PAS as they were confident in his approach to the subject, suggesting a high degree of trust and scaffolded autonomy provided by the parents, a parent Questionnaire 2 response for a different student also referred to this. Grolnick and Slowiaczek (1994:240), refer to the possibility that parent involvement may be linked to student competencies; where parents become more or less involved based on their children's motivation in school. If these students were exhibiting greater self-regulation, the autonomy index score in Questionnaire 1C would have shown higher levels of intrinsic motivation or movement on the continuum towards this, this was not observed. There remains a fine line between maintaining involvement, while affirming the adolescence's autonomy (Hill and Tyson, 2009). PAS processes should be used to maintain a balance.

The reengineered meeting engenders parental engagement, more so than the original PTM format but its influence is not as prodigious or significant as in the case of student engagement. The correlation between the research and parental engagement is harder to determine; this is not unexpected given the range of parental barriers and the ability of the research to account for these.

5.2.5 Engendering student educational engagement

Within the research, student educational engagement is determined by the presence and levels of non-cognitive skills associated with autonomy and self-determination for learning. These skills are referred to in this study as student learning characteristics and attributes. Several research tools were used to triangulate findings. SLCA Questionnaire 1A measured the perceived SLCA competence of students, whilst coding analysis, Questionnaire 2 and the interviews (including group interviews) determined the discussion and preferred discussion of SLCA. The students' domains of regulation (including the relative autonomy index) were measured using Self-Regulation and Autonomy Questionnaire 1C.

Phase 1 SLCA Questionnaire 1A responses indicated that students exhibited moderate levels of SLCA. In School B, the overall Likert scale response was between acceptable and good (M = 3.6), this was slightly higher in School Y (M = 3.7). The SLCA category *Practice* had the lowest overall mean for all participants (M= 3.5) followed by *Systems* (M = 3.5) in School B. In School Y, the lowest was *Behaviour and Attitude* (M = 3.7), followed by *Vision* (M = 3.8). In both schools, *Systems: Organisation of work* and *Systems: Revision planning and strategies*, were some of the lowest values, suggesting a

lack of competence in these areas (a table mapping the areas of consideration and the associated intervention instruments is provided in Appendix C).

Based on feedback from Questionnaire 2 as shown in Table 5.8, the discussion of certain characteristics within the original PTM was lacking, including *Vision*, *Practice*, *Systems* and an element of *Reporting*. The discussion of *Behaviour*, *Attitude*, *Effort and Reporting (assessment)* were high, being typical reporting aspects within a PTM.

Participant	Vision	Effort	Systems	Practice	Attitude	Behaviour	Reporting (Assessment)	Reporting (Course Information)	Overall mean
Parent School B	3.2	4.1	3.6	3.7	4.1	4.4	4.1	3.5	3.8
Teacher School B	2.5	5.0	4.0	3.5	5.0	5.0	5.0	4.5	4.3
Parent School Y	4.2	4.5	4	4.3	4.5	4.5	4.4	4	4.3
Student School Y	3.8	4.1	3.3	3.8	3.9	3.9	4	3.7	3.8
Teacher School Y	3.0	3.0	4.0	3.0	4.0	4.0	5.0	2.0	3.5
Red colour indicates significantly below the overall participant mean (0.5)									

Table 5.7. *School B: Inner-City School and School Y: Suburban School Parent and Teacher Questionnaire 2 SLCA Likert scale mean responses of characteristics discussed during the PTM*

Within the interviews, participants were asked if all five SLCA should be discussed at the meeting and all thought they would be useful but characteristics such as *Behaviour* and *Attitude* should have a greater focus.

Based on coding analysis for School B during the PTM (see Figure 5.3), the majority of discussions were focused on *Reporting and course content* with *progress towards predicted grades or target grades* having the most amount coded references, followed by *course content*. Some of the meeting conversations, especially by Teacher 3 (School B), were directed at *Student attendance of intervention* which explained the higher

figure for this subcategory of effort (see Appendix D: SLCA coding analysis). In School Y, as shown in Figure 5.4, most of the meetings focused on *Reporting and course content,* aspects of this, including *Prior assessment* and *Progress towards predicted grade*, would have been provided in the tracking report received by parents before the meeting, so in effect repeated. A further reason for the high reporting and course content value was the proportion of codes for *Resources available*, where the teacher, in several meetings, referred to a textbook for parents to purchase. Some subcategories of SLCA were not discussed at all such as *Types of intelligence, Dealing with failure, Leadership and Teamwork, Presentation of work* and *Organisation of work*. The lack of the discussion and advice provided of these may be debilitating for learning, for instance, *Types of intelligence* and *Dealing with failure* are associated with developing a growth mindset. Students demonstrating a positive mindset are more likely more intrinsically motivated to undertake independent activities such as effective revision (Yan, Thai and Bjork, 2014). The teacher's dominant role and ability to decide the content of the meetings resulted in higher subcategory codes within certain characteristics rather than a range. Furthermore, these seem to be repeated across meetings, meaning a standardised format was provided rather than individualised to the student's engagement needs.

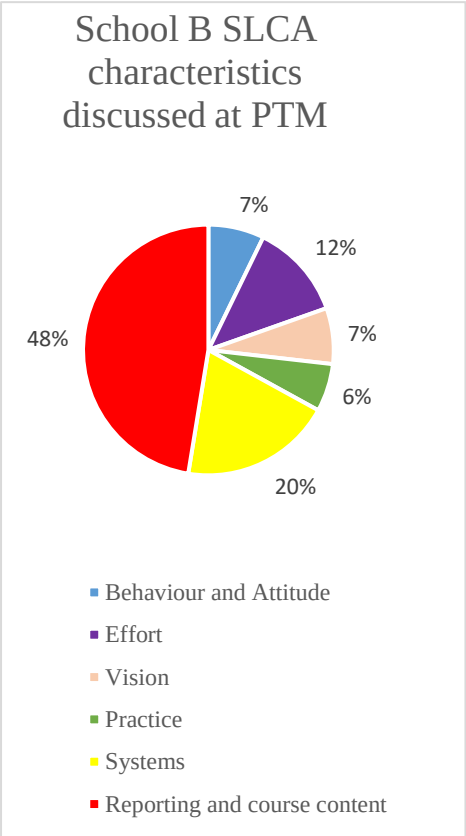

Figure 5.3. School B: Inner-City School SLCA discussed at PTM

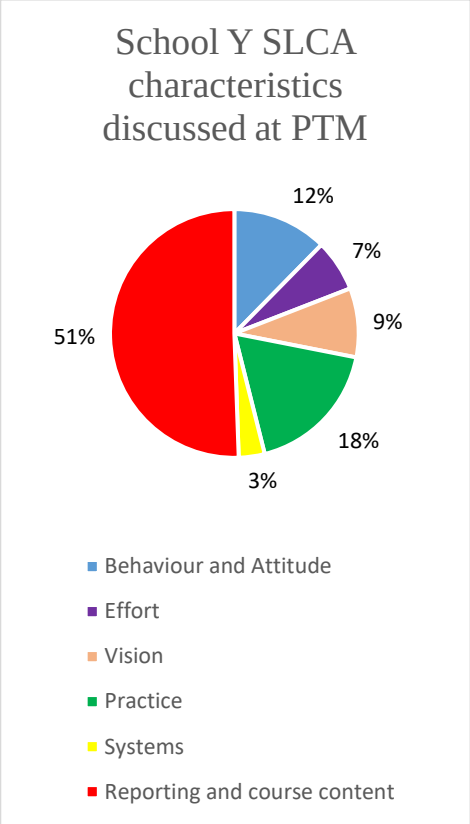

Figure 5.4. School Y: Suburban School SLCA discussed at PTM

For effective student engagement, a greater balance of SLCA should be discussed, since the characteristics are complementary for producing positive outcomes and internalising motivation (Gutman and Schoon, 2013). For example, *Vision* and *Systems* are important characteristics in developing self-regulatory skills including metacognition. Furthermore, the extensive discussion of *Reporting and course content* (as shown in Figures 5.3 and 5.4) reduces the time for meaningful conversations regarding SLCA. Based on Questionnaire 2, SLCA Questionnaire 1A and coding analysis, it seems that the meeting itself has a substantial impact on the characteristics focused on, suggesting that there is little engagement input coming from elsewhere. This represents a significant limitation of the existing engagement approach.

Using the Self-Regulation and Autonomy Questionnaire 1C it was possible to determine students' domains of regulation and relative autonomy during Phase 1. The highest domain in School B was external regulation and at School Y, it was identified regulation. In both schools, the lowest domain was intrinsic motivation, suggesting motivation was more externally orientated, particularly in School B. The relative autonomy of students in both schools was low, with nine out of twelve students in School Y and 11 out of 17 in School B having a relative autonomy index below zero. Furthermore, in both schools the overall relative autonomy index was negative. Based on the domains that are most prevalent, it would suggest that in Year 10, students were driven by more external factors such as rewards, punishments, compliance, and approval rather than engagement in their learning.

The impact of the reengineered Student Inclusive Meeting approach on engagement can be determined by comparing SLCA related data between Phase 1 and Phase 3, particularly SLCA Questionnaire 1B, which focused on the perceived SLCA competence in students.

	Behaviour and Attitude	Effort	Vision	Practice	Systems	Overall (M)
Phase 3 Parent- School B (M)	4	3.7	3.9	3.7	3.8	3.8
Difference from Phase 1- Parent School B	0.1	0.2	0.4	0.5	0.3	0.3
Phase 3 Student-School B (M)	4.2	4	4	4	4.1	4.1
Difference from Phase 1- Student School B	0.3	0.3	0.2	0.2	0.6	0.3
Phase 3 Teacher-School B (M)	4.5	4.5	4.4	4.4	4.4	4.5
Difference from Phase 1- Teacher School B	0.9	0.8	1	0.8	0.9	0.9
Phase 3 Overall- School B (M)	4.2	4.1	4.1	4	4.1	4.1
Difference overall from Phase 1 - School B	0.4	0.5	0.5	0.5	0.6	0.5
Phase 3 Parent- School Y (M)	3.9	3.5	4.1	3.9	4	3.9
Difference from Phase 1 Parent- School Y (M)	0.1	0.1	0.4	0.4	0.5	0.3
Phase 3 Student-School Y (M)	4.2	4.2	4.1	4	4	4.1
Difference from Phase 1 Student- School Y (M)	0.8	0.1	0.4	0.2	0.2	0.3
Phase 3 Teacher-School Y (M)	4.2	4.5	4.1	4.3	4.3	4.3
Difference from Phase 1 Teacher-School Y (M)	0.3	0.4	0.2	0.2	0.1	0.2
Phase 3 Overall- School Y (M)	4.1	4	4.1	4.1	4.1	4.1
Difference overall from Phase 1 - School Y	0.4	0.1	0.3	0.3	0.3	0.3
Green indicates a significant increase of 0.5 or more above the mean, yellow indicates 0.1 to 0.49 below the mean.						

Table 5.8. *Phase 1 to Phase 3 School B: Inner-City School and School Y: Suburban School student difference for learning characteristic mean values*

		Intervention inclusion criteria	Phase 3 Parent (M)	Difference from Phase 1 - Parent	Phase 3 Student (M)	Difference from Phase 1 - Student	Phase 3 Teacher (M)	Difference from Phase 1 - Teacher
School B: Inner-City School	**Behaviour and Attitude: Leadership and teamwork**	Student yellow, teacher yellow			4	0.4	4.1	0.8
	Behaviour and attitude: Behaviour when working with others	Student yellow, teacher yellow			4.1	0.5	4.3	0.8
	Vision: Setting goals and targets	Student yellow, teacher yellow			3.9	0.3	4.4	1.2
	Practice: Q11-Looks for opportunities to work on challenging material outside their comfort zone	Parent red	3.8	0.9				
	Systems: Revision planning and strategies	Student red, teacher red			3.4	0.3	4.4	1.3
	Systems: Organisation of work	Student red			4.1	1	4.4	0.8
	Systems: Reviewing assessment material	Student yellow, teacher yellow			4.1	0.6	4.4	1
School Y: Suburban School	**Behaviour and Attitude: Leadership and teamwork**	Student yellow, teacher yellow			4.3	0.9	4	0.3
	Behaviour and attitude: Self-efficacy	Teacher red			4.1	0	3.9	0.4
	Behaviour and attitude: Q13 Believes intelligence is fixed	Parent red	3	0.3				
	Practice: Q11-Looks for opportunities to work on challenging material outside their comfort zone	Parent red	3.8	0.6				
	Practice: Questions	Student yellow, teacher yellow			3.8	0.3	4.3	0.4
	Systems: Revision planning and strategies	Student red, teacher yellow			3.8	0.5	4.4	0.6
Green indicates a significant increase of 0.5 or more above the mean, yellow indicates 0.1 to 0.49 below the mean, red represents 0.5 or more below the mean.								

Table 5.9. *Phase 1 to Phase 3 School B: Inner-City School and School Y: Suburban School difference for student learning attributes mean values*

Table 5.9 shows the overall characteristic mean values in Phase 3 and the difference from Phase 1. For each participant type and characteristic, there has been a positive increase, in some cases almost a whole Likert response higher, especially for *Systems* in School B. Table 5.10 shows the intervention focus areas and the difference in values between Phase 1 and Phase 3. Out of the 13 attributes identified as requiring improvement from Phase 1, all have increased and most significantly (0.5 or more of a Likert scale response). When comparing Phase 1 to Phase 3 using SLCA Questionnaire 1A, student and teacher data show the difference was statistically significant (student responses p= 0.0003 and teacher p=0.0000) with a high effect size (student and teacher 0.5), suggesting the increase was not random and engagement was higher. Parent data did not exhibit statistical significance (p = 0.087), although, qualitative data in Figure 5.6 and 5.7 shows an improvement between phases for characteristics and intervention areas. The lack of statistical significance could be attributed to the absence of the Student Inclusive Meeting and associated activities at School Y. Since the characteristics may not regularly be discussed or evidenced in a home setting, parents may have believed they had not increased, whereas, in educational activities and schooling they would be more visible to teachers and students. Furthermore, increased autonomy of students, could have prevented visibility of improvement in certain characteristics.

	Phase 3 Student-School B (M)	Difference from Phase 1 Student- School B	Phase 3 Student-School Y (M)	Difference from Phase 1 Student- School Y
External Regulation	3.0	0.0	2.9	-0.3
Introjected Regulation	3.1	0.1	2.6	-0.5
Identified Regulation	3.3	0.2	3.4	-0.1
Intrinsic Motivation	2.5	0.2	2.3	0.0
Relative Autonomy Index	-0.8	0.7	-0.4	0.7

Table 5.10. *Phase 1 to Phase 3 School B: Inner-City School and School Y: Suburban School difference for regulation domain values*

For there to be an improvement from Phase 1, a shift in the motivation continuum would be expected in Phase 3 with values decreasing for external and introjected domains and increasing in identified and intrinsic domains. As shown in Table 5.10, for School B, the expected trend is observed with increased values for identified and intrinsic domains. The trend is more significant with the external and introjected domains in School Y. The relative autonomy index difference between Phase 1 and Phase 3 for students was statistically significant (P= 0.005) with a medium effect size (0.3). In total, the relative autonomy index increased for 68% (n=19) of students, showing improved self-regulatory behaviours, leading to a rise in autonomy (see Appendix D: Self-Regulation and Autonomy Questionnaire 1C). Whilst still negative, the relative autonomy index for both schools was greatly increased, with a mean Phase 1 to Phase 3 difference of 0.7. Although not solely responsible, the correlation would suggest that the reengineered approach improved engagement.

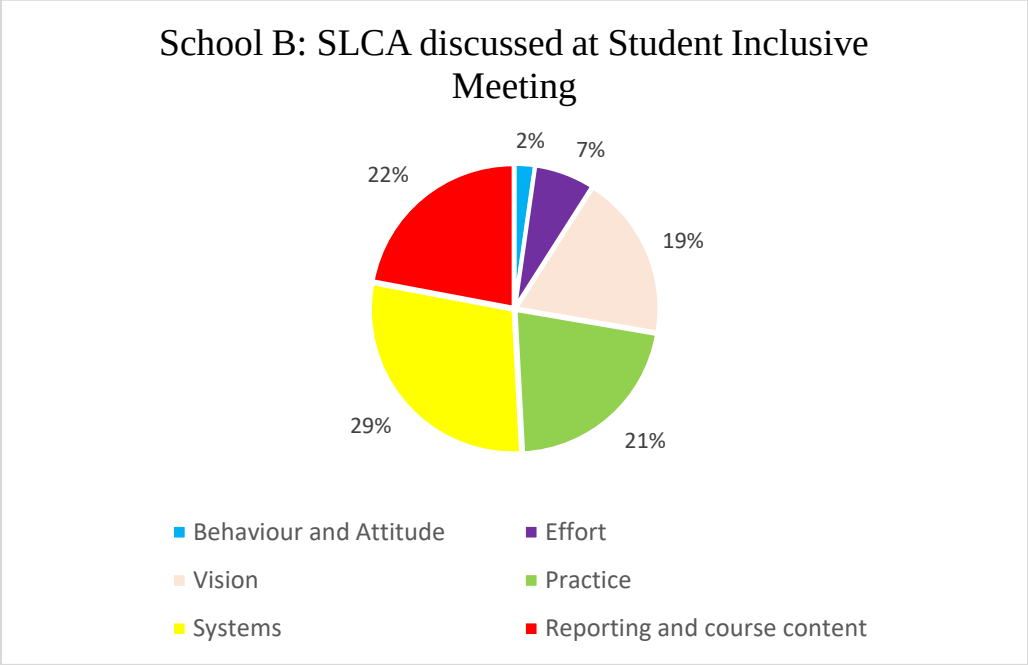

Figure 5.5. School B: Inner-City School SLCA characteristics discussed at Student Inclusive Meeting

Within both PTM and the Student Inclusive Meeting, the discussion of *Reporting and course content* is useful to establish anchor points of shared understanding and provide key data for formative feedback; however, its discussion in the original PTM was excessive and reduced the opportunity for meaningful discussion. As shown in Figure 5.5, the reengineered meeting was successful in reducing the discussion of reporting and course information by 26%. This was validated through similar results obtained from SLCA Questionnaire 1A and the Questionnaire 2 Likert scale responses for SLCA shown in Table 5.9 and Table 5.11. The reduction was aided by providing general information before the meeting in FAQ documentation, through the pedagogy text messages, the parental toolkits, and the suggested resources and activities within the audit. Figure 5.5 also shows a greater balance in characteristics discussed, with a reduction in *Behaviour and Attitude. Using Table 5.11 and Figure 5.5 Practice* increasing by 15%, *Vision* increasing by 12% and *Systems increasing* by 9%. The

increase in *Vision* is associated with the goal orientated formative nature of the new format. *Practice, Systems* and *Vision* represented 69% of all SLCA, their prevalence was partly attributed to their focus within intervention activities and to this extent, demonstrates a level of success in developing targeted student engagement. Their increase in frequency was also due to their relevance to learning during lockdowns and preparing for teacher assessments instead of external examinations. Although the discussion of SLCA should be personalised to the student, the prevalence of particular SLCA will still be predicated, to an extent, by the context and time of year of the meeting

Participant	Vision	Effort	Systems	Practice	Attitude	Behaviour	Reporting (Assessment)	Reporting (Course Information)	Overall mean
Phase 3 Parent School B (M)	4.1	3.9	3.6	3.9	3.9	3.8	3.8	3.8	3.9
Difference from Phase 1-Parent	0.9	-0.2	0.0	0.2	-0.2	-0.6	-0.3	0.3	0.1
Phase 3 Student School B (M)	4.1	4.4	3.8	3.9	3.9	3.6	4.4	4.1	4.0
Phase 3 Teacher School B (M)	5	5	5	5	3	3	4	3	4.1
Difference from Phase 1-Teacher	2.5	0.0	1.0	1.5	-2.0	-2.0	-1.0	-1.5	-0.2
Green indicates a significant increase of 0.5 or more above the mean, yellow indicates 0.1 to 0.49 below the mean, red represents 0.5 or more below the mean.									

Table 5.11. *School B: Inner-City School Questionnaire 2 SLCA Likert scale mean responses discussed during the Student Inclusive Meeting*

Are **you [student] (your son/ students) more engaged with your learning and education as a result of this project?**		
	Yes (n)	**No (n)**
Parent School B	15	1
Student School B	15	1
Teacher School B	1	0
Parent School Y	5	3
Student School Y	8	4
Teacher School Y	2	0

Table 5.12. *School B: Inner-City School and School Y: Suburban School Phase 3 student educational engagement*

Within Questionnaire 2, participants were asked to consider whether students were more engaged because of the research. As shown in Table 5.12, the results were very positive and endorsed through the student group interviews and parent interviews responses. Participants felt that students were more confident, proactive, and independent, Teacher 2 found a new maturity in students when speaking to them regarding goals and their plan for achieving these. An increase in engagement, focus, responsibility, and motivation was reported by parents and students from both schools; these qualities can be associated with the development of self-regulation and autonomy. Furthermore, the willingness of students to now engage with parents and teachers regarding learning, demonstrates social self-efficacy for relating to teachers (Walker et al., 2010) or what is referred to as control understanding (Grolnick et al., 1991).

Both the qualitative and quantitative data provide a level of correlation to suggest that the intervention has engendered student educational engagement. The research has managed to develop the desired qualities of the seminal conference models explored in Chapter 2, including the use of shared goals and active listening techniques (Minke, 2010; DfCSF, 2009); metacognitive skills and useful feedback (Van der Eem and Haelermans, 2014); presentation skills and confidence in sharing information (Taylor-

Patel, 2011); and goal mastery (Goodman, 2008). The original approach to student engagement was deficient in certain characteristics; many were side-lined in favour of traditional, familiar discussion points, largely dictated by the teacher due to their dominance in the meeting as indicated by the average 81% meeting talk time they occupied. The reengineered format educated participants in the value of learning characteristics, including those rarely discussed at the PTM such as *Systems, Vision* and *Practice.* The student intervention activities engendered engagement by developing self-regulation through character education, formative feedback and self-evaluation. Students were no longer treated as "objects of evaluation" (García-Sánchez et al., 2011) but credible assessors of their progress and learning.

5.2.6 Comparison of meetings

The data suggest that the reengineered meeting significantly develops student and parental educational engagement through improved training, preparation, collaboration, student self-evaluation, and the development of SLCA and PAS processes.

By its nature, action research should directly improve practice in the researcher's setting (McNiff, 2017), the extent to which the reengineered meeting develops student and parent engagement can therefore be determined by its perception by participants and their preference between the two meeting styles. As shown in Figure 5.6, the majority of participants preferred the Student Inclusive Meeting version.

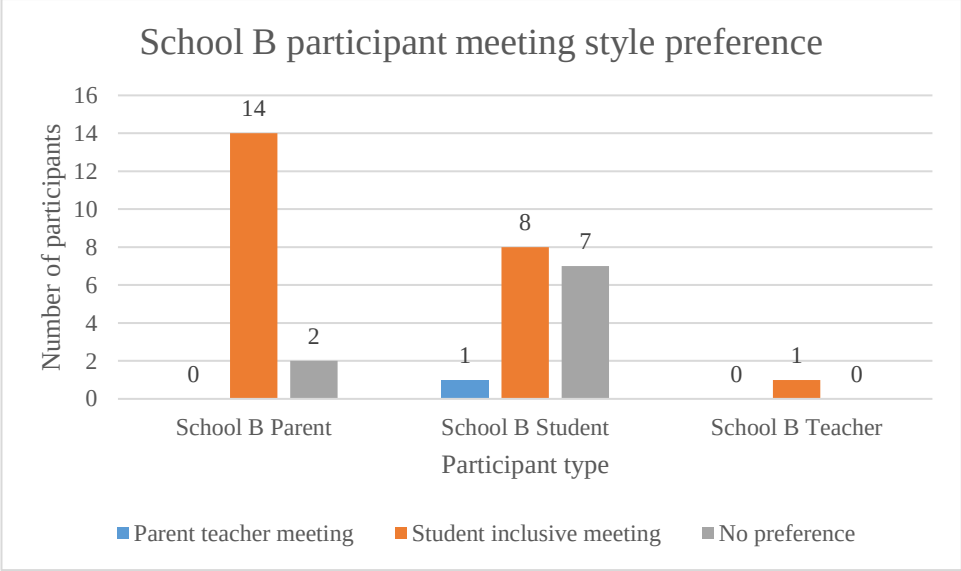

Figure 5.6. School B: Inner-City School participant meeting style preference

Several benefits of the Student Inclusive Meeting emerged; the most prominent was the inclusive nature of the meeting and its ability to create an "engaged pedagogy" (Reay, 2018:192), whereby students are empowered to take responsibility for their learning. Parents 16, 15 and 8 during interview referred to the use of the meeting for student self-review of strengths, weaknesses and targets. This was mirrored by the student group interview, which discussed the students being given agency, invited to take an active role in their own education and given the skills to support themselves (compared to a passive and alienating role in the original meeting). One parent surmised that it was "better value for the student" (Parent 9 Questionnaire 2, 11/02/21). Parents 18 and 8 at interview suggested that students felt more confident, respected and listened to.

The prescriptive and productive approach to the meeting was also highlighted as a benefit. Parents 16 and 18 at interview suggested the clear structure and forensic approach made the most of the limited time available. The principle of the meeting was felt to be clear as feeding forward and target driven; "it's much more about forward goal setting, rather than a sort of report, the original meeting was too much about

information transmission" (Parent 8 Interview, 01/03/21), the same parent later commented, "content and assessment of levels is all done outside the meeting, so it's really your problem-solving time". The focus on moving forward, also removed the summative nature, making the meeting less about judgements and proportioning blame or praise.

Whilst the teacher and parent preference for the reengineered meeting was high, on first inspection, only 50% of the students preferred the inclusive meeting and 44% had no preference. Initially, when discussed at the group interview some students felt their absence might be more conducive for candid and honest conversations between parent and teacher. However, once students realised their non-attendance at the meeting was not an option, 14 out of 16 then favoured the Student Inclusive Meeting. It is interesting that some students considered non-attendance as favourable given that in the original Phase 1 group interview, all wanted to attend. A reason for this could be associated with the amount of extra effort and training that was required for this Student Inclusive Meeting due to its pilot nature. This would be reduced if the meeting style were commonplace, as the associated practices would become internalised and embedded into school practice. An alternative explanation could be attributed to teenagers' apathy for further involvement and collaboration, which may reduce their free time or subjugate their independence. A further reason could be their anxiety in taking a more inclusive role speaking to adults, as implied by one student; future teacher training for the meeting should help to recognise such sensitivities and support accordingly. Some interview and Questionnaire 2 responses referred to the agency and empowerment it provided to pupils and the opportunities for collaboration:

> "I thought the student inclusive meeting was excellent and all subject meetings should be held this way. It's an effective way to get 15 and 16-year-olds to take responsibility for their own development. It encourages them to feel empowered, in control of the process and also for them to acknowledge that it is up to them to work to improve."
>
> (School B: Inner-City School Parent 18 Questionnaire 2, 02/02/21)

Parent 18's response suggests the suitability of the approach for the age group. This is an important quality, as many of the models within the conceptual framework were based on meeting structures with primary school aged children. Therefore, there was the possibility that the principles may not be transferable, its effectiveness with teenagers provides a degree of validation that this is not the case.

5.3 Impact of COVID-19

Since the research was conducted during the COVID-19 pandemic, Phase 3 Questionnaire 2 included questions to capture participants' experiences of how the pandemic impacted educational engagement. A significant theme arising, especially with students, was the lack of motivation, apathy and monotony caused by the pandemic. This was also compounded by the social isolation, loneliness and lack of human interaction that some parents reported their sons experiencing. Due to uncertainty regarding schools opening and examinations, participants commented on the increased anxiety regarding the unknown factor. At the time of the Phase 3 data collection, students were unsure whether every piece of work was counting towards their overall grade and they found maintaining very high levels of performance draining

and demotivating. Access to technology became a further factor that exacerbated the disadvantaged attainment gap (EEF, 2020). Stress, well-being and the impact of prolonged computer use were further concerns relating to remote learning and assessments that were raised by parents. These are legitimate concerns, given that excessive screen time has links with an unhealthy lifestyle, depressive symptoms and poorer quality of life (Stiglic and Viner, 2019).

There were some unforeseen benefits from the crisis, as participants commented on greater parental presence and increased engagement in the child's learning, an OECD report (Reimers and Schleicher, 2020) investigating the impact of COVID-19 found similar results. Two parents and a student enjoyed the greater family time it provided, allowing them to grow closer together. During the student group interviews, some reported the altered nature of learning provided them with greater freedoms, autonomy and flexibility for learning. Students felt that working at home removed wasted time commuting or moving between classes and provided a calmer working environment. For these students, the crisis acted as a useful scaffolding activity for self-regulation, since they had to manage their own learning and develop important characteristics including grit and resilience (Reimers and Schleicher, 2020).

The impact of the pandemic was also felt by teachers and school leaders including myself. Being responsible for the remote learning provision was challenging. Anxiety levels were very high amongst staff, but I was in awe of teachers who quickly mastered online tools to provide outstanding teaching and pastoral support. Parental feedback was of similar praise and admiration. Many technological innovations required during the crisis have now been embedded into everyday practice, School B now streams and

records lessons for those students' absent due to behaviour, health or COVID-19 self-isolation.

CHAPTER 6: CONCLUSION

6.1 Recommendations for professional practice

Whilst the research is not directly replicable, the tools explored have procedural value and knowledge for the improvement of parent and student engagement and PTM. Based on the literature review and the findings, I have provided recommendations for senior and middle leaders to facilitate evidence-informed practice. These are not intended as an off-the-shelf toolkit, since their relevance, the resources and the capacity for their implementation requires review by practitioners in their specific school setting.

As the findings demonstrate, there are significant issues with the original meeting format and its evaluative, repetitive nature. The reengineered meeting offers a viable alternative to provide meaningful support and communication, based on equal participation and meaningful formative feedback and action, whilst still maintaining the expert position of the teacher and parent. All involved need to be retrained to understand its purpose and to ensure there are no misconceptions about the agenda. The term Student Inclusive Meetings was used in my research to emphasise the student's involvement and to make a clear distinction with the original event, as the approach becomes embedded the term is unnecessary and group subject meeting or subject meeting will be used instead.

Parents need to be aware of their importance in student engagement and educated in the value of academic socialisation processes for their child (Yamamoto and Sonnenschein, 2018). As indicated by Hoover-Dempsey et al. (1995, 1997, 2005, 2010), the link

between parental engagement, the development of SLCA and student achievement should be made explicit.

I am aware that time is a limited resource for some parents. However, the support provided does not need to be arduous or extended; it can be delivered in a functional and timely manner. Schools should try to ensure that any home-school engagement is carefully planned for the duration of a course, key stage or at least an academic year. It is important to provide a suite of engagement activities rather than singular communication or event. Information communications technology provides an effective method to facilitate engagement (Goodall and Vorhaus, 2011). The COVID-19 pandemic has resulted in a period of disruptive innovation (Arnett, 2021), whereby schools are more equipped and better trained to utilise this technology, including parent webinars, educational videos and text messages.

Text messages are a convenient and timely communication tool to provide parents and students with important dates, key messages, links to learning and revision strategies, and student well-being information. There are minimal costs (Miller et al., 2016) and messages can be tailored around important events in the school year. The pedagogical understanding gained by parents through the messages, also helps to improve understanding of school reports and aid discussions during PTM. More specific, question-based text messages used for retrieval practice offer a good opportunity to develop home learning conversations between parent and child but could also be used solely by the child. Once created, text messages can be re-used by teachers with different cohorts. Difficulties may arise when this method is scaled to include multiple

subjects as parents are unlikely to engage with all, due to the sheer volume, an alternating subject schedule, agreed in advance, may be more prudent.

Some consolation from the pandemic was the introduction of online parent teacher meeting software in both participating schools. Whilst there are certainly benefits for parents' face-to-face attendance, such as increasing parent involvement with the school and reducing cultural barriers, the online software provides greater flexibility for all participants. The software's online nature makes it easier for parents to engage by removing the need to commute, which is a significant benefit to those with a disability or childcare issues. A hybrid approach could be adopted to meetings, whereby the parent and child may choose to meet the teacher in person or online.

The use of parental support toolkits offers a good source of engagement documents for parents and reduces the need for discussion of generic information at PTM. The distribution of these at opportune times in the academic year and their format, needs to be carefully considered and tailored to families the school serves. In some cases, an abridged version in pamphlet format or translation into the school's home languages may be more suitable. An opportune time for distributing the toolkit is in conjunction with the interim and annual reports to parents, as there is often a lack of advice and practical strategies for parental support provided with these (Power and Clark, 2000).

A concise subject FAQ document provided in advance of the meeting is a good support method for answering typical curriculum related questions and providing lists of home learning resources. This was used to good effect in my research and will be developed in future meetings to include a template for parents to prepare meeting questions and to

write relevant notes during the meeting regarding advice and targets. As discussed in my findings, it is difficult to influence parenting style and engagement approaches over a short period of time; many positions and barriers have been entrenched over time. Engagement must be continuous and uninterrupted through all stages and ages of education, with clear invitations for agency and involvement (Goodall, 2017; Hoover-Dempsey and Sandler, 1997).

Clear messaging and guidance need to be provided by school leaders to develop a change in culture and practice. Teachers need formal training on theoretical precepts of engagement and the practicalities thereof, particularly the importance of character education in developing self-determination and the value of parental academic socialisation processes. The PAS categories used within my research based on Suizzo and Soon's (2006) model, may provide a relevant reference point for practitioners and can be found in Chapter 2. Support should be provided on how to approach and conduct the meeting. Principles used by Vickers et al. (2002) CORE model of connecting, optimism, respect and empowerment, and the Structured Conversations toolkit (DfCSF, 2009), are particularly pertinent for creating a positive environment and encouraging deliberation. Both pieces of research also recognise the importance of active listening techniques including paying attention, withholding judgement, reflecting, clarifying, summarising, and sharing expertise (DfCSF, 2009). Training for the meeting should help teachers make meaningful use of the data to influence formative action rather than rehashing the report or providing evaluative information. As Nicol and Macfarlane-Dick (2006) suggested, feedback should close the gap between current and desired performance.

Both teachers who prepared for the Student Inclusive Meeting at School Y and the teacher who delivered the Student Inclusive Meeting in School B, were very positive regarding the new format, including Teacher 2, a long-serving member of staff at School B. Given the established routines and practices of Teacher 2, there was a possibility they may be more resistant to the change. This was not found to be the case. The motivation for change may lie in the meeting itself being more productive and less arduous for teachers, collaborating rather than leading.

Many teachers rely on observation of peers for PTM training; a more effective alternative is instructional coaching (Knight and Van Nieuwerburgh, 2012) using deliberate practice (Deans of Impact, 2016). Instructional coaching is used in the delivery of the Early Career Framework by DfE Lead Providers including Ambition and Teach First (Young, 2020; Craster, 2021). Practical elements of this approach share similarities with Kolb's (1984) vision of experiential adult education, although, there are variations in the four core mechanisms used. Instructional coaching empowers teachers to understand the purpose of a particular technique with opportunities for regular practice and reflection. Using an instructional coaching model, teachers could be observed during the PTM, then feedback could be provided with training on active listening techniques or modelling at a further PTM by the coach. A further observation could be completed to practice and embed the new technique. Using deliberate practice, teachers will be more conscious of where they adopt a generic meeting structure, focus on particular SLCA or speak for too long. Alternatively, rather than using a further PTM for the coach to model good practice, simulated practice or pre-recordings of PTM could be used (Walker and Dotger, 2012; Cohen et al., 2020). Using prepared material would reduce the experimenter effect (Cohen et al., 2013) and the time between

coaching sessions. In both cases the coach's purpose is to help the teacher develop a mental model (Deans of Impact, 2016) for communication during the PTM.

In preparation for the meeting, teachers should review their summative and formative student data and prepare a checklist of SLCA areas of strength and improvement to be discussed during the meeting, Appendix C: SLCA teacher checklist, provides a possible structure. Due to COVID-19, teachers reviewed the students' audits and targets documentation prior to the meeting, a more pertinent method in future would be a short learning conversation but given the demands of delivering the curriculum this may not always be possible.

Student self-assessment is very important for educational engagement and increasing self-regulation (Zimmerman, 2002). Students need to be encouraged to look beyond curriculum strengths and areas of improvement and think metacognitively, addressing the root cause of capabilities and weaknesses by reviewing their learning characteristics and attributes, determining how these influence progress. My research used three review points throughout the academic year, but schools may find greater regularity more propitious. Before the meeting, there should be an opportunity for self-assessment to ensure that any discussion focuses on the most up-to-date information. Targets should be developed using goal mastery theory (Muis and Edwards, 2009; Daniels, Stupnisky, Pekrun, Haynes, Perry and Newall, 2009; Senko and Tropiano, 2016). To ensure the targets can be actioned effectively, they should be SMART, accounting for improvement in both curriculum areas and SLCA. Teachers should try to scaffold this process by compiling lists of learning resources and opportunities. To drive formative action (Harrison, 2021), students need access to rich, high quality formative assessment

(including tracking, assessment data and exam question level analyses) to determine their learning progress before or during the learning process (Hattie, 2012; Wiliam, 2018). To encourage learning ownership, any interim or annual parental report should be shared with students, so they are aware of their progress and use the data when target setting. Furthermore, an abridged version of the self-review should be given to parents so they are aware of progress and can support home learning, and teachers, so they can provide individual support or identify trends in a class to influence their approach to teaching and learning.

Regular, taught sessions focusing on learning characteristics and attributes can be an effective way to develop positive behaviours in students. Educating students on important characteristics is essential for their improvement and to become more self-determining. Some content can be taught through generic sessions outside the curriculum. However, certain content should remain within the purview of subjects since its success remains entwined with the curriculum (Higgins et al., 2007; Quigley et al., 2018). A possible solution may be to cascade learning through generic sessions that are then embedded through subjects, for example, explaining the principles of the Frayer's vocabulary knowledge organiser in pastoral time and then applying its use in the subject curriculum.

Discourse is a key requirement for effective learning and assessment (Black and Wiliam, 1998). Students should be encouraged to discuss their data, strengths, areas for improvement and targets. The teacher should prompt and scaffold to encourage reflection, adopting active listening techniques to summarise. Using their professional expertise and subject mastery, teachers should then provide their own input, either

adjusting or supplementing targets or in some cases providing new ones, particularly if those set by the student are not challenging. The parent/s should be encouraged to follow the same process as the teacher, providing their own expert opinion. Action plans should then be formalised including school and home learning support required, finally, there should be time to resolve any additional questions. To ensure their success, targets should be revisited and monitored regularly (Dotson, 2016).

This exploratory mixed method study has found that learning characteristics are very important for positive outcomes and student achievement. These characteristics represent only a small sub section of characteristics that have been shown to have positive associations for students (DfE, 2019). The engagement could be expanded to focus on a range of character strengths rather than solely focusing on learning characteristics, these could be delivered through pastoral time. Either way, there needs to be a whole school approach, driven by senior leaders, based on a collective understanding and language (Walker, Sims and Kettlewell, 2017).

6.2 Limitations and further research

The sample size obtained was suitable for statistical analysis, reliability measures and to determine significant relationships from the data but marginally, with the lowest acceptable levels. The mixed method nature ensured that any inferences were reduced through methodological triangulation, generating multiple rich sources of data. Although the sample represented 33% of the possible cohort, a larger sample size would increase the likelihood of a representative distribution and reduce the sampling error. Furthermore, the participant profile changed during the study with minor attrition

including changes to subject teachers. The change in teachers limited feedback on contrasting PTM and Student Inclusive Meetings but all had previous experience of the existing meeting to draw upon. For future research, a larger sample size and scope would be advisable to improve quantitative reliability and representation.

Although SLCA Questionnaire 1A and PAS Questionnaire 1B were based on previous pilots or instruments with a significant lineage used in similar studies, there were internal consistency issues with some reverse orientated Likert scale questions (see Appendix C: Cronbach's Alpha values). Participants were confused by the questions' meaning and how to respond using the same scale to which they were using to answer positive questions. In total, this impacted four questions mainly on parent questionnaires. The analysis and findings associated with these questions was given less credibility in determining areas of consideration for Phase 2 and the outcomes of the research, unless other data sources suggested there was need or value.

The research used an exploratory approach to influence practice directly in the purview of the schools I work within, or, affiliated to. The situational cultural context of London Catholic boys' secondary schools may be perceived as too niche to provide tools that are generalisable to other school contexts, particularly the focus on GCSE Computer Science. Other institutions may feel that they account for different communities of parents and students. The research cannot be used as a blueprint, applicable to any context but it provides comparability and transferability but not replicability or predictability (Cohen et al., 2013:182). Developing the use of the Student Inclusive Meeting in alternative settings, is part of the next iteration of the action research cycle.

Those from a quantitative research background may feel the impact of my position and involvement creates a bias in the research orientation effecting its credibility and validity. As a practitioner action researcher, I acknowledge that my values have influenced the study, since my own biography is interlinked with the schools' contexts. My values certainly determined the direction of the research, but I have not disguised this fact. Chapter 3 explains their influence on my own epistemology and axiology, including the critical realist approach to educational research.

It is likely those who volunteered valued education and were possibly more engaged. Since the sample was not random, it is important to consider the motivation of these participants including acquiescence bias and the powerful position of the researcher, leading potentially to selective memory, attribution and exaggeration by participants. The sample may have represented a more homogenous group than would be found in the full population. As a senior leader, my position of authority may have influenced participation; however, the candid participant feedback, in some places openly critical, would suggest otherwise. Furthermore, my role in both schools is and was closely tied to teaching and learning responsibilities; therefore, requests for involvement in the research would not have been viewed out of context by teaching staff.

The talk time for some parents during meetings was certainly inhibited by their English language fluency and not their engagement. Some found the written questionnaire responses challenging, influencing the depth and articulation of the responses. The active, collaborative role of the student in a Student Inclusive Meeting may present a barrier to some parents, as the style may be perceived as violating cultural norms of respect for elders associated with collectivism (Trumbull et al., 2001), meaning some

parents would be reticent to any changes in format. The research did not investigate the ethnicity, culture or background of participants, as its small scale could not provide a sufficiently representative sample to make assertions.

Student learning characteristics and attributes and parental academic socialisation processes require many years of support and development to become internalised, many skills are developed over a lifetime and so the scope and timeframe of the research limit the possible impact. For this reason, only certain SLCA and PAS were selected as areas of focus during the intervention. Participants are more aware of the benefits in adoption of PAS and SLCA but it is unlikely they are fully embedded, particularly in parental practices. As Goodall (2013) suggests, any parent engagement must begin early and continue throughout schooling, as my research moves forward, it will be important to continue support and provision for PAS and SLCA to ensure their effect is long-term. As discussed in the constraints section of Chapter 3, COVID-19 presented some significant challenges and limitations to the research. Due to the longitudinal nature over two years, the introduction of the COVID-19 restrictions and the first national lockdown on 16/03/20 occurred after the traditional PTM at both School B and Y, meaning the study had the unusual position of being conducted both before and during the pandemic. Whilst the literature review was expanded to include contemporary COVID-19 related publications, some sections reference pre-pandemic research due to limited current research relating to a particular aspect of the conceptual framework or the seminal nature of the authors' work. To provide more up-to-date accounts, participant voice regarding the pandemic was collected to determine its influence and impact. The extended Phase 1 and Phase 3 data collection period due to COVID-19 may have decreased participants' accuracy in remembering the events and increased

telescoping. Aspects of parent interviews supported this, with parents combining some elements of other subject meetings or not remembering engagement resources provided. Due to the extraordinary circumstances, emergency government educational legislation was introduced and schools' working practices changed, impacting the collection of Phase 3 data and the delivery of the intervention instruments. Some intervention activities were abridged, consolidated or delivered where opportunities arose, rather than being scheduled regularly, such as the SLCA sessions at School Y. Where possible, alternative intervention approaches were found or data analysis from similar tools in the other school was increased. In some cases, the alternative instruments offered a more improved approach than original format.

The Student Inclusive Meeting was too scripted and mechanical in some cases, students read from preparation materials (similar to behaviour observed by Tholander, 2011), avoiding elaboration and struggling to paraphrase or pick out the most important strengths and areas for development when asked by the teacher. In some meetings, the teacher kept rigidly to the planned order for participant input. Further development, application to other subjects and adoption at a whole-school level, will help to naturalise the instruments used and normalise the processes for participants. Greater role-playing of the meeting would encourage students to speak conversationally without reading the pro forma verbatim.

The results found a very small group of parents who provided their sons with almost complete educational ownership and independence. This removed approach could be attributed to a lack of invitation by students for parental engagement or a permissive

parenting style (Baumrind,1971) but further investigation is needed to understand the underlying behaviours.

Further research and development of the tools with younger students and their parents is now required, extending the scope to include children in Key Stages Two and Three. Early training in metacognitive skills and self-regulative behaviour increases the likelihood of positive learning and self-efficacy attitudes (Dignath, Buettner and Langfeldt, 2008). Significant adjustments would be required for the primary setting, including scaffolding of the self-evaluation process and the meeting, with more support from adults. Furthermore, there are no findings to determine the impact of the research in a girls' only setting or a co-educational context.

Character education is a noteworthy area for further research. My study focused on five main learning characteristics, each in turn could be studied in greater detail to determine their long-term impact and importance for achievement. There are many school programmes that conduct student self-assessment and formative assessment of characteristics (Lickona, 2013; Harrison, Arthur, Burn, 2016), but to my knowledge, there is little research that focuses on how an annual meeting could be used to review and develop characteristics. Such a meeting may be best facilitated by a teacher with pastoral oversight of the student's capabilities rather than a subject teacher; for this reason, it may be easier to conduct such research in primary schools or settings where there is strong pastoral oversight.

During the study, aspects of instructional coaching and deliberate practice were used to train the teachers for the meeting, since it provides an effective dialogical mechanism

for implementing pedagogical practice. It differs from directive coaching techniques, normally associated with traditional mentoring in schools, as it is not concerned with telling but embraces enquiry, dialogue and collaboration. Compared to non-directive methods, the coach does not withhold their professional expertise and the process focuses on specific elements of good practice. The outcomes associated with this method are greater teacher effectiveness and self-efficacy (Zugelder, 2019). Further research is needed to embed this technique for meetings and to develop further resources including role-play videos and simulated practice for scenario training to improve understanding (Walker and Dotger, 2012; Cohen et al., 2020).

6.3 Summary

The results from the research were warmly welcomed by key stakeholders with approval to be used in a wider capacity across School B and the multi-academy trust. The meeting structure will be adopted with Y10 and Y11 students in all subjects and teacher INSET will be provided starting September 2022. An engagement toolkit for senior leaders is to be included within the multi-academy trust's Teaching and Learning Handbook. The SLCA sessions are to be developed into regular lessons delivered through creative curriculum periods and cascaded into subject content.

The original meeting format did not engender student and parent educational engagement. It remains part of a traditional, didactic approach to education with one-way communication, teachers providing an evaluation of the evaluative school report with little opportunity for meaningful formative feedback. The teachers' approach is not intentional but appropriated by a lack of training and clarity in the event's purpose. The

PTM content often refers to a limited number of learning characteristics which are generalised, with little or no input from the student. Parental academic socialisation is poorly supported and their role is often reduced to the purchaser of materials or an enforcer of homework and revision.

The intervention instruments described in Chapter 4 were based on seminal research identified in the literature review, including Oakes and Griffin (2017), Minke and Anderson (2003), Tholander (2011) and Structured Conversations (DfCSF, 2009). As the findings indicate, the tools were successful in increasing parental and student educational engagement. Although the initial outlay of time in their development is significant and training for participants is required, tools can be reused and their administration and cost are minimal.

Based on the findings, the reengineered student inclusive meeting and the intervention activities offer a progressive approach to education, significantly improving opportunities for student and parental educational engagement, where pedagogy is focused on the self-actualisation and empowerment of the students (Reay, 2018). The meeting structure provides support and formative action based on collaborative review of curriculum and SLCA strengths, weaknesses and targets. The feedback, the development of learning characteristics, the use of mastery goals and the improved support from parents and teachers increases competence/academic self-efficacy, relatedness/social self-efficacy for relating to teachers and autonomy/self-regulatory strategies increasing self-determination (Grolnick et al., 1991; Slowiaczek, 1994; Ryan and Deci, 2000b, 2008; Hoover-Dempsey et al., 1997, 2005), developing internalised motivation. Parental academic socialisation processes also improved, as parents became

more educated in learning characteristics and the curriculum, improving role construction, self-efficacy and home learning, particularly learning conversations.

Bourdieu and Passerson (1990) argue that cultural capital consists of familiarity with the dominant societal culture, where education systems assume the possession of this cultural capital, making it difficult for those lacking this 'educated' language to succeed in schools (Sullivan, 2001). My research sought to improve communication between home, student and school by advancing parents' and students' understanding of the curriculum, the science of learning, pedagogy, progress and targets. Although this will not solve the cultural reproduction issues associated with the English education system, it does provide participants with the 'educated' vocabulary and cultural knowledge to engage and reduce barriers associated with habitus, self-efficacy, role construction and power imbalances.

The findings obtained were not always as predicted or desired. Certain incongruent and somewhat inconvenient aspects were discovered and ignoring these would be dishonest (Pring, 2003) and morally impact the social values of my research (Greenbank, 2003). The meeting version was too scripted and whilst the engagement activities had a significant impact on student engagement, parental engagement was more limited. However, embedding, further study and the cyclic nature of the action research process will help improve its effectiveness, as will a return to normal teaching practices after the COVID-19 pandemic.

The research contributes procedural knowledge of good practice in supporting student and parent educational engagement. It makes a unique contribution in drawing on a

broad range of educational literature to develop a conceptual framework for an extended multi engagement approach rather than a singular annual meeting. The current study is unique in adopting a collaborative approach for all interlocutors within a secondary educational setting, using student learning characteristics as part of self-assessment, formative feedback and action. A key element of the feedback approach is the use of active listening (Vickers et al., 2002; Lendrum et al., 2015) by the teacher to scaffold the student's discourse, whilst still providing expert support about the next steps that are likely to deliver the most learning (Coe, Rauch, Kime and Singleton, 2020).

Professional reflection and communicating results are important stages in the action research cycle (Mertler, 2019) and I will be sharing my research through journals, conferences and online. From its inception, I have believed my research to be of importance, particularly for transformative practice (Foreman-Peck and Heilbronn, 2018) and worthy of study. I hope other professionals will agree and find relevance to their own educational contexts. Furthermore, by opening the research up to critical examination, a better understanding of the topic can be gained (Mills, 2014), including fuelling further action research by others, acting as a rhizome for learning-orientated and enquiry-based cultures within schools (Stoll, 2015; Armstrong, 2015). As Reay (2018) suggests, an effective method of improving social justice in our schools is to counter the individualised ethos of the English education marketplace and increase cooperation, I hope the dissemination of my research will contribute to this process and evidence-informed practice within schools.

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APPENDICES

To ensure the appendices remains succinct but relevant to the thesis, not all documents have been included but rather a sample of each.

Appendix A: Application for Ethical Approval

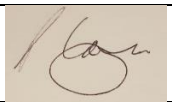
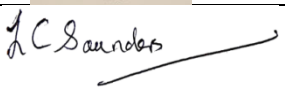
St Mary's University
Ethics Sub-Committee
Application for Ethical Approval (Research)

St Mary's Ethics Application Checklist

Document	**Enclosed?***	**Version No**
1. Application Form	Mandatory	
2. Participant Invitation Letter	☐ Yes ☐ No ☒ Not applicable	
3. Participant Information Sheet(s)	Mandatory	
4. Participant Consent Form(s)	Mandatory	
5. Parental Consent Form	☒ Yes ☐ No ☐ Not applicable	
6. Participant Recruitment Material - e.g. copies of posters, newspaper adverts, emails	☐ Yes ☒ No ☐ Not applicable	
7. Letter from host organisation (granting permission to conduct study on the premises)	☒ Yes ☐ No ☐ Not applicable	
8. Research instrument, e.g. validated questionnaire, survey, interview schedule	☒ Yes ☐ No ☐ Not applicable	
9. DBS if required (to be provided separately)	☒ Yes ☐ No ☐ Not applicable	

*Double click the check boxes to check them

I can confirm that all relevant documents are included in order of the list and in one document (any DBS check to be sent separately) named in the following format:
'Full Name - Faculty – Supervisor'

Signature of Proposer(s):		Date:	03/09/19
Signature of Supervisor (for student research projects):		Date:	5. 9. 2019

Ethics Application Form

1. Name of proposer(s)	Patrick Lanigan
2. St Mary's email address	[redacted]
3. Name of supervisor	Jane Chambers (jane.chambers@stmarys.ac.uk) {Dr Linda Saunders (linda.saunders@stmarys.ac.uk)}
4. Title of project	Redesigning educational engagement to enhance meaningful support and communication between the home, student and school. {Increasing academic socialisation and developing student learning attributes through effective student inclusive conferencing}

5. Faculty or Service	☐ EHSS ☐ SHAS ☐ Institute of Theology
6. Programme	☐ UG ☒ PG (taught) ☐ PG (research) Name: Educational Doctorate
7. Type of activity	☐ Staff ☐ UG student ☒ PG student

8. Confidentiality	
Will all information remain confidential in line with the Data Protection Act 1998?	☒ Yes ☐ No
9. Consent	
Will written informed consent be obtained from all participants/participants' representatives?	☒ Yes ☐ No ☐ Not applicable
10. Pre-approved Protocol	
Has the protocol been approved by the Ethics Sub-Committee under a generic application?	☐ Yes ☒ No ☐ Not applicable Date of approval:
11. Approval from another Ethics Committee	
a) Will the research require approval by an ethics committee external to St Mary's University?	☐ Yes ☒ No
b) Are you working with persons under 18 years of age or vulnerable adults?	☒ Yes ☐ No

12. Identifiable risks		
a)	Is there significant potential for physical or psychological discomfort, harm, stress or burden to participants?	☐ Yes ☒ No
b)	Are participants over 65 years of age?	☐ Yes ☒ No
c)	Do participants have limited ability to give voluntary consent? This could include cognitively impaired persons, prisoners, persons with	☐ Yes ☒ No

	a chronic physical or mental condition, or those who live in or are connected to an institutional environment.	
d)	Are any invasive techniques involved? And/or the collection of body fluids or tissue?	☐ Yes ☒ No
e)	Is an extensive degree of exercise or physical exertion involved?	☐ Yes ☒ No
f)	Is there manipulation of cognitive or affective human responses which could cause stress or anxiety?	☐ Yes ☒ No
g)	Are drugs or other substances (including liquid and food additives) to be administered?	☐ Yes ☒ No
h)	Will deception of participants be used in a way which might cause distress, or might reasonably affect their willingness to participate in the research? For example, misleading participants on the purpose of the research, by giving them false information.	☐ Yes ☒ No
i)	Will highly personal, intimate or other private and confidential information be sought? For example sexual preferences.	☐ Yes ☒ No
j)	Will payment be made to participants? This can include costs for expenses or time.	☐ Yes ☒ No If yes, provide details:
k)	Could the relationship between the researcher/ supervisor and the participant be such that a participant might feel pressurised to take part?	☒ Yes ☐ No Please see explanation in Section 19
l)	Are you working under the remit of the Human Tissue Act 2004?	☐ Yes ☒ No

13. Proposed start and completion date

Please indicate:

- When the study is due to commence.
- Timetable for data collection.
- The expected date of completion.

Please ensure that your start date is at least four weeks after the submission deadline for the Ethics Sub-Committee meeting.

The research adopts a prospective cohort longitudinal approach consisting of three distinct phases over a period of two years. Phase one represents the pre-intervention phase, this will effectively commence from the use of the first research tools (student, teacher and parent questionnaires part 1) four weeks before the first parents evening on 30/01/20 [redacted] and on 05/03/20 ([redacted] Phase two; the intervention phase, continues after the pre-intervention phase up to Phase three; the post-intervention phase. Phase two will commence on 20/04/20 until approximately *25/03/21* {28/11/20} [redacted] and 30/01/21 [redacted] depending on the dates set for parent teacher meetings the next academic year. The expected date of completion and submission of the research will be July/August 2021.

14. Sponsors/collaborators

Please give names and details of sponsors or collaborators on the project. This does not include your supervisor(s) or St Mary's University.

- Sponsor: An individual or organisation who provides financial resources or some other support for a project.
- Collaborator: An individual or organisation who works on the project as a recognised contributor by providing advice, data or another form of support.

There are no individuals or organisations providing financial assistance for this study.

15. Other Research Ethics Committee Approval

Please indicate:

- Whether additional approval is required or has already been obtained (e.g. an NHS Research Ethics Committee).
- Whether approval has previously been given for any element of this research by the University Ethics Sub-Committee.

Please also note which code of practice / professional body you have consulted for your project.

No further approval is required from other Ethics Committees.
The research will be conducted in accordance with St Mary's University Ethical guidelines and BERA 2018 guidelines (particularly 'responsibilities to participants').

16. Purpose of the study

In lay language, please provide a brief introduction to the background and rationale for your study. *[100 word limit]*

The purpose of the study is to investigate the reconstruction of parent teacher meetings to a student inclusive conferencing structure through a process of action research using a triangulation mixed method longitudinal approach. The meeting will become part of a greater engagement process including home learning activities and non-cognitive skills sessions, thus increasing parental involvement and developing student learning attributes including autonomy, competence, self-regulated motivation and social self-efficacy. The research uses observations, semi structured interviews and questionnaires with parents, students and teachers in two London secondary schools with Year 10 and 11, focusing on Computer Science and IT classes.

17. Study design/methodology

In lay language, please provide details of:

a) The design of the study (qualitative/quantitative questionnaires etc.)
b) The proposed methods of data collection (what you will do, how you will do this and the nature of tests).
c) The requirement of the participant i.e. the extent of their commitment and the length of time they will be required to attend testing.
d) Details of where the research/testing will take place, including country.
e) Please state whether the materials/procedures you are using are original, or the intellectual property of a third party. If the materials/procedures are original, please describe any pre-testing you have done or will do to ensure that they are effective.

a) As part of triangulated mixed method design, quantitative and qualitative data will be analysed separately and then integrated. This process will enable comparisons and correlations to be established, maximising the strengths of each method, while minimising associated weaknesses.
b) The research is broken into three distinct phases; pre-intervention, intervention and post-intervention referred to as Phase 1, Phase 2 and Phase 3.

During Phase 1:

- Parent, teacher and student online questionnaires relating to traditional parent teacher meetings. The questionnaire comprises two parts. The first part focuses on student learning attributes, qualities, self-regulation and parental academic socialisation. This part of the questionnaire is to be completed before the initial parent teacher meeting and is comprised of Likert- scale questions. To inhibit pattern completion (such as selecting 4 for all answers independent of the question), mixed negatively and positively worded questions will be used. The second part focuses on the actual parent teacher meeting and uses open, closed and Likert scale questions. This will be completed after the initial parent teacher meeting. A similar question profile will be used for parents, teachers and students. The questionnaires will

require the participant's first name and surname, as data needs to be linked between teacher, student and parent. Such a correlation is essential to ensure that any safeguarding issues arising as a result of the content can be addressed.

- Observation will occur of traditional parent teacher meetings using audio recording equipment. The dialogue at the meeting will be recorded and coded for themes, in addition, the conference length, participant talk intervals (greater than 10 seconds) and participant talk time will be logged. Observation will occur at both the traditional parent teacher meeting (Phase 1) and the reconstructed version (Phase 3), recordings will be made using a digital encrypted dictaphone provided by St Mary's University. Audio was favoured over video or researcher observation, limiting the ability to capture behaviour, expression and body language but reducing the intrusiveness of the tool and the selective attention of the researcher. A secondary recording device will be used to ensure that parallel meetings are documented. *The teacher involved in the meeting facilitated the audio recording* {The researcher will use a volunteer for this, who will be the librarian at each school, holding a valid DBS}. All participants will be required to give explicit written consent for audio recordings.
- Parent, teacher semi structured interviews and student group interviews relating to traditional parent teacher meetings. Parents and teachers will be interviewed separately using a semi structured format and students will be interviewed using a group format. Student *group interviews and interviews took place in computer rooms, outside or online due to COVID-19 restrictions* {All student group interviews and teacher interviews will be conducted in the library to provide a neutral school based setting}. While it is hoped that the majority of the parent interviews can be conducted during the parent teacher meeting evening, telephone interviews may be necessary if time is limited. The number of interviews conducted will be limited by the availability of the participants and researcher. *For Phase 1 there were 4 parent interviews, all teachers were interview, as were students in a group interviews* {For Phase 1 it is hoped that there will be at least 5-10 of each participant category to account for attrition in Phase 3}. Semi structured interviews will be used with open style questioning, focusing on understanding description and experiences. Questions will be standardised across interviews to allow for comparability and suitable coding analysis. The interview questions posed are very similar in phase 1 and phase 3 to ensure consistency and comparability.
- Parent and student part 1 questionnaires relating to academic socialisation pre-intervention using 31 Likert scale with 4 answer types (never, rarely, sometimes, often), focusing on three characteristics; responsiveness and emotional autonomy support, active and direct involvement, control and demanding hard work. In Phase 1 parents and students will be asked to describe the influence of traditional parent teacher meetings and the subsequent planning, discussions and actions for parental academic socialisation. In Phase 3, the same questionnaire will be used based on the reconstructed meeting after the action research Phase 2 intervention.
- Student questionnaires relating to student learning attributes and self-regulation pre-intervention using Likert scale questions . The questionnaire uses a 4 point Likert scale (very true, sort of true, not very true, not at all true) to determine external regulation, introjected regulation, identified regulation and intrinsic motivation and calculates the individuals score (2 x Intrinsic + Identified – Introjected – 2 x External) in relation to the relative autonomy index (RAI). By using this questionnaire it will be possible to compare the individual's RAI score pre-Intervention (Phase 1) and post-intervention (Phase 3).
- Parent questionnaire part 1 contains a 17 Likert scale and 5 answer types (Strongly disagree, Disagree, Neither agree nor disagree, Agree and Strongly Agree) based on the research by Oakes and Griffin, 2017 focusing on student qualities attitude, systems, effort, practice and vision, in addition to these, further questions have been added to include behaviour that the researcher believes as an additional important quality. Negatively and positively worded questions have been used to avoid pattern completion.

- Student and teacher part 1 questionnaires include a more detailed version of the student qualities questionnaire, representing a Likert scale as a continuum with 5 answer types (Very good, good, acceptable, poor and very poor).

During Phase 2:

- The intervention and the meeting's reconfiguration will be determined through the data analysis from the Phase 1 research tools, based on this, parent, teacher and student training will be provided and resources developed to increase student inclusivity. These activities will include:
    a. A parental engagement toolkit to be emailed to parents as a PDF or by post. This is to include home learning activities, Computer Science and IT enrichment activities and support with study skills and revision supported by evidence from the latest research into these fields
    b. A weekly parental text message focusing on study skills/ revision topic or a Computer Science/IT topic
    c. A meeting before the newly constructed parent teacher meeting to explain the format and research supporting this (A YouTube video will be provided for those parents who are unable to attend the meeting)
    d. Three teacher meetings over the course of phase 2. One initial meeting to explain and discuss the intervention activities completed with parents and students over the course of the year. Two meetings focusing on training teachers in the new teacher meeting construct. To ensure parity, on completion of the research, any positive outcomes will be shared and implemented with immediate effect in both schools with teachers, parents and students, so that the research may be applied to the next cohort at GCSE and A-Level (ensuring those parents and students who decided not to participate would have a further opportunity)
    e. Regular communication with teachers to gauge student's progress and to ensure that intervention activities are relevant to the curriculum/ schemes of work at that point in the year, including pre examination points and landmark assessment
    f. A monthly lunch time student session focusing on key non cognitive attributes such as autonomy, competence, self-regulated motivation and social self-efficacy, to be delivered by the researcher
    g. Before the newly constructed parent teacher meeting some further time dedicated to preparing the students for the new parent teacher meeting. To be led by class teachers
- A review will be conducted by *Jane Cambers* {Linda Saunders} (Research supervisor) to ensure the phase 2 intervention is constructed as a consequence of the phase 1 data collection and adheres to ethical guidelines.
- Phase 3 of the research focuses on validating the new approach and identifying further action.

During Phase 3:

- The same structure will be used as phase 1 in relation to research tools used to ensure construct and content validity in addition to methodological triangulation. It is essential that the traditional parent teacher meeting can be compared to the new construct.

c) Due to the longitudinal nature of the study participants will be asked to commit to two academic years for the study. Although the duration is significant, the length of time and frequency of parent participation is largely limited to the research methods described in Phase 1 and Phase 3 (online questionnaire, observation, semi structured interview and questionnaire), *with interaction occurring where possibly due to COVID-19*{most interaction concentrated on the two weeks before, during and after the parent teacher meetings}. Student participants are asked to commit to further involvement including the intervention which will be delivered for during lunch times by the researcher. Training sessions will be provided for teacher participants by the researcher on how to conduct the new parent meetings.

d) The proposed research will use participants from two schools; [redacted], graded as [redacted] in its last Ofsted inspection ([redacted], graded as [redacted] in its last Ofsted inspection [redacted]). Year 10 students, parents and teachers from [redacted] and Year 10 students from [redacted] will be selected for Phase 1 of the data collection, as this represents the start of Key stage 4 and GCSE's, this purposive non probability sample has been selected as it normally represents the transition to adolescence and a significant change in mindset. It is a significant milestone in schooling where students are expected to show greater signs of maturity, ownership and independence. The parent teacher meeting scheduled for Year 10 occurs on 30/01/20 [redacted]) and on 05/03/20. Using a longitudinal sampling strategy will enhance space triangulation and methodological triangulation by using the same method on different occasions. The same participants will be involved with the intervention and Phase 3 data collection in Year 11. In both schools, the parent teacher meetings for Y11 are scheduled for approximately *25/03/21* {28/11/20} [redacted] and 30/01/21 [redacted] this would be just over a year since the Phase 1 data collection.

e) The parent, teacher and student online questionnaires are based on an earlier version created by the researcher in a pilot version of the study as part of the EdD programme and were reviewed by the Deputy Headteacher of [redacted] and the researcher's tutor at the time; [redacted]. Many tools used are based on questionnaires used by leading research in academic socialisation and student learning attributes. The observations will be constructed based on a similar format to Mink and Anderson's (2003) successful use of the tool in a similar study. The parental academic socialisation pre and post-intervention questionnaires are based on an earlier version developed by Suizzo and Soon (2006) of 31 Likert scale, using 4 answer types (never, rarely, sometimes, often). The Likert scale has been modified to represent 5 answer types (never, rarely, sometimes, often, frequently) to provide greater choice and uniformity with the student qualities Likert scales used in the research. The student learning attributes and self-regulation pre and post-intervention questionnaires are based on an earlier seminal version created by Ryan and Connell (1989) and used in other articles including Grolnick, Ryan and Deci (1991), Grolnick and Slowiaczek (1994), Skinner, Johnson and Snyder (2005) and Suizzo, Jackson, Pahlke, McClain, Marroquin, Blondeu and Hong (2016). The student qualities questionnaire to be found in all three participant type questionnaires has been developed from the research by (Oakes and Griffin, 2017) and the Behaviours for Learning Continuum developed by [redacted]

18. Participants

Please mention:

a) The number of participants you are recruiting and why. For example, because of their specific age or sex.
b) How they will be recruited and chosen.
c) The inclusion/exclusion criteria.
d) For internet studies please clarify how you will verify the age of the participants.
e) If the research is taking place in a school or organisation then please include their written agreement for the research to be undertaken.
f) Please state any connection you may have with any organisation you are recruiting from, for example, employment.

a and b) The initial focus will be on teacher recruitment, the teachers who volunteer will then determine which parents and students will be selected. Teachers will be recruited on the basis that they teach Computer Science {or IT} at GCSE. Over the two schools this represents *three teachers* {four

teachers}. Initial conversations will be had in person during the Inset days at the beginning of September where teachers will be informed of the research and its purpose, consent will need to be completed by the end of September. After the initial conversation a meeting will be had with each teacher where an information sheet and consent form will be provided detailing the purpose, questions, content, procedures, reporting and dissemination of the research including statements ensuring confidentiality, anonymity and right to withdrawal (A copy will also be emailed after the meeting using the university provided email). Focusing on Computer Science {and IT} at GCSE is intentional and fundamental to the research. It is a subject where most parents have a limited understanding and therefore low self-efficacy in supporting their children at home impacting academic socialisation. In addition Computing is now statutory at KS3 and KS4, coding is included as part of the curriculum offer at KS2. At GCSE Computer Science contributes as a science subject not an open subject for Progress 8 measures and is part of the EBACC. However, the number of entries for computer science qualifications dropped from 318,781 in 2017 to just 175,230 last year in the UK (Kemp and Berry, 2019).There has also been a reduction in the number of schools offering computing qualifications at Key Stage 4. Moreover, the number of hours of computing or IT taught per week at KS3 to KS5 has also fallen dramatically by 35.8% between 2012 and 2017. At key stage 4 this has been particularly significant, which has seen a fall from 66,400 hours per week to just 35,400 per week during this period. In order to ensure its success as a core subject and that "the next generation leaves school with an understanding of the principles of programming" (Gibb, 2018), the research seeks to embed and apply key skills to enhance the academic curriculum and provide students with a greater opportunities for success.

Students (and parents) will be selected based on which of their subject teachers provided consent. Four classes across the two schools are being targeted which would be a total of 85 students, a minimum of 30 students is required. Access for the research will be provided through the student information management system (SIMS), in accordance with data protection regulations explicit consent will be sought to use the following fields. *Access to these fields at one school was provided after consent had been provided by an administrator since Mr Lanigan was not member of the teaching staff:*

- Student First Name
- Student Surname
- Student Form
- Student Class
- Student Subject
- Student Teacher
- Parent First Name
- Parent Surname
- Parent Email Address

Approval to do so has been granted from the Headteachers in both schools, who, as gatekeepers have been informed of the research design . Parents will be provided with information detailing the purpose, questions, content, procedures, reporting and dissemination of the research including statements ensuring confidentiality, anonymity and right to withdrawal. Parents will be asked for consent for their own participation and assent for their son's participation within the research. Once consent is gained from parents, an information meeting will be held in the school library for students during a breaktime or lunchtime. During this, students will be informed of their right to no further involvement without consequences and their right to withdrawal at any time . The same parents, students and teachers will be used in Phase 1, 2 and 3. By adopting a cohort approach, individuals will be grouped by the common characteristic of those teachers who have given consent to participate. While it is possible to ensure the integrity of the parent and student cohort, there may be difficulties with the teacher sample since they could leave the school (In both schools teachers are allocated to the same classes for the duration of the key stage). To counteract this, a greater number of Computer Science {and ICT} classes have been targeted in Phase 1 to account for teacher attrition in Phase 3.

c) Inclusion/ exclusion criteria is based on subject teachers' participation. A student and therefore a parent need to be taught by that teacher, this will be discussed with parents and students at the information events and in documentation. No other inclusion or exclusion criteria exist.

d) The online student questionnaires in Phase 1 and Phase 3 will be completed in the library or computer room at each school supervised by *Mr Lanigan* {a volunteer (School librarian). Each librarian holds an enhanced DBS and has experience of working with the students}. Students will be asked for their first name and surname on these questionnaires for safeguarding reasons, this will be

discussed with parents and students at the information events and in documentation. Bristol online academic survey software will be used to collect this information to ensure that the data is secure and encrypted.

e) Written consent has been provided for the study by the Head teachers of both schools.

f) Mr Lanigan is currently an [redacted] at [redacted] and has previously been an [redacted] at [redacted]. Although the researcher is a teacher of Computer Science, *he is not their main teacher, only supporting the class as a result of changing in staffing due to COVID-19*{none of his classes will be participating in the study}.

19. Consent

If you have any exclusion criteria, please ensure that your Consent Form and Participant Information Sheet clearly makes participants aware that their data may or may not be used.

a) Are there any incentives/pressures which may make it difficult for participants to refuse to take part? If so, explain and clarify why this needs to be done.

b) Will any of the participants be from any of the following groups?
- Children under 18
- Participants with learning disabilities
- Participants suffering from dementia
- Other vulnerable groups.

If any of the above apply, state whether the researcher/investigator holds a current DBS certificate (undertaken within the last 3 years). A copy of the DBS must be supplied **separately from** the application.

c) Provide details on how consent will be obtained. This includes consent from all necessary persons i.e. participants and parents.

a) There will be no incentives/pressure applied to participate, however, due to the nature of the role the researcher holds at each school (as a member of SLT), parents, teachers and students may feel obliged to participate. Mr Lanigan will ensure that during his address to teachers and students and email to parents, it is made very clear that there is no obligation to participate. The ability to withdraw from the research will be reiterated through the consent form, the address and the presentation. Mirroring safeguarding procedures within the school, if students are not happy to withdraw by email or in person to the researcher, they can do so through the Head of Year/Learning Coordinator or Linda Saunders, as research supervisor, through her email. The researcher's senior leadership position in both schools is and was closely tied to teaching and learning responsibilities, therefore the premise or his involvement in the research will not be viewed out of context by teaching staff. Furthermore, since the researcher's responsibilities are related to staff matters rather than pastoral issues, both parents and students should feel less inhibited, apprehensive and cautious regarding opinions and comments made in the questionnaires.

b) The pupils participating will be 14 to 16 year old boys.

c) Mr Lanigan's DBS issued on 22nd June 2015 has been seen by the PGR/ Ethics Sub Committee administration office at St Mary's University (DBS No. [redacted])

d) There are three main types of consent required in the study:
- Teacher consent to participate
- Parent consent to participate
- Parental consent for their son to participate
- Student consent to participate

Students will be informed that their data is confidential and anonymised in any findings, but some personal details will be identifiable to only the author in case there is a safeguarding issue as a result of a response, mirroring school safeguarding procedures.

20. Risks and benefits of research/activity

a) Are there any potential risks or adverse effects (e.g. injury, pain, discomfort, distress, changes to lifestyle) associated with this study? If so please provide details, including information on how these will be minimised. b) Please explain where the risks / effects may arise from (and why), so that it is clear why the risks / effects will be difficult to completely eliminate or minimise. c) Do you have an approved risk assessment form relating to this research? d) Does the study involve any invasive procedures? If so, please confirm that the researchers or collaborators have appropriate training and are competent to deliver these procedures. Please note that invasive procedures also include the use of deceptive procedures in order to obtain information. e) Will individual/group interviews/questionnaires include anything that may be sensitive or upsetting? If so, please clarify why this information is necessary (and if applicable, any prior use of the questionnaire/interview). f) Please describe how you would deal with any adverse reactions participants might experience. Discuss any adverse reaction that might occur and the actions that will be taken in response by you, your supervisor or some third party (explain why a third party is being used for this purpose). g) Are there any benefits to the participant or for the organisation taking part in the research?
a) No b) N/A c) No d) No e) Both parents and pupils will receive similar questionnaires and interview questions regarding their perceptions of parents evening, learning attributes and the roles of the individuals involved. It will be important to explain to parents that any similarities in questions between the different respondent research tools (for parents, children and teachers) should not be misconstrued as the researchers attempt at 'truth checking', but an attempt to understand different perceptions and collect a rich, diverse sample. Within the pupil questionnaire, special care has been taken with the wording of some questions to avoid personal reference and contextual stories. Also more decisive questioning has been used to avoid any ambiguity in meaning and to encourage criticality. Group interviews for students has been selected to reduce anxiety and potential intimidation. It encourages interaction between the group, normalising the process rather than direct responses to adult questioning (Cohen, Manion and Morrison, 2013:433). Use of a mixed methods approach is key to ensuring methodological triangulation and for a reasonable level of statistical treatment of the data. The initial teacher and student online questionnaires has been trialled in a paper based format within a pilot study (Approval granted at level 2 on 18/01/19), 56 out of a potential 120 parents participated. From the parents who provided assent for their sons to participate, 34 out of 35 students participated. f) At the time of consent, to ensure parents are aware of the content their son will be providing they will receive a blank copy of: • The online pupil questionnaire • The student group interview questions • The student questionnaires relating to academic socialisation • The student questionnaires relating to student learning attributes and self-regulation Pupils will be informed that their data will be confidential and anonymised in any findings, but some personal details will be identifiable to only the researcher for safeguarding/child protection reasons. If a safeguarding issue is disclosed within a student data collection tool, the school's Safeguarding policy will be followed and the school's Safeguarding Lead will be contacted. Pupils are aware of the term 'Safeguarding' and what this relates to, so its use in the pupil consent form, should not cause any confusion or uncertainty in either school. f)The proposed research does not seek to influence student achievement summary measures such as grades and test results, to argue a correlation between these and the research intervention would be tenuous considering the numerous extraneous variables associated with student learning. Instead the research seeks to influence student learning attributes that lead to successful student outcomes and achievement. The research should increase parental involvement through academic socialisation and the development of student learning attributes including autonomy, competence, self-regulated motivation and social self-efficacy. The use of the termly parental engagement booklets, text messages and the lunch time student sessions outside regular communication and classroom practice is intentional. This is to ensure that the curriculum offer for those parents and students who did not provide consent is not impacted by the

research. Similarly, the parent teacher meeting for these students and parents will not be reconfigured. To ensure parity, on completion of the research, any positive outcomes will be shared and implemented with immediate effect in both Schools, so that the research may be applied to the next cohort at GCSE and A-Level (ensuring those parents and students who decided not to participate would have a further opportunity).

21. Confidentiality, privacy and data protection

- Outline what steps will be taken to ensure participants' confidentiality.
- Describe how data, particularly personal information, will be stored (please state that all electronic data will be stored on St Mary's University servers).
- If there is a possibility of publication, please state that you will keep the data for a period of 10 years.
- Consider how you will identify participants who request their data be withdrawn, such that you can still maintain the confidentiality of theirs and others' data.
- Describe how you will manage data using a data a management plan.
- You should show how you plan to store the data securely and select the data that will be made publically available once the project has ended.
- You should also show how you will take account of the relevant legislation including that relating to data protection, freedom of information and intellectual property.
- Identify all persons who will have access to the data (normally yourself and your supervisor).
- Will the data results include information which may identify people or places?
- Explain what information will be identifiable.
- Whether the persons or places (e.g. organisations) are aware of this.
- Consent forms should state what information will be identifiable and any likely outputs which will use the information e.g. dissertations, theses and any future publications/presentations.

- Jisc online academic survey software will be used to collect any online responses, this will only be accessible to the researcher. All data collected using this software will be password protected, encrypted and secure. Once responses have been collected they will be downloaded and stored on the PHD/EdD encrypted server hosted by St Mary's University, this is also password protected. Depending on the timing of the request, data withdrawal will be completed by removal from the online software or through the encrypted server (requests will be dealt with immediately). The prescribed software and encrypted mobile devices will be provided by St Mary's University through IT services. Similarly, after collection of any paper based documentation and transcription to a suitable electronic format, it will be stored in the same manner. Due to the ethical sensitivity of audio recordings, particularly of children, after transcription, all audio recordings will be destroyed (All participants are informed of this on consent), electronic data will be stored using encryption and password locked files on the SMU server provided by St Mary's University, only accessible to the researcher and his research supervisor; *Dr Jane Chambers*{Linda Saunders} and Christine Edwards-Leis; his second supervisor. Any hard copies will be kept in locked cabinets (with only key in procession of the researcher), in a locked office at the researcher's main place of work. Data will not be accessed by anyone other than the researcher and *Dr Jane Chambers* {Dr Linda Saunders} (Research Supervisor). Parents will be unable to view any of their son's data since the child is over 13 and under the General Data Protection Regulations (2018) has full ownership of their own data (Parents, teachers and students will be made aware of this during consent). It would also infringe on the confidentiality guaranteed to the students and may influence the candidness and honesty of response. *Mr Lanigan asked students not to share any information regarding those attending the session* {A volunteer at the beginning of the pupil address will ask pupils not to share any information regarding those attending the session, this will be the librarian at each school who students will be familiar with (both hold an enhanced DBS). The researcher will not chair this address in order to reduce the experimenter effect and the powerful position of the researcher (Cohen et al., 2013:168) to the students.}
- Every effort will be made to maintain confidentiality and privacy of those who participate. Guarantees of confidentiality and non-maleficence will be made at the start of all interviews. To

ensure data security and stewardship the information gathered will only be used for the purpose of the study. Personal details will be redacted and replaced with coded numbers, however, there will be a correlation between some coded numbers to express the relationship between parent and student, and, student and teacher. Apart from this all other identifiers will be deleted and micro aggregation will be used. Any data used within the final thesis, publications or presentations will not contain participant identifiable characteristics, this will be explained to all participants when requesting consent. Due to safeguarding and child protection laws, it will not be possible to promise that the observation, questionnaire or interview data will be entirely anonymous and that it will certainly be known to the researcher. Students, teacher and parents will be made aware of this and the need for the researcher to contact the school's Safeguarding Lead where necessary.

- Parents, teachers and students will be reminded of their right to withdraw from the research at any time without needing to provide a reason, contact details will be provided on how to action this or the option to leave the activity with immediate effect. To mirror school safeguarding procedures, a second figure, the Head of Year/Learning Coordinator can also be contacted by students if they wish to withdraw. Withdrawal of data will be conducted only by the researcher using the coded reference representing their personal details.
- Data will be stored on an encrypted file for ten years after the completion of the study to ensure compliance with relevant legislation. In line with *St Mary's* {Liverpool Hope's} open access and research provision, this thesis will be available in the public domain. Participants will be made aware of this on consent.

22. Feedback to participants

Please give details of how feedback will be given to participants:

- As a minimum, it would normally be expected for feedback to be offered to participants in an acceptable format, e.g. a summary of findings appropriately written.
- Please state whether you intend to provide feedback to any other individual(s) or organisation(s) and what form this would take.

Feedback in the form of a basic written summary of findings will be offered to participants this will include only very basic characteristics of the study. On completion of the main doctorate research and thesis, gatekeepers will be provided with a copy. In line with *St Mary's* {Liverpool Hope's} open access and research provision, this thesis will be available in the public domain.

The proposer recognises their responsibility in carrying out the project in accordance with the University's Ethical Guidelines and will ensure that any person(s) assisting in the research/ teaching are also bound by these. The Ethics Sub-Committee must be notified of, and approve, any deviation from the information provided on this form.

Signature of Proposer(s):	P Lanigan	Date:	05/08/19
Signature of Supervisor (for student research projects):		Date:	

St Mary's
University
Twickenham
London

02 October 2019

Dear Patrick

I am writing to confirm that your application for ethical approval of your research enquiry has been approved.

Student's name: Patrick Lanigan
Regnum: 040052
Course: EdD
Tutor: Dr Linda Saunders

Should you have any queries please do not hesitate to contact me.

Dr Mary Mihovilović
Programme Director MA in Education

St Mary's University, Waldegrave Road, Strawberry Hill, Twickenham, London TW1 4SX
Switchboard 020 8240 4000, Fax 020 8240 4255, www.stmarys.ac.uk

Teacher information sheet and consent form

St Mary's University Twickenham London

Section A: The Research Project

1. **Title of project**
Increasing academic socialisation and developing student learning attributes through effective student inclusive conferencing.

2. **Purpose and value of study**
The purpose of the study is to investigate the reconstruction of parent teacher meetings to a student inclusive conferencing structure whereby the meeting forms part of larger student engagement process. The research will occur in three phases over two years, focusing on Y10 and Y11 of the GCSE course. In phase 1 the existing parent teacher meeting structure will be reviewed, in phase 2, based on the findings from phase 1, carefully planned training and activities will be introduced for students supported by parents and teachers. In phase 3 a new version of parent teacher meetings will be determined based on the previous phases.
It is proposed that reviewing and reconstructing parent teacher meetings with meaningful student engagement, will increase academic socialisation and the development of student learning attributes including autonomy, competence, self-regulated motivation and social self-efficacy. The research uses observations (audio), semi structured interviews, focus groups and questionnaires with parents, students and teachers in two London secondary schools focusing on Year 10 and 11.

3. **Invitation to participate**
It is hoped that parents/carers, teachers and students will be willing to participate in the research.

4. **Who is organising the research**
The research has been organised by Mr Patrick Lanigan, [redacted]. Mr Lanigan is currently completing an Educational Doctorate at St Mary's University, Twickenham.

5. **What will happen to the results of the study**
On completion of the doctorate research the final thesis relating to the research through the issuing university will be in the public domain.

6. **Source of funding for the research**
No funding has been provided for this study.

7. **Contact for further information**
For further information please contact Mr P Lanigan, Email: [redacted]

Section B: Your Participation in the Research Project

1. **Why you have been invited to take part?**
You have been invited to participate due to your position as a teacher of a Computer Science/IT GCSE class who participates regularly in parent teacher meetings.

2. **Whether you can refuse to take part**
Your participation is entirely voluntary and you can withdraw from the project at any time without prejudice, now or in future. In order to do so, please contact Mr Lanigan using the details provided, at which point, any data held will be immediately removed.

3. **What will happen if you agree to take part?**
The process is as follows:

- Based on the classes of the Computer Science/ IT teachers who volunteer; students and their parents will be invited to participate.
- If you agree to participate you will be invited to complete two online questionnaires in year 1 (phase 1) and year 2 (phase 3) around the time of the parent teacher meeting relating to Y10 and Y11of the GCSE course. You will be asked to participate in observations and semi structured interviews relating to the meetings (using audio equipment).
- During phase 2 students will be participating in lunch time sessions focusing on developing non-cognitive learning attributes such as autonomy, competence, self-regulated motivation and social self-efficacy. Some aspects will relate to their forthcoming exams or a specific area of the curriculum, however, the only activities that will take place in lessons will be in preparation for the new parent-teacher meeting structure and so occur close to the Y11 meeting.
- Before phase 3 and the new parent teacher meeting structure, training and resources will be provided on how to support the meeting. During the meeting it is hoped you will adopt and implement the new structure.

5. **Whether there are any risks involved (e.g. side effects) and if so, what will be done to ensure your wellbeing/safety**
There are no foreseeable risks in participating in the study.

6. **What will happen to any information/data/samples that are collected from you**
Any data collected will be used for qualitative and quantitative analysis to determine the next phase of the research and outcomes. All data will be confidential, kept secure and anonymised in any findings but some personal details will be identifiable only to the author in case there is a safeguarding issue as a result of a response, mirroring school safeguarding procedures.

7. **Whether there are any benefits from taking part**
The research plans to improve parent teacher meetings ensuring they form part of a bigger student engagement process improving student outcomes. It is hoped students will benefit from increased student learning attributes such as autonomy, competence, self-regulated motivation and social self-efficacy. Teachers should benefit from increased student ownership of learning and increased motivation.

8. **How much time you will need to give up to take part in the project**
The research will take place over a two year period. All phase 1 activities will take no more than 2 hours. Phase 2 activities will occur outside of classes, apart from sessions required in preparation for the new parent teacher meeting structure. Similar to phase 1, phase 3 activities will take no more than 2 hours.

9. **How your participation in the project will be kept confidential**
Privacy and confidentiality will be ensured for all participants, with careful anonymisation of the data, all identifiable characteristics will be removed from any summary reports or findings. All audio recordings once transcribed will be destroyed. Data will not be accessed by anyone other than Mr Lanigan and Dr Linda Saunders (Research supervisor) with all electronic data stored using an encrypted server and password locked files at St Mary's University.
Please note, if a safeguarding issue is disclosed within a questionnaire, the Safeguarding Lead at the school will be notified and investigations will be made which may involve the teacher, student and parents/carers.

Parent Information Sheet

Section A: The Research Project

1. Title of project

Increasing academic socialisation and developing student learning attributes through effective student inclusive conferencing.

2. Purpose and value of study

The purpose of the study is to investigate the reconstruction of parent teacher meetings to a student inclusive conferencing structure whereby the meeting forms part of larger student engagement process. The research will occur in three phases over two years, focusing on Y10 and Y11 of the GCSE course. In phase 1 the existing parent teacher meeting structure will be reviewed, in phase 2, based on the findings from phase 1, carefully planned training and activities will be introduced for students supported by parents and teachers. In phase 3 a new version of parent teacher meetings will be determined based on the previous phases.

It is proposed that reviewing and reconstructing parent teacher meetings with meaningful student engagement, will increase academic socialisation and the development of student learning attributes including autonomy, competence, self-regulated motivation and social self-efficacy. The research uses observations (audio), semi structured interviews, focus groups and questionnaires with parents, students and teachers in two London secondary schools focusing on Years 10 and 11.

3. Invitation to participate

It is hoped that parents/carers, teachers and students will be willing to participate in the research. Parents/carers can either agree for their son to participate and/or themselves.

4. Who is organising the research

The research has been organised by Mr Patrick Lanigan, a [redacted] who is currently completing an Educational Doctorate at St Mary's University, Twickenham.

5. What will happen to the results of the study

On completion of the doctorate research the final thesis relating to the research through the issuing university will be in the public domain.

6. Source of funding for the research

No funding has been provided for this study.

7. Contact for further information

For further information please contact Mr P Lanigan, Email: [redacted]

Section B: Your Participation in the Research Project

1. Why you have been invited to take part?

The research focuses on Computer Science classes and IT. You have been invited to participate due to your position as a parent/carer who participates in parent teacher meetings. Similarly consent on behalf of your son is requested due to his position as a beneficiary of such meetings and the fact that he is completing a GCSE in Computer Science or IT.

2. Whether you can refuse to take part

Your participation is entirely voluntary and you can withdraw from the project at any time without prejudice, now or in future. In order to do so, please contact Mr Lanigan using the details provided, at which point, any data held will be immediately removed.

3. What will happen if you agree to take part?

The process is as follows:

- Parents and students will be asked to volunteer based on their Computer Science or IT teachers who provide consent to be involved in the research and support phase 2 activities.
- If you agree to participate you will be invited to complete two online questionnaires in year 1 (phase 1) and year 2 (phase 3) around the time of the parent teacher meeting for your son. Some parents will be asked to participate in observations and semi structured interviews relating to the meetings (using audio equipment). During phase 2 you will receive a termly Parental Engagement ToolKit which provides activities, advice and skills on how to support your son with home learning. Similar you will receive a weekly text message of useful advice to support your son. The exact nature of some activities cannot be determined until the feedback from phase 1 but there is likely to be a parental engagement meeting during the year. The aim of all of these activities will be to increase key non-cognitive learning attributes such as autonomy, competence, self-regulated motivation and social self-efficacy.
- If you provide consent for your son to participate, he will be asked to attend a meeting where the research will be explained and he will be invited to participate. The time of this meeting will be either break or lunch time, he will need to provide written consent.
- If approval is granted by your son, he will complete two online questionnaires in year 1 (phase 1) and year 2 (phase 3) around the time of the relevant parent teacher meeting. Some students will be asked to participate in observations and focus groups relating to the meetings (using audio equipment). During phase 2 of the research your son will participate in training and activities aimed at increasing student learning attributes such as autonomy, competence, self-regulated motivation and social self-efficacy. These activities are likely to occur at lunch or after school.
- Please note that you can provide consent for your son to participate or for yourself to participate, or both.

5. Whether there are any risks involved (e.g. side effects) and if so, what will be done to ensure your wellbeing/safety

There are no foreseeable risks in participating in the study.

6. What will happen to any information/data/samples that are collected from you

Any data collected will be used for qualitative and quantitative analysis to determine the next phase of the research and outcomes. All data will be confidential, kept secure and anonymised in any findings but some personal details will be identifiable only to the author in case there is a safeguarding issue as a result of a response, mirroring school safeguarding procedures.

In line with the Data Protection Act (2018) students have full control over the data provided and therefore consent would have to be sought by a parent if they wanted to review the contents of any data submitted by their son.

7. Whether there are any benefits from taking part

The research plans to improve parent teacher meetings ensuring they form part of a bigger student engagement process improving student outcomes. It is hoped students will benefit from increased student learning attributes such as autonomy, competence, self-regulated motivation and social self-efficacy.

8. How much time you will need to give up to take part in the project

The research will take place over a two year period. All parent phase 1 activities will take no more than 3 hours. Parent phase 2 activities will likely occur using email, post and a parental workshop/s taking no more than 5 hours in total, including working through the Parental Engagement Toolkits with your son. Student activities in phase 2 will take considerably longer and will likely occur once a lunch time every month. Similar to phase 1, phase 3 activities will take no more than 3 hours.

9. How your participation in the project will be kept confidential

Privacy and confidentiality will be ensured for all participants, with careful anonymisation of the data, all identifiable characteristics will be removed from any summary reports or findings. All audio recordings once transcribed will be destroyed. Data will not be accessed by anyone other than Mr Lanigan and Dr Linda Saunders (Research supervisor) with all electronic data stored using an encrypted server and password locked files at St Mary's University.

Please note, if a safeguarding issue is disclosed within a student questionnaire, the Safeguarding Lead at the school will be notified and investigations will be made which may involve the teacher, student and parents/carers.

Teacher and parent consent form

St Mary's University Twickenham London

Name of Participant: _____

Title of the project: **Increasing academic socialisation and developing student learning attributes through effective student inclusive conferencing.**

Main investigator and contact details: Mr P Lanigan, [redacted]

Members of the research team:

1. I agree to take part in the above research. I have read the Participant Information Sheet which is attached to this form. I understand what my role will be in this research, and all my questions have been answered to my satisfaction.
2. I understand that I am free to withdraw from the research at any time, for any reason and without prejudice.
3. I have been informed that the confidentiality of the information I provide will be safeguarded.
4. I am free to ask any questions at any time before and during the study.
5. I have been provided with a copy of this form and the Participant Information Sheet.

Data Protection: I agree to the University processing personal data which I have supplied. I agree to the processing of such data for any purposes connected with the Research Project as outlined to me.

Name of participant (print)……

Signed……..…… Date……..

If you wish to withdraw from the research, please complete the form below and return to the main investigator named above.

Title of Project: **Increasing academic socialisation and developing student learning attributes through effective student inclusive conferencing.**

I WISH TO WITHDRAW FROM THIS STUDY

Name: _____

Signed: _____ Date: _____

Parental consent form

St Mary's University Twickenham London

Name of Participant: _____

Title of the project: **Increasing academic socialisation and developing student learning attributes through effective student inclusive conferencing.**

Main investigator and contact details: Mr P Lanigan, Email: [redacted]

Members of the research team:

1. I agree to my child taking part in the above research. I have read the Participant Information Sheet which is attached to this form. I understand what my child's role will be in this research, and all my questions have been answered to my satisfaction.
2. I understand that I am free to withdraw my child from the research at any time, for any reason and without prejudice.
3. I have been informed that the confidentiality of the information I and my child provides will be safeguarded.
4. I am free to ask any questions at any time before and during the study.
5. I have been provided with a copy of this form and the Participant Information Sheet.

Data Protection: I agree to the University processing personal data which I and my child have supplied. I agree to the processing of such data for any purposes connected with the Research Project as outlined to me.

Name of parent (print)……

Signed…… Date……

If you wish to withdraw your child from the research, please complete the form below and return to the main investigator named above.

Title of the project: **Increasing academic socialisation and developing student learning attributes through effective student inclusive conferencing.**

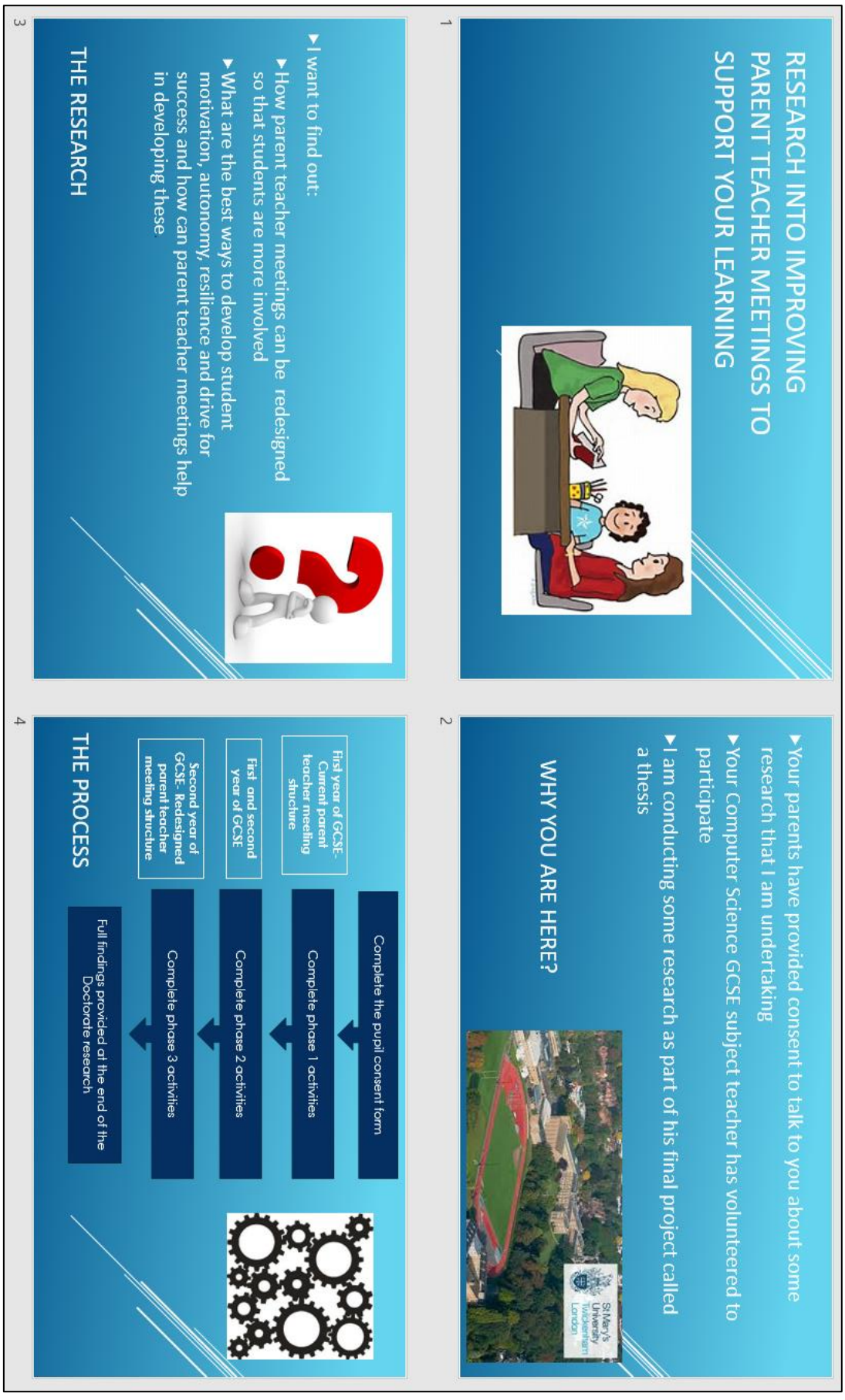
I WISH TO WITHDRAW MY CHILD FROM THIS STUDY

Name of Participant: _____

Name of Parent _____

Signed: _____ Date: _____

Student information presentation (sample) and consent form



Research Project - Improving parent-teacher meetings to support student learning

My name is Mr Lanigan, I am conducting a research project and I would like to ask if you would be prepared to participate. The purpose of the research is to redesign parent teacher meetings so that students are more involved, especially in the decision making process and ways that improvement and support can be developed. I want to investigate the best ways to develop student motivation, autonomy, resilience and drive for success. I believe that changing the format of parent teaching meetings, with activities over the course of the year, may be a way of doing this.

The research will take place over two years and will involve three phases. One or more of your subject teachers has volunteered to participate in the research. Parents/carers are aware that you are going to be asked about participating in the research activities below.

Phase 1- Current parent teacher meeting

- An online questionnaire completed at school with three sections relating to:
  - Your student qualities
  - Home learning, engagement and parental support
  - Your motivation to work and learn
- An online questionnaire completed at school asking your opinions on the current structure of parent teacher meetings
- Some students will be asked to participate in observations where the parent teacher meetings will be recorded (audio only)
- Some students will be asked to participate in a focus group, where they will discuss with other members of the year group their opinions on the current parent teacher meetings (audio only)

Phase 2:

- Over the course of the year, a number of activities will be introduced to help you develop key skills relating to metacognition, growth mindset, resilience, grit, self-regulation reflect on your progress and self-efficacy.
- Your parents will be provided for home learning pack on a termly basis
- There will also be activities to prepare you for taking a more central role in the next parent-teacher meeting.

Phase 3- Redesigned parent teacher meeting

- An online questionnaire completed at school with three sections relating to:
  - Your student qualities
  - Home learning, engagement and parental support
  - Your motivation to work and learn
- An online questionnaire completed at school asking your opinions on the new structure of parent teacher meetings
- Some students will be asked to participate in observations where the parent teacher meetings will be recorded (audio only)
- Some students will be asked to participate in a focus group, where they will discuss with other members of the year group their opinions on the new parent teacher meetings (audio only)

Your participation is completely optional. If you do participate you can withdraw from the research at any time during the activity or afterwards by emailing me on [redacted] or speaking to me at school. You can also speak to your Head of Year and request to be withdrawn from the study.

The information will be kept private and confidential, unless there is a safeguarding issue, in this case it will only be viewed by the relevant people. Any audio recordings will be destroyed once typed up. It will not be possible to identify you individually in any findings or reports.

In line with the Data Protection Act (2018), apart from Mr Lanigan, the information you provide will not be shared with anyone including teachers or parents, unless you give consent to do so.

If you would like to participate please complete the reply slip below.

	Please tick the boxes
I would like to participate in Mr Lanigan's research on redesigning parent teacher meetings and the associated activities	
I understand that this is optional and I can withdraw from the research at any time during the activity or afterwards by contacting Mr Lanigan on [redacted] or speaking to him at school or speaking with my Head of Year.	
I understand that my information will be kept private and confidential, unless there is a safeguarding issue, in this case it will only be viewed by the relevant people.	

Full Name (Block Capitals) .....

Signed.....

Host School Approval

[redacted]

28 July 2019

RE: Doctorate Research

I can confirm that Patrick Lanigan, currently completing an EdD at St Mary's University, has been granted permission to complete research into the reconstruction of parent teacher meetings to a student inclusive conferencing structure, whereby the meeting forms part of larger student engagement process.

I understand the research does not seek to find a correlation between the research intervention and attainment in assessment/ examination results but aims to develop student learning attributes (autonomy, competence, self-regulated motivation and social self-efficacy) and academic socialisation.

I understand the longitudinal nature of the research focusing on the current Year 10 cohort over two years and the three phases of the research. I am happy for Mr Lanigan to seek teachers, parents and students to volunteer for the research as follows:

Phase 1- Research into the existing parent teacher meeting structure and student engagement:

Contact Year 10 teachers by email and in person to participate in the research. Those who volunteer to be provided with information and consent documentation. It is likely the study will focus on those teaching Computer Science.

Contact Year 10 parents through the parental information evening on 10/10/09 to participate and for their sons to participate in the research. Those who volunteer to be provided with information and consent documentation. Those who were unable to attend the parental information evening to be emailed and posted documentation.

Invite Year 10 students for whom parents have provided consent to attend a meeting in the library where further information and consent documentation will be provided.

Research activities to include:

- Parent, teacher and student online questionnaires relating to existing parent teacher meetings
- Observation of existing parent teacher meetings using audio recording equipment
- Parent, teacher semi structured interviews and student group interviews relating to existing parent teacher meetings
- Parent and student questionnaires relating to academic socialisation pre intervention
- Student questionnaires relating to specific attributes including behaviour and attitude, effort, vision, practice and systems. Teachers are also to complete a similar questionnaire based on students.

Phase 2- Intervention:

The intervention and the meeting's reconfiguration will be determined through the data analysis from the Phase 1 research tools, based on this, parent, teacher and student training will be provided and resources developed to increase student inclusivity. Some of the interventions are likely to include:

- Lunch time sessions for students focused on developing key skills including goal setting, revision techniques, growth mindsets and metacognition. A session would also focus on preparing students for the reconfigured parents evening
- Text messages to parents providing tips, activities and useful ideas to support their son, some of these will be Computer Science/ IT specific
- A termly parental engagement toolkit to be posted or emailed to parents including useful activities and information to support their son's home learning, some of these will be Computer Science/ IT specific
- A face to face meeting or email explaining to parents the new format of the parent teacher meeting.

Phase 3- Research into the reconstructed parent teacher meeting structure and student engagement:

- Parent, teacher and student online questionnaires relating to reconstructed parent teacher meetings
- Observation of reconstructed parent teacher meetings using audio recording equipment
- Parent, teacher semi structured interviews and student group interviews relating to reconstructed parent teacher meetings
- Parent and student questionnaires relating to academic socialisation post intervention
- Student questionnaires relating to specific attributes including behaviour and attitude, effort, vision, practice and systems. Teachers are also to complete a similar questionnaire based on students.

I am supportive of the research and happy for Mr Lanigan to proceed accordingly.

Yours sincerely

[redacted]

[redacted]

28 July 2019

RE: Doctorate Research

I can confirm that Patrick Lanigan, currently completing an EdD at St Mary's University, has been granted permission to complete research into the reconstruction of parent teacher meetings to a student inclusive conferencing structure whereby the meeting forms part of larger student engagement process.

I understand the research does not seek to find a correlation between the research intervention and attainment in assessment/ examination results but aims to develop student learning attributes (autonomy, competence, self-regulated motivation and social self-efficacy) and academic socialisation.

I understand the longitudinal nature of the research focusing on the current third form over two years and the three phases of the research. I am happy for Mr Lanigan to seek teachers, parents and students to volunteer for the research as follows:

Phase 1- Research into the existing parent teacher meeting structure and student engagement:

Contact fourth form teachers in person and by email to participate in the research. Those who volunteer to be provided with information and consent documentation. It is likely the study will focus on those teaching Computer Science.

Contact fourth form parents by email and post to participate and for their sons to participate in the research. Those who volunteer to be provided with information and consent documentation.

Invite fourth form students for whom parents have provided consent to attend a meeting in the library where further information and consent documentation will be provided.

Research activities to include:

- Parent, teacher and student online questionnaires relating to existing parent teacher meetings
- Observation of existing parent teacher meetings using audio recording equipment
- Parent, teacher semi structured interviews and student group interviews relating to existing parent teacher meetings
- Parent and student questionnaires relating to academic socialisation pre intervention
- Student questionnaires relating to specific attributes including behaviour and attitude, effort, vision, practice and systems. Teachers are also to complete a similar questionnaire based on students.

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- Lunch time sessions for students focused on developing key skills including goal setting, revision techniques, growth mindsets and metacognition. A session would also focus on preparing students for the reconfigured parents evening
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- Parent and student questionnaires relating to academic socialisation post intervention
- Student questionnaires relating to specific attributes including behaviour and attitude, effort, vision, practice and systems. Teachers are also to complete a similar questionnaire based on students.

I am supportive of the research and happy for Mr Lanigan to proceed accordingly.

Yours sincerely

[redacted]

Appendix B: Research Tools

SLCA Questionnaire 1A

Student and Teacher Version

	Type	Very Good	Good	Acceptable	Poor	Very Poor
Behaviour and Attitude	Self-Efficacy	Very high level of self-belief	High level of self-belief	Moderate self-belief	Low self-belief, lacking confidence	No self-belief, believes they are always likely to fail
	Leadership and	Shows leadership and/ or excellent teamwork skills when working with others	Works well with others and as part of a team	Can work well with others and as part of a team but not always a key contributor	Can be silly, immature or off task when working with others or as part of a team	Cannot work with others or a team sensibly or does not contribute
	Uniform	Wears the uniform with pride	Is presentable in the uniform all of the time	Usually wears the correct uniform	Does not always wear the correct uniform/shirt is untucked	Incorrect uniform has received warnings and sanctions for this
	Behaviour when working with	Seeks out opportunities to help and support others, showing high levels of empathy. Always courteous and polite	Courteous and polite and volunteers to help others	Is usually polite to others and willing to help	Needs reminders to speak politely to staff and peers/ is reluctant to help when asked	Can be rude, uncooperative or aggressive
	Types of	Believes that intelligence is not fixed	Believes that you can improve on the intelligence you have been given	Believes that you can improve some aspects of you intelligence	Believes intelligence is largely fixed and cannot be changed	Believes intelligence is fixed and cannot be changed
	Dealing with	Experiments with new ideas and sees failure as part of learning	Sees failure as a learning opportunity	Feels anxious when responses are incorrect	Sees failure seen as a weakness	Will make no attempt to succeed as sees failure as inevitable

	Attendance	Attendance is above 98%	Attendance is between 96-98%	Attendance is between 95-96%	Attendance is between 91-95%	Attendance below 90%
Effort	**Focus and**	Focused in the lesson content, contributing throughout	Remains focused throughout the lesson	Can lose focus in class but mainly on task	Can be easily distracted	Easily distracted and distracts others
	Comparisons	Compares effort to hard working pupils	Compares effort to some hard-working pupils	Compares effort to a range of students in the class	Compares effort to pupils who have made no effort	Compares effort to pupils who have made no effort
	Punc	Excellent punctuality	Very good punctuality	Usually punctual but not always	Frequently late	Regularly late
	Attendance/intervent	Can analyse performance independently and identify support	Identifies intervention/support needs without teacher prompt	Attends detentions/interventions without reminders	Attends detentions/interventions with reminders	Fails to attend intervention and detention / catch up sessions
Vision	**Setting goals and targets**	Always sets goals and targets that are challenging, setting personal bests to measure against	Sets goals and targets that are usually challenging, reflecting on previous effort and attainment and pushing these	Sets some goals and targets that are challenging	Sets some goals and target that are easy to achieve, may wait for other to set goals for them	Resents setting goals and target, requires others to set them on their behalf
	Deadlines and	Work is always completed on time, they do not miss deadlines	Work is usually completed on time, they usually do not miss deadlines	Work is mostly completed on time, they mostly do not miss deadlines	Work is rarely completed on time, they often miss deadlines	Work is not completed on time, they always miss deadlines
	Future career and higher	Is focused and driven when considering their future or sixth form/ university/ career plans	Considers carefully their future or sixth form/ university/ career plans	Has some ideas regarding their future or sixth form/ university/ career plans	Has given little thought to the future or sixth form/ university/ career plans	Has not considered the future or sixth form/ university/ career plans
Practice	**Knowledge**	Looks for opportunities to work on challenging material	Looks to develop their knowledge with new material	Will try to develop their knowledge of new material independently but	Will look over existing materials to develop their knowledge and will only extend	Will only look over material they already know and understand

		outside their comfort zone		not always sure where to start	themselves when promoted	and not extend themselves
	Feedback	Seeks out feedback believes it will make them better	Responds positively to feedback	Will accept feedback but not always action this	Responds poorly to feedback	Responds negatively to feedback or avoids it completely
	Questions	They are curious and ask meaningful questions	Regularly asks and answers questions	They can be interested in a topic and may try to find out more by asking questions	They are mostly disinterested and will only answer questions if asked	They are disinterested or indifferent and actively avoid answering question or giving suitable responses
Systems	**Presentation of**	Work is very well presented (THUD). Diagrams are drawn carefully	Work is neatly presented (THUD). Diagrams are neat.	Work is usually tidy (THUD). Diagrams are clear	Work is often untidy	Work is scrappy with no care for presentation. Diagrams are scribbled and in pen.
	Organisation of	All sheets are trimmed, glued in/book is covered	Worksheets are neatly stuck in/ book is covered	Most worksheets are stuck in/ book is covered. Diagrams are drawn roughly and in pen	Worksheets not always stuck in/book is not covered	Books not covered and loose sheets
	Reviewing assessment material	Reviews tests, does not look to focus on the negatives, seeks to address issues, uses mark schemes and examiners reports	Reviews tests looking for areas of weakness and address these issue	Makes corrections to tests	Will read through test to look for mistakes but mainly focus on the negatives	Does not review tests to see how to improve
	Revision planning and strategies	Has a daily revision plan/timetable. Understands the best strategies for revision and uses these regularly	Revises on a weekly basis, has a form of revision plan/timetable. Understands the best strategies for revision and uses these most of the time.	Revises for tests/assessments and creates a basic plan/timetable for this. Understands the best strategies for revision and uses these occasionally.	Revises sometimes for key tests/assessments but does not plan/timetable time. Understands the best strategies for revision but favours certain methods over others due to ease.	Does not revise and does not complete revision plans/timetables. Does not apply best strategies for revision, will choose the easiest

						method or none.
	Homework quality	Homework tasks show evidence of further reading and research around a topic	Homework completed to a good standard	Homework completed to minimum standard	Homework not always completed to a good standard	Homework rarely completed
	Planning and	Records key dates, informatio n and homework in planner	Usually records key dates, information and homework in planner	Most of the time records key dates, information and homework in planner	Rarely records key dates, information and homework in planner	Never records key dates, information and homework in planner
	Preparation and equipment	Always fully equipped for lessons and has some additional useful resources e.g. coloured pencils	Usually fully equipped for lessons	Most of the time equipped for lessons	Rarely equipped for lessons	Never equipped for lessons

Parent Version

	Question	Response Scale				
		Never	Rarely	Sometimes	Often	Frequently
1	Likes setting goals and targets	1	2	3	4	5
2	Often sets personal bests to measure themselves by	1	2	3	4	5
3	Has a clear purpose and considers their future including further education and career planning	1	2	3	4	5
4	Avoids hard work	1	2	3	4	5
5	Surrounds themselves with other hardworking people	1	2	3	4	5
6	Totally focused when working	1	2	3	4	5
7	Plans their work carefully and welcomes feedback	1	2	3	4	5
8	Records homework in planner. Has organised books and notes	1	2	3	4	5
9	Reviews tests, does not focus on the negatives but seeks to address issues	1	2	3	4	5
10	They revise and review work using a number of methods including using timetables, testing and flash cards	1	2	3	4	5
11	Looks for opportunities to work on challenging material outside their comfort zone	1	2	3	4	5
12	Always seeks feedback on performance	1	2	3	4	5
13	Believes that intelligence is fixed	1	2	3	4	5
14	Has high levels of self-belief and emotional control	1	2	3	4	5
15	Sees failure as part of learning	1	2	3	4	5
16	Seeks out opportunities to help and support others, showing high levels of empathy	1	2	3	4	5
17	Always courteous and polite	1	2	3	4	5

PAS Questionnaire 1B (Parents)

	Statement	Rating Scale				
		Never	Rarely	Sometimes	Often	Frequently
1.1	I use parent teacher meetings as an opportunity to discuss with my son their progress	1	2	3	4	5
1.2	I plan further activities to support my child based on the feedback received from parent teacher meetings	1	2	3	4	5
1.3	I regularly discuss with my child what they are learning at school	1	2	3	4	5
1.4	I review and discuss assessments/grades with my child and use these to support learning at home	1	2	3	4	5
1.5	I do not regularly review classwork and homework	1	2	3	4	5
1.6	I ensure my son keeps to a regular homework timetable	1	2	3	4	5
1.7	I encourage my son to learn and do things for themselves	1	2	3	4	5
1.8	I explain difficult ideas to my son when they don't understand or seek further help for them	1	2	3	4	5
1.9	I organise further learning opportunities outside school e.g. tutors, museums, library visits	1	2	3	4	5
1.10	I praise my child for achievement and success in learning	1	2	3	4	5
1.11	I do not spend time with my child working on creative activities	1	2	3	4	5
1.12	I discuss with my child regularly the importance of education and the importance of working hard	1	2	3	4	5
1.13	I engage and take an interest in my child's hobbies	1	2	3	4	5
1.14	I discuss with my child their future aspirations in relation to education and employment	1	2	3	4	5
1.15	I set high expectations for my son when it comes to school grades, sports performance and other pursuits	1	2	3	4	5
1.16	I provide a structured environment for my son and rules regarding work and leisure time	1	2	3	4	5
1.17	I encourage my son to be independent and to solve problems at school without my help	1	2	3	4	5
1.18	I allow for my son to make some significant decisions regarding their education independently	1	2	3	4	5
1.19	I consult my son for their point of view before making decisions on their behalf	1	2	3	4	5

Self-Regulation and Autonomy Questionnaire 1C (Students)

	Statement	Rating Scale			
		Very True	**Sort of true**	**Not very true**	**Not at all true**
	Why do I do my homework?				
1.1	Because I want the teacher to think I'm a good student.	1	2	3	4
1.2	Because I'll get in trouble if I don't.	1	2	3	4
1.3	Because it's fun.	1	2	3	4
1.4	Because I will feel bad about myself if I don't do it.	1	2	3	4
1.5	Because I want to understand the subject.	1	2	3	4
1.6	Because that's what I'm supposed to do.	1	2	3	4
1.7	Because I enjoy doing my homework.	1	2	3	4
1.8	Because it's important to me to do my homework.	1	2	3	4
	Why do I work on my classwork?				
2.1	So that the teacher won't yell at me.	1	2	3	4
2.2	Because I want the teacher to think I'm a good student.	1	2	3	4
2.3	Because I want to learn new things.	1	2	3	4
2.4	Because I'll be ashamed of myself if it didn't get done.	1	2	3	4
2.5	Because it's fun.	1	2	3	4
2.6	Because that's the rule.	1	2	3	4
2.7	Because I enjoy doing my classwork.	1	2	3	4
2.8	Because it's important to me to work on my classwork.	1	2	3	4
	Why do I try to answer hard questions in class?				
3.1	Because I want the other students to think I'm smart.	1	2	3	4
3.2	Because I feel ashamed of myself when I don't try.	1	2	3	4
3.3	Because I enjoy answering hard questions.	1	2	3	4
3.4	Because that's what I'm supposed to do.	1	2	3	4
3.5	To find out if I'm right or wrong.	1	2	3	4
3.6	Because it's fun to answer hard questions.	1	2	3	4
3.7	Because it's important to me to try to answer hard questions in class.	1	2	3	4
3.8	Because I want the teacher to say nice things about me.	1	2	3	4
	Why do I try to do well in school?				
4.1	Because that's what I'm supposed to do.	1	2	3	4
4.2	So my teachers will think I'm a good student	1	2	3	4
4.3	Because I enjoy doing my school work well.	1	2	3	4
4.4	Because I will get in trouble if I don't do well.	1	2	3	4
4.5	Because I'll feel really bad about myself if I don't do well.	1	2	3	4
4.6	Because it's important to me to try to do well in school.	1	2	3	4
4.7	Because I will feel really proud of myself if I do well.	1	2	3	4
4.8	Because I might get a reward if I do well.	1	2	3	4

PTM and Student Inclusive Meeting Questionnaire 2

Phase 1- Parent

Number	Question	Answer Options
1.1	Please describe any training, support, resources you have received for this parent teacher meeting?	Free Text
1.2 Part A	Please describe any training, communication, support, resources or information provided by the school on how best to support your son with home learning, study skills, revision and working independently?	Free Text
1.2 Part B	Please describe how effective you found these resources in supporting you son's home learning, study skills, revision and working independently.	Not at all Effective Slightly Effective Moderately Effective Very Effective Extremely effective
1.2 Part C	How could this be improved?	Free Text
1.3 Part A	Does your son normally attend the meeting?	Free Text
1.3 Part B	If yes, please describe their involvement during the meeting.	Free Text
1.4	How did you prepare for the meeting?	Free Text
1.5	What do you believe is the purpose of parent teacher meetings?	Free Text
1.6	What do you see as your role in parent teacher meetings?	Free Text
1.7	What do you see as the teacher's and student's role (if present) in parent teacher meetings?	Teacher: Student:
1.8	Describe the information that is provided at parent teacher meetings?	Free Text
1.9 Part A	Does the teacher adopt a structure/order/agenda to these meetings? For instance, explain who they are, then explain the course, then explain pupil behaviour, then effort etc.?	Yes No
1.9 Part B	If yes, please describe this structure.	Free Text
1.10 Part A	Please state how effective the meeting was for discussing your son's behaviour and attitude (how they interact with others, how they deal with failure and how they perceive their intelligence)	Not at all Effective Slightly Effective Moderately Effective Very Effective Extremely effective
1.10 Part B	Please state how effective the meeting was for discussing your son's effort (the amount of hard work they dedicate to their studies)	Not at all Effective Slightly Effective Moderately Effective Very Effective Extremely effective
1.10 Part C	Please state how effective the meeting was for discussing your son's use of systems (How they organise their learning, resources and time)	Not at all Effective Slightly Effective Moderately Effective Very Effective Extremely effective
1.10 Part D	Please state how effective the meeting was for discussing your son's use of practice (how they review their learning, receive feedback or challenge themselves)	Not at all Effective Slightly Effective Moderately Effective Very Effective Extremely effective
1.10 Part E	Please state how effective the meeting was for discussing your son's vision (their use of goals and targets and how to achieve them)	Not at all Effective Slightly Effective Moderately Effective

		Very Effective Extremely effective
1.11 Part A	Do you record the information from these meetings	Yes No
1.11 Part B	If yes, please describe these.	Free Text
1.13	How do you use the information from these meetings to influence home learning targets and activities for your son?	Free Text

Please provide one option for each statement. This section is specific and relates directly to Computer Science

	Statement	**Rating Scale**				
		Never	**Rarely**	**Sometimes**	**Often**	**Frequently**
1	There is a discussion and information is shared on my son's ability to set suitable goals and targets in the subject	1	2	3	4	5
2	There is a discussion and information is shared on my son's level of effort	1	2	3	4	5
3	There is a discussion and information is shared on my son's organisation and planning	1	2	3	4	5
4	There is a discussion and information is shared on my son's skills development and use of feedback	1	2	3	4	5
5	There is a discussion and information is shared on my son's attitude to the subject	1	2	3	4	5
6	There is a discussion and information is shared on my son's behaviour	1	2	3	4	5
7	There is a discussion and information is shared regarding assessment data for my son	1	2	3	4	5
8	There is a discussion and contextual information is shared regarding the subject, course and components	1	2	3	4	5
9	The meeting is collaborative with equal opportunities for all to contribute	1	2	3	4	5
10	My son actively participates in the meeting	1	2	3	4	5
11	My son is aware of his strengths and weaknesses within the subject and can articulate these with suitable actions	1	2	3	4	5
12	My son and his teacher's understanding of his strengths and weaknesses with the subject are similar	1	2	3	4	5
13	There is an opportunity to collaborate and discuss next steps, action plans and home learning targets	1	2	3	4	5
14	The teacher is receptive to my input and suggestions on academic progress including strengths and areas for improvements	1	2	3	4	5

Phase 3- Student

Included below are only those questions that differ from the Phase 1 Questionnaire 2.

Number	Question	Answer Options
1.1	Please state how helpful the following research activities have been in supporting and developing your engagement in your education:	
1.1a	The training for the student inclusive meeting.	Not helpful Slightly helpful Moderately helpful Very helpful Extremely helpful
1.1b	The student inclusive meeting.	Not helpful Slightly helpful Moderately helpful Very helpful Extremely helpful
1.1c	The text messages your parents received focusing on subject knowledge.	Not helpful Slightly helpful Moderately helpful Very helpful Extremely helpful
1.1d	Your subject knowledge audit and preferred intervention options.	Not helpful Slightly helpful Moderately helpful Very helpful Extremely helpful
1.1e	The bespoke videos created by the researcher on developing learning characteristics and revision methods.	Not helpful Slightly helpful Moderately helpful Very helpful Extremely helpful
1.1f	The sessions on leaning characteristics, revision methods etc.	Not helpful Slightly helpful Moderately helpful Very helpful Extremely helpful
1.1g	The student inclusive meeting.	Not helpful Slightly helpful Moderately helpful Very helpful Extremely helpful
1.1h	The text messages your parents received focusing on subject knowledge.	Not helpful Slightly helpful Moderately helpful Very helpful Extremely helpful
1.1i	Your subject knowledge audit and preferred intervention options.	Not helpful Slightly helpful Moderately helpful Very helpful Extremely helpful
1.2	How helpful were the research activities in supporting and developing your understanding of the Computer Science curriculum and course requirements	Not helpful Slightly helpful Moderately helpful Very helpful Extremely helpful

1.3 Part A	Are you more engaged with your learning and education as a result of this project?	Yes No
1.3 Part B	If yes, please explain how	Yes No
1.4 Part A	Are your parents more engaged with your learning and education as a result of this project	Free Text
1.4 Part B	If yes, please explain how	Yes No
1.5	What has been challenging about home learning and your education during the COVID-19 pandemic. Has there been any benefits?	Free Text
1.6 Part A	Do you have a preference for a particular meeting style from the options listed?	No preference A student inclusive meeting style The original parent teacher meeting style
1.6 Part B	Please explain why.	Free Text

Cronbach's Alpha values

SLCA Questionnaire 1A

The overall alpha for each school was above the threshold for each participant type indicating internal consistency.

Research tool	Category	n	Number of items	Alpha	Potential improved Alpha
Combined Student Questionnaire 1A	Behaviour and Attitude	29	6	0.4	If **Attendance** was removed, alpha increases to 0.6
	Effort	29	5	0.7	
	Vision	29	3	0.6	
	Practice	29	3	0.5	
	Systems	29	7	0.8	
	Overall	29	24	0.9	
Combined Teacher Questionnaire 1A	Behaviour and Attitude	29	6	0.8	
	Effort	29	5	0.9	
	Vision	29	3	0.8	
	Practice	29	3	0.8	
	Systems	29	7	0.9	
	Overall	29	24	0.96	
Combined Parent Questionnaire 1A	Behaviour and Attitude	29	5	0.42	If **Believes that intelligence is fixed** is removed, alpha increases to 0.7
	Effort	29	3	0.8	
	Vision	29	3	0.8	
	Practice	29	2	0.7	
	Systems	29	4	0.9	
	Overall	29	17	0.9	

SLCA Questionnaire 1A Combined Data

PAS Questionnaire 1B

These alphas indicate that the questionnaire meets the threshold for Cronbach's alpha internal consistency.

Research tool	Category	n	Number of items	Alpha	Potential improved Alpha
Combined student questionnaire 1B	Reflective enhancing communication and developing metacognition	29	7	0.6	If **Q1: My parents use parent teacher meetings as an opportunity to discuss my progress with me** was removed, the alpha would increase to 0.7
	Active involvement and home learning activities.	29	7	0.4	If **Q11: My parents do not spend time with me working on creative activities** was removed, the alpha would increase to 0.5
	Expectation, aspiration, goal setting and providing structure.	29	5	0.6	If **Q14.My parents discuss with me my future aspirations for education and employment** was removed, the alpha would increase to 0.7
	Overall	29	19	0.7	If **Q11: My parents do not spend time with me working on creative activities** was removed, the alpha would increase marginally to 0.74
Combined parent questionnaire 1B	Reflective enhancing communication and developing metacognition	29	7	0.7	Removal of no question/questions increases the alpha
	Active involvement and home learning activities.	29	7	0.5	If **Q9: I organise further learning opportunities outside school e.g. tutors, museums, library visits** was removed, the alpha increases to 0.6
	Expectation, aspiration, goal setting and providing structure.	29	5	0.7	Removal of no question/questions increases the alpha
	Overall	29	19	0.8	

PAS Questionnaire 1B Combined Data

Self-Regulation and Autonomy Questionnaire 1C

Research tool	Category	n	Number of items	Alpha	Potential improved Alpha
Combined student questionnaire 1C	External	29	9	0.9	
	Introjected	29	9	0.8	
	Identified	29	7	0.5	If **Q21 Questioning in Class: To find out if I'm right or wrong** was removed, alpha increases to 0.7
	Intrinsic	29	7	0.8	
	Overall	29	32	0.9	

Self-Regulation and Autonomy Questionnaire 1C Combined Data

Teacher and parent interviews

Phase 1- Teacher Interview (School Y: Suburban School)

I: Interviewer, R: Respondent	
I	Again, thanks for doing the teaching instruction interview. Like I said everything is confidential and will be anonymised as well and I am recording this. So just the context, obviously it is over the phone as well and because of the coronavirus it is taking place at both of our homes. So, the first question is, can you describe any training or support you've received for parent teaching meetings, any support at all, and has this helped you prepare?
R	Any support or training that I've had before came from my PGCE where I sat with my mentor and I was kind of observing what he was actually saying to individuals. I had the opportunity at that point to maybe speak to one student that I was teaching at the time but aside from that I haven't really had any other sort of teacher training or support in that regard to be fair.
I	Okay, thank you. Can you describe how you prepared for the parent teacher meeting with the year tens which was sort of back at the end of January?
R	Yep so what I do is I usually prepare their assessment results, that's the first thing that I get together and I also get together resources i.e. books that might be useful to them and just generally look through all their class work. And mainly really just talk to them about how well they're doing and what they potentially could improve in terms of their attitude or any behaviour for learning etc. and any concerns in terms of homework or lack of classwork and maybe even look at some assessment results 'cause I think that's pretty much what parents want to know about, how well their son is doing or how well their daughter is doing.
I	Um hmm, okay. Can you describe a normal parent teacher meeting for computer science and also, how long you normally spend with each parent?
R	Yeah, it really depends on the student. So obviously the ones that are really doing well I just praise them and tell them how well they are doing, I give their parents the results and just give them hints and tips on what to expect for in the next couple of weeks or maybe the next term etc. and what they can do to maybe further their development in the subject. Any other queries that they might have I just answer it there and then so for those ones I usually tend to spend about three/four minutes at absolute max.
I	Okay.
R	But the ones that I've got real concerns with i.e. with their learning attitude and the really just not up to scratch. They're the ones that I usually spend a lot of time with and I'll talk to them really about what my concerns are and what I expect from them going forward and yeah that's pretty much it.
I	Okay, thank you. How do you support the student to prepare for the meeting if at all, so, do you help them prepare for the meeting or is it more the case of they're there with their parents?
R	I don't really prepare anything, I just, I don't really prepare anything with them. I just sort of give them the heads up that I am looking forward to speaking to their parents about them and yeah just kind of see their parents, speak about what I see in class and anything that I, you know, notice in lessons etc. maybe in the corridors or yeah.
I	Okay and what do you see as your role at the meeting, what do you see as your actual role in that meeting?
R	Personally, I see it as more of a coach, I don't see it as a lecturer, I see it more as a coach. What can we get this person to improve themselves as a person and also how can we get the best out of them and also what we can do? What I can potentially do to help them 'cause they might feel sometimes, you get kids sometimes that are kind of struggling but they don't want to tell you that they're struggling and might be finding things difficult so what can we do to maybe support things or try to get them to think about what they are really struggling with and maybe tackling that issue one to one maybe. I don't know, in terms of if they've got no confidence in programming is there something that we can do to maybe help with programming, is there some resources that I can provide them with in order to get the confidence up for programming or any other subject knowledge etc. but I see myself as more of a coach in that situation not more of a yeah you know telling them off etc.
I	Yeah. And what do you see as the parent's role at the meeting?

R	Erm taking on board what I'm saying. You tend to have some parents who are literally writing down notes and really engaging in the conversation and telling me how they're at home, if there are any like common themes that we find that he's doing in class and he's doing at home; they kind of relay their concerns with me as well. Or you have those parents who only really sit down and listen and my expectation of a parent would hopefully be to follow it up with them at home, so if I've them to just sit down for half an hour and revise I would want their parent to follow that up and just basically make sure that they're actually doing that rather than just saying yeah they'll do it and not actually follow it through if that makes sense?
I	Okay yeah, it does, it does. And can you, you touched on this before, but can you explain the information you typically share with parents about a student?
R	Yeah assessment results, conduct in class, attitude, behaviour, homework, classwork. Just whether they are engaged in the class or not, whether they participate in the lessons. Yeah things that I just notice in the lesson really.
I	Yeah, how do you think they use this information from the meeting how do you think….
R	I think most parents look at behaviour for learning, that's the first thing they look for in terms of "is my son helping in terms of is he, is he behaving himself in lessons, is he you know engaging in lessons, how is his is he talkative is he not, how is he engaging with his peers etc.". I think that's the first thing they look for and then I think the second thing after that is how well their son is actually doing in the class, are they passing their assessments, how well are they doing, if they're not doing so well w not hat can we do to improve etc. I think that's the second thing they look for.
I	And, and do you have a structure to the meeting, do you approach meetings in a certain order and introduction etc. etc. or do you have a certain structure you adopt?
R	Sometimes I do, sometimes depending on if I've never seen the parent before, if I've never taught their son before then introduce myself. Others I've seen before from previous years so I don't feel like I need to constantly reintroduce myself so it really depends on the situation. If I've never seen the parent before then no but if I have seen a parent before then yeah, I introduce myself and tell them a little bit more about yeah. I think the first thing I always ask the individual is how well they're doing or how well they think they're doing in the subject and its kind of gauges to see what he's actually thinking and if that's level on par to what I'm actually thinking
I	Okay yep, and how is this student involved in the meeting, how do you feel about their level of involvement in the meeting?
R	More or less they just sit there and listen, you get those ones that I think they've been told off by previous teachers and they've got this angry face and they expect even worse news. But then you've got those really good ones who are looking forward to seeing you, who ask questions as well, like when maybe I'm telling them/maybe when I'm giving them some sort of information about a particular resource to purchase or something and they just really are saying "ah where can I purchase that information from". And then there are others who just sit there and just listen and listen and listen and aren't really taking anything in and then nothing really improving until obviously I see their parent again etc.
I	Okay and how do you feel about that level of involvement in the meeting?
R	I don't think it's effective because I've got no idea whether this individual has listened to what I'm saying, I've got no idea if this individual has processed what I'm saying and yeah, I don't think it's a very effective way of doing parents' evening. Especially if it's just me constantly talking to them rather than it being a general conversation between two parties.
I	Right, thank you. And what in your opinion makes a parent teacher meeting successful?
R	In my opinion, I would love it if parents could follow it up with things that I've said and I also think it's a positive thing if I see a change in their attitude towards what I've told them, you know what kind of issue I've flagged up in that meeting. So if I said you know "you're not really engaging in the lesson" then I would like to hopefully see in the next few lessons that they're actually engaging and that's when I know that, you know, they're participating but aside from that I don't really know to be fair.
I	Okay, okay.
R	I can't really think of anything else really.
I	What do you like and dislike about the structure of parents evening and what would you improve? So, if it's a blank slate, what do you like and dislike and what would you improve?
R	I like the fact that, you know, we have to go to the parents; I like that structure of the parents evening because it gives the opportunity for us to go and find everybody that we are looking

	for, you know, and them not coming to find us 'cause what you find is individuals just pick and choose who they want to go see. And what I don't like about it is the engagement of conversation between myself and the parent and the student, I feel like it's constantly me talking to them rather than it being a two-way conversation where they're relaying some issues to me that I could potentially maybe help them with. So, I ask "how are you getting on with the subject?" and "how are you finding the subject?". What you tend to find is they won't say anything to you at all asides from that, if you don't ask a question they just sit there and they won't say anything to you at all and then you'll find maybe a week later they'll say "oh sir do you remember when you said that in parents evening, what did you mean by that?", well for me I'm just like "why didn't you ask me that when we were there and then at the time?". So yeah that is what I'd definitely improve.
I	Okay, have you provided parents with advice, information or guidance on how to support their son at home or outside school and if yes what sort of things have you advised on?
R	Yeah, so some of the things that I get, what I got, the Year Tens to go and purchase is the book; that's the first thing I always ask them to go and buy. I've also asked them to sign up to websites that can help them with keeping up to date with the programming techniques, just you know making sure that their skills are up to date and that they're always just remembering how to program etc. and how to structure their programs. In terms of theory it's quite difficult because obviously theory is just more of a, I think you kind of know it, so that is probably an area to maybe get them some more resources but I think the book kind of covers that aspect anyway. But yeah those are the two main resources that I kind of give to parents to support them.
I	Great, how could the school improve the support in relation to students' education at home?
R	That's a tough one.
I	If at all to be fair.
R	I think obviously 'cause of the coronavirus it's probably a very good idea. Now that we've got google classroom set up so I think that there's more than one way of doing, especially for key stage four and five, whereas before we didn't have anything for key stage four to support them at home. So now that we've got that at home I can kind of monitor whether they're actually doing work at home so it's a good way of maybe setting homework for example and maybe getting them to… so that I know they've definitely completed that at home and not just a break time, for example, and right before the lesson starts so yeah that could be a potential way forward actually.
I	Okay thank you. So finally, this question has five parts to it but I'm gonna ask you about certain qualities about students and characteristics and I just wanted you to tell me if you discuss them during the meeting and if not do you think they would be useful to discuss at the meeting.
R	Okay.
I	So, so the first one is behaviour and attitude and by that, I mean how they interact with others, how they deal with failure, how they perceive their intelligence. You know, do they have a growth mindset or a fixed mindset, so do you discuss that already or if not do you think it might be useful?
R	I don't discuss that currently but I think that it could be useful in terms of their mindset, yeah, I think that could be useful. I think that could be a good conversation to have.
I	Okay effort: the amount of hard work they dedicate to their studies?
R	Yeah that's in the conversations.
I	Okay, systems: how they organise their learning resources and their time?
R	That is partially part, we partially talk about that, it depends on how neat their books are because when I'm marking I find that some individuals just have their sheets inside the book and not stuck inside that could be, that is, depends on who it actually is then yeah we do have that conversation.
I	Okay practice: how they review their learning, receive feedback or challenged themselves?
R	Yeah that's part of the conversations
I	Okay and then vision: their goals and targets and how they set about achieving them?
R	Nah that's not part of the conversation but I think that could be a good one actually.
I	Okay brilliant, listen thank you very much for talking to me today. I'm just gonna turn the recording off, thank you for that.
R	That's alright.

Phase 3-Parent Interview (School B: Inner-City School)

I: Interviewer, R: Respondent	
I	Great. Thank you for participating in this semi structured interview. Just to let you know that all information will be anonymised and will be kept confidential even after the results have been produced. It's a semi structured interview, so in its nature it's free flowing and please elaborate where you want to or ask any questions or follow up etc in relation to anything I ask. So just to start off with can you describe any training or support you received for the actual inclusive meeting, and did this help you prepare at all?
R	Yes we had really good training for the inclusive meeting. So as parents we had a Zoom session with you where we were taken through an absolutely brilliant slide pack about what the meeting would cover and how it was going to be structured. But that slide pack also built on the months and months of communication that we'd had before about the curriculum. So what I remember most about the preparation for the meeting was talking about how the meeting was not about conveying any knowledge that could have been conveyed through other means, so knowledge of the curriculum or of our son's attainment level, but it was really focussing on forward looking, and that the role of the meeting was to get the child to … well young person … to understand and own the actions that they were taking forward. It was really good training, really good training – including viewing us and the teacher as potentially scary figures of authority, so how to ensure that the young person was both confident, but also took on board the wisdom of those figures of authority – it was really good. And then the slide pack, you circulated the slide pack afterwards so that we could go through it, but I was really clear then what the meeting was going to be about.
I	Brilliant, thank you. And was there any other preparation you involved yourself with before the meeting? I suppose you looked through the slides or … was there anything else?
R	Yeah looked through the slides, sort of reminded myself of the curriculum and looked through … we were encouraged … your emails encouraged us to … well to say in the structure of the meeting that [redacted] … our son would be going through his learning needs and his goals. So I think we'd had an email about those back in November of our son's sort of self articulated goals, so I busied away and went back through my inbox and looked at that. Looked at his recent marks, grades and engagement scores, so was informed of the data, and we we talked to our son. But we didn't kind of pre-rehearse it, because we just knew what was expected of our son. We know the role you're going to play in the meeting, so I hope you're ready with what you're going to say to us and your teachers, so … yeah.
I	Thank you. And the meeting itself, did you notice was there an observable structure or style to the meeting?
R	Yeah it was brilliant, it was really funny actually, it was really good. Cos yes there was a very clear structure and style, and our son had been saying oh no no for ages, and I said are you clear what you're going to be saying, he said oh no I've got it completely taped – we've been through this so many times with the teachers, I know exactly what I'm going to say and we've rehearsed it. So there was that structure, but then a rather … yeah, a rather brilliant thing happened in the actual meeting itself which is he started on his sort of set piece that he was going to say, and then I think the teacher gave a cue to go sort of shorter cos had worked out that you can't get through all the material, you can't get through the 'Mum, dad, I'd like you to meet my teacher, his name is [redacted] all of that, there wasn't time. But then the thing that actually happened in the meeting is [redacted] started … our son started talking around his rehearsed material, and then he realised that wasn't actually cutting through and he stopped. And he just re-cut it in his head and kind of actually articulated it for himself in a really clear … it just got straight to the point of what he was committed to focussing on going forward, it was really good. And especially as he can get … when he was very young he had speech therapy for a stammer and he sometimes has a kind of interiorised stammer, it can under pressure occasionally form a block in formulating his words. Other times you wouldn't notice it, and I probably only notice it cos of … well cos of being his mum. But rather than stumbling and hesitating he kind of paused and then got out what he wanted to say, so it was really good.
I	And what do you think your role was at the meeting, how did you perceive yourself and your role in the meeting?
R	Well I really … I sat back much more … I don't really sit back very much usually (laughs) … I sat back much more than I would have done without all the training material. My role was essentially to sort of monitor and probe, so to listen to how convinced I was that our son had

	really internalised and was committing to the work actions he was articulating. And then to sort of monitor and then to nudge … I really took on board in your training course you're figures of authority, so a) you can be quite scary, so just not being, trying to not to be scary, but b) you've got wisdom that's worth listening to. So the nudge was you know ensuring that he really was committed to pulling his finger out and getting his assignments in on time which is the perennial issue. (laughs) So yeah, monitor and nudge I'd say.
I	And what do you think the teacher's role was?
R	Um … the teacher's role was to verify and assess the content of [redacted] self-articulated commitment to his areas of focus and to make sure that those were the right ones necessary for where he was at, both on knowledge and on learning style.
I	Yeah. And what was it like to have [redacted] play a greater role in the meeting, and how did this new level of involvement make you feel?
R	Oh it was great, it was really good, it made me feel this is what they should always be. I mean at this age they always need to be in the meetings, and it made me feel really good that he was … you know he was in charge and we were listening to his own articulated commitment. Because I'm you know fully confident that I wouldn't have to be hassling him about assignments that he's forgotten and everything, and it's just much easier when it's based on a promise he's made rather than it being done to. But it was just really good hearing him involved, and I was very … yeah I was really proud and chuffed as I say when he kind of departed from this script and actually kind of clicked with the underlying process of 'Hold on this is about me and my learning and what I need to do for Computer Science – and of course I know this stuff, and it is the following' you know. That was really good when I could just see the shift that he had really internalised it – that was brilliant you know.
I	That 'ah ha' moment is brilliant, yeah.
R	Yeah.
I	So in terms of the actual information at the meeting, was there certain categories of information discussed? So was there things like behaviour or effort or attitude – was there anything in particular that you picked out that you thought … that was sort of categories discussed?
R	Yeah I mean behaviour was pretty light. I think if his behaviour had been really bad I hope I would have kind of known that earlier. So that was there, I mean it's light touch, you know how he is in class, it was much more around learning priorities and commitment, forward commitment … and it was subject areas, topic areas, kind of work activity that could cement that topic area or conceptual area. I mean actually for him it was mostly … his skills are pretty sound on programming, he absolutely loves it, so skills were pretty sound on that. There was kind of content of all the legal and ethical side, so to flag up that he'd be doing that. And then there was the how and the what – you know how he was going to work and what he was going to focus on. Yeah, and a bit about behaviour and conduct.
I	Great. And you talked a little bit about targets and stuff and how [redacted] was in charge of that – what sort of outcomes and actions have happened as a result of the meeting?
R	So outcomes and actions … I mean we know that the area … we know there's a topic area of focus which is the part of the curriculum he's less secure on and just hadn't been covered at that stage, so ethical and legislative. And that sort of means that … what happens is I kind of monitor what assignments are coming in, cos his real challenges are not so much on content of curriculum but on organisation and completing his work and planning his time. So I can sort of be on his case and use my authority, but hopefully in quite a constructive way, to ensure that he really is following up on those areas. I have to say it doesn't really work so brilliantly because it's still … you know they're at the age it's really got to come from within, and a parent putting external pressure doesn't really work. But what I am doing and can do as a result … so it's more just making sure he gets in touch with his teachers and explains if he hasn't submitted things why, and what he's struggling with. So that's the main thing I do is sort of nudge him to keep communicating. And then the other thing I can do is just stay engaged and interested in the curriculum, so just sort of … so I just have a lot of conversations about GDPR and the Data Protection Act – I kid you not (laughs) – at lunch time. It's quite good, the slide pack's quite useful, I have to deal with all that stuff at work, so … so actually showing him that you're not doing this just for … Data Protection Act isn't just for GCSEs, it's for life. (laughs)
I	It's for life yeah. (laughs) So what did you like and what did you dislike, and how could it be improved moving forward … that's the meeting yeah the meeting.

R	The meeting. Oh it could be a bit less artificial, it was very very sort of scripted. So that would be my only improvement point. But even with that artificiality, I mean it just knocks the socks off the standard format. What did I really like? – I liked the fact that the majority of the work had been done outside of the session, that we as parents are educated on the curriculum. It wasn't about curriculum, we're educated on where he's at in terms of attainment and in terms of effort, so it didn't need to be about that. And it was actually all forward looking on action on, and self generated by the student. I mean that's just brilliant. And also we're totally kind of confident that that's the right thing to be doing because of all the material that you'd shared about the evidence base of how students best learn. So we felt it was actually really sort of useful. Otherwise these things can be really awful. I mean I'm a relatively informed and confident parent, but there's something awfully infantilising about a parents meeting – for the parent itself you feel like you're being judged and marked and it's how good your parenting is, and you can feel as nervous as … it takes you back to being a teenager 'Are they going to say something awful about my child?' and it's not like that at all, because the content and assessment of levels is all done outside of the meeting, so it's really you know problem solving time. Yeah, and commitment and forward looking. So … really good yeah.
I	And just I suppose on a broader sense now, there's a lot of engagement activities during the research and one of them was the pedagogy text which was sort of tips and hints, the other one was the Computer Science quiz text messages. You spoke about in November getting the subject knowledge audit and the intervention list.
R	Yes.
I	And then there was the toolkits and the videos and then there was the actual meeting itself. Out of those different engagement methods what did you find most useful and why?
R	Oh well do you know I'm going to be a cop out, I liked having the whole suite of them. I did like … the learning styles was really good, I used it with my older son who's an A Level student at another school as well, that was really good sort of prompts. There was a lovely quiz about different learning styles - that was really good. Yeah it was stuff I didn't know about you know … yeah the sort of cramming techniques, flash cards etc and only useful in some situations not in others. It was just really well founded and it was a really good springboard for conversation and I could see it was all being cemented in the classroom, so that was … I really liked that. But with Computer Science which is a subject I didn't learn at school … well I did back in the early days of ASCII code and BBC computers, which was hilarious you know in the mid 80s – dinosaur stage … the quiz points and reference to the GCSE Bite Size pieces on the website were brilliant, I mean really good at understanding the curriculum, that was incredibly useful. So I think both of those were good. The videos … I think the students had the videos too, I didn't watch many of the videos, but I told him about the videos and he said oh yeah we've seen that in class. So then I'd talk about oh what did you gain from that. So it was the fact that the student had had the same material that we had was good because then it could just prompt a conversation between us, which was actually the valuable thing.
I	Great. And was there any method that you thought wasn't very useful, was there anything that you know actually you could take away and it would still be … the rest would be okay?
R	Um … yeah you could probably boil down … if I was being really picky you could probably boil down some of the learning styles material which some of it is quite sort of academic in how it describes … oh I'll get the words, all the pedagogy of learning. I mean it was good to know that the academic credentials was there but it could probably be made more parent friendly, user friendly, by even more concise and plain English. I mean I wasn't really interested … I've been a secondary school governor for a bit, and so that was nice because I could … I was always on the finance committee, and I quite fancied being on the curriculum committee, so it felt like I was in a (laughs) broader workshop, but it could probably be made you know even more concise, but that's just splitting hairs it was just great to have the material in the first place.
I	And you touched on this earlier, so do you feel more knowledgeable about the computer science curriculum and what it entails and its content?
R	Oh yeah absolutely, definitely – a million percent. It's really handy, it's really handy for me professionally as well actually the work on … yeah it's just really good. Goodness, it helps me sort out the wifi as well, I'm just much more kind of confident, rather than go '[redacted] this is broken, can you sort it out?' – we're all more informed. Yeah it's really good.

I	And do you think you've learnt anything new about [redacted] as a result of the engagement activities?
R	Yeah I'm just much more … I'm much more confident that, yeah he's really engaged with his subject, he really likes it, he really enjoys it, he's quite good at some aspects. You know I can see he's got an aptitude for programming, I mean I did send him on coding summer courses and things … before in two different summer holidays … but that was much more as something to keep him busy with in the holidays and off the computer in a more constructive way. And now I've really … yeah I really respect his huge range of computing skills and that application. I mean I really do, I mean I supported him in building a PC … yeah I mean he's fleeced me a bit, he persuaded me that our old very out of data Apple Mac needed an upgrade and we should let him build his own PC – and he set out a whole costing project about how it was going to be really good value for money, and so yeah I just thought yeah do you know what, I'm going to do this, and then I watched him with awe and wonder, so I learnt a lot about him, I learnt … because he could tell me and explain what he was doing at different parts of the curriculum I was better informed at you know assessing what he was saying. Yeah and I've been really confident to let him make his own A Level choices which is the right thing to do, and for this being a really good choice for him because he loves it, he enjoys it and he seems to be pretty good at it.
I	Good I'm glad he's thinking about it to be fair. You know he's definitely got a talent for it, there's no doubt about it.
R	Yeah, yeah.
I	What differences … was there differences in … so when you were speaking to [redacted] about Computer Science and all the activities and things like that, did you notice a difference in the way you discussed things with him as a result of the engagement activities?
R	Yeah yeah, because it comes from a much stronger knowledge base from my side I can understand what he's talking about, so it's just really interesting. No it comes up in conversation all the time. He feels validated and self confident because it is one of the things he loves and we can understand it, you know not being like a Victorian household saying you know 'It's terrible you're engaging with a pen rather than …' – spending too much time with your pens rather than your slates, or whatever the other conversations there must have been – 'This new fangled electricity is going to be the death of us all' you know (laughs). I mean there's just none of that, and we can actually see the benefit.
I	And as a result do you feel more engaged in [redacted] education, I suppose and learning, and his development with skills and things like that.
R	Yeah 100%. I mean the thing is we've always been pretty engaged with his learning, but the technology side of his life had always been more of a … a bit more of a mystery. And now it's just not a mystery, it's really good. I mean I've been focussing anyway getting engaged in the games he likes doing and the gaming, but now I can see the connection between the type of gaming he does and actually what he's interested in from a systems point of view, if that makes sense.
I	Yeah. How do you feel? – do you feel more engaged in his learning as well, as a result of the actual activities, the research?
R	Well I feel more engaged in Computer Science as a specific subject, but I think I was pretty engaged in his learning anyway. So that hasn't shifted, but it's just much more productive engagement. For two reasons – one, because better informed about the subject area, and better informed about the learning style. So all of that learning styles piece has meant that my engagement with all his other subjects has been more productive.
I	That leads nicely on to my next question, I was going to talk to you about that – in terms of whole school, where do you think we could improve? What sort of lessons could be learnt in terms of looking at other subjects and helping parents at home and outside?
R	Oh so much. I mean I think this should be the format of teacher parent meetings, they should always have the pupil there. Because the school is so good at its data it should be really clear that this isn't about sharing … there's so many things, you don't need to waste that precious time with the tripartite of the pupil, the teacher, the parent – you don't need to waste that time on giving information about the curriculum, or about levels of attainment, engagement or behaviour, because all of that can be done through the other channels of communication. So I think that you've really hit upon a golden nugget here of all of that should be happening before. So the parent should be prepared before these meetings by having been given the tools to familiarise themselves with the curriculum content and levels of attainment. And then I think it can be … it's much more about forward goal setting, rather than a sort of

	report, how have things been going … it's like okay let's all be on the same page for progress attainment. I think it really should be the whole school model. Yeah cos they're very data rich, the parent pupil meeting, but it's still been too much information transmission, the style of [redacted] ones is information transmission from teacher to parent with the student as a silent party or not there – and I think that really should shift.
I	Yeah okay, great thank you. And my last question's a bit more wider in scope – Covid 19 in terms of lockdown and all the restrictions and the tiers, how has it affected your approach to parental engagement, and did you … has there been any benefits as a result of it?
R	Oh yeah so there's been some both massive disbenefits and massive benefits. So the disbenefits are you know the teaching is just not the same when the pupils are not with each other, with their peers and in the classroom - it's a lot of strain on the pupils. But I think there's a massive benefit, and for [redacted] and for us it's been a real massive benefit. Because yeah, like many sectors or like me at work … oh I think it's shifted the whole school curriculum and monitoring system onto online, and that has really got to be mainstreamed. And for us it's absolutely transformational having all … and for [redacted] having all the tasks across all subjects, all assignments set on a single platform – is just brilliant, and one that as a parent I've got visibility of. And it was really archaic before, I mean [redacted] has got brilliant teaching, brilliant individuation, you know the different sets, it just meets the needs of a genuinely comprehensive intake, and it's a staggeringly brilliant school in that regard, but was unbelievably behind in my humble opinion on being so paper-based for the homework systems. It's brilliant to have all the rigidity of that homework system – you must do your homework overnight and hand it in – but I think there's then just so much … there must be so much double keying in all the data capture. And with all the developments in ed tech that just should be a seamless whole of assignment setting, teacher marking, all into the same system, and then parents can monitor. But then crucially the children … particularly if they've got organisational challenges, which less face it a lot of them do … it's all within their devices, they can know what task was set. My other son was on iPad with all tasks set online and monitoring from Year 9, and it just takes so much of the logistic hassle. Whereas for us it was always just a termly drama with [redacted] organisation struggles, of his meltdown half way through the term, be getting loads of detentions and work support because he just couldn't keep track of what he was supposed to be submitting when - and for all of that to be digitised is just brilliant. And then in terms of curriculum delivery I think there's just massive scope in the ed tech sector isn't there in terms of online content and mixed blended learning types. And actually he's finding in this lockdown some really creative and imaginative lesson content, and then you know hard core – focus down, knuckle down, hand the assignment and hand in. And never before has school looked so close to the workplace, because me and my husband are both working from home, and we're all doing exactly the same stuff. You know it's really coping with the teams, all the etiquette with that, handing stuff in, PowerPoints assignments in, you know … you know that's really good, and it's been great having time with him actually.
I	Yeah yeah, there is a small silver lining with Covid isn't there … there's nothing open, but at least family time certainly improved I think.
R	Yeah, and also I mean GCSEs … don't get me going on the Michael Gove reforms, but for them to be so knowledge-based and all based on end year exams, I mean that's back to … I was final year of O Levels, and it's back to that. It's just you know … well it's not based on sound educational principles. I mean [redacted] actually happens to be really good at exams and under pressure, but it's not great for lots of other kids' learning. And actually having done an exam season with our older one, it's just brutal that pace, you know a month long period of all those exams – [redacted] doing 12 subjects, I mean it's just nuts. Whereas actually the constant assessment is much better in my view, you know.
I	Yeah, doing it that way, yeah.
R	Yeah.
I	Great, thank you very much, that's brilliant.

Student Group Interviews

Phase 1-School B: Inner-City School

I: Interviewer, R: Respondents	
I	I'm now carrying out a semi structured interview, well a focus group, with students from the [redacted] about the pre-intervention and parents evening. So people in the room … so just a quick question … have you previously attended a parent teacher meeting anyone? No? Has no one in the room? Okay. So … in terms of – you can't really describe it. Can you describe any training or support you've received, or your parents have received relating to parent teacher meetings?
R	We were given textbooks to buy.
I	Textbooks to buy. Okay. Anything else?
R	My parents usually just tell me … they usually relay what the teachers have said, and it tends to just be to be more active in class and do more independent study and they'll give you resources for that.
I	Okay great, thank you. Can you describe … okay, so the people who have just joined us – you haven't been to a parent teacher meeting before?
R	No.
I	No okay. Remember guys to speak up quite loudly if you can, just because it's recording. So all of you in this meeting haven't attended a parent teacher meeting – would you like to?
R	Yes yes.
R	Yeah.
R	Yeah.
I	Got to say yes, you can't nod guys, so … yeah. Can I ask those who said yes why?
R	Well I would like to just learn more and be there personally and not have to have it relayed to me.
I	Not have it relayed to you. Yeah?
R	Also like obviously I think the teachers' words are going to get like a bit jumbled when it goes through my parents, because they're not going to say it exactly how the teacher said it, might make a difference.
I	That's true.
R	I think the input of the parents and the teachers are both important, but so are the inputs of the students. And having them all together would be helpful for the student and the teacher.
I	Any other views? No, okay, right thank you. How do you think a normal Computer Science teacher meeting might go? So thinking about in terms of your teacher and your parents, how do you think the interaction would normally go?
R	I think it would probably be a bit one-sided on behalf of the teacher.
I	Okay.
R	Talking about grades and like how they're doing in class.
R	And talking about like the theory and the practicals separately.
I	Okay yeah. What do you think is your parents' role at those meetings?
R	To listen, relay information towards the child and help and encourage them to do better.
I	Okay. Anything else?
R	Just provide information for the teachers.
I	Okay. What do you mean by that? What sort of information?
R	Well I'm not really sure.
I	Okay all right. So I know you're not actually in the meeting, but how do you feel involved in the parent teacher meeting, what do you think your involvement is?
R	We're the subjects.
I	You're the subjects, okay, interesting. So can you explain the information you typically receive? Sorry before I go on to that, what's the teacher's role in the meeting? I know you spoke about this a little bit more, but what do you think is the teacher's role in the meeting?
R	Just tell the parents how the student is getting on in class and like how they can develop their ideas and just like be better.
I	Okay. Anyone else? No? Can you explain the information you typically receive from parent teacher meetings? So can anyone tell me what you might get from your parents regarding it?
R	How to improve in class.
I	Okay.

R	They might give you a few like websites with something that like improves your learning and has more information.
I	Okay yeah, anything else, no? Okay. Do you think there's a certain structure to the meeting? Do you think there's certain categories of information that are discussed?
I	How many people say yes, put your hands up so I can … one, two, three, four, five, six, seven … how many people say no? All right those three people who said no, what do you think it's like?
R	Well from my understanding the teachers have very limited time to speak to the parents. So I think they're quite rushed in what they have to say.
I	Okay. Anyone who said yes, can you give me a bit of information what sort of structure you think it might be like?
R	Well I'm not sure of like anything in particular, but I know that they always discuss with my parents like behaviour.
I	Behaviour. Right, anything else?
R	Exam grades.
I	Exam grades, yeah.
R	Effort in class.
I	Effort in class.
R	Like the strengths and weaknesses in different topics.
I	Strengths and weaknesses on topics, anything else?
R	Involvement in class.
I	Their involvement in class. Yeah okay good okay thank you. What do you think makes a parent teacher meeting successful? So what do you think would make it really successful if you had to think about it?
R	I think if the parent and the teacher communicate well and like the teacher says to the parent what the students is doing well in and what they're not doing well in. And if like a result comes out of it.
I	Okay.
R	If the parent comes out with a piece of advice that they didn't know before, like to improve their child's learning.
I	Okay.
R	If the child understands what they need to do to overall improve, and what they should stick to if they're doing already
I	Okay great. What do you like and dislike about the current structure to the meetings, and how could it be improved?
R	Well my parents always tell me things that I already knew.
I	Oh so your parents tell you things you already knew, okay yeah.
R	I think maybe there's not enough time sometimes to see all the teachers.
I	Yeah fair enough.
R	Because they have to go round to different people.
I	Yeah. Anything else?
R	What we're given is pretty much a reiteration of that.
I	Okay reiteration, yeah fair enough. Anything else? No okay. How would you improve them? What would you do?
R	Try to get the pupils more involved
I	Yeah okay. Who agrees with that, just out of interest? Okay that's one, two, three, four, five, six, seven, eight, nine, 10, 11 … oh it's unanimous – it's everyone 12 okay. Is it 12? – one, two, three, four, five, six, seven, eight, nine, 10 … yeah it's unanimous, all right. How would you be involved? What do you think, what would that look like?
R	I think if the pupil came along with the parent. Some can, but I think if it was more incentivised by the school for it to happen. And then they could input to the conversation as well.
I	Brilliant, yeah.
R	Yeah because the parents don't really know what actually goes on during the lesson, they are just taking the perspective of the teacher. And if the student comes along as well then they would have a different perspective.
I	Fair point, yeah I take that on board yeah.
R	Some pupils might be a bit like scared about what the teacher's going to say, so maybe make the whole thing a bit more positively framed.

I	Yeah yeah, really good point, anything else? No, okay. Can you describe your parents' role at home outside school in supporting your education? What do they do at home for you?
R	They try to motivate you and like they force you to stick to like a programme.
I	A programme yeah.
R	They get like the different stuff, like guides, study guides.
I	Study guides okay.
R	Assisting with homework and studying.
I	Yeah.
R	They make sure…
I	Yeah.
R	Make sure you do like revision when it comes to exams.
I	Yeah.
R	Check on classwork and homework.
I	Check on classwork and homework.
R	They like buy your stationery.
I	Buy your stationery, yeah important yeah. Anything else? No? Okay. So in terms of outside school, so information and guidance on how you learn outside school, has the school provided you with any guidance on how to learn outside school?
R	The teachers have given us like a few textbooks. But that's it.
I	That's it, textbooks.
R	And websites.
I	And websites, yeah.
R	They do like tell us what study guides to get and which are better
I	Okay, which study guides to get, yeah.
R	And they do make like a revision lesson stuff when there's the actual exams coming up.
I	Okay good, all right. How could the school improve in relation to your education outside school and home? What could they do? – teachers and the school in general – what do you reckon? Have you got any ideas?
R	If there were like more detailed revision guides.
I	Okay.
R	Suppose people don't really know how to … there isn't … if we were taught how to revise more effectively, that would be …
I	That would be useful, yeah. That's a point, anything else like that? Cos that crosses all subjects doesn't it, that's not just one subject. Anything else? No? Sure? All right. I've got these qualities and I want to discuss them with you. And I want you to tell me if you think they'd be useful to be discussed in a meeting. Now that could be with you or without you, but either way. So do you think these are sort of useful qualities to be discussed? So behaviour and attitude would be how you interact with others, how you deal with failure, and how you perceive intelligence, what do people think about that, do they think that would be useful? Yeah, people are nodding. Can people say why?
R	I feel like a person's behaviour in class is quite reflective of their effort and how they would influence themselves and their peers to try harder or worse.
I	Okay, great yeah.
R	It would probably like help bridge the gap between teachers and parents because if the student's like trying really hard in class but not trying hard at home then they'd be able to work out that.
I	All right, fine, great. Right, anything else? What about effort, the amount of hard work you dedicate to your studies, do you think that's an important quality to discuss at meetings? Yeah [nodding], why?
R	Some students will perform better than others, so I think taking into account how much effort people put into their work could be motivating for students who feel like they're performing worse than other people.
I	Okay.
R	I think it's cos like your parents can see your grades, but if they don't know how much effort you're putting in they don't see your full potential, like what you could get.
I	Really interesting. Yeah.
R	It has a lot to do with what you're doing at home as well, how much effort you might be doing in the work you do at home.

I	So you're saying effort is related not just to the class but what you do at home as well. Okay. Great. What about … it's a funny one – systems. And what I mean by that is how you organise your learning, your resources and your time. Do you think that should be something that's discussed at parent teacher meetings? [nodding] Yes?
R	Yeah because a lot of people at our age would rather be playing at lot more than studying, I think a revision timetable really effective.
R	I think also if you're more organised and prepared for the work that you need to do you're going to be like less stressed and uptight cos you already have all the resources to be able to learn.
I	Yeah great.
R	I think different people will cope with different levels of work better than others and therefore although it's important to talk about the systems that people put in place for their own, it could be quite difficult because of the fact that it's quite subjective in the way that teach yourself.
I	Yeah okay, yeah. What about practice? And what I mean by that is how you review your learning, how you receive feedback or how you challenge yourselves – do you think that's important or to be discussed?
R	Yeah, because if you do like the even better ifs, then you are not giving enough effort
I	Yeah.
R	… then you're not maybe making enough effort.
I	Okay yeah. If you're not doing even better you're not putting enough effort, yeah. Anyone else – practice qualities in order to say they might be important? No, all right. What about vision, what I mean by that is how you set goals and how you challenge yourself and how you set targets and then how you look to achieve them – do you think that's important to be discussed at parent teacher meetings? What do you think? Goal setting?
R	Yeah.
I	Yes?
R	The more ambitious you are it's probably the more effort you're going to put in to try and reach those goals.
I	Okay. I tell you what then, give me your top three, I'm going to go round the room and give me your top three. So you've got behaviour and brackets – attitude, effort, systems, practice and vision. Right? So behaviour, effort … so behaviour plus attitude, and then I've got effort, systems, practice and vision. I'll tell you what, put them all in order, right, put them all in order. So we'll go round the room and tell me what you think.
R	I would say behaviour and attitude they would be my top two. And I'd put vision third.
I	Yeah.
R	And then systems and practice 4th and 5th
I	Yeah. And then systems and practice going fourth and fifth. And what about effort? Second, you said second. What do we think?
R	I think I'd probably do exactly the same - behaviour and attitude first, then vision, then system and …
I	Then practice, okay.
R	Behaviour, then effort, then practice, then vision, then systems.
I	Okay.
R	Yeah I would do the same.
I	Same.
R	Behaviour and attitude, then effort, practice, systems and vision.
I	Okay.
R	Behaviour, effort, practice, vision and systems.
I	Okay.
R	I'd go vision, effort and then behaviour plus attitude.
I	Okay.
R	I'd go systems, practice, behaviour and attitude, vision and then effort.
I	Okay, great.
R	I'd go for effort, vision, behaviour and attitude, systems, then practice.
I	Yeah.
R	I would say effort, then behaviour, and then practice and then vision and systems.
R	I'd put effort, vision and behaviour, and then practice and systems.
I	Okay.

R	I'd put effort, practice, systems, behaviour and attitude and then vision.
I	Okay brilliant. Listen boys thanks very much for that, that's been really really useful, thank you.

Phase 3- School B: Inner-City School

I: Interviewer, R: Respondents	
I	Okay this is a recording, a semi structured interview or focus group of the students involved in the study and we have all students present with us. All information will be kept confidential and will be anonymised. So to start off with, can you describe the training or support you were provided with for the inclusive meeting? Can anyone describe any of the support you had for it, for the meeting itself? Student?
R	So firstly, I had an online session on 'teams' whilst we were still in lockdown and during that we were given a basic skeleton script to fill out so that, although this first meeting was more artificial than future ones will be it was easier to fill out the skeleton script so we knew what we were doing.
I	Great. Okay, student?
R	We also got our strengths and weaknesses and what we could do to improve ourselves in the subject and we have, we learnt about different learning types and different revision strategies.
I	I'm going to try and avoid saying names boys because I've got to redact them anyway so I'll just do some pointing.
R	We were invited to also go in instead of attend the teams meeting and we were given the same skeleton script and we were assessed in exactly the same way but it was face-to-face so it was more informative.
I	And did it help you prepare? What do people think? Was it useful to prepare?
R	Yeah.
I	Yeah? Okay. Alright. Can you describe any other preparation you did for the meeting outside the resources and as you said outside the sessions etc. Any other?
R	Talking over things with parents like talking over exam results and goals as well as running through the script before the meeting.
I	Yeah.
R	Parents were more involved with the actual material of the course because they kept on asking us questions about computer science.
I	Okay, great. Can you describe the meeting style? So was there a meeting structure? Was there a certain style to the meeting adopted in relation to it?
R	So first we joined the meeting, we say our hellos, like hello I and the I says hello. And then we were asked to essentially say what we'd got in the script, we didn't have to exactly say the script but most people did so we then followed that through and then after that we got the opportunity to ask questions and our parents go the opportunity to ask questions and so he gave more information as well.
I	Great. Was it different for anyone else?
R	Yeah I think it was a lot more student lead than other parent-teacher meetings would've been.
I	Okay.
R	I think a lot of the fluff with the script was skipped over and we just went straight to the strengths, weaknesses and revisions strategies.
R	I find it quite adaptive or flexible for a meeting like that and I think we talked about my weaknesses for computer science and we compared that to what our Is thought out weaknesses are.
I	Great, thank you. Anything else? No. So what was your role in the meeting? So if you had to think about the different roles the teacher played, your parents played and you played, what was your role?
R	The communicator.
I	Yep, yeah, okay. Anything else?
R	The one who receives, who receives, they get the information and results to better themselves.
I	Better themselves. Okay, yeah. What about anyone else? What about the teacher's role? What's the teacher's role in this?
R	The teachers gave feedback in general, on our strengths and weaknesses within the subject and maybe plan on how to improve and what to work on.

R	It was most likely moderating the ideas that we put forward and making sure we didn't like do anything wrong.
I	Okay.
R	Yeah they kind of added on what we were saying about all the revision strategies and our strengths and weaknesses and I think they also received information from our parents.
I	Okay and what about your parents then, what sort of role did they play during the meeting? What role do they have?
R	They, they take in the feedback and then they relayed it back to us to see if I understood.
R	I think they were given the information they needed to support us with revision.
I	Alright, okay I'm gonna look at this side for a bit more questioning. You're kind of just starring. Alright what about, how did you use the information? So you talk about strengths and weaknesses and stuff like that and targets. So how did you actually use the information?
R	Well once we identified what my weaknesses were I tried to revise those aspects of computer science rather than the ones I'd done quite well with.
I	Yeah, okay. Did anyone else find that about strengths and weaknesses? That actually, was it useful to know your strengths to in some ways put them aside? Do you know what I mean by that principle? Once you know go actually "I'm actually alright with that, I'm not gonna keep looking at that stuff"? What else, what other kind of activities did you do?
R	Can we talk about the … program?
I	Yeah, yeah of course.
R	Well, I think that was really useful because you could go through the whole course and everything you need to know from GCSE and identify exactly what, what, which ones are our specific weaknesses and which ones we just need to check up on.
I	That's really interesting, the audit. What, what in terms of, what did people think of that because that's something, do you think that would work across all subjects or do you think that's something, is that something you already do in subjects? Or you know what's peoples take on that?
R	Well, it's already something we do in other subjects but it is very useful, it helps with like revision and stuff.
I	Yeah, I'm gonna come on to ask you which were the most useful tools later on but that's interesting you raised that now.
R	I think with subjects where it's not so like so maths or science based, like English, I think it would only really help us to know which like style of questions to work with. But with maths and other sciences it would probably help us more with the parts of the course.
I	Fine, yep, yeah.
R	I also learn my weaknesses in terms of planning and organisation, not just the topics to revise because I wasn't making revision time tables and stuff like that.
I	Okay so sort of the actual attributes as well as just looking at the curriculum.
R	Yeah so I did a lot more question practice for all my subjects in general.
I	…. okay.
R	It was also really helpful knowing how my strengths and weaknesses in subjects, in topics changed over the course of the curriculum.
I	Okay, good stuff. And how did it feel to take a greater role in a meeting? Because it is unusual 'cause to be honest it's not a normal format for a parent-teacher meeting. So what was it like to be, I suppose, more at the forefront?
R	I feel like whilst we were going over our strengths and weaknesses and going over our exam results it was more useful in a student-teacher meeting and our parents were kind of like, they were more interested in our general progress than in our specific strengths and weaknesses.
I	Yeah, okay. So if you were to think about, if you were to think about that process, what would you, what would you like to do in the meeting if you were to be there? So, are you saying you'd rather your parents spoke to the teacher or are you saying you'd rather there was still a parent-teacher-student interaction but what would it be on if that was the case?
R	I just think it's not, I don't know, I think it would be more useful to have regular planned student-teacher meetings because we never really have the opportunity to go 1-on-1 with you and go through our strengths and weaknesses so I think it would be more useful than a parent-teacher meeting.
I	Yeah, so like a 20-minute slot where you just sit down and work it out with the teacher, yeah.

R	The face-to-face contact with a teacher is really helpful as well, just to like make sure you know where you actually are so you're not behind in your subject and need to catch up or even how to catch up as well. I think that's really helpful.
I	Okay thanks.
R	I feel like sometimes having your parents there it allows them to help you motivate you. Like they know what you have to work towards and check your work.
I	Yeah, yeah thank you for that. And, so, how did it make you feel? Were you anxious, were you happy, were you sad, were you like not bothered at all by it? How did the actual process make you feel?
R	I think not bothered.
I	Not bothered? No. Anyone else? Any other opinions or takes on it? No. Can I ask why not? Why were you not bothered, was it because, why were you not bothered?
R	I think most of us weren't really bothered because we weren't really too worried about what would transpire in the meeting, like most of us in here were doing relatively well so, I don't mean to be rude but let's say a student who is not doing as well they might be a bit more anxious about that kind of thing especially if the school haven't been in touch with their parents.
I	Yeah, okay. Great, yeah
R	I think the fact that in the, the parent-teacher meeting that we did I wasn't really expecting feedback from the teacher, … would've been the more valuable thing so that's way I didn't really feel either way about it.
I	Yeah, okay.
R	It was nice to be prepared for it which I think if you were anxious that would reduce that.
I	Fine, yeah I see so if you prepare for it you feel less anxious. Okay.
R	I think if anything it was more comfortable than a regular parent-teacher meeting because it's like a strange experience to be sat there whilst your parents and your teachers talk, it feels like you've kind of got a passive role, where like here it was more active and it was more like a dialogue with the student as well.
I	Did anyone else think that?
R	Yeah. It was really helpful being given agency.
I	Being given agency? I'm quite interested in that idea of the original parent teacher meeting and the interaction of how it is. How do people feel in those original meetings in terms of their role or what they were there to do?
R	It, it feels alienating, it's like watching two people talking about you with not really much input or not, maybe not really much desire to have an input.
I	Fine, okay.
R	But when it was I found it quite helpful.
R	I find it like a bit passive and a bit uncomfortable sometimes. Especially when it's the subjects I'm not doing the best at, they're a bit passive sometimes. Yeah it's just …
I	Okay, good, fine. Now there was loads of, actually alright then, I'm gonna come to this question, which meeting format did you prefer? So let's, so let's take a vote, let's do no preference to start off with. Who's no preference? No preference for original or new meeting style yeah to be fair I should outline that properly. Who's no preference. So we got one, two, three, four, five, six, seven. Alright who's in sort of student inclusive meetings? Who thinks that one? One, two, three, four, five, six, seven. Okay, who's original? Sorry, seven, eight. Who's original? That's interesting, do you wanna, can you explain, just tell us why.
R	I don't think it's important for the student to be involved because the student sees both his parents and his teacher on a weekly basis but the parent and the I don't see each other on a weekly basis so I think it's more important for them to talk.
I	For them to talk, that's interesting. Okay thank you, yeah?
R	And also from that aspect maybe teachers are less likely to hold back if the student wasn't there.
I	If the student wasn't there?
R	Yeah.
I	Yeah, okay so they'd talk more freely without them yeah. Okay, so if, so let's say that it's not an opportunity, that there's not an opportunity, you have to be there, I mean would you still go for the parent-teacher style or would you go for the student inclusive style? If the student has to be there. So let's say the school policy has to, yeah, the school policy is that when you get to lower sixth and upper sixth you have to be there.

R	Right.
I	Which is different from third and fourth.
R	Probably student inclusive.
I	Right that's interesting, so can I ask that question again then, so if you had to be there who would still prefer the original meeting, parent-teacher meeting? Yep, okay. Who still no, no preference? Okay two, alright. Fair enough, okay. Yeah I should've explained that a bit clearer, it's like school policy that you are there, is that something that wouldn't be changed by the nature of this meeting because you have to be there in some format?
R	Can I ask what the original point of the parent-teacher meeting is?
I	Yes, you certainly can. Yeah, the original purpose under the 'Education Regulations Act of 2015' and it goes back to 1997, yes I've had to do my research boys, it's a fascinating topic. It was an opportunity to discuss the annual report given by the headteacher, that was the use of it.
R	To discuss just in general?
I	Yeah, so to actually go through the report and basically tell you what's on the report and discuss the report. And that was the original purpose of the meeting, back when and it was just one opportunity in the year to do that and the idea was that perhaps maybe people would read the report and it was that engagement that was needed. And yeah, that's really what it comes from originally. Alright, you had, your parents had pedagogy texts with lots of revision methods and things like that, strategies, they also got subject texts, yeah, about quizzing you and things like that and the idea of that was retrieval practice. There was also videos on revision methods, you also mentioned the audit and the intervention methods earlier and then there was also the actual meeting as well and your, your parents got toolkits as well about how to, how students revise and stuff like that. Can you tell me a bit about what you thought were the best methods, what you thought were the most useful methods? So, I'm quite interested to see about that particularly.
R	I did like the texts in particular which asked the questions because it made me remember things that I might have thought I knew but when it came to answering the question it made me realise I actually do need to revise that more. And if I didn't have that I wouldn't have realised that I need to revise it.
R	I also thought, for me, it was the audit because we could go over the exact knowledge we needed to know and also answer the question of what you're secure on and revaluate your targets from there.
I	Okay.
R	I also found the audit really helpful because it just reminded you of what topics are actually in the content so like sometimes you just get focussed on the topic you've been studying for the last month or term whereas that just made me go through and remember that actually that is going to be on the test or could be on the test.
I	Yeah, right, okay. Did you find it a bit complicated; I mean it was pretty long wasn't it? Was that a problem or were you glad you did it?
R	No, I think it was better that it was long.
I	So, you had the detail, okay.
R	I think the text questions as well, not just because it helped me to revise and like relearn the subject matter but like it kind of made it easier for my parents to engage with the subject because they might not of been as confident to ask questions about it because they don't really understand it that well. So, having the questions come from like an external source and they have the answers with them, it makes it easier for them to like engage with my learning and know what it is I'm doing which I think makes it easier for them to support me with my revision.
I	That, that leads on nicely to my other question I have, do you think your parents are more engaged in your, do you think they understand the computer science curriculum a bit more as a result?
R	Yeah. (Many students)
I	Yeah, is that like, how do you know that? How do you know they, they do?
R	Because like when I'm revision they'll ask questions about it and be more involved in it and they can also be much more of a help when I revise. It's easy and they can ask you questions that are, that are about the text.
I	Yeah, okay. And what methods didn't you like? What engagement methods didn't you like? So we had the texts, the audit, the meeting, the videos, the sessions, I forgot to mention the

	sessions we did as well, the strategy sessions. You know what else, was there other things, anything else anyone wants to comment on what they liked or what they didn't like?
R	The, I think it was earlier on when we were talking about the traits we had, I'm not really sure how they helped.
I	Okay, yeah. Fair enough, the motivations, fair enough.
R	With that, originally I wasn't really sure on how they helped but when we were going and doing what revision strategies we need it was actually really helpful; looking back at what I had previously said wasn't my strongest parts of that, because at, at the beginning it was … but when you turn it into things that you're actually going to do, like I'm going to do past papers or whatever, then it became really helpful.
I	Okay, alright, anything else? Nope. Did your parents use the texts regularly with you? Yeah? Lots of people are nodding, okay. Did they share the information from the booklets with you? Did they talk to you about the booklets? No, no, no. Did they talk about their pedagogy texts they got? Yeah? Pedagogy is just like learning, methods of learning. Okay, alright. What about this then, so, have you learnt anything new about yourself as a result of the research? Now I'm not talking about you've realised, I'm not talking about curriculum, have you learnt anything about your sort of learning attributes? So some of you talked about how you realised you weren't doing feedback, you weren't doing questions, has anybody learnt anything about themselves that they didn't really know or appreciate beforehand?
R	It's that, earlier revision methods before I, earlier it was just note taking but now I've realised that doesn't work and I've started doing like past papers and things.
I	Okay, yeah?
R	Yeah, same the note taking wasn't helping but the flash cards helps.
I	It helps? Okay.
R	I worked out that pretty much most of the marks that I lost on the papers were pretty much all from, were all from, not doing good exam practice so.
I	Okay, anything else? Anyone else learn anything about themselves as a result of it? I meant to ask you, what did you think about the question analysis document you got? So, you know when you did your mock exams it listed how much marks you got for the question, what did you think about that? Because that's something I personally, I know that it's just my opinion, I think that it would be useful in most subjects. Right, but what was your, did you use it? Was it useful to you understanding what your strengths and weaknesses are? Yeah? Can anyone expand on that? Does everyone know what I'm talking about? Do you remember the sort of coded chart and it sort of says, it was sort of a bar chart, well a side bar chart on how well you did?
R	It was so much it easier because it's not like well I think I didn't do well on this topic or I find this topic a bit hard you kind of just go off that, you can go off or see for a fact that this one I did better in.
I	Yeah, okay. And as a result of the research do you feel you're more involved in your own education and learning? Have you developed any sort of skills to support yourself? Hands up who's saying yeah. Okay, that's everyone, alright. And do you think your parents are more involved in your education and understand how learning happens rather than just learning as a result of it? Hands up who says yes. Okay, one, two, three, four, five, six, seven, eight, nine, ten. Okay I'm interested in the peoples who's arms aren't up, sorry, ten, eleven. Right, tell me a little bit more because I'm interested in that. Because I've seen your questionnaires and there's some really interesting points related to it. So, what, why, why are you not more engaged?
R	I just feel like my parents aren't particularly interested in the actual topic, like as long as I'm doing alright in the topic there's no reason to be concerned so there's no reason to take any particular interest in the subject.
I	Okay, yeah, that is, okay, similar thing yeah?
R	I feel like my parents were already quite interested in it because they both did study computer science in university so they already took an active part in my computer science.
I	They already, right. Alright, okay. How do you think the school can support engagement at home more? And outside school. It's a funny question because in a normal year I'd talk about how we could support you at home and you know get you ready for the exams but obviously with these assessment tasks instead, how could the school improve?
R	In terms of preparation?

I	Yeah like, so, your learning at home, how can we help you be more effective when your outside school for your learning and technique and stuff like that?
R	I think like the audit over the course so you can see, you know what you're doing 'cause that's like helpful with making a target for revision.
I	So instead of just me going over everything?
R	Yeah so you can visualise what you've done, what you haven't done and what you need to learn. I think that can be very useful.
I	Okay.
R	Having like a timetable when all the exams are, like so we know when to start our revision or what subjects to organise.
I	Okay, anything else? No. Alright, Covid-19, right. I mean it's been challenging, you've had to be at home. Can you see any benefits, have there been any benefits to your education or your learning or the way you learn from being at home during Covid-19? Alright I'm seeing three hands up, four hands up here, the four hands up give us, tell us why.
R	Learning from home was actually calmer, rather than coming to school, waking up early, getting a ton of homeworks and then just spending ages at home with not really much free time but working from home had all that extra free time that you would've spent on travel where you could actually revise and prepare.
I	So, you're talking about it allows you greater efficiency of your time.
R	Yes.
I	Okay, that's interesting.
R	I feel like generally, when you didn't have the pressure of coming into school and sitting through lessons, I feel the mental health was actually better when doing my work. When we did Google Classroom during the first lockdown I was able to work in my own, working in you know what I knew I needed to work on was more efficient that going through lessons where everyone else has to work together you can work more for yourself.
I	Okay so you, you can differentiate what would be better for yourself then in a class where there's lots of different ability learners. That is interesting.
R	Those who had access to documents and gone over them in class gave a lot more opportunity, there was more transparency and it made working from home a lot easier for revising because you had all the class documents that you're studying.
R	Oh I think also the fact that the lessons were recorded as well then you could go over and watch them and learn a lot more when I could go back and watch them again.
I	Right, yeah, right.
R	I think with like the first lockdown obviously we, we didn't have the live lessons so it was more like towards our own pace that we could work so I found that a bit easier but then when we started doing the live lessons it was more like you were trying to imitate like classrooms from our home and I don't think that worked too well and it kind of got a little bit tiring like trying to keep the same routine that we would've had in school without actually having to go to school.
I	Yeah, I wanted to talk to you a bit more about, any more from the no? Because that's an interesting side of it as well.
R	So I think my eyes got kind of worse after the screen thing, like the screen time.
I	Yeah, the screen time, that was yeah, that can be an issue. You could definitely tell, yeah.
R	I think with online learning as well, especially towards the end of the previous lockdown, the latest lockdown, I found myself with a lack of motivation, a lack of drive to do any work at all and I know I'm not the only one here because we've been in lockdown for like four months and we'd been really drained so I was really thankful when the headmaster said no we're not going to do anything more over summer so it got to the point where I couldn't, I was just very drained and I didn't have any drive to do any work whatsoever so it definitely felt like a massive chore rather than just going to school.
I	Okay.
R	Yeah, I agree, most of the days I just ended up sitting in my room most of the day, just for online lessons and then after I'd go and do some of extra-curricular stuff which I do enjoy but other times after I'd study I'd go out or stuff like that. I just felt like by the end of it I had no motivation left to do it.
I	Okay yeah.
R	Well one thing I did like was that when we had loads of online tasks, like when we had to do the work on a document, I'd go back and like revise all of that from it because it was around

	different places whereas when it's all in one book it's not as easy just go back and learn from it.
I	Right, did anyone else find that about the organisation side of things? I suppose that's probably something you find more now than, than at the time. Okay. Yeah.
R	I would've, I think I would've found that online was a lot easier if it wasn't for, it, if it wasn't at the same time when we were off school also if we knew that there would be assessments when we got back because without that, without that you're just kind of every piece of work would be your GCSE which was not great.
I	Yeah, I can see that.
R	Yeah I think at this point if you knew what kind of questions, if you knew what kind of assessments was important for your GCSEs then I wouldn't have put as much importance into them but since I put that much it was kind of draining.
I	Yeah, yep.
R	Along like how the assessments would work because we didn't know like, I think the fact that it wasn't just school that wasn't in lockdown effected it in that like it kind of disrupted our whole lives it made it feel like trying to persevere through the online school as though it was just normal school but not in school made it a little difficult because there were obviously other things that were impacted outside of that so, like it did make it quite hard to focus not just doing school online but the fact that we couldn't do anything else other than that anyway.
R	Yeah I found it massively demotivating that we were doing online school we were doing all that to work towards a grade and then we came back and it's like okay it's good you did the work but it doesn't really mean anything and that kind of oh yeah it just makes me think that how many hours were put into a lot of work.
I	Yeah I think that's fair enough, there is a, there is an issue there. I mean the problem is the information is just being filtered through by the government like as we go, do you know what I mean, rather than it be, but I think now we've got a more concrete idea of what's going on ahead so yeah. I can see where you're coming from.
R	Overall, the worst part was definitely the uncertainty of what going to happen, not knowing, what's going to happen with our GCSEs with our results when it was only recently announced what was going to happen in these assessed tasks that we're doing, especially in the first lockdown we didn't know if our GCSEs were going to be cancelled. Of course there was no way the school could've known but that did take a big toll on me especially and that's something that made me quite stressed.
I	Okay and what's, my final question to you all is how has Covid and the lockdown and restrictions and stuff has it changed your parent's engagement in your education, has it, has it changed the way they're engaged as a result of it?
R	Yeah 'cause they can see the missing assignments that we haven't completed so it kind of did, they force you to do them, it makes you keep on top of schoolwork but sometimes if you know you can't really do that kind of assignment so you wanna leave it a bit later so there's no point.
I	Yeah, okay.
R	Yeah, so if I, I think the fact that obviously not everyone's parents would've been working from home but the fact that my parents were at home whilst I was doing school made me, meant that they could like engage with me while I was working and not just say oh how was school at the end of the day and not be like yeah school was fine. So like they were actually able to know what was going on while it was happening and it was like easier to talk about because I wasn't trying to recall like an entire day in the evening.
I	Hmm, fair enough. Anything else on that? No. Thank you everyone.

PTM and Student Inclusive Meeting observations

Phase 1

Person	Transcription- School B Inner-City School	Start & End Time	Duration
Teacher	Here we go, okay. So Computer Science, so I took over this class from last year, [redacted] had them last year. And I've been to saying to all the parents, they're very quickly growing into becoming my favourite class, honestly … and [redacted] is definitely adding to that. He's a bit of a character and I like him. Quite quiet and reserved in the lessons. So one thing he could work on a little bit is putting his hand up just a little bit more. Whenever I ask a question I try to pick on them anyway when they're hands are down, but that encouragement shows me he's listening and wants to do well. His exam before Christmas he got 70%, that's a solid mark, that's a really good mark. Above the class average, a lot of theory was in that exam as well, and lots of stuff we did in Year 3 was tested again, and to get 70 for me is a good mark. Homework overall – fantastic, always done, always done to a really good standard as well, that's good to see. Again encourage [redacted] if there's anything he doesn't understand my door is always open. Even on the morning when he hands his homework in, see me '[redacted] I don't get this question, can we go through it again please?'– more than happy to do so. Yeah? Behaviour is really good, he's focussed on his studies, he's doing well, he's progressing, I give him a 1 for effort because the effort's there, 3 for progress, he's working nicely, that's great. So so far so good. Any questions from your end?	00.00 - 01.34	94
Dad	Yeah like I mean … I'm not quite sure what he should be doing at home. He seems to come home, he does homework out of a book, is there any actual computer …	01.35 - 01.49	14
Teacher	Yeah, so I've been saying this to a lot of parents, when they ask what else they can do at home. So obviously homework is the way for consolidating learning from the lesson. But it's then also important for [redacted] to ensure that he goes and does X number of reading. There's so much out there online, online tutorials. When it comes to the practical work there's so much free stuff online as well. Examples of … let's say we do 2D arrays in the lesson - find an example online, have a go at it. Come and show me your code the next day, see if it works or not. A lot of the software is freely available now as well, so if he just practice, practice in his own time it will massively help when it comes to understanding the programming aspects of Computer Science as well.	01.50 - 02.34	44
Mum	Does he do a practical element in the exam?	02.35 - 02.36	1
Teacher	No no, they're both written papers. There used to be at (NEA) – it's been taken away across the country. So they now do it but it doesn't count towards their GCSEs. But it helps them to set them up for their A Levels if you choose to take it then, because they'll do a practical task then I also suggest buying these revision materials. So this one's with all the topics, nice and summarised, and this one is full of little worksheets all based on exam style questions. It will help him massively in the exams. And it's also a good way	02.37 - 03.31	54

	just to consolidate his learning at the end of a topic. Yeah. Just make sure put on AQA, because you get them at OCR – they look exactly the same – there are slight differences. So work through those as well, they're good for revision and good to consolidate his learning on a weekly basis as well.		
Mum	What grade should he be working towards at the moment, aiming for?	03.32 - 03.35	3
Teacher	All right. So his target grade is an 8, which an A*. At the moment I suggest predicting he's going to get a 7. It's still early days, obviously come the summer exams I'll have a better idea of where [redacted] is at, but at the moment he's working really nicely towards that 8. For me that's just a number, he should go for a 9 all the way. And if he works hard I can't see why he should not achieve that because working hard will give him top marks. Okay?	03.36 - 04.05	29
Mum	Lovely, thank you very much.	04.06 - 04.07	1
Teacher	All right. Lovely to see you again.	04.07 - 04.08	1
Dad	Okay many thanks.	04.08 - 04.09	1

Person	Transcription- School Y: Suburban School	Start & End Time	Duration
Teacher	Hello nice to meet you. I'm [redacted], and it's Computer Sciences as he's just said.	0.02-0.03	1
Mum	Computer Sciences.	0.03-0.04	1
Teacher	How are you getting on, good?	0.04-0.05	1
Student	I'm all right.	0.05-0.06	1
Teacher	All right yeah? You've got nothing to worry about honestly. Look your target grades are what 7, and you're bang on on 7, but personally I think you should be doing better than a 7. That's my person view, because he's absolutely perfect in class, I've got no issues with him. I think you need to push yourself harder though, yeah, don't just wait for me to …	0.07-0.24	17
Mum	To call you.	0.24-0.25	1
Teacher	Yeah not to call you, but don't wait for me to teach the topic – push yourself even further than … push yourself deeper into it as well. Yeah like for example if I'm teaching computer systems for example, don't just look at what I'm teaching, look at other things as well that you can potentially be talking about in an exam yeah, to pick up more marks, yeah? But look I've got no concerns about him at all, zero concerns. It's great, and I'll read them out to you, yeah … there you go … so look 93% in one of the test papers.	0.25-0.57	32
Dad	Is it? Really good.	0.57-0.59	2
Teacher	Yeah 93% - that's nearly 100%.	1.01-1.02	1
Dad	Oh, mathematics.	1.02-1.03	1
Teacher	Yeah look and second test he got 80%, yeah which is a solid grade 8, yeah grade 8 yeah. And then the last test you got 76 which is about 2% lower than a grade 8. Yeah, so really	1.03-1.35	32

	I don't want to see 7s, I want to see 8 and 9. Yeah, because you keep getting a 93%, that's a 9 yeah, that is where you should be. Don't just look at your target grade, forget your target grade, no one cares about that, push yourself, yeah cos you're a very able boy. Yeah? Aside from that … see this book, have you got it?		
Mum	You have that one yeah.	1.35-38	3
Teacher	He's got it? Good. One page a week, only one page – mum and dad, please make sure that he reads one page a week. Look at one page a week, that's all I ask, because between now and next year that one page is basically the whole book, yeah. That's all I ask for – do that and believe me you will get far. Yeah? Any questions?	1.38-1.59	21
Mum	I'm happy anyway, but if he can go further.	1.59-2.07	8
Teacher	Further, that's what we want yeah. That's what your mum wants and your dad wants and that's what I want.	2.07-2.10	3
Dad	From 93 going to seventy -	2.10-2.12	2
Teacher	Six. 76.	2.12-2.13	1
Dad	From 79. So what's the problem, you don't understand.	2.13-2.21	8
Student	The way that they word questions.	2.21-2.28	7
Teacher	Yeah the way they word the questions, I know it's a bit tricky and we're going to work on that slowly, but at the minute I just want to get the content out of the way so you understand, but that all we need to do is just apply your knowledge to the questions and nothing else. Does that makes sense? And we'll work on that, don't worry we're going to do that as well, so don't worry about a tutor.	2.28-2.58	30
Dad	if you don't understand, need to ask, at school or afterschool	2.58-3.00	2
Teacher	Him and I think about 4, 5 other boys work together up there, and that's what I want, yeah just stay … stay beyond them. Not with them – beyond them.	3.00-3.03	3
Mum	All right thank you very much.	3.02-3.04	1
Teacher	Have a good evening. Take care, see you later.	3.04-3.07	3

Phase 3

Person	Transcription- School B: Inner-City School	Start & End Time	Duration
Teacher	Alright, um, tell me quickly when it comes to computer science, what have you identified as your strengths, your weaknesses, and what are your main goals you want to work towards over the next few months?	22 – 31 secs	9 Secs
Student	So, um, my strengths are in algorithms, data representation, uh, computer networks and cyber security. I need to improve on the topics program, the computer system, ethical and legal and environmental issues. Also the, the specific, like sub topics that I'm most concerned about trace tables, sub routines, data representation, the numbers	34 secs – 1.09	33 Secs
Teacher	Oh the numbers side of it?	1.09 – 1.10	1 Sec

Student	Um, yeah. Um, three goals before pursuing, uh, I need to work on understanding trace tables. So to do this, I will complete the work related to on Seneca over the February half term. And, um, uh, I'm gonna ask you some questions on trace tables. It's now, again, along with it, I'm also gonna start using the websites teach ICT to, and use my class notes and my homework, the highest standard to aim for the higher marks. And, and I'm going to look up past papers from the computer science groups, focussing on answering the questions to sub routines and get a complete these before the PEPs.	1.10 – 2.04	54 Secs
Teacher	Okay, brilliant. So, thanks for that. When it comes to, you said you struggled a bit with programming, are there any specific topics in programming you find harder and which ones are they?	2.04 – 2.13	9 Secs
Student	Well I think it's when we were doing the, the flight planner, I found a bit, there's you know, it was quite hard to sort of get started. And I'm just getting my head around the language a bit, but I think with pseudocode it's, it's not too difficult. I think I've sort of started to figure out what that means.	2.17 – 2.41	24 Secs
Teacher	And then in the exam itself. So in paper one, my data shows that when it comes to sub routines, you had a bit of difficulty with subroutines. Can you identify the exact areas you struggled with the sub routines or is it just subroutines in general?	2.41 – 2.54	13 Secs
Student	I think I just need to revise for them in preparation for the exam a bit more.	2.57 – 3.05	8 Secs
Teacher	Yeah. Well, thanks for your honesty. That's really, that's really, that's a good start anyway. So moving forward, so you've mentioned, you're going to do a bit of trace tables. I'll obviously give you some examples. That's good. What kind of deadlines have you put into place for yourself to, to meet these kinds of revision sessions that you're, you're, you're talking about?	3.08 – 3.26	18 Secs
Student	Well, so I want to do it all before the February half term really so that I can, whenever these are actually going to happen, I mean, I'm properly prepared.	3.27 – 3.37	10 Secs
Teacher	Okay. All right. Well we, we don't know for sure when we're actually going to be back at school. So I know we've got the date of the 8th of March to come back to school. But obviously we have to wait and see how things pan out. There's, there is talk of mini exams taking place in school. Again, whether it's going to go ahead. We're not really sure off. But I think the best, the best approach now, will be to focus on those topics you've identified, do those past questions on them and ensure you do give me back some of that feedback. So I can actually mark your answers, see where you're going wrong and then help you to improve on those specific areas. That's that should be your first main target. But the reason why I asked timelines is using a small little revision time table or a little calendar, and to help you stay on task, that might be a useful way for both you and mum to see what you are currently focusing on. Yeah? So, so show mum, these are my topics. I struggle with mum. These are the nights I'm putting out half an hour, here and there to work on those. And that way I think you'll be able to get around most of it, the quickest way. Is that something you would also like to see?	3.38 – 4.48	70 Secs

Parent	Yes. That's, that's great. I'd love it a bit more organized, cause that might just feel a little bit less tossed around by the situations. Yeah. And this is in addition to the actual work he's doing with the lessons and the homework?	4.49 – 5.04	15 Secs
Teacher	Yes, yeah. It will be, but like I say, you obviously have to make sure he, he, organises himself well. So on those days when he has the odd CR lesson or a private study lesson, you use that time to, as a revision or in the evenings, if he has time do then one or two topics just on the areas that you want to focus on. So with we've sent you that, that breakdown of your marks, so focus on those specific areas, there to help you consolidate that kind of knowledge and understand those topics a little bit better.	5.04 – 5.32	28 Secs
Parent	Excellent!	5.32 – 5.33	1 Sec
Teacher	Okay. Yeah. Anything else you want to add to it? Any questions?	5.33 – 5.37	4 Secs
Parent	No, no, it's just they've got a lot on their plate and so have you. So thanks for doing this.	5.38 – 5.44	6 Secs
Teacher	You're more than welcome. Well, enjoy the rest of your evening.	5.45 – 5.48	3 Secs

Person	**Transcription- School B: Inner-City School**	**Start & End Time**	**Duration**
Teacher	Alright. Can you quickly tell me, before we start looking at grades and stuff, what was your strengths? What was your weaknesses and what are your main goals looking forward to the rest of this year when it comes to computer science?	8 - 20 Secs	12 Secs
Student	Well I think at the moments my strengths would be like the parts of computers and like components. My weaknesses I'd have to say probably networks and also programming here.	22 – 32 Secs	10 Secs
Teacher	Networks and programming? Okay. Well, if I have a look back at the, the marks you've achieved. So for paper one definitely seemed an area where you struggled a bit because you're at 55%, for the paper one and it was all to do with algorithms, I think. And understanding algorithms. Yeah. So when you do revision for algorithms, what kind of techniques do you use?	33 – 53 Secs	20 Secs
Student	That one was mostly because halfway through, I switched to making flash cards. Because previously I was doing the notes for that, for algorithms.	55 secs – 1.04	9 Secs
Teacher	Okay. And when you say you make notes, what do you mean by making notes?	1.04 – 1.06	2 Secs
Student	I remember I was doing the different types of like the, like the trees, not the trees, the NOT gates and NOT gates all of that kind of stuff. I remember I was doing so many example ones on the papers as well.	1.08 – 1.23	15 Secs
Teacher	Okay. All right. When it comes to sub routines area, I think you struggled a bit in the last exam. can you specifically put your finger on what areas it is you feel you need to improve?	1.24 – 1.35	11 Secs
Student	I think maybe doing the actual practice again, I think that could be an area to improve on.	1.37 – 1.45	8 Secs
Teacher	Yeah. If I say to you the name of a subroutine is max size and it's followed by brackets number one and number two, what do I mean by number one? And number two, what are	1.45 – 2.03	18 Secs

	they know as? Putting you on the spot here now, sorry. What are they known as?		
Student	Both would be variables	2.05 – 2.07	2 Secs
Teacher	Okay. This is another word. It starts with a P	2.07 – 2.09	2 Secs
Student	Parameters?	2.11 – 2.12	1 Sec
Teacher	Parameters? Yeah. Parameters. Well done. Yes. Parameters. So I would say as well as, apart from working through different examples of subroutines, make sure you understand the structure of sub routines. Yes. You know, where is the subroutine name? Is it a function? Is it a procedure? How will you know the difference between a function and the procedure?	2.13 – 2.33	20 Secs
Student	I'm guessing that the function would be the smaller one and the procedure would be the bigger one.	2.35 – 2.40	5 Secs
Teacher	Okay. Not, not necessarily in that order. No. So if it's a function, it always gives us a return value. So you look out for key word return and then you'll know exactly it is a function. So I would say when you do these questions, make sure that you take a highlighter and you identify the keywords in those sub routines, you know exactly where the return value is going to be and what your output values are going to be. And then also, work through past papers, loads of them reading through what a subroutine does and doesn't look like it's not going to help you during the actual practical work itself. So make sure you do lots and lots of past paper questions on them, and then hand them into me. So I can give you feedback. I've given you this option before, you being in my form class. Not once did I mark a paper. You know what I mean?	2.41 – 3.32	51 Secs
Student	I have handed the booklet to you.	3.33 – 3.35	2 Secs
Teacher	We've gone through the booklet but I was always asking for past papers. So make sure you do make use of myself and Mr Lanigan to give you some feedback on the areas you do struggle with. Yeah. And then also is, online lots and lots of resources. Okay. There's lots of YouTube channels. Um, Craig and Dave is a good example, teach ict.com. Make sure you work through those areas as well, because they break it down and make it a bit more simpler for you to understand as well. Okay. Mum and dad, any questions from your end?	3.35 – 4.02	27 Secs
Parent	No I think that's pretty clear, we know what bits he needs to concentrate on.	4.04 – 4.08	4 Secs
Teacher	Okay, that's good. And how are you finding lockdowns [redacted]? You look a bit down tonight. You alright?	4.08 – 4.14	6 Secs
Student	Yeah, I'm good.	4.14 – 4.15	1 Sec
Teacher	I see mum's frowning. Has it been hard work?	4.16 – 4.20	4 Secs
Student	Yeah it's been a bit hard.	4.21 – 4.23	2 Secs
Teacher	Yeah. Well, just make sure to remember everything you do now, it all counts towards your final grade. It's really important that you keep yourself nice and refreshed and you make sure you put all your effort now into your work. Yeah? Everything you do, homework, make sure it's done on time. Make sure it's done to a good standard. Everything set for	4.24 – 4.58	34 Secs

	you guys because all of those is going to count towards your GCCE. So make sure you focus on getting it done. Yeah? Yeah, okay well, if there's nothing else, I'm gonna let you guys going to cut this off now anyway.		
Parent 2	I have one quick question, realistically, is there anything that he can do now to improve his grade?	4.59 – 5.04	5 Secs
Teacher	Well, everything that he does now, work-wise classwork is obviously important. I'm also thinking about maybe having a good, another NEA and non-exam assessment to help him get his mark better. There's possibility of topic tests coming up. All of that is going to help him improve his grade. All of it. Cause it's obviously targeted at the moment to six. He's predicted a six, target grade six, seven, but with efforts, you can still get that seven. That should be your aim.	5.05 – 5.32	27 Secs
Parent 2	Thank you very much that's excellent.	5.34 – 5.36	2 Secs
Teacher	You're welcome. Have a nice evening. Take care. Bye.	5.36 – 5.38	2 Secs

Concept, axial and open codes diagram

Appendix C: Intervention Instruments

Pedagogy text messages

Sample 1: Spaced learning is a much more effective method of preparing for exams then cramming, it ensures that information is retained in long term memory. Research has shown the 'spacing effect' can increase exam results by 10%-30% as opposed to cramming. Revising some Computer Science topics over holidays will help ensure pupils embed the content. For further information visit https://tinyurl.com/y6scd7c2

Sample 2: Part of the Computer Science GCSE curriculum focuses on the ethical, moral, social and environmental impact of Computing. If you see any interesting story relating to this in the news please discuss it with your son.

Sample 3: Having high expectations and aspirations for your son has the biggest impact on their grades. Regular communication is essential to prevent any problems potentially arising. Having clear rules for homework and leisure time is also important, explaining these helps students make better decisions about how to study independently (Castro et al, 2015, Child Development).

Sample 4: It is important that students adopt a growth mindset. They must realise that with effort, good strategies and help, they can always improve. Watch the following video for more information https://tinyurl.com/y5flkgjp

Sample 5: Research shows that reviewing information at regular intervals improves memory retention. During half term, ask your son to spend 60 minutes reviewing a CS topic they have found challenging.

Computer Science challenge text messages

Sample 1: How many bytes are there in 72 bits?
Answer: 9 bytes (B)
Further Support: www.tinyurl.com/y4m5bzg4
Please note, there is no need to respond to this text, this is an activity for you and your son.

Sample 2: Add the two binary numbers together representing your answer as a binary number.
10110 +
01111
Answer: 100101
Support: https://tinyurl.com/y2h75wnq

Sample 3: What is the difference between a high level and low-level language?
Answer: HL- Easy for programmer to understand, uses English words, high abstraction. LL-limited constructs, limited English, low abstraction
Support: https://tinyurl.com/yxvvldpb

Sample 4: Give three examples of comparison/relational operators and is the following true or false: NOT(mark1 > 50) AND (mark2 > 50)
Answer: = > < != True
Support: https://tinyurl.com/2bs56scc

Sample 5: What would be output by the following algorithm: FOR count ← 1 TO 10 STEP 2 OUTPUT count ENDFOR
Answer: 1, 3, 5, 7, 9
Support: https://tinyurl.com/4z533asv

Computer Science parental support toolkit (sample)

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Both teachers and parents need to encourage students to develop a growth mindset:

- Encourage your son to view challenges as opportunities.
- Encourage your son to try different learning strategies
- Replace the word "failure" with the word "learning".
- Value the process over the end result. Encourage your son to enjoy the learning process.
- Emphasise growth over speed. Learning fast isn't the same as learning well, and learning well sometimes requires allowing time for mistakes.
- Portray criticism as positive. Your son should be open to criticism and see this as the gateway to progress.
- Disassociate improvement from failure. Stop your son from assuming that "room for improvement" translates into failure.
- Place effort before talent. Hard work should always be rewarded before inherent skill.
- Cultivate grit. Students with that extra bit of determination will be more likely to seek approval from themselves rather than others.
- Use the word "yet". Whenever you see your son struggling with a task, just tell them they haven't mastered it yet.
- Encourage your son to make a new goal for every goal accomplished.
- Growth-minded people know how to constantly create new goals to keep themselves stimulated.
- Ensure that your son thinks realistically about time and effort. It takes time to learn. He shouldn't expect to master a topic in one lesson/ week/ month/ year.
- Always praise the process not the child, avoid grand statements like "you are really bright", this encourages a fixed mindset. Instead praise the process they adopted, by doing so you are praising engagement, perseverance and improvement.

8

GRIT

Grit is about having passion and perseverance for a long-term goal. It's an idea that has been developed by Angela Duckworth, a professor at the University of Pennsylvania. Students need to realise there is no such thing as an overnight success. Most successful people have usually spent years working behind the scenes to develop their craft.

With your son, watch the following video:
https://www.ted.com/talks/angela_lee_duckworth_grit_the_power_of_passion_and_perseverance?language=en (You can Google Angela Duckworth Grit TED)

Ask your son to complete the following Grit Scale, don't get him to think too much about the questions but to go with gut feeling.

	Not at all like me = 1	Not much like me = 2	Somewhat like me = 3	Mostly like me = 4	Very much like me = 5
1. New ideas and projects distract me from previous ones					
2. Setbacks don't discourage me. I don't give up easily					
3.I often set a goal but later pursue a different one					
4. I am a hard worker					
5. I have difficulty maintaining my focus on projects that take more than a few months to complete					
5. I finish whatever I begin					
7.My interests change from year to year					
8. I am diligent I never give up					
9. I have been obsessed with an idea or project for a short time but later lost interest.					
10. I have overcome setbacks to conquer an important challenge					

To calculate the grit score, add up the points in the boxes and divide by 10. The highest score you can get is 5 (very gritty) and the lowest score is 1 (not at all gritty)

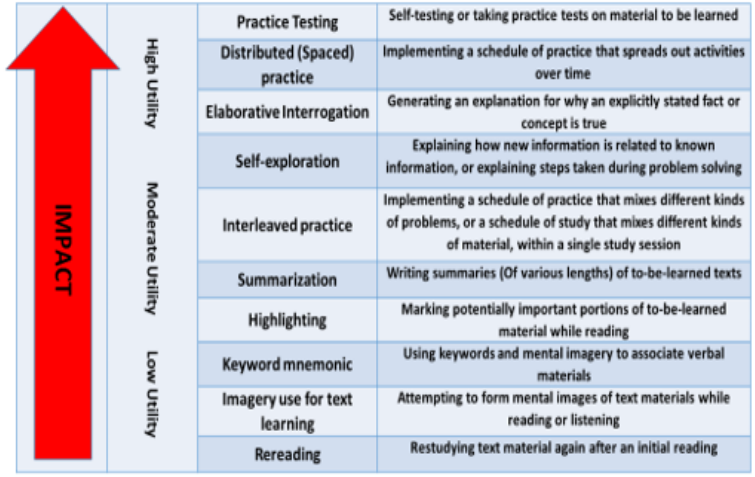
Discuss the results with your son and ask the following questions:

When have you been most gritty?

How could you become grittier with Computer Science schoolwork and homework?

LEARNING AND REVISION STRATEGIES

There are many ways of learning and revising, some are more effective than others. Students may prefer one method over another, this may well be due to ease or familiarity rather than impact. In recent years there has been a significant amount of research into the most effective types. Below is a summary of these, please encourage your son to complete the high impact activities.



Practice Testing	Self-testing or taking practice tests on material to be learned
Distributed (Spaced) practice	Implementing a schedule of practice that spreads out activities over time
Elaborative Interrogation	Generating an explanation for why an explicitly stated fact or concept is true
Self-exploration	Explaining how new information is related to known information, or explaining steps taken during problem solving
Interleaved practice	Implementing a schedule of practice that mixes different kinds of problems, or a schedule of study that mixes different kinds of material, within a single study session
Summarization	Writing summaries (Of various lengths) of to-be-learned texts
Highlighting	Marking potentially important portions of to-be-learned material while reading
Keyword mnemonic	Using keywords and mental imagery to associate verbal materials
Imagery use for text learning	Attempting to form mental images of text materials while reading or listening
Rereading	Restudying text material again after an initial reading

DID YOU KNOW…

MUSIC

Students who revised in quiet environments performed over 60% better in exams than their peers who revised listening to music that had lyrics. Students who revised whilst listening to music without lyrics did better than those who had revised to music with lyrics. It made no difference if students revised listening to songs they liked or didn't like. Both led to a reduction in their subsequent test performance. Caveat: music can motivate and improve mood.

(Perham and Currie, 2014, Applied Cognitive Psychology)

SLEEP

Having a good night's sleep prior to learning allows students to create new memory associations more effectively. If students do not get enough sleep it hinders their ability to commit what they have taught to memory (consolidate memory). Sleep deprived people are more likely to forget positive memories. The opposite is true with negative memories. Excessive sleep loss increases the likelihood of students displaying negative emotions, feeling stressed and being unable to manage their emotions.

(Walker and van derby Helm, 2009, Psychology Bulletin)

MOBILE PHONES

The mere presence of a mobile phone led to a 20% reduction in attention, concentration and performance in tasks that were demanding and complex. Students performed worse in these tasks regardless of whether they could see their own phone nearby or someone else's. This reduction was found to be true regardless of the student's gender, age, how much they normally used their phone or how attached they said they felt to it.

(Thornton et al, 2014, Social Psychology)

EATING BREAKFAST

In a large research study, students' ability to focus was measured throughout the day. All students had a dip in their ability to focus as the morning went on. However, if students had eaten breakfast, this decline was reduced by 50-65% compared to those who hadn't. In a memory test conducted four hours after a revision session, students who had breakfast suffered 12% reduction in their score. Students who only had a glucose drink for breakfast had a 27% decline, with those who had breakfast improved their performance by 3-5%. Students who ate breakfast felt the most alert over the course of the morning. A glucose drink gave an initial boost for the first few hours before dropping to the same low levels by midday as those who had missed breakfast. (Wesnes et al, 2003, Appetite)

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Computer Science Curriculum Support

COURSE STRUCTURE

The course comprises of three elements, two paper-based examinations that will be sat in June/July 2021 and one programming project.

Paper 1: Computational thinking and problem solving

What's assessed

Computational thinking, problem solving, code tracing and applied computing as well as theoretical knowledge of computer science from subject content 1–4 above.

How it's assessed

- Written exam set in practically based scenarios: 1 hour 30 minutes
- 80 marks
- 50% of GCSE

Questions

A mix of multiple choice, short answer and longer answer questions assessing a student's practical problem solving and computational thinking skills.

Paper 2: Written assessment

What's assessed

Theoretical knowledge from subject content 3–7 above.

How it's assessed

- Written exam: 1 hour 30 minutes
- 80 marks
- 50% of GCSE

Questions

A mix of multiple choice, short answer, longer answer and extended response questions assessing a student's theoretical knowledge.

Programming project

Purpose

The programming project develops a student's ability to use the knowledge and skills gained through the course to solve a problem. Students will be expected to follow a systematic approach to problem solving, consistent with the skills described in Section 8 of the subject content.

The skills developed can be applied to exam questions on computational thinking.

By the end of September teachers will have finished teaching most of the curriculum for Paper 1 and 2. During the autumn term, students will be completing a 20-hour programming project. Students are given a scenario and have to program a solution using Visual Basic. They are then required to complete a report detailing their approach and solution. This project does not count towards the final mark but it is useful for students to develop their programming skills for the Paper 1 content and a mandatory requirement of the course.

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COMPUTER SCIENCE CO-CURRICULAR ACTIVITIES AND RESOURCES

ACTIVITIES

National Museum of Computing, Bletchley Park (Near Milton Keynes)
http://www.tnmoc.org/
https://www.bletchleypark.org.uk/
http://www.codesandciphers.org.uk/bletchleypark/ (virtual tour)
The National Museum of Computing and the Bletchley Park code breaking exhibition are both on the same site, although each has a separate entrance fee. Huge range of technology to explore, including Colossus, the world's first electronic computer.

Museum of Science and Industry, Manchester
http://msimanchester.org.uk/
The museum has an exhibition covering the development of computers, and they have "Baby" the world's first stored program computer. (There is an interactive talk about Baby every day.)

Science Museum, London
http://www.sciencemuseum.org.uk/
A wide range of science and technology exhibitions. In particular, the museum is currently hosting an exhibition on robotics, charting our 500 year quest to make machines human.

Centre for Computing History, Cambridge
http://www.computinghistory.org.uk/
A large collection of vintage and retro computers, with an emphasis on how computers have developed over time and the social context and impact of technological change.

Research information video

Explanation of the research

Reengineering parent teacher meetings to enhance student and parent educational engagement.

St Mary's University Twickenham London

1

Why does parental academic socialisation need to be increased?

St Mary's University Twickenham London

2

Why parent engagement?

Pupils do better if parents are involved

Parents are the first teachers of their children, and even when they leave the home for organised education, children of school age spend up to 70% of their waking hours not in school

We now know that parental engagement is one of the largest levers for children's achievement, and that it is not who parents are but what they do that matters

Studies have shown that, regardless of parent income or formal education, if parents are involved, students tend to do better in their academic work and have more positive school attitudes, higher aspirations, and other positive behaviours

Parent involvement in education has been associated with a variety of positive academic outcomes, including higher grade-point averages

Parent engagement is associated with increased achievement in reading, mathematics and lower dropout rates

Goodall, J., 2013. Parental engagement to support children's learning: a six point model. School Leadership & Management

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Parental Academic socialisation

- Communicating parental expectations for education and its value or utility, linking schoolwork to current events, fostering educational and occupational aspirations, discussing learning strategies with children, and making preparations and plans for the future.
- Academic socialisation includes the types of strategies that will scaffold adolescents' burgeoning autonomy, independence, and cognitive abilities.

(Hill, N. and Tyson, D.F., 2009)

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Why student inclusive meeting? What does this mean?

"There is no one intervention, no singular programme, which will 'Solve' all of the issues".

Goodall (2017: 113)

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Student Inclusive Meeting

- Greater involvement and ownership by student
- More efficient use of time
- VESPAB: Strengths and areas for improvement
- Computer Science Curriculum: Strengths and areas for improvement
- Discussion regarding strengths, areas for improvement and support
- Agreed goals and follow up

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Research Activities

COMPUTER SCIENCE

- Weekly text messages
- Parental toolkit
- VESPAB Student Sessions
- Student inclusive meeting preparation
- Student inclusive meeting
- Student inclusive meeting follow up

COMPUTER SCIENCE

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Thank you for your participation

[redacted]

https://stmarys.onlinesurveys.ac.uk/research-feedback-_autumn-2020

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SLCA and subject knowledge audit

SLCA Audit 1 (Same audit structure for SLCA Audit 2 and 3)

	Question Name	Very Good	Good	Acceptable	Poor	Very Poor	Please select an option below
Behaviour and Attitude	Self Efficacy	Very high level of self-belief	High level of self-belief	Moderate self-belief	Low self-belief, lacking confidence	No self-belief, believes they are always likely to fail	Moderate self-belief
	Leadership and Teamwork	Shows leadership and/or excellent teamwork skills when working with others	Works well with others and as part of a team	Can work well with others and as part of a team but not always a key contributor	Can be silly, immature or off task when working with others or as part of a team	Cannot work with others or a team sensibly or does not contribute	Cannot work with others or a team sensibly or does not contribute
	Uniform	Wears the uniform with pride	Is presentable in the uniform all of the time	Usually wears the correct uniform	Does not always wear the correct uniform/shirt is untucked	Incorrect uniform has received warnings and sanctions for this	Usually wears the correct uniform
	Behaviour when working with others	Seeks out opportunities to help and support others, showing high levels of empathy. Always courteous and polite	Courteous and polite and volunteers to help others	Is usually polite to others and willing to help	Needs reminders to speak politely to staff and peers/ is reluctant to help when asked	Can be rude, uncooperative or aggressive	Courteous and polite and volunteers to help others
	Types of intelligence	Believes that intelligence is not fixed	Believes that you can improve on the intelligence you have been given	Believes that you can improve some aspects of you intelligence	Believes intelligence is largely fixed and cannot be changed	Believes intelligence is fixed and cannot be changed	Believes that you can improve on the intelligence you have been given
	Dealing with failure	Experiments with new ideas and sees failure as part of learning	Sees failure as a learning opportunity	Feels anxious when responses are incorrect	Sees failure seen as a weakness	Will make no attempt to succeed as sees failure as inevitable	Feels anxious when responses are incorrect
	Attendance	Attendance is above 98%	Attendance is between 96-98%	Attendance is between 95-96%	Attendance is between 91-95%	Attendance below 90%	Attendance is between 96-98%

Survey 1 | Survey 2 | Survey 3 | Totals | PLC

Totals

	Question Name	Survey 1	Survey 2	Change	Why?	Survey 3	Change
2	Self Efficacy	Good	Good	Same		Good	Same
3	Leadership and Teamwork	Good	Good	Same		Very Good	Better
4	Uniform	Very Good	Good	Worse		Very Good	Better
5	Behaviour when working with others	Good	Good	Same		Good	Same
6	Types of intelligence	Good	Good	Same		Good	Same
7	Dealing with failure	Acceptable	Good	Better	I gain more knowledge from feedback than before	Good	Same
8	Attendance	Very Good	Very Good	Same		Very Good	Same
9	Focus and attention	Good	Good	Same		Good	Same
10	Comparisons of effort	Very Good	Very Good	Same		Very Good	Same
11	Punctuality	Good	Very Good	Better		Very Good	Same
12	Attendance/intervention/detentions	Good	Good	Same		Very Good	Better
13	Setting goals and targets	Acceptable	Good	Better	getting better at setting targets ffor myself	Good	Same
14	Deadlines and time keeping	Acceptable	Good	Better		Acceptable	Worse
15	Future career and higher education	Acceptable	Acceptable	Same		Very Good	Better
16	Knowledge development	Good	Good	Same		Good	Same
17	Feedback	Good	Good	Same		Good	Same

Subject Audit (two aspects)

PROGRAMMING	OPTION
3.2.1 Data types Understand the concept of a data type.	1
3.2.1 Data types Understand and use the following appropriately: integer, real, Boolean, character, string.	1
3.2.2 Programming concepts Use, understand and know how the following statement types can be combined in programs: variable declaration, constant declaration, assignment, iteration, selection, subroutine (procedure/function).	1
3.2.2 Programming concepts Use definite and indefinite iteration, including indefinite iteration with the condition(s) at the start or the end of the iterative structure.	2
3.2.2 Programming concepts Use nested selection and nested iteration structures.	1
3.2.2 Programming concepts Use meaningful identifier names and know why it is important to use them.	1
3.2.3 Arithmetic operations in a programming language Be familiar with and be able to use: addition, subtraction, multiplication, real division, integer division, including remainders.	1
3.2.4 Relational operations in a programming language Be familiar with and be able to use: equal to, not equal to, less than, greater than, less than or equal to, greater than or equal to.	1
3.2.5 Boolean operations in a programming language Be familiar with and be able to use: NOT, AND, OR.	1
3.2.6 Data structures Understand the concept of data	1

PROGRAMMING
Areas requiring significant improvement
3.2.10 Subroutines (procedures and functions) only exist while the subroutine is executing

PROGRAMMING
Areas requiring some improvement
3.2.2 Programming concepts Use definite and indefinite iteration, including indefinite iteration with the condition(s) at the start or the end of the iterative structure.
3.2.6 Data structures Understand the concept of data structures. 3.2.6 Data structures Use arrays (or equivalent) in the design of solutions to simple problems.
3.2.10 Subroutines (procedures and functions) Understand the concept of subroutines. 3.2.10 Subroutines (procedures and functions) Explain the advantages of using subroutines in programs.
3.2.10 Subroutines (procedures and functions) Know that subroutines

What is a specific topic/area are particularly struggling with?
Programming

What is the overall topic/area you are most struggling with?
Subroutines (Procedures and functions)

What is your plan to improve? (You can choose more than one	
Activity	Actions	Yes/ No
Review class materials	Decide on a sixty-minute challenge per week to be completed up to the exams using materials from class.	Yes
Intervention activity booklets	Decide on a sixty-minute challenge per week to be completed up to the exams. Mr Lanigan will provide resources during sessions.	Yes
Complete Computer Science Revision Units in Seneca Learning https://app.senecalearning.com/	Decide on a sixty-minute challenge per week to be completed up to the exams using Seneca Learning.	Yes
Course Study Guide: 'AQA GCSE Computer Science' By Steve Cushing	Purchase and work through the topics you were finding challenging	Yes
Organise some intervention time with your teacher	Speak to your teacher and arrange a date and time.	No
Practice exam questions in exam conditions. Use the mark scheme to review answers. Read the examiner's report for common misconceptions	Focus on the topics you find challenging rather than completing all the paper. Exam papers can be found on the AQA website. Mr Lanigan will also provide more details during sessions.	

FAQ for parents

PARENT FAQ FOR GCSE COMPUTER SCIENCE

How is the course assessed?

In a normal year the course would be assessed through two public examination papers sat in June 2021. Each paper is worth 50%. Both papers are completed using a paper-based examination booklet and not on a computer. No calculators are allowed in either exam. We are waiting to hear how the course will be assessed this year. For further information regarding the government consultation, please click here.

What are Computer Science curriculum areas?

The course covers the following topics:

- Fundamentals of algorithms
- Programming
- Fundamentals of data representation
- Computer systems
- Fundamentals of computer networks
- Fundamentals of cyber security
- Ethical, legal and environmental impacts of digital technology on wider society, including issues of privacy

The information below relates to the structure of assessment in previous years. As of yet, it has not been decided how the course will be assessed this year:

Paper 1 lasts for 1 hour 30 minutes and covers topics 1 to 4 from above. It consists of a mix of multiple choice, short answer and longer answer questions assessing a student's practical problem solving and computational thinking skills.

Paper 2 lasts for 1 hour 30 minutes and covers topics 3 to 7. It consists of a mix of multiple choice, short answer, longer answer and extended response questions assessing a student's theoretical knowledge.

Is there coursework or a Non-Examined Assessment?

Students completed a practical project through September to November 2020. It was a stipulation of the course required by AQA and used as an opportunity for students to develop their programming skills.

When should my son start revising?

Students should continue to revise and review material from lessons. Students should be dedicating some time per week to revising Computer Science topics.

Will there be Easter revision days and further intervention?

No decision has been made until we receive further government guidance.

How can I help my son at home?

Your son has completed a personalised learning checklist for each sub topic in Computer Science identifying how competent they feel. They should use this, with the advice of their teacher and areas identified in recent exams to focus revision activities. Your son has been provided with a range of options on how to revise, as outlined below, please discuss these with him and the progress he has made. The Intervention Activity Booklets are strongly recommended as a revision tool.

A place to work with no distractions is crucial, encourage your son to put away any unnecessary devices while working. Further home learning and support ideas can be found in the weekly text messages and the two toolkits sent to parents.

Computer Science Revision Approaches	
1. Review class materials (PowerPoints and Classwork) from SharePoint	Go to CVMS SharePoint: Student Resources\KS4 GCSE COMPUTER SCIENCE- 8520\ Lessons and Topics.
2. Intervention Activity Booklets	Go to CVMS SharePoint: KS4 GCSE COMPUTER SCIENCE- 8520\1. Lessons & Topics\Intervention Activities. Answers can also be found in this area.
3. Complete Computer Science Revision Units in Seneca Learning https://app.senecalearning.com/	Register or use your existing login.
4. Purchase course study guide: 'AQA GCSE Computer Science' By Steve Cushing	Purchase and work through the topics you were finding challenging.
5. Organise some intervention time with your teacher	Speak to your teacher and arrange a date and time.
6. Practice exam questions in exam conditions. Use the mark scheme to review answers. Read the examiner's report for common misconceptions.	Past examination papers, mark schemes and examiner's reports in [redacted]
7. Use the following resources to review topics: https://student.craigndave.org/aqa-gcse-videos (search craigndave youtube) www.teach-ict.com go to AQA (8520) GCSE Computer Science. [redacted] https://www.bbc.co.uk/bitesize/examspecs/zkwsjhv https://classroom.thenational.academy/subjects-by-key-stage/key-stage-4/subjects/computing https://teachcomputing.org/curriculum/key-stage-4	Find the relevant topic on these websites and YouTube channels.
8. Attend after school intervention sessions on topics	
9. Glossary of terms	Build a glossary of Computer Science terms using Frayer's model.
10. Learning Grids	Create at least one learning grid for each Computer Science Topic.
11. Knowledge Organisers	Create a knowledge organiser for each topic.
12. Flash Card	Create a set of flashcards for a particular topic or the entire curriculum.

SLCA teacher checklist

Student Name:

For each characteristic, circle attributes that are strengths

Behaviour and Attitude	Self Efficacy
	Leadership and Teamwork
	Uniform
	Behaviour when working with others
	Types of intelligence
	Dealing with failure
	Attendance
Effort	Focus and attention
	Comparisons of effort
	Punctuality
	Attendance/intervention/detentions
Vision	Setting goals and targets
	Deadlines and time keeping
	Future career and higher education plans
Practice	Knowledge development
	Feedback
	Questions
	Presentation of work
	Organisation of work
	Reviewing assessment material
Systems	Revision planning and strategies
	Homework quality
	Planning and organisation
	Preparation and equipment

For each characteristic, circle attributes that need improvement

Behaviour and Attitude	Self Efficacy
	Leadership and Teamwork
	Uniform
	Behaviour when working with others
	Types of intelligence
	Dealing with failure
	Attendance
Effort	Focus and attention
	Comparisons of effort
	Punctuality
	Attendance/intervention/detentions
Vision	Setting goals and targets
	Deadlines and time keeping
	Future career and higher education plans
Practice	Knowledge development
	Feedback
	Questions
	Presentation of work
	Organisation of work
	Reviewing assessment material
Systems	Revision planning and strategies
	Homework quality
	Planning and organisation
	Preparation and equipment

A graded description of each attribute is provided on the other side

Pro forma for Student Inclusive Meeting (student example)

Mum and Dad this is [redacted]. He is the Computer Science teacher.

The Computer Science GCSE consists of two papers worth 50% each, Paper 1 is based on practical programming and algorithms, whereas Paper 2 is more focused on theory. During the Christmas exams, I got 75 % for Paper 1 and 78 % for Paper 2. My overall mark was 76% which is equivalent to a level 7.

My target grade is set at 8, my effort grade is 2 and my progress colour is green which means I am on to achieve or exceed my target grade

I think my topic strengths are Algorithms, Programming and Data representation

I think I need to focus on both papers. The topics I need to improve on are Computer systems, Computer Networks, Cyber security and Ethical, Legal and environmental issue. The specific subtopic areas I am most concerned about are Software classification, functions of OS and Von Neuman architecture

I think my learning characteristic strengths are my Vision / Practice

I think I need to improve my Behavior and attitude, Systems, in particular organisation of work, homework quality and planning and organisation

The three goals I need to focus on now are:

1. Redo any HWs under 9/10 starting from now. I will use textbooks and other resources such as BBC Bitesize.
2. Use Seneca for topics I am unsure of. I will do 30-60 minutes of Seneca for my most uncertain topics on a Sunday, starting from February and until I am fully confident in my knowledge. I will determine these weak points through:
3. Practicing exams. Most of my marks were lost to poor exam technique. To remedy this, I will do past papers under exam conditions to bring my exam technique up to a satisfactory level, again starting from February aiming to do one timed paper per month at the least, and reviewing my mistakes. If possible, I will get them marked by a CS teacher.

Teacher Training Presentation for the student inclusive meeting (session 1 sample of slides)

Scenario 4

Dialogue	Alternative response
Parent: What resources would you recommend for my son?	Teacher: I have compiled an FAQ sheet and put lots of information including useful resources. John has also seen list and has thought about what might work best for him? John what did you decide on?
Teacher: Well there is a book by… and a good website is…	

Rationale

Be direct
Don't waste precious time being generic, make it tailored advice
Involve the student

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Scenario 5

Dialogue	Alternative response
Parent: I don't really understand all of the information in John's progress report. Are you saying John can't learn?	Teacher: No, I believe John is really capable of learning. Can you tell me more about what you don't understand on the progress report?
Teacher: To be honest, I think John's difficulties have more to do with his attitude and behaviour rather than not be able to learn	

Rationale

Answers questions directly
Seeks information
Avoids power play with diagnosis
Avoids opinion

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During the evening- key points

- Please encourage the students to start the session, possible ask them ' John, please can you tell me about your progress and strengths, weaknesses and targets'
- Please use your own understanding of their subject knowledge, focusing on a few key areas
- Please use your own tracking of their student learning attributes, to make a judgement on their progress towards these, focusing on a few key areas
- Try to avoid repeating info that parents already have such as that contained on the report or they FAQ sheet they were sent in advance of the meeting.

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After the meeting

- Check progress towards targets at regular intervals.
- Students will continue to monitor their progress.
- Complete the questionnaires and interview.
- Thank You!

You can withdraw from the research at any time by emailing [redacted]
All information is confidential and anonymised

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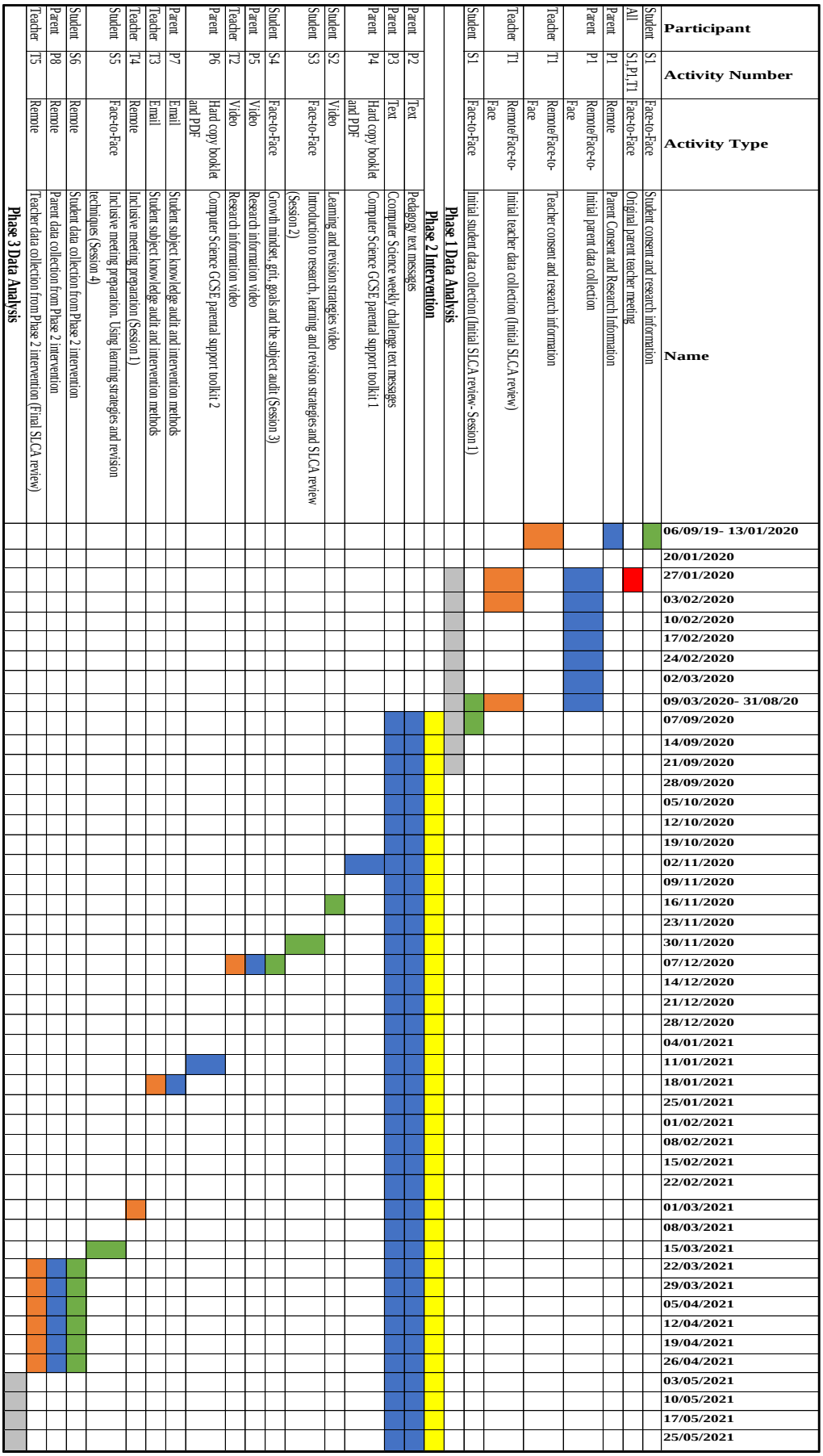
School B: Inner-City School Gantt Chart

Participant	Activity Number	Activity Type	Name	18/10/19- 24/02/2020	02/03/2020	09/03/2020	16/03/20-25/06/20	29/06/2020	06/07/2020	13/07/2020	20/07/2020	27/07/2020	03/08/2020	10/08/2020	17/08/2020	24/08/2020	31/08/2020	07/09/2020	14/09/2020	21/09/2020	28/09/2020	05/10/2020	12/10/2020	19/10/2020	02/11/2020	11/09/2020	16/11/2020	23/11/2020	30/11/2020	07/12/2020	14/12/2020	21/12/2020	28/12/2020	04/01/2021	11/01/2021	18/01/2021	25/01/2021	01/02/2021	08/02/2021	15/02/2021	22/02/2021	01/03/2021	08/03/2021	15/03/2021	22/03/2021	29/03/21-31/05/21
Student	S1	Face-to-Face	Student consent and research information																																										
All	S1,P1,T1	Face-to-Face	Original PTM																																										
Parent	P1	Remote	Parent Consent and research information																																										
Parent	P1	Remote/Face-to-Face	Initial parent data collection																																										
Teacher	T1	Face-to-Face	Teacher consent and research information																																										
Teacher	T1	Face-to-Face	Initial teacher data collection (Initial SLCA review)																																									
Student	S1	Face-to-Face	Initial student data collection (Initial SLCA review- Session 1)																																									
			Phase 1 Data Analysis																																									
Student	S2	Face-to-Face	Introduction to research and preparing for the summer break (Session 2 delivered twice)																																									
			Phase 2 Intervention																																									
Parent	P2	Text	Pedagogy text messages																																									
Parent	P3	Text	Computer Science weekly challenge text messages																																									
Parent	P4	Hard copy booklet and PDF	Computer Science GCSE parental support toolkit 1																																									
Student	S3	Face-to-Face	Developing a Growth Mindset, grit and metacognition (Session 3)																																									
Student	S4	Face-to-Face	Second SLCA review and understanding will vs skills (Session 4)																																								
Parent	P5	Video	Research information video																																								
Teacher	T2	Video	Research information video																																								
Student	S5	Face-to-Face	Putting planning into practice (Session 5)																																								
Student	S6	Video	Learning and revision strategies video (Session 6)																																								
Parent	P6	Email	Student subject knowledge audit and intervention methods																																								
Teacher	T3	Email	Student subject knowledge audit and intervention methods																																								
Parent	P7	Hard copy booklet and PDF	Computer Science GCSE parental support toolkit 2																																								
Teacher	T4	Remote	Second SLCA review																																								
Student	S7	Remote	Inclusive meeting preparation (Session 1)																																								
Student	S8	Remote	Inclusive meeting preparation (Session 2)																																								
Parent	P8	Remote	Inclusive meeting preparation																																								
Teacher	T5	Remote	Inclusive meeting preparation (Session 1)																																							
Teacher	T6	Remote	Inclusive meeting preparation (Session 2)																																							
All	S9,P9,T7	Remote	Inclusive meeting																																							
Student	S10	Remote	Student data collection from Phase 2 intervention																																							
Parent	P10	Remote	Parent data collection from Phase 2 intervention																																							
Teacher	T8	Remote	Teacher data collection from Phase 2 intervention (Final SLCA review)																																							
			Phase 3 Data Analysis																																									
All	S11,P11,T9	Remote	Progress towards targets meeting																																								
Student	S12	Face-to-Face	How to plan a revision session, using flash cards and coping with exams (Session 7)																																								
			Final subject knowledge audit and modification of SLCA																																								

School Y: Suburban Gantt Chart



Engagement activity plans

Parents (School B: Inner-City School)

Engagement Number	P1
Title and activity type	Parent consent and initial data collection. Existing parent teacher meeting (05/03/20).
Date	Information sheets and consent forms posted to parents 18/10/19. Follow up email 13/11/19- VLE access to consent forms. Questionnaires 1A, 1B and 1C available online from 16/12/19. Questionnaire 2 available from 05/03/20 (at the meeting in hard copy or online afterwards). Parent interviews 23/03/20
Time	N/A
Length	N/A
Participants	Parents
Delivered by	Mr Lanigan
Purpose	To understand parents' views of the existing parent teacher meeting (Questionnaire 2), PAS processes (Questionnaire 1B) and their son's SLCA (Questionnaire 1A).
Description / Activities	• Questionnaire 1A and 1B were completed in advance of the parent teacher meeting. • Questionnaire 2 could either be completed as hard copy document at the parent teacher meeting or at a later stage online
Resources	• Online survey software https://admin.onlinesurveys.ac.uk/. • Questionnaire 2 (Paper based)
Other considerations	• Parent interviews were conducted over the phone due to the first COVID-19 lockdown. All interviews conducted on the same day.

Engagement Number	P2
Title and activity type	Pedagogy text messages Parent
Date	13/07/20- 26/03/2021
Time	N/A
Length	34 messages sent to parents
Participants	All parents
Delivered by	Mr Lanigan
Purpose	To provide parents with a range of information on PAS processes including supporting metacognition, understanding learning strategies, parental engagement support, student well-being, health and the importance of expectations and aspirations.
Description / Activities	• Text message were less than 280 characters and sent between Monday and Wednesday every week. • Text messages contained links to videos, articles and websites.
Resources	• URLs were compressed using the www.TinyURL.com • Text messages were sent through www.schoolcomms.com
Other considerations	• Content in messages was designed to coincide with information in the toolkits, content of student sessions or a particular time in the year e.g. mock examinations.

Engagement Number	P3
Title and activity type	Computer Science challenge text messages Parent
Date	13/07/20- 26/03/2021

Time	N/A
Length	34 messages sent to parents
Participants	All parents
Delivered by	Mr Lanigan
Purpose	To be used as a parental engagement method to gauge progress and understanding. To be used to as a retrieval practice activity for students.

Description / Activities	• Text message were less than 280 characters and sent between Thursday and Saturday every week.
	• Text messages contained links to videos and websites to provide support.
	• Every text had the same structure:
	  ○ CS Challenge Question:
	  ○ Answer:
	  ○ Support:

Resources	• URLs were compressed using the www.TinyURL.com • Text messages were sent through www.schoolcomms.com
Other considerations	• Content in messages was linked to curriculum and the order it was taught. • Parents were advised that the text message were not to be used independently to gauge progress but in conjunction with other data, including homework, exams and reports.

Engagement Number	**P4**
Title and activity type	Computer Science GCSE Parental Support Toolkit 1 Parent hard-copy booklet and PDF
Date	07/09/20
Time	N/A
Length	N/A
Participants	All parents
Delivered by	Mr Lanigan
Purpose	To develop PAS processes. To provide information on key student attributes and learning and revision strategies. To explain the Computer Science curriculum and provide practical activities for support.
Description / Activities	The toolkit provided: • An introduction regarding the research and the key aspects. • Information on the sixty-minute mission and reward strategy and maintaining this. • An explanation of what is a growth mindset and how to support their son in developing this. • An explanation of what is grit and why it is important for their son to possess this. • The effectiveness of different learning and revision strategies. • 'Did you know facts' on the impact of listening to music, sleep, mobile phones and eating breakfast on learning and revising. • An explanation of the GCSE course structure. • Practical programming drills and skills that can be completed by their son and demonstrated. • Computer Science related museums. • Interesting resources and further reading on Computer Science.
Resources	• Computer Science GCSE Parental Support Toolkit 1
Other considerations	• The booklet was posted to parents, but a link was also provided to it through one of the pedagogy text messages to ensure it could be accessed by all parents. • Some activities were designed to coincide with activities from the student engagement sessions at school.

	• The first page provided details on how the participant could withdraw from the study. The anonymity and confidentiality of the information provided was reasserted.

Engagement Number	**P5**
Title and activity type	Research information video Parent video
Date	19/10/20
Time	N/A
Length	11 minutes
Participants	Parents
Delivered by	Mr Lanigan
Purpose	To provide parents with further information regarding the research including the terminology used. To explain possible outcomes and to seek feedback.
Description / Activities	The video covered: • The meaning of the research title. • The importance of educational engagement • To explain the term PAS and why it is important. • To explain SLCA and why they are important. • How the possible new structure differs from the original. What other methods will be used as part of the new educational engagement approach. • At the end of the video a survey link was provided to allow parents to leave feedback and provide suggestions.
Resources	• Microsoft SharePoint. • Video recording software.
Other considerations	• The video was narrated by Mr Lanigan. • The video was stored within the schools SharePoint system, a link was provided to this in a parent pedagogy text message and the online form for feedback. Storing the video in SharePoint allowed for the number of views to be recorded.

Engagement Number	**P6**
Title and activity type	Subject Knowledge Audit Parent email
Date	19/11/20
Time	N/A
Length	N/A
Participants	All parents
Delivered by	Mr Lanigan
Purpose	To make parents aware of challenging curriculum areas for their son and the intervention strategies their son had selected to overcome these.
Description / Activities	• Formatted subject audit sent as an email attachment to parents. The document had two columns for **Areas requiring significant improvement** and **Areas requiring some improvement**, these sections were populated with the subtopics identified by students**.** • **What is a specific topic/area are particularly struggling with?** and **What is the overall topic/area you are most struggling with?** were used to identify those aspects in greatest need of addressing. • The student selected intervention methods identified at the bottom of the document. With each method was either a link to the resource, website or further instructions on how to use it. • The email asked parents to review the audit and support their son with the chosen intervention methods.

	• A link to the student learning and revision strategies video was provided in the email and parents were asked to encourage their sons to view the contents.
Resources	• Subject knowledge audits extracted from student engagement spreadsheet. • Subject knowledge audit for mailmerge.
Other considerations	• Students asked for consent to share Curriculum Audits with parents and teachers.

Engagement Number	**P7**
Title and activity type	Computer Science GCSE Parental Support Toolkit 2 Parent hard-copy booklet and PDF
Date	25/11/20
Time	N/A
Length	N/A
Participants	All
Delivered by	Mr Lanigan
Purpose	To develop PAS processes. To provide information on learning strategies and revision methods and key student attributes. To explain the Computer Science curriculum and practical activities for support.
Description/ Activities	The toolkit provided: • An explanation of the chunking and interleaving revision methods. • The purpose of flash cards and how they could be used effectively. • Key revision strategies and their effectiveness. • The importance of their son keeping active. • Advice on helping their son to prepare the night before an exam. • Information on the difference between good revisers compared to poor revisers. • Eight methods to help their son achieve. • Seven ways to stop exam panic. • Support on how to enable their son to use the intervention methods for curriculum areas. • Further practical programming drills and skills that can be completed by their son and demonstrated. • Interesting resources and further reading on Computer Science.
Resources	• Computer Science GCSE Parental Support Toolkit 2.
Other considerations	• There was a greater focus in this booklet on revision methods as its delivery was linked to the mock examinations before Christmas 2020. • The booklet was sent out in the post as a hard copy, but a link was also provided to it through one of the pedagogy text messages to ensure it could be accessed by all parents. • Some activities were designed to coincide with activities from the student engagement sessions at school. • The first page provided details on how the participant could withdraw from the study. The anonymity and confidentiality of the information provided was reasserted.

Engagement Number	**P8**
Title and activity type	Inclusive meeting preparation Parent remote session
Date	26/01/20
Time	5.30-6.15
Length	45 minutes
Participants	14
Delivered by	Mr Lanigan

Purpose	To prepare parents for the forthcoming meeting. To make them aware of the training undertaken by the teacher and students.
Description/ Activities	• A rationale for the inclusive meeting and other engagement activities based on the data from Phase 1. • An explanation of the changes and possible outcomes. • The structure was discussed and parents were provided with guidance on how to prepare and approach the evening. • An explanation of how their son had prepared was provided. • An explanation of how the teacher had prepared for and their use of active listening techniques was provided. • Advice on how to support their son with their targets after the meeting was provided. • Questions from parents were encouraged regarding the meeting and engagement activities.
Resources	• Session PowerPoint • Zoom software • FAQ guide to Computer Science for parents (emailed)
Other considerations	• Conducted online due to COVID-19 restrictions. • Directly after, the presentation was emailed to all parents including those who were unable to attend. • The last slide provided details on how the participant could withdraw from the study. The anonymity and confidentiality of the information provided was reasserted. • The participants were reminded that audio from the meeting would be recorded.

Engagement Number	**P9**
Title and activity type	Inclusive meeting Student, parent and teacher remote session
Date	28/01/21
Time	5pm-8pm
Length	3 hours of 6-minute slots with teacher
Participants	All
Delivered by	Participants
Purpose	To develop student and parent educational engagement through an inclusive meeting structure.
Description/ Activities	• Students open the meeting by discussing their strengths, weaknesses and targets, some students discussed progress data. • Teacher considers strengths, weaknesses and goals, adding their own insight and adjusts these accordingly. Parents contribute their own insight and asks any further questions. • SMART targets are agreed.
Resources	• Specialist parents evening software used
Other considerations	• Conducted online due to COVID-19 restrictions. • Meetings were recorded by dictaphone by the teacher, all participants were aware

Engagement Number	**P10**
Title and activity type	Parent data collection from Phase 2 intervention
Date	Questionnaires 1A,1B,1C, 2 combined and available online from 01/02/21. Interviews conducted on 11/02/21, 24/02/21, 26/02/21, 01/03/21 and 11/03/21
Time	N/A
Length	
Participants	Parents

Delivered by	Mr Lanigan
Purpose	To provide feedback on educational engagement methods used during Phase 2 (the intervention phase).
Description / Activities	N/A
Resources	N/A
Other considerations	• All research collection completed online due to COVID-19 restrictions

Students (School B: Inner-City School)

Engagement Number	**S1**
Title and activity type	Student consent and initial data collection (Initial SLCA review) Student face to face session (Session 1) Existing parent teacher meeting (05/03/20)
Date	Research information presentation and consent 04/12/20 at school. Questionnaires 1A ,1B,1C and 2 completed at school on 16/03/20 and online 01/05/20. Student group interview at school on 18/03/20.
Time	12.30- 1.30pm
Length	1 hour
Participants	All
Delivered by	Mr Lanigan
Purpose	To understand students' views of the existing parent teacher meeting (Questionnaire 2), PAS processes (Questionnaire 1B) and their SLCA (Questionnaire 1A). To measure levels of self-regulation amongst students (Questionnaire 1C).
Description / Activities	• Questionnaire 1B,1C and 2 were completed online during the session. • Questionnaire 1A was presented using the SLCA grid on the 'Survey 1' tab students indicated their SLCA by selecting the relevant statement which were attributed to Very Good, Good, Acceptable, Poor and Very Poor. Students repeated this process on two further occasions.
Resources	• Student engagement spreadsheet. • Online survey software https://admin.onlinesurveys.ac.uk/ .
Other considerations	• Consent was only sought from students once parents had provided written consent using the parental consent form. • Questionnaire 1A,1B,1C and 2 were completed remotely online by two students who were self-isolating due to COVID-19. Completed by 01/05/20. • As part of the initial questionnaire, parents completed a similar review for their son with adjusted statements (more relevant to their home context). • Teachers completed the same process as students, for each student, excluding questionnaires 1B and 1C. • Student engagement spreadsheet stored in R Drive only accessible to students.

Engagement Number	**S2**
Title and activity type	Introduction to the research and preparing for the summer break Student face to face session (Session 2)
Date	03/07/20 and 14/07/20
Time	11.45am for both sessions
Length	1 hour
Participants	03/07/20 (6 students) and 14/07/20 (7 students)
Delivered by	Mr Lanigan
Purpose	To introduce students to the research purpose and activities. To provide strategies and materials for summer study.

Description / Activities	• The research focus and key terminology was explained, including SLCA and the motivation continuum. The main engagement methods the students will be involved with were discussed. • Types of motivation were discussed, students were encouraged to reflect on their own motivations and how they could be linked to goals. • The difference between a student's learning zone and performance zone were discussed. In preparation for the summer holidays, the importance of working in their learning zone was emphasised, moving later to their performance zone. • An explanation was provided of spaced practice and how this could be used over the summer holidays. • Summer Computer Science readings were provided.
Resources	• Session PowerPoint • Spaced practice handout (PixL) • Vision activity: The motivation diamond (Oakes and Griffin, 2018) • Physical folder for activity sheets
Other considerations	• All resources were available to students in a shared online folder and through the MS Teams Research Group • The weekly pedagogy text message to parents over the summer holidays covered similar themes to ensure parity in activities and to support home learning. • A register by code was kept of those who attended to ensure resources could be sent to those who were unavailable.

Engagement Number	**S3**
Title and activity type	Developing a growth mindset, grit and metacognition Student face to face session (Session 3)
Date	18/09/20
Time	12.30pm
Length	45 minutes
Participants	16 students
Delivered by	Mr Lanigan
Purpose	To introduce the concept of metacognition. To understand the importance of a growth mindset and grit.
Description / Activities	• Students were introduced to the iceberg illusion of success analogy. • A practical explanation was provided with examples for the meaning of metacognition. • The difference between a fixed mindset and a growth mindset were discussed, students completed a questionnaire to determine their mindset. • Students considered their long-term goals and how these relate to Computer Science to determine a plan of action. • In future students were to reference the Growth Mindset stickers, now stuck in planners. • An explanation of the Learning Pit was provided followed by a video expanding on this topic.
Resources	• Session PowerPoint Presentation. • Growth Mindset Sticker. • Mindset questionnaire (Oakes and Griffin, 2018). • Fixed Vs Growth Mindset video (John Spencer, 2017). • The Learning Pit Video (Kenilworth Learning, 2015). • Physical folder for activity sheets.
Other considerations, reliability and replicability	• A register by code was kept of those who attended to ensure resources could be sent to those who were unavailable. • All resources were posted on the MS Teams Research Group. • The weekly pedagogy text messages to parents covered similar themes to ensure parity in activities and to support home learning.

Engagement Number	**S4**
Title and activity type	Second SLCA review and understanding will vs skills. Student face to face session (Session 4).
Date	16/10/20
Time	12.30pm
Length	45 minutes
Participants	All
Delivered by	Mr Lanigan
Purpose	To reflect and review changes in their SLCA. To identify areas of focus for students in both subject knowledge and SLCA.
Description / Activities	• Using the SLCA grid on the 'Survey 2' tab of the student engagement spreadsheet, students indicated their SLCA by selecting the relevant statement which were attributed to Very Good, Good, Acceptable, Poor and Very Poor. • Using the 'Totals' tab on the student engagement spreadsheet, students were able to compare their SLCA from the previous review to determine if they were improving or deteriorating. Students were asked to enter reasons why on the same tab. • The Will Vs Skill Matrix was explained to students. Students then completed two versions of this focusing on subject knowledge topics and SLCA main characteristics.
Resources	• Session PowerPoint • Student engagement spreadsheet • Will Vs Skill Matrix Worksheets (Oakes and Griffin, 2018) • Physical folder for activity sheets
Other considerations	• Second SLCA was not analysed as part of the final data, it was only used for students to indicate their progression.

Engagement Number	**S5**
Title and activity type	Putting planning into practice Student face to face session (Session 5)
Date	Completed during creative curriculum during 11/11/2020 to 12/11/20
Time	Different times
Length	1 hour
Participants	15 students
Delivered by	Mr Lanigan
Purpose	To consider clear practical steps in achieving goals. To review subject knowledge.
Description / Activities	• Students reflected on their normal school week and when they were least and most productive. They then decided on a 60-minute Computer Science mission with a medal for completing their goal. • Bad attitudes and good attitudes to thinking were explained and how these impact goal setting (De Bono, 2017:69). • Students used the 'PLC' tab on their student engagement spreadsheet to complete a detailed subject knowledge audit, grading their understand of a subtopics 1,2 or 3 (1 being the highest). • On the same workbook, students selected the main topic and the subtopics that required the greatest improvement. • Students then selected potential intervention methods from a comprehensive list of resources compiled by the researcher and subject teacher. • Students emailed themselves a copy of subject knowledge audit for reference.
Resources	• Session PowerPoint • Student engagement spreadsheet

	• Physical folder for activity sheets • Sixty Minute Challenge (Oakes and Griffin, 2018)
Other considerations	• A register by code was kept of those who attended to ensure resources could be sent to those who were unavailable. • Individual sessions were provided to the two students unavailable due to other commitments. • Students provided permission for their subject knowledge audits to be shared with their teachers and parents. • Parents were emailed with their son's subject knowledge audit and intervention methods (19/11/20). Advice was provided on how to use the audit. • Teachers were emailed with the students' subject knowledge audits and intervention methods (19/11/20), this was used to influence teaching approaches and intervention.

Engagement Number	**S6**
Title and activity type	Learning and revision strategies video (Session 6) Student remote session
Date	19/11/20
Time	N/A
Length	23 minutes
Participants	Video link emailed to students individually allowing for views to be reviewed
Delivered by	Mr Lanigan
Purpose	To provide a range of strategies, skills and tools to improve learning and revision.
Description/ Activities	The video covered: • The impact of different revision strategies (Dunlosy et al, 2013). Students were asked to reflect on how their own revision methods compare. • How six learning strategies can improve memory and recall including spaced practice, interleaving strategy, elaboration, concrete examples, dual coding and retrieval practice (How to study effectively for school or college, memorize academy, 2016). • Using a metacognitive method for learning definitions called Frayer's model (Computer Science examples provided). • Using retrieval challenge grids for retrieval practice (Computer Science examples provided) • Designing mini-tests for retrieval practice. • A free, revision timetabling app to plan topic revision (www.getadapt.co.uk). • The importance of goals for success in Computer Science and the planning needed to achieve these.
Resources	Resources embedded within the video included: • How to study effectively for school or college (Memorize academy, 2016 https://www.youtube.com/watch?v=CPxSzxylRCI&feature=youtu.be) • EEF Metacognition and self-regulated learning toolkit, 2018 • Motivation Madness, 2015 https://www.youtube.com/watch?v=SFjgXNLzsB4)
Other considerations	• Video was used instead of face-to-face session due to the growing numbers of students absent and self-isolating (conducted during the second national lockdown). • Activities from the original face to face session 6 were compiled in the video. • Video was also shared with parents and teachers. • The same video was used at both schools. • The student learning and revision strategies video was created with the help of the teachers involved.

Engagement Number	S7
Title and activity type	Inclusive meeting preparation (Session 1) Student remote session
Date	13/01/21 and 20/01/21
Time	1.30-3.30PM
Length	2 hours
Participants	All student over two sessions
Delivered by	Mr Lanigan
Purpose	For students to review their subject knowledge audit and SLCA. For students to plan their role in the meeting including their data, strengths, weaknesses and targets.
Description/ Activities	• An explanation was provided as to why the meeting format had been restructured. • An explanation of the new meeting structure was provided. • Students adjusted their SLCA on the 'Survey 2' tab of the student intervention spreadsheet to include learning from their mock examinations. • Students adjusted their subject knowledge audit on the 'PLC' tab of the student intervention spreadsheet to include learning from their mock examinations and their question level analysis (QLA). The QLA provided a breakdown of marks based on topics rather than questions and displayed this as percentages. • Students were provided with a pro forma/ script to scaffold what they might say, this included progress data, SLCA strengths and weaknesses and subject knowledge strengths and weaknesses. • A help sheet was provided with potential targets for the SLCA characteristics and what intervention methods they could use to meet their target. • How to create SMART targets was explained to students. Students then decided on three SMART targets for Computer Science focusing on subject knowledge and SLCA. • How to present and how to communicate effectively during the meeting was also explained to students. • Students were encouraged to practice their script as homework.
Resources	• Session PowerPoint • Student Engagement Spreadsheet • Student script/pro forma • Support sheet • Student's Computer Science Paper 1 and Paper 2 mock examination papers • Question level analysis (QLA) printouts for student's Computer Science Paper 1 and Paper 2 mock examination papers
Other considerations	• The session was recorded and stored within the MS Teams Research Group, available to be reviewed by students at any time. • Modified due to COVID-19 restrictions • The participant was reminded that audio from the meeting would be recorded.

Engagement Number	S8
Title and activity type	Inclusive meeting preparation (Session 2) Student remote session
Date	27/01/20
Time	1.30-2.10PM
Length	40 minutes
Participants	All
Delivered by	Mr Lanigan
Purpose	To practice for the inclusive subject meeting.

Description/ Activities	• Main points explained from the previous session with a focus on dialogue, etiquette and communication. • Students now encouraged to personalise their scripts/pro forma by reading through and making changes to ensure they were concise and clear. To be conscious of timing. • Breakout rooms set up with two students in each room, reading personalized version of script aloud, other student listening and providing feedback, students then swapped roles.
Delivered by	Mr Lanigan
Resources	• Session PowerPoint • Student Engagement Spreadsheet • Student script/pro forma
Other considerations	• The session was recorded and stored within the MS Teams Research Group, available to be reviewed by students at any time. • Modified due to COVID-19 restrictions

Engagement Number	**S9**
Title and activity type	Inclusive meeting Student, parent and teacher remote session
Date	28/01/21
Time	5pm-8pm
Length	3 hours of 6-minute slots with teacher
Participants	All
Delivered by	Participants
Purpose	To develop student and parent educational engagement.
Description/ Activities	• Students open the meeting by discussing their strengths, weaknesses and targets, some students discussed progress data. • Teacher considers strengths, weaknesses and goals, adding their own insight and adjusts these accordingly. Parents contribute their own insight and asks any further questions. • SMART targets were agreed.
Resources	• Specialist parents evening software used.
Other considerations	• Conducted online due to COVID-19 restrictions. • Meetings were recorded by dictaphone by the teacher, all participants were aware of the overt recording.

Engagement Number	**S10**
Title and activity type	Student Data Collection from Phase 2 Intervention Student remote session
Date	Student Questionnaires 1A,1B,1C and 2 combined and available online from 02/02/21. Student group interview conducted on 12/03/21
Time	N/A
Length	Questionnaires completed remotely. Student group interview conducted during for 45 minutes.
Participants	Students
Delivered by	Mr Lanigan
Purpose	To provide feedback on educational engagement methods used during Phase 2 (the intervention phase) To measure levels of self-regulation amongst students (Questionnaire 1C).
Description / Activities	• Questionnaire 1A, 1B,1C and 2 were completed remotely. • Student group interview group conducted at school during lunchtime
Resources	N/A
Other considerations	• Most research tools conducted online due to COVID-19 restrictions

	• Student group interview took place on the first week students returned to school after lockdown.

Engagement Number	**S11**
Title and activity type	Progress towards targets meeting Student and teacher face to face session
Date	15/03/21 – 26/03/21
Time	During lessons or immediately after
Length	10 minutes or less
Participants	Students and teachers (Parents emailed if follow up required).
Delivered by	Teacher
Purpose	To discuss progress towards targets set during inclusive subject meeting.
Description / Activities	• The teacher arranges short meetings to discuss progress towards targets and next steps.
Resources	• Student Pro forma
Other considerations	• Parents only involved if home support required or limited progress made. • Modifications to targets were required as the method of final assessment for GCSE students changed to teacher assessed grades due to Covid-19.

Engagement Number	**S12**
Title and activity type	How to plan a revision session, using flash cards and coping with exams Final subject knowledge audit and modification of SLCA Face to face session (Session 7)
Date	25/03/21
Time	3.30-4.30
Length	1 hour
Participants	Students
Delivered by	Mr Lanigan
Purpose	To help students plan a revision session. To help students to develop a key revision tool. To help students cope with exam stress, explaining the importance of sleep and exercise. To finialise what areas need addressing before examinations
Description / Activities	• The date was originally planned for the summer term. However, most assessed tasks started after Easter. • The concept of the memory clock was explained and how it could be applied to Computer science revision. Memory clock sticker and handout provided. • How to effectively use flash cards was explained, including the Leitner system. A Leaflet with summary information was provided. • The importance of sleep and exercise for exams was explained and their impact on stamina and concentration • Research into revising to music and having your smart phone with you while revise was discussed. • The difference between poor and good revisers was discussed. • Students to use the 'Survey 3' tab and the 'PLC' tab to update student engagement spreadsheet for the final time. • Students should be able to identify the final areas for revision and improvement required
Resources	• Session PowerPoint • Memory clock handout and sticker (Sandringham Research School, 2018) • Flashcards (PiXL Secondary) • Student engagement spreadsheet
Other considerations	• Content changed as a result teacher assessed grades resulting from the COVID-19 pandemic.

Teachers (School B: Inner-City School)

Engagement Number	T1
Title and activity type	Teacher consent and initial data collection (Initial SLCA review). Existing parent teacher meeting (05/03/20).
Date	Information sheet and consent forms available from 03/09/19. Questionnaires 1A available in a spreadsheet format from 23/01/20. Questionnaire 2 available in hard copy format from 05/03/20 (after the meeting). Teacher interviews 20/03/20 and 17/05/20
Time	N/A
Length	N/A
Participants	Teachers
Delivered by	Mr Lanigan
Purpose	To understand teachers' views of the existing parent teacher meeting (Questionnaire 2) and SLCA (Questionnaire 1A).
Description / Activities	• Questionnaire 1A was completed using a similar SLCA 'Survey 1' gird as students but for all students in advance of parent teacher meeting. • Questionnaire 2 was completed after the meeting.
Resources	• Teacher SLCA spreadsheet
Other considerations	• Later interview and completion by T3 due to COVID-19 related illness. • One teacher interview conducted face to face on 20/03/20. One teacher interview (17/05/20) was conducted by phone due to the first COVID-19 lockdown.

Engagement Number	T2
Title and activity type	Research information video Teacher email
Date	19/10/20
Time	N/A
Length	11 minutes
Participants	Teachers
Delivered by	
Purpose	To provide teachers with further information regarding the research including the terminology used. To explain possible outcomes and to seek feedback.
Description / Activities	The video covered: • The meaning of the research title. • The importance of educational engagement • To explain the term PAS and why it is important. • To explain SLCA and why they are important. • How the possible new structure differs from the original. What other methods will be used as part of the new educational engagement approach. • At the end of the video a survey link was provided to allow teachers to leave feedback and provide suggestions.
Resources	• Microsoft SharePoint. • Video recording software.
Other considerations	• The Student learning and revision strategies video was created with the help of the teachers involved, a link to the final video was emailed to the teachers.

Engagement Number	T3

Title and activity type	Subject knowledge audit Teacher email
Date	19/11/20
Time	N/A
Length	N/A
Participants	Teachers
Delivered by	Mr Lanigan
Purpose	To make teachers aware of challenging curriculum areas for their students and the intervention strategies their students had selected to overcome these.
Description / Activities	• Formatted subject audit sent as an email attachment to teachers. The document had two columns for **Areas requiring significant improvement** and **Areas requiring some improvement**, these sections were populated with the subtopics identified by students**.** • **What is a specific topic/area are particularly struggling with?** and **What is the overall topic/area you are most struggling with?** were used to identify those aspects in greatest need of addressing. • The student selected intervention methods identified at the bottom of the document. With each method was either a link to the resource, website or further instructions on how to use it. • The email asked teacher to review the audits and support the students.
Resources	• Subject knowledge audits extracted from student engagement spreadsheet. • Subject knowledge audit for mailmerge.
Other considerations	• Students asked for consent to share Curriculum Audits with parents and teachers.

Engagement Number	**T4**
Title and activity type	Second SLCA review
Date	18/12/20
Time	N/A
Length	N/A
Participants	Teachers
Delivered by	Mr Lanigan
Purpose	To review changes in SLCA.
Description / Activities	• Questionnaire 1A (second SLCA review) was completed using a similar SLCA 'Survey 1' gird as students but for all students. • To identify possible areas for development and support.
Resources	• Teacher SLCA spreadsheet
Other considerations	• Completed after marking Computer Science mock examinations.

Engagement Number	**T5**
Title and activity type	Inclusive meeting preparation (Session 1) Teacher remote session
Date	25/01/21
Time	1.30-3.30PM
Length	2 hours
Participants	Teacher
Delivered by	Mr Lanigan
Purpose	To prepare teachers for the inclusive meeting and the reengineered structure. To develop active listening approaches.
Description/ Activities	• A rationale for the inclusive meeting and other engagement activities was provided based on the data from Phase 1. • A discussion was had regarding a fictious extract from a parent teacher meeting and the issues it presented.

	• An explanation of the changes and possible outcomes was provided. • The new structure and the teacher's role were explained. • The teacher was informed of how parents and students have been supported in preparing for the meeting. • The first draft of student pro forma was provided with an audio example. • The six key active listening skills were explained and the differences between effective and ineffective communication were explored. • Key features to remember in the meeting were discussed such as talk time, students being novices etc. • Five meeting scenarios with dialogue were provided. The teacher was asked to consider an alternative response. An exemplar alternative response and rationale was then presented. • Key points regarding the meeting were discussed. • Actions after the meeting were discussed.
Resources	• Session PowerPoint
Other considerations	• Modified due to COVID-19 restrictions • The last slide provided details on how the participant could withdraw from the study. The anonymity and confidentiality of the information provided was reasserted. • The participant was reminded that audio from the meeting would be recorded.

Engagement Number	**T6**
Title and activity type	Inclusive meeting preparation (Session 2) Teacher remote session and independent work.
Date	28/01/20
Time	12.30-1.30PM
Length	1 hour
Participants	Teacher
Delivered by	Mr Lanigan
Purpose	To collate information on pupils', considering strengths, weaknesses and targets for SLCA and Subject knowledge.
Description/ Activities	• The teacher reviewed progress data and examination results including the question level analysis for both mock exam papers. • The teacher considered the students' subject knowledge and SLCA. • The teacher reviewed the students' strengths, weaknesses and targets. • Information was collated in preparation for the meeting and the teacher was encouraged to think about their delivery, the use of active listening and the removal of unnecessary general information.
Resources	• Question level analysis. • Examination papers. • Tracking data. • Homework marks. • Student script/pro forma.
Other considerations	• The time was selected by the teacher, the first 10 minutes were directed and the last 50 minutes was independent. • Modified due to COVID-19 restrictions.

Engagement Number	**T7**
Title and activity type	Inclusive meeting Student, parent and teacher remote session
Date	28/01/21
Time	5pm-8pm
Length	3 hours of 6-minute slots with teacher
Participants	All

Delivered by	Participants
Purpose	To develop student and parent educational engagement through an inclusive meeting structure.
Description/ Activities	• Students open the meeting by discussing their strengths, weaknesses and targets, some students discussed progress data. • Teacher considers strengths, weaknesses and goals, adding their own insight and adjusts these accordingly. Parents contribute their own insight and asks any further questions. • SMART targets are agreed.
Resources	• Specialist parents' evening software used.
Other considerations	• Conducted online due to COVID-19 restrictions • Meetings were recorded by dictaphone by the teacher, all participants were aware.

Engagement Number	**T8**
Title and activity type	Teacher data collection from Phase 2 intervention and final SLCA review
Date	Teacher Questionnaires 2 available online from 01/02/21. Teacher Questionnaire 1A (Final SLCA review) in spreadsheet format available 01/02/21. Interview conducted on 09/02/21.
Time	N/A
Length	
Participants	Teacher
Delivered by	Mr Lanigan
Purpose	To provide feedback on educational engagement methods used during Phase 2 (the intervention phase)
Description / Activities	• Questionnaire 1A (final SLCA review) was completed using a similar SLCA 'Survey 1' gird as students but for all students. • Questionnaire 2 completed online • Interview conducted through MS Teams
Resources	• Microsoft Office 365 • Online survey software https://admin.onlinesurveys.ac.uk/.
Other considerations	• All research tools conducted online due to COVID-19 restrictions

Engagement Number	**T9**
Title and activity type	Progress towards targets meeting Student and teacher face to face session
Date	15/03/21 – 26/03/21
Time	During lessons or immediately after
Length	10 minutes or less
Participants	Students and teachers (Parents emailed if follow up required).
Delivered by	Teacher
Purpose	To discuss progress towards targets set during inclusive subject meeting.
Description / Activities	• The teacher arranges short meetings to discuss progress towards targets and next steps.
Resources	• Student Pro forma
Other considerations	• Parents only involved if home support required or limited progress made. • Modifications to targets were required as the method of final assessment for GCSE students changed to teacher assessed grades due to COVID-19.

Mapping of intervention instruments to areas of consideration

Phase 1 Research Tool	SLCA Questionnaire 1A	
Intervention Inclusion Criteria	• Any attribute that appears below the overall mean (yellow) for both teachers and students. • Any characteristic attribute that appears significantly below the mean (coloured red meaning equal to or greater than 0.5 below) for either teachers or students at School B. • Any characteristic attribute that appears significantly below the mean (coloured red meaning equal to or greater than 0.5 below) for parents at School A. Excluding Q4 and Q13, where internal consistency of the data is reduced. No comparison can be drawn with another participant type to identify attributes where both are below the overall mean (yellow), as the questions differ slightly or are absent. A singular attribute where the value is less than the overall mean (yellow) cannot constitute significant triangulation to result in intervention.	
School	**Intervention Area for Consideration**	**Intervention Instrument**
Both	• Vision o Setting goals and targets (student yellow School B, teacher yellow School B, student yellow School Y, teacher yellow School Y).	S2, S3, S4, S5, S6, S7, S9, S11, S12, P2, P3, P4, P6, P9, T3, T6, T7, T9- School B. S2, S3, S4, S5, P2, P3, P4, P6, P7, T3- School Y.
	• Practice o Q11-Looks for opportunities to work on challenging material outside their comfort zone (parent red School B, parent red School Y).	S2, S3, S4, S5, S6, S12, P2, P3, P4, P6, P9, T3, T4, T7, T9- School B. S2, S3, S4, S5, P2, P3, P4, P6, P7, T3- School Y.
	• Systems o Revision planning and strategies (student red School B, teacher red School B, student yellow School Y, teacher yellow School Y).	S2, S5, S6, S7, S9, S11, S12, P2, P3, P4, P6, P7, P9, T3, T6, T7, T9- School B. S2, S3, S4, S5, P2, P3, P4, P6- School Y.
	• Behaviour and attitude o Leadership and teamwork (student yellow School B, teacher yellow School B, student yellow school Y, teacher yellow school Y).	S8, S9, S11, P3, P9, T7, 79- School B. P3-School Y.
School B	• Systems o Organisation of work (student red). o Reviewing assessment material (student yellow, teacher yellow).	S1, S4, S5, S7, S9, S10, S11, P2, P3, P6, P9, T3, T7, T9.
	• Behaviour and attitude o Behaviour when working with others (student yellow, teacher yellow). This characteristic aspect is close to the mean and therefore less significant.	S8, S9, S11, P3, P9, T7, T9.

School Y	• Behaviour and attitude
	  ○ Self-Efficacy (teacher red).
	  ○ Types of intelligence (parent red).
		S3, S4, S5, P2, P4, P6.

	• Practice ○ Questions (student yellow, teacher yellow).	S2, S3, S4, P3, P4, P6.
Phase 1 Research Tool	Parental Academic Socialisation Questionnaire 1B	
Intervention Inclusion Criteria	• Any characteristic aspect that appears below the overall mean (yellow) for both parents and students. • Any characteristic aspect that appears significantly below the mean (coloured red meaning equal to or greater than 0.5 below) for either a parent or a student. • AIHL: I do not spend time with my son working on creative activities- reverse orientated (parent red)- This was not included as an area of consideration as the Cronbach's alpha showed low internal consistency. Furthermore, creative activities are more associated with a primary curriculum rather than an analytical secondary subject such as Computer Science.	
School	**Intervention Area for Consideration**	**Intervention Instrument**
Both	• AIHL: I plan further activities to support my son based on the feedback received from PTM (student red School B, student yellow School Y, parent yellow School Y).	P2, P3, P4, P5, P6, P7, P8, P9- School B. P2, P3, P4, P5, P6, P7- School Y.
	• AIHL: I do not regularly review classwork and homework- reverse orientated (parent red School B, parent red School Y).	P3, P5, P6, P8, P9- School B. P3, P5, P7- School Y.
	• AIHL: I explain difficult ideas to my son when he does not understand or seek further help for him (student red school B, student red School Y).	P2, P3, P4, P5, P6, P7, P9- School B. P2, P3, P4, P5, P6, P7- School Y.
	• AIHL: I organise further learning opportunities outside school e.g. tutors, museums, library visits (student red School Y, parent red school Y, student red School B).	P3, P4, P5, P6- School B. P3, P4, P5, P6- School Y.
School B	• RECM: I allow for my son to make some significant decisions regarding their education independently (student yellow, parent yellow).	P5, P6, P8, P9.
	• AIHL: I ensure my son keeps to a regular homework timetable (parent red, student yellow).	P5, P6, P9.
	• EAGS: I provide a structured environment for my son and rules regarding work and leisure time (student yellow, parent yellow).	P2, P4, P5, P6, P7, P9.
School Y	No additional PAS indicated except those shared with School B.	
Phase 1 Research Tool	Self-Regulation and Autonomy Questionnaire 1C	
Intervention Inclusion Criteria	• Moving students from identified regulation to intrinsic motivation. • Reducing the value for external regulation. • Increasing the number of students with a positive RAI, consequently increasing the RAI average.	

School	Intervention Area for Consideration	Intervention Instrument
Both	The intervention required a holistic approach where intrinsic motivation was cultivated in the students across a range of engagement activities. Autonomy was key, students needed to be motivated by the intrinsic value of action, not by the reward or punishment attributed to it.	All student intervention activities especially the Student Inclusive Meeting. Students educated regarding principles: • Initial interest meeting, S2, S7- School B. • Initial interest meeting, S3, S5- School Y. Parents and teachers educated regarding importance of principles through: P2, P4, P5, P7, P8, T2, T5- School B. P2, P4, P5, P6, T2, T4- School Y.
Phase 1 Research Tool	Parent Teacher Meetings (audio transcriptions from meetings, parent, teacher and student interviews, Questionnaire 2).	
Intervention Inclusion Criteria	The research tools collectively explore particular questions, which on review of the literature focusing on PTM are essential in the understanding its format, objectives and impact on educational engagement.	
Key Question	**Intervention Area for Consideration**	**Intervention Instrument**
What are the timings for the PTM and who speaks?	• Greater involvement of the student in the meeting, with a higher proportion of talk time and more talk intervals. • Greater involvement of the parent in the meeting, with a higher proportion of talk time and more talk intervals. • Consider how to maximise the time available for the meeting.	A clear purpose and structure to the meeting discussed during training: • S7, S8, P5, P8, T2, T5, T6- School B. • S5, P5, T2, T4- School Y. Adoption of active listening and coaching techniques by teachers: • T2, T5, T6- School B. • T2, T4- School Y. Training and support provided to students on effective communication: • S7, S8- School B. • S5-School Y. Development of a pro forma by students to use in the meeting: • S7, S8- School B. • S5-School Y. Analysis of data by students to prepare for meeting: • S1, S4, S7, S8- School B. • S1, S4, S5- School Y.

		Research video provided to parents and teachers to explain the purpose of the study and the active role of the student: • P5, T2-School B. • P5, T2-School Y. Intervention resources provided to parents on curriculum to provide a greater understand and confidence to contribute during meeting: • P2, P3, P4, P8- School B. • P2, P3, P4- School Y. Use online parent meeting software, so a standardised time is provided for all meetings: • S9, P9, T7- School B.
What training, support and resources are available for the existing PTM?	• Training for all participants to improve the effectiveness of the meeting, including the information shared and targets that might arise.	All participants to receive training on the meeting purpose, structure and outcomes. • S7, S8, P8, T5, T6- School B. • S5, T4- School Y. Meeting focused on formative action and target setting: • S7, S8, S9, S11 P8, P9 T5, T6, T7, T9- School B.
Is the meeting collaborative? What is the PTM structure?	• Develop a structure that allows all to contribute and collaborate. • Given the time constraints, reduce elements of the structure where there is repetition in information from the report or where the information is generic and could be provided through an alternative format. • Ensure the structure focuses on a range of SLCA rather than a few. • Ensure the structure develop PAS processes and provides support for these. • Ensure the meetings are more balanced focusing equally on strengths, weaknesses and improvements in relation to subject content and SLCA.	Clear structure shared with participants during training providing opportunities for all participants to speak: • S7, S8, P5, P8, T2, T5, T6- School B. • S5, P5, T2, T4- School Y. Parent FAQ document provided in advance with generic information, aspects also included in pedagogy text messages, student audit and parental support toolkits: • P2, P3, P4, P6, P7, P8- School B. • P2, P3, P4, P6, P7- School Y. Teachers complete an SLCA checklist before the

		meeting focusing on all characteristics: • T6- School B. During training, students are encouraged to consider their characteristic strengths and areas for improvement as part of their targets: • S1, S4, S7, S8- School B. • S1, S4, S5- School Y. Regular review of SLCA by students through audits: • S1, S4, S7, S10- School B. • S1, S4, S5, S6- School Y. Teachers are aware of the importance of PAS processes: • T2- School A and B. Parent intervention activities to support PAS processes: • P2, P3, P4, P5, P6, P7, P8, P9- School B. • P2, P3, P4, P5, P6, P7- School Y.
What is the partipants' role? How do they prepare and participate?	• Provide training and support to participants on the best way to prepare for a meeting. • Ensure that any preparation required for the meeting is time efficient. • Questionnaire and interview responses show that the majority of parents view the meeting as collaborative, this is not validated in other research tools. • Develop greater collaborative role of students and parents in the meeting. • To reduce nerves and anxiety, practice the meeting format and explain the supportive role of the parent and teacher. • Provide training and support for teachers on how to prepare for the meeting and to make it more inclusive, increasing student and teacher collaboration opportunities. • Develop the role of the teacher as a facilitator (as well as an expert), focusing on coaching techniques.	Tailored training provided to each participant type: • S7, S8, P5, P8, T2, T5, T6- School B. • S5, P5, T2, T4- School Y. Training for parents to be conducted in the evening and at convenient times for other participants. For those who are unable to attend, an individual phone call will be offered: • P8- School B. Preparation and training for students ensure they have an outline for discussion at the meeting and suitable data to support any decision taken by them: • S7, S8- School B. • S5- School Y. Adoption of active listening and coaching techniques by teachers:

		• T2, T5, T6- School B. • T2, T4- School Y. An opportunity will be provided for students to practice their scripts with their peers before the meeting. They will be reminded of the supportive role other participants are to take: • S7, S8- School B. Students encouraged to speak first at the meeting, after listening, teacher will provide their expert input as will parents. • S7, S8- School B. • S5- School Y.
What information is recorded from the PTM? How is it used?	• Remove the need for parents and students to record resources for home learning by providing these in advance. • Ensure students are present at the meeting reducing the need for parents to record information to be relayed to them. • Focus recording of information on actions such as targets moving forward. • Encourage students to take more responsibility for recording information.	Students and parents provided with all data in advance and possible intervention resource including revision guide, websites and books: S4, S5, P4, P6, P7, P8- School B. S2, S4, S5, P4, P6, P7- School Y. All students to attend meeting: • S9-School B. Parent FAQ document provided in advance: • P8-School B. Targets are developed during the meeting and recorded by students: • S9-School B. Target meeting between teacher and student following the meeting: • S11, T9-School B.
To what extent are SLCA discussed and supported at the meeting? What educational engagement support is provided to students?	Both schools: • Develop participants understanding of SLCA. • Significantly increase the level of training and support for educational engagement methods to develop SLCA, focusing on key SLCA. • Reduce the meeting time spent on reporting and course information to make the meeting more balanced. • In both schools there needs to be a focus on developing the following characteristics:	Numerous intervention activities develop participants understanding of SLCA and training: • S1, S4, S7, S8, S10, P2, P4, P5, P7, T1, T2, T4, T6, T7,T8, T9- School B. • S1, S4, S5, S6, P2, P4, P5, P6, T1, T4, T5 - School Y.

	○ Vision (red for parents and teachers at School B, red for teachers at School Y). ○ Systems (yellow for parents and teachers at School B, yellow for student and parents at School Y). ○ Practice (red for teachers at School B, red for teachers at School Y). School B: • Based on questionnaire and interview feedback, Behaviour and attitude- Types of Intelligence is to be considered. Furthermore, self-efficacy, dealing with failure and where necessary, uniform, to be included due to no or low coding frequency in the original PTM. School Y: • Effort (red for teacher). • Due to no or low coding frequency in the original PTM, Behaviour and attitude- Leadership and teamwork, self-efficacy, types of intelligence Vision- Punctuality and Systems- organisation of work, planning and organisation, presentation of work were also to be considered. • Based on questionnaire and interview feedback, Behaviour and attitude- Types of Intelligence is to be considered.	Parent FAQ document provided in advance with generic information, aspects also included in pedagogy text messages, student audit and parental support toolkits: • P2, P3, P4, P6, P7, P8- School B. • P2, P3, P4, P6, P7- School Y. Intervention activities focused on those characteristics and attributes identified as areas of consideration.
To what extent are PAS processes discussed and supported at the meeting? What educational engagement support is provided to parents?	Both schools: • Develop participants understanding of PAS. • Significantly increase the level of training and support for educational engagement methods to develop PAS, focusing on the key PAS identified. ○ Reduce the meeting time spent on particular PAS categories, make the meeting more balanced. ○ Develop parents understanding of the Computer Science curriculum and structure. ○ Develop a catalogue of Computer Science resources for parents to support PAS. ○ Consider EAL parent when developing resources. ○ Consider methods to follow up on what was discussed at meetings. • There are many PAS processes that have no or a low coding frequency in	Intervention activities to develop participants understanding of the full range of PAS processes: • P2, P3, P4, P5, P6, P7, P8, P9, T2- School B. • P2, P3, P4, P5, P6, P7, T2- School Y. Intervention activities to explain Computer Science curriculum, structure and provide resources: • P2, P3, P4, P7, P8- School B. • P2, P3, P4, P6- School Y. Provide, where possible, visual resources, info graphics and limited text: • P4, P7- School B. • P4, P6- School Y. Use of progress towards target meeting (Parent

	both schools which need to be accounted for including: ○ AIHL: Organise learning opportunities such as tutors, museums, exhibitions. ○ AIHL: Review assessments, homework, classwork and support accordingly. ○ EAGS: Foster education and occupation aspirations (making future plans). ○ RECM: Allow son to make significant decisions or consult and ask for their opinion. ○ RECM: Developing an understanding of the different learning strategies and metacognition practices. ○ RECM: Improve communication with the school. School B: • No or a low coding frequency PAS processes to be included: ○ EAGS: Discuss the importance of education and working hard. ○ EAGS: Support their development of learning strategies. ○ RECM: Improve communication with the school. ○ RECM: Specific praise for task completion and success in learning. School Y: • No or a low coding frequency PAS processes to be included: ○ AIHL: Explain difficult concepts or seek further support for their son, including intervention. ○ EAGS: Discuss the importance of education and working hard. ○ EAGS: High expectations set for school grades, sports performance and other pursuits. ○ RECM: Encourage independence, self-regulation and independent problem solving. ○ RECM: Specific praise for task completion and success in learning	involvement where required): • S11, T9- School B. Intervention activities focused on those characteristics and attributes identified as areas of consideration.

Appendix D: Results

Phase 1 SLCA Questionnaire 1A (All participants)

Parent questions relating to SLCA	Teacher- Overall	Student- Overall	Parent- Overall	Teacher- School Y	Student- School Y	Parent-School Y	Teacher- School B	Student- School B	Parent-School B	School
Q14. Has high levels of self-belief and emotional control	3.4	3.9	3.8	3.5	4.1	3.8	3.4	3.7	3.8	Self-Efficacy
Q16. Seeks out opportunities to help and support others, showing high levels of empathy	3.4	3.5	4.0	3.7	3.4	4.3	3.3	3.6	3.8	Leadership and Teamwork
	3.8	4.1		4.1	4.3		3.6	3.9		Uniform
Q17. Always courteous and polite	3.7	3.7	4.6	4.0	3.8	4.7	3.5	3.6	4.5	Behaviour when working with others
Q13. Believes that intelligence is fixed	3.9	4.1	3.1	4.0	4.2	2.7	3.8	4.1	3.4	Types of intelligence
Q15. Sees failure as part of learning	3.8	3.7	3.6	3.9	3.8	3.5	3.6	3.6	3.6	Dealing with failure
	4.2	4.3		4.3	4		4.2	4.5		Attendance
Q6. Totally focused when working	3.8	3.7	3.6	4.1	3.8	3.4	3.6	3.7	3.6	Focus and attention
Q5. Surrounds themselves with other hardworking people	3.6	3.9	3.7	3.7	4.1	3.7	3.5	3.8	3.8	Comparisons of effort
	4.2	4.2		4.3	4.6		4.1	4.0		Punctuality
Q4. Avoids hard work (Hard working)	3.9	3.6	3.1	4.3	4.1	3.3	3.7	3.3	3.0	Attendance/intervention/detentions
Q1. Likes setting goals and targets	3.5	3.6	3.6	3.9	3.5	3.7	3.2	3.6	3.6	Setting goals and targets
Q2. Often sets personal bests to measure themselves by	3.8	3.9	3.3	4.1	3.8	3.5	3.6	4.0	3.2	Deadlines and time keeping
Q3. Has a clear purpose and considers their future including further education and career planning	3.6	3.8	3.8	3.8	3.8	4.0	3.4	3.8	3.7	Future career and higher education plans
Q11. Looks for opportunities to work on challenging material outside their comfort zo	3.7	3.9	3.0	3.9	3.9	3.2	3.5	3.9	2.9	Knowledge development
Q12. Always seeks feedback on performance	3.8	3.9	3.6	4.3	4.1	3.9	3.5	3.8	3.4	Feedback and support
	3.8	3.6		3.9	3.5		3.6	3.7		Questions
	4.0	3.5		4.4	3.7		3.6	3.5		Presentation of work
Q8. Records homework in planner. Has organised neat books and notes	3.8	3.5	3.5	4.2	3.9	3.3	3.6	3.1	3.6	Organisation of work
Q9. Reviews tests, does not focus on the negatives but seeks to address issues	3.8	3.5	3.4	4.3	3.6	3.4	3.4	3.5	3.5	Reviewing assessment material
Q10. They revise and review work using a number of methods including using timetabl testing and flash cards	3.4	3.2	3.4	3.8	3.3	3.5	3.1	3.1	3.4	Revision planning and strategies
	3.8	3.9		4.2	4.1		3.6	3.8		Homework quality
Q7. Plans their work carefully and welcome feedback	3.9	3.8	3.5	4.3	3.7	3.7	3.6	3.9	3.4	Planning and organisation
	3.9	4.1		4.1	4.5		3.8	3.9		Preparation and equipment

Phase 1 School B: Inner-City School and School Y: Suburban School student attributes mean values

	Parent- School B (M)	Student -School B (M)	Teacher-School B (M)	Overall- School B (M)		Parent-School Y (M)	Student-School Y (M)	Teacher-School Y (M)	Overall -School Y (M)		Overall -School B and Y (M)
Behaviour and Attitude	3.8	3.9	3.6	3.8		3.8	3.4	3.9	3.7		3.7
Effort	3.5	3.7	3.7	3.6		3.4	4.1	4.1	3.9		3.8
Vision	3.5	3.8	3.4	3.6		3.7	3.7	3.9	3.8		3.7
Practice	3.2	3.8	3.6	3.5		3.5	3.8	4.1	3.8		3.7
Systems	3.5	3.5	3.5	3.5		3.5	3.8	4.2	3.8		3.7
Overall (M)	3.5	3.7	3.6	3.6		3.6	3.8	4.0	3.8		3.7

Phase 1 School B: Inner-City School and School Y: Suburban School Characteristic mean values

Phase 1 PAS Questionnaire 1B (Parents and students)

	Student- Overall	Parent- Overall	Student- School Y	Parent- School Y	Student- School B	Parent- School B	School
Reflective enhancing communication and developing metacognition	4.5	4.7	4.2	4.6	4.8	4.7	Q1: I use parent teacher meetings as an opportunity to discuss with my son their progress
	3.6	4.3	3.8	4.6	3.4	4.2	Q3: I regularly discuss with my son what they are learning at school
	4.0	4.5	3.9	4.6	4.1	4.4	Q7: I encourage my son to learn and do things for himself
	3.8	4.8	3.8	4.9	3.7	4.6	Q10: I praise my son for achievement and success in learning
	4.0	4.1	4.2	4.1	3.9	4.2	Q17: I encourage my son to be independent and to solve problems at school without my help
	3.6	3.9	3.8	4.3	3.5	3.6	Q18: I allow for my son to make some significant decisions regarding their education independently
	3.4	4.3	3.5	4.5	3.4	4.1	Q19: I consult my son for their point of view before making decisions on his beha
Active involvement and home learning activities	3.0	4.2	3.3	4.3	2.9	4.2	Q2: I plan further activities to support my son based on the feedback received from parent teacher meetings
	3.7	3.1	3.6	3.9	3.8	2.6	Q5: I do not regularly review classwork and homework
	3.4	3.9	3.3	4.7	3.5	3.4	Q6: I ensure my son keeps to a regular homework timetable
	3.0	4.1	3.0	4.1	3.0	4.1	Q8: I explain difficult ideas to my son whe he does not understand or seek further help for him
	2.9	3.9	3.2	3.6	2.8	4.1	Q9: I organise further learning opportuniti outside school e.g. tutors, museums, librar visits
	3.2	3.3	3.1	3.7	3.4	3.1	Q11: I do not spend time with my son working on creative activities
	3.6	4.3	3.3	4.6	3.8	4.2	Q13: I engage and take an interest in my son's hobbies
Expectation, aspiration, goal setting and providing structure	4.1	4.0	4.1	4.3	4.2	3.8	Q4: I review and discuss assessments/grades with my son and use these to support learning at home
	4.2	4.7	4.6	4.8	3.9	4.6	Q12: I discuss with my son regularly the importance of education and the importance of working hard
	3.8	4.5	4.1	4.8	3.5	4.2	Q14: I discuss with my son their future aspirations in relation to education and employment
	4.3	4.3	4.5	4.8	4.1	4.1	Q15: I set high expectations for my son when it comes to school grades, sports performance and other pursuits
	3.5	3.9	3.8	4.3	3.3	3.6	Q16: I provide a structured environment fo my son and rules regarding work and leisure time

Phase 1 School B: Inner-City School and School Y: Suburban School PAS subcategory mean values

Category	Parent- School B(M)	Student-School B (M)	Overall- School B (M)		Parent- School Y (M)	Student-School Y (M)	Overall- School Y (M)		Overall -School B and Y (M)
Reflective enhancing communication and developing metacognition (RECM)	4.3	3.8	4.1		4.5	3.9	4.2		4.1
Active involvement in home learning activities (AIHL)	3.7	3.3	3.5		4.1	3.2	3.7		3.6
Expectation, aspiration, goal setting and providing structure (EAGS)	4.1	3.8	4.0		4.6	4.2	4.4		4.2
Overall (M)	4.0	3.6	3.8		4.4	3.8	4.1		4.0

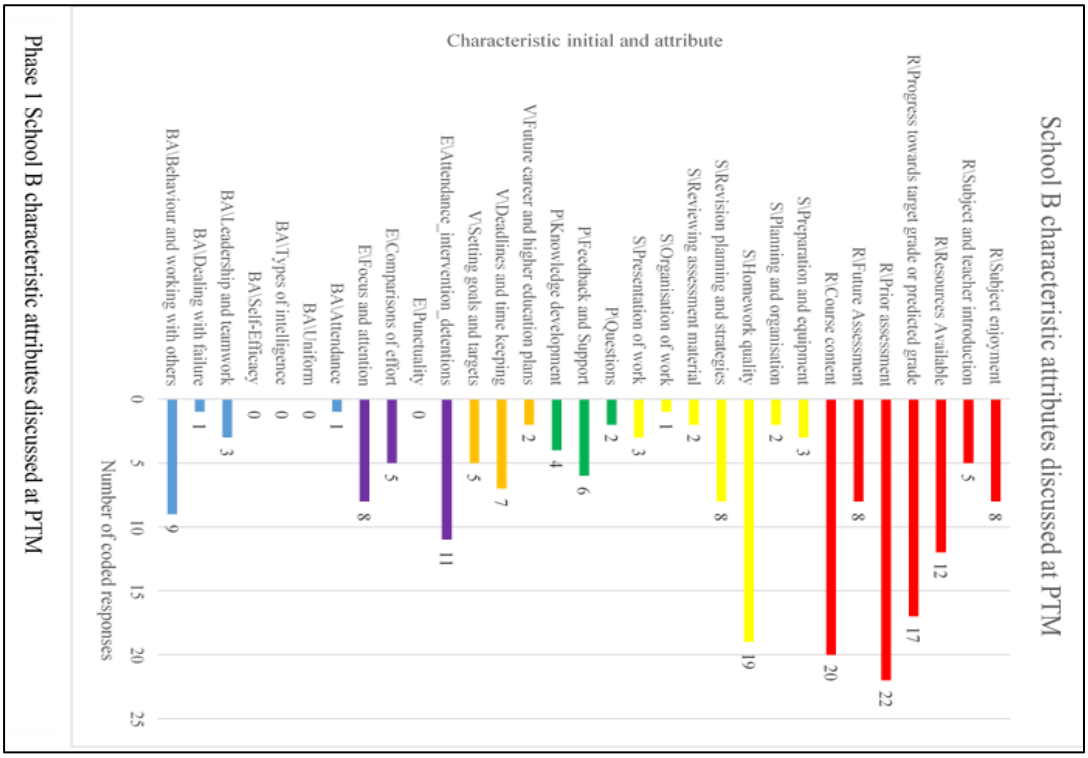
Phase 1 School B: Inner-City School and School Y: Suburban School PAS mean values

Phase 1 Self-Regulation and Autonomy Questionnaire 1C (Students)

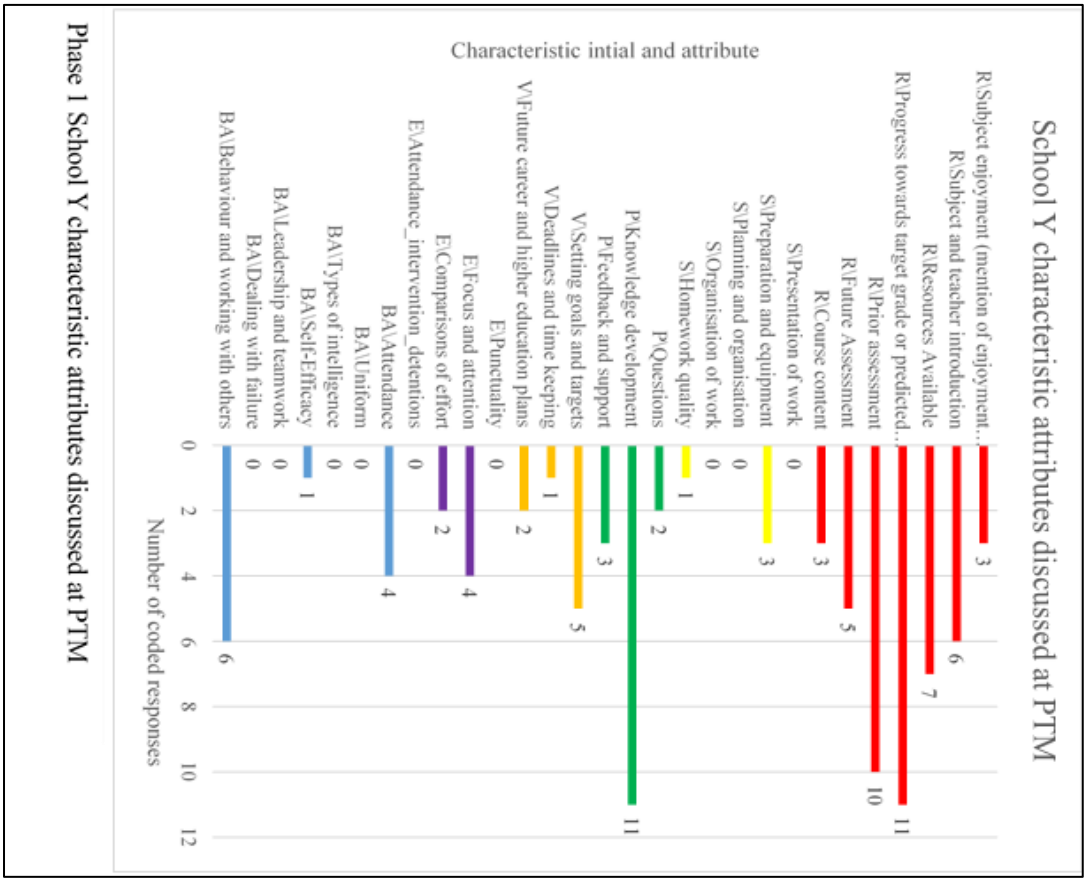
	External Regulation	Introjected Regulation	Identified Regulation	Intrinsic Motivation	Relative Autonomy Index (RAI)
School B	3.1	3.0	3.1	2.3	-1.5
School Y	3.2	3.0	3.5	2.4	-1.2
Overall (M)	3.1	3.0	3.3	2.3	-1.3

Phase 1 School B: Inner-City School and School Y: Suburban School regulation domain values

Phase 1 SLCA (coding analysis)

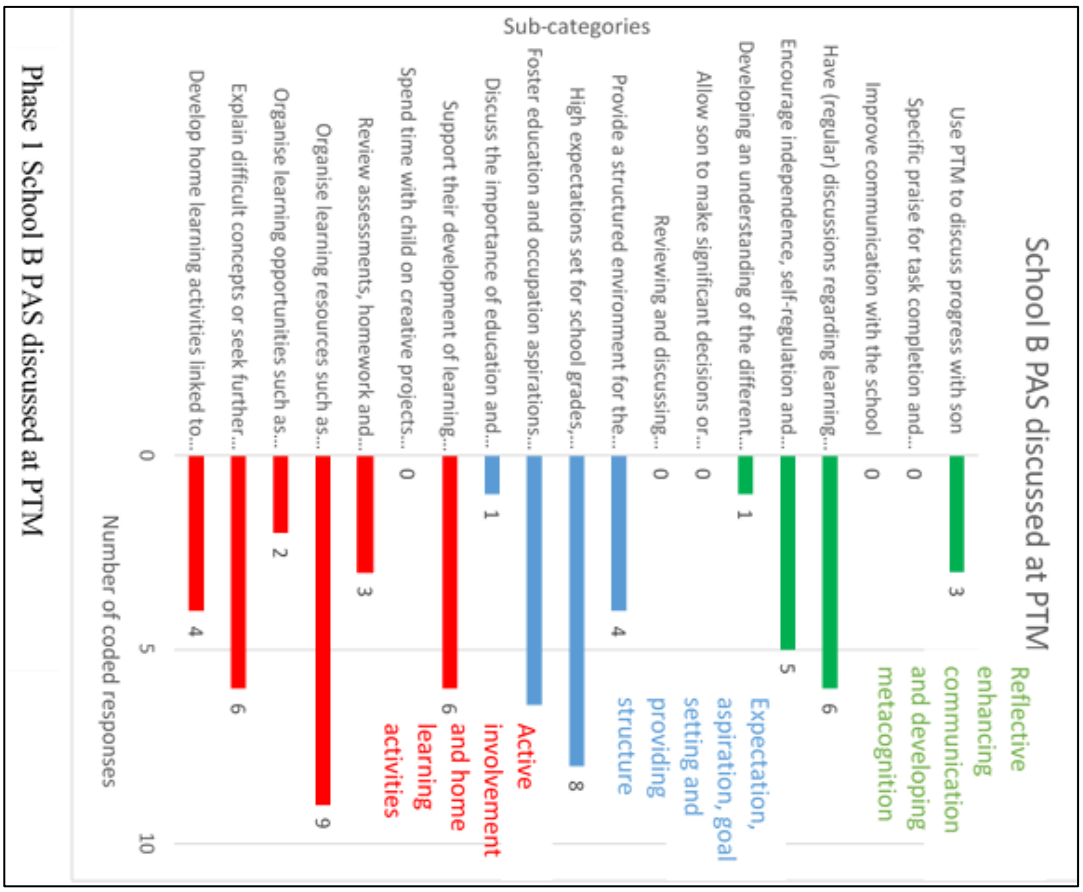


Phase 1 School B characteristic attributes discussed at PTM

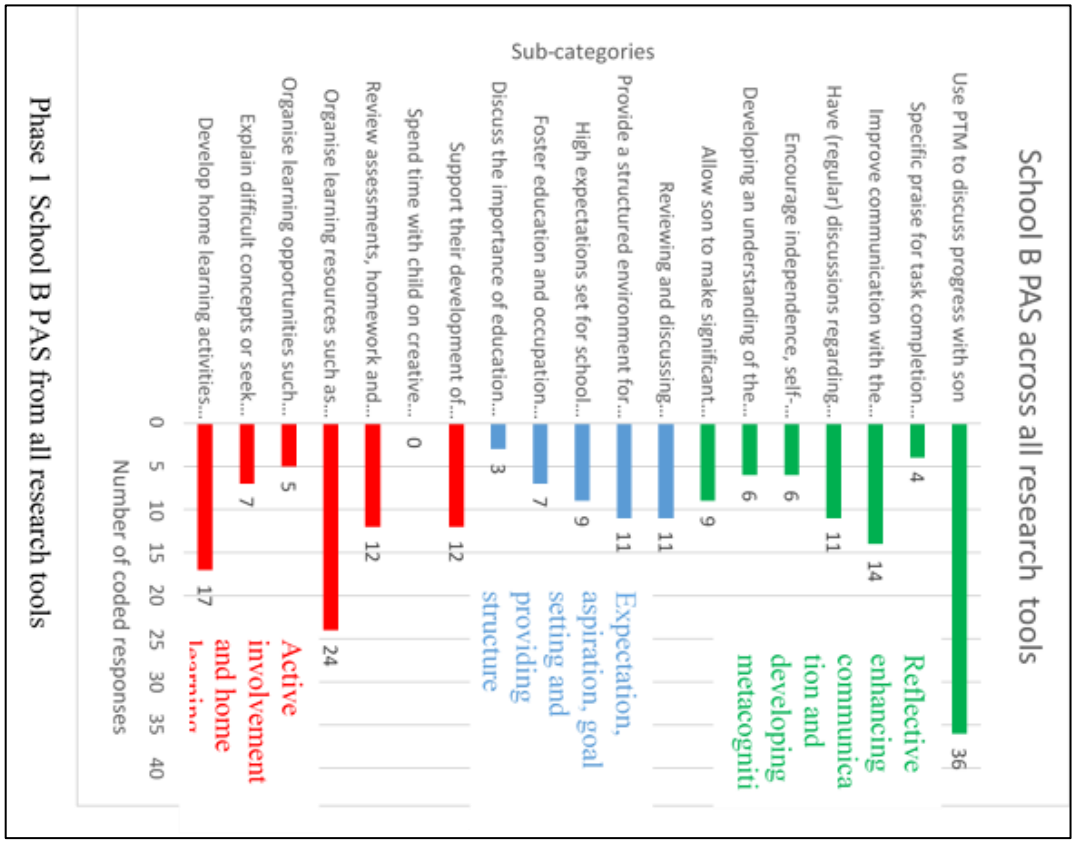


Phase 1 School Y characteristic attributes discussed at PTM

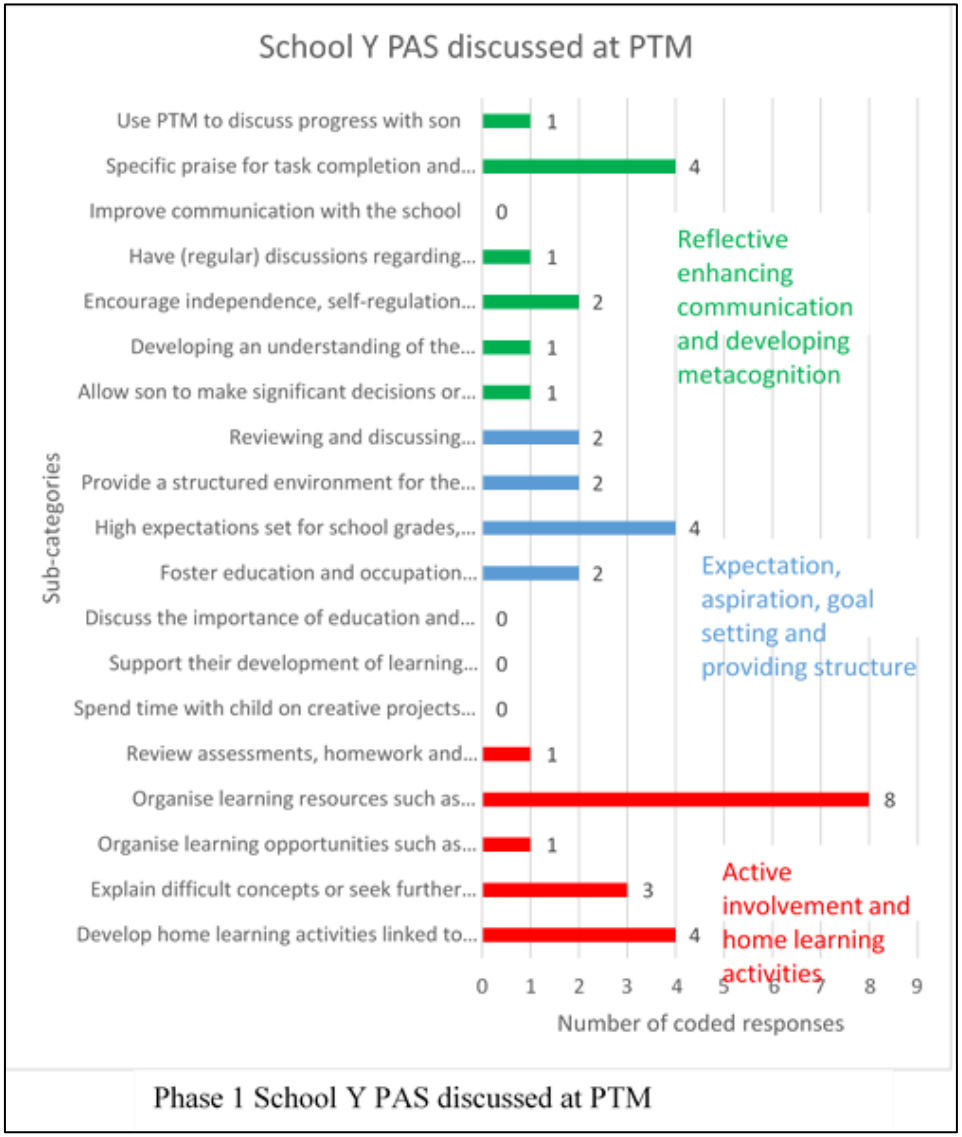
Phase 1 PAS (coding analysis)



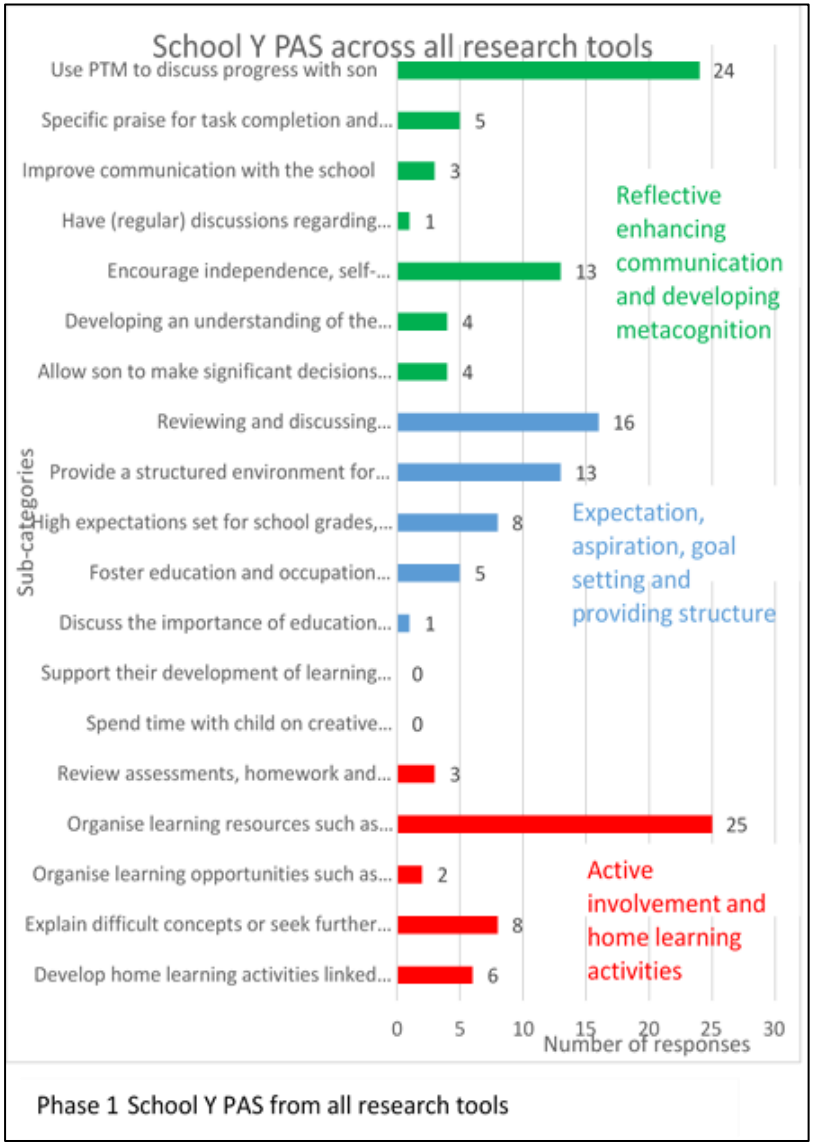
Phase 1 School B PAS discussed at PTM



Phase 1 School B PAS from all research tools

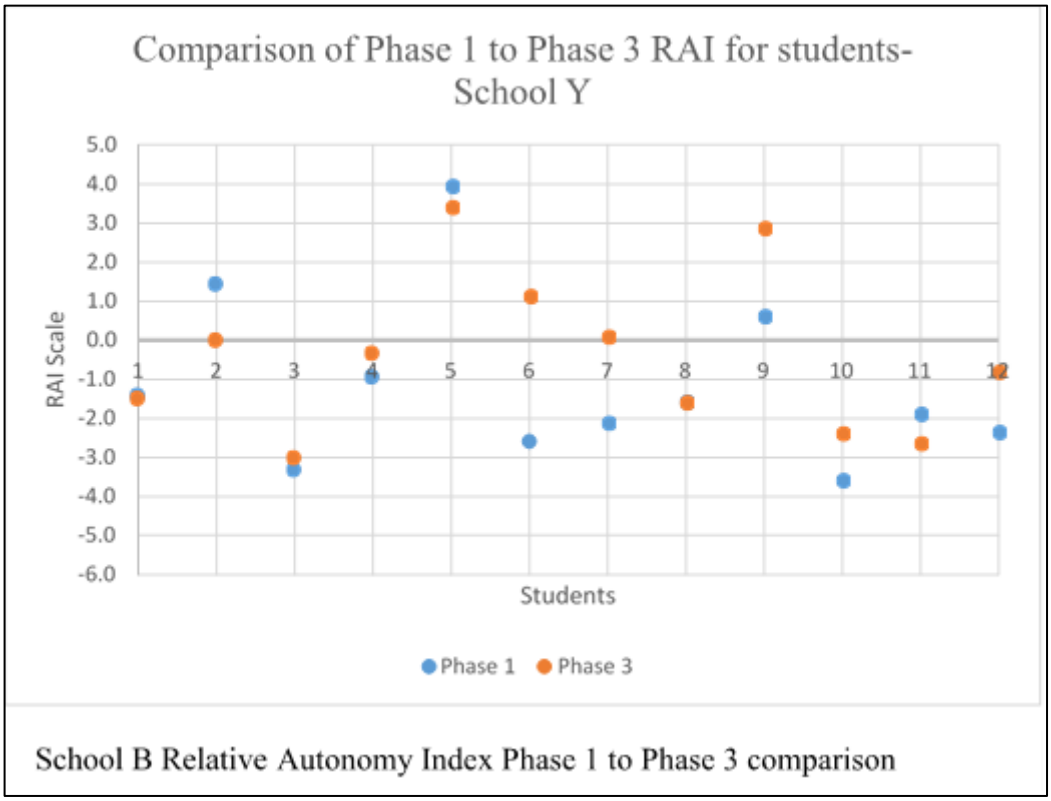


Phase 1 School Y PAS discussed at PTM

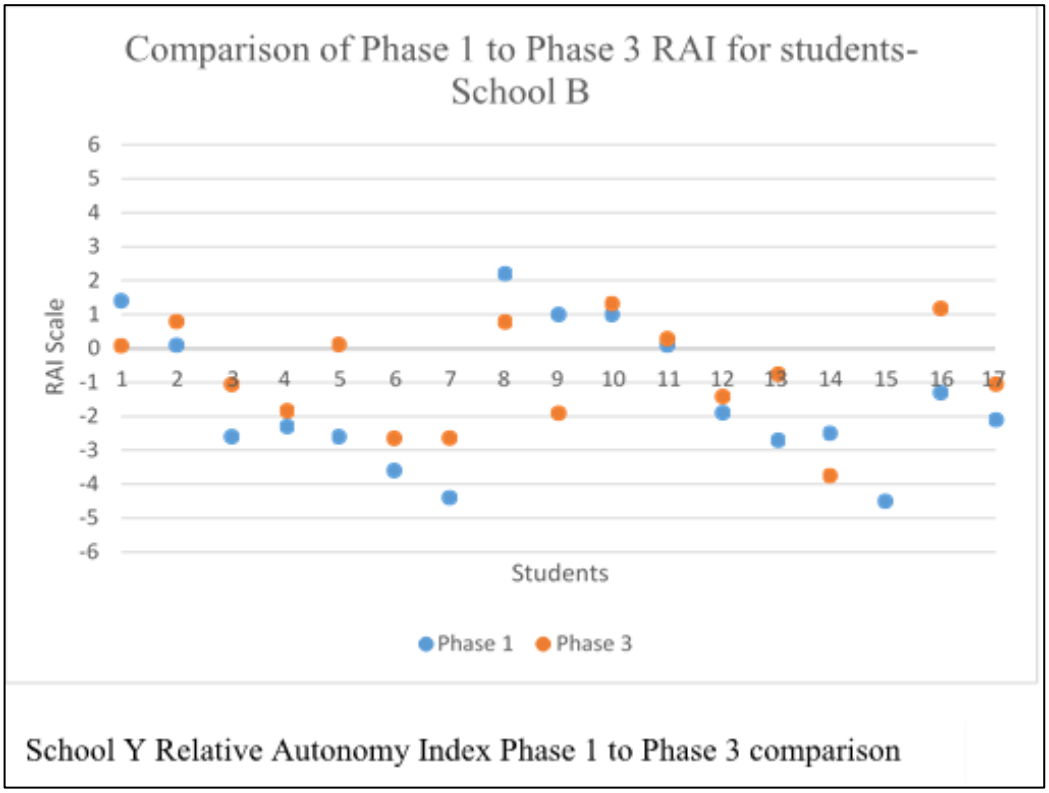


Phase 1 School Y PAS from all research tools

Phase 3 Self-Regulation and Autonomy Questionnaire 1C

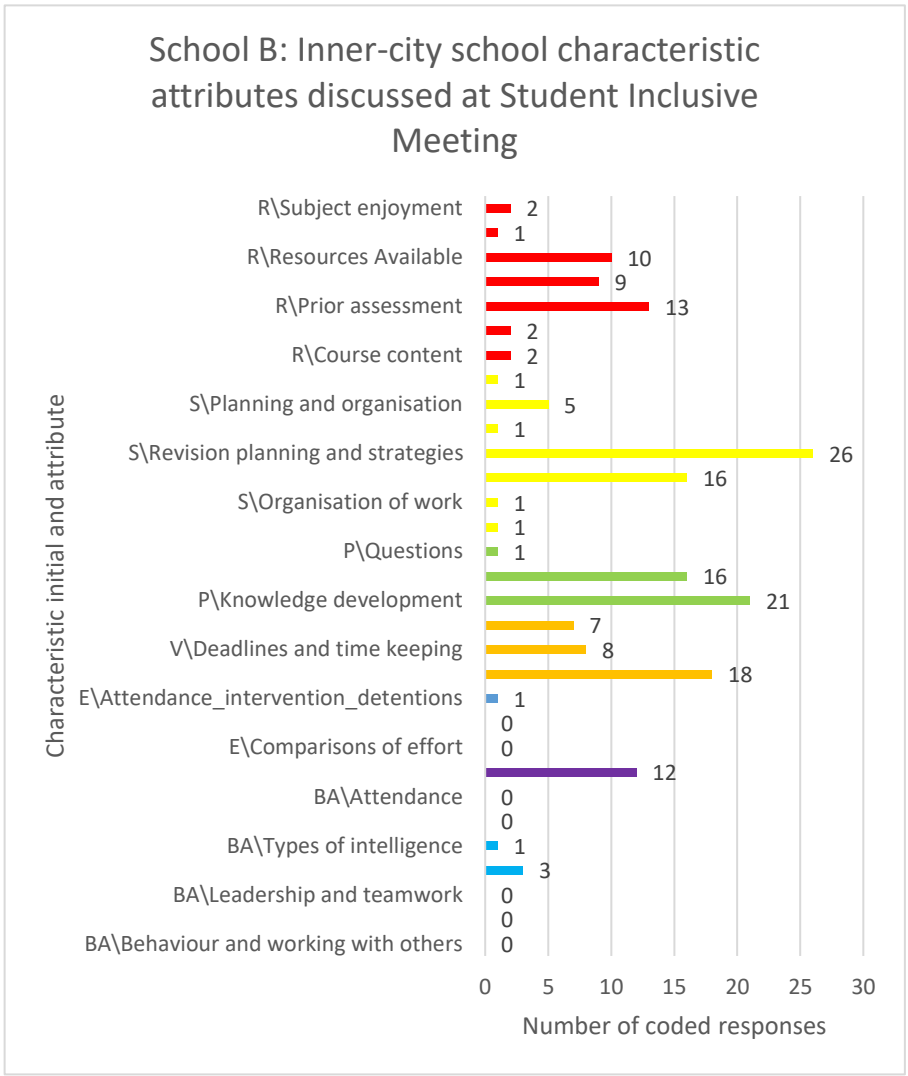


School B Relative Autonomy Index Phase 1 to Phase 3 comparison



School Y Relative Autonomy Index Phase 1 to Phase 3 comparison

Phase 3 SLCA (coding analysis)



Phase 3 School B:Inner-city school characteristic attributes discussed at Student Inclusive Meeting

Phase 3 PAS (coding analysis)